JOE MOROLONG LOCAL MUNICIPALITY

INVITATION TO BID (INFRASTRUCTURE DELIVERY)

(In terms of the Supply Chain Management Regulations (Government Gazette 27636 of 30 May 2005))

BID NO: B239-2024

PANEL OF CONTRACTORS FOR THE BOREHOLE REFURBISHMENT SERVICES (3 YEARS PERIOD)

Closing Date and Time: Thursday, 18 July 2024 at 12h00

NAME OF BIDDER:		**Bidder VAT registered? – (Please tick appropriate box)** Yes ☐ No ☐
CENTRAL SUPPLIER DATABASE (CSD) SUPPLIER NO:		
TOTAL BID PRICE (INCL VAT): (Brought forward from Pricing Schedule MBD3)	**R**	

Please note that it is compulsory for all service providers to complete the above required information

Local Municipality physical address:
D320 Cardington Road, Churchill Village
MOTHIBISTAD
8474

Local Municipality postal address:
Private Bag X117
MOTHIBISTAD
8474

SCM contact details:
SCM manager: Mr Tebogo Molaolwe
Tel No: (053) 773 9300 / (082) 829 3053
E-Mail: registry@joemorolong.gov.za

Technical contact details:
Technical Services Director: Mr. L Moinwe
Tel No: (053) 773 9300 / (082) 829 3053
E-Mail: registry@joemorolong.gov.za

JOE MOROLONG LOCAL MUNICIPALITY

Bid no	Description
B239-2024	Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

SUMMARY FOR BID OPENING PURPOSES

Name of bidder:	
Address:	
Telephone number:	
Fax number:	
E-mail address:	
Closing date:	Thursday, 18 July 2024 at 12h00
Total bid price: (VAT Incl.)	R

(Amount brought forward from the Pricing Schedule **MBD3**) *

Signed by an authorized representative of the Bidder:

Date	Signature

* Should any discrepancy occur between this figure and that stated in the Pricing Schedule (**MBD3**, the latter shall take precedence and apply).

BID GENERAL DATA

Item	Description
Bid no:	B239-2024
Bid Description:	Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)
Bid type:	Infrastructure delivery
PPPFA preferential points system:	80/20
CIDB minimum grade required:	5CE or Higher
Functionality evaluation bid:	Minimum functionality score of 70.00/100.00 is required
Pre-qualifying criteria bid:	N/A
Local production bid:	N/A
Sub-contracting bid:	N/A
Project manager:	Technical Services Director: Mr. L Moinwe
Department:	Technical Services
Advert date:	16 June 2024
Bid document fee (VAT Incl.):	R1 693.95 (Free if downloaded from the e-Tender Portal)
Bid document availability date and time:	Thursday, 20 June 2024 at 12h00
Advert closing date and time:	Thursday, 18 July 2024 at 12h00
Bid validity days:	90
Contact name and details:	Technical Services Director: Mr. L Moinwe Tel No: (053) 773 9300 / (082) 829 3053 E-Mail: registry@joemorolong.gov.za
Bid document pickup location:	Cashiers office in the Finance Department
Bid document submission location:	Tender box situated in the foyer of Joe Morolong Local Municipality, D320 Cardington Road, Churchill Village
Bid briefing details:	Compulsory Site Briefing: N/A

FOR MORE INFORMATION PLEASE CONTACT:

Joe Morolong Local Municipality	
Telephone number:	(053) 773 9300
E-mail address:	registry@joemorolong.gov.za

Bid contact details	
Name and Details:	Technical Services Director: Mr. L Moinwe Tel No: (053) 773 9300 / (082) 829 3053 E-Mail: registry@joemorolong.gov.za

Municipal Manager
B Motlhaping
Joe Morolong Local Municipality
Private Bag X117 MOTHIBISTAD 8474

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JOE MOROLONG LOCAL MUNICIPALITY

BID NO : B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

PORTION 1: THE BID

PART T1
Bid Procedures

Part T1: Very Important Notice on Evaluation:

A bid not complying with the peremptory requirements stated hereunder may be regarded as not being an "Acceptable bid", and as such will be rejected.
"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 published in Government Gazette number 47452, dated 04 November 2022, in terms of which provision is made for this policy..

1. If a valid **SARS PIN** (or in the case of a joint venture, of all the partners in the joint venture) has not been submitted with the bid document on closing date of the bid.
2. If any pages have been removed from the bid document, and have therefore not been submitted, or a copy of the original bid document has been submitted.
3. Failure to complete the schedule of quantities as required, i.e. only lump sums provided.
4. Scratching out, writing over or painting out rates, without initialling next to the amended rates or information, affecting the evaluation of the bid.
5. The use of correction fluid (i.e. tippex) or any erasable ink, e.g. Pencil.
6. Non-attendance of mandatory/compulsory:
   - Information/Clarification meetings
7. **THE BID HAS NOT BEEN PROPERLY SIGNED BY A PARTY HAVING THE AUTHORITY TO DO SO ACCORDING TO THE *EXAMPLE* OF "AUTHORITY FOR SIGNATORY"**
8. No authority for signatory submitted – See example, where it is stated that a duly signed and dated original or certified copy of the company's relevant resolution (for each specific bid) of their members or their board of directors, must be submitted (Section 04 or Section 05).
9. The bid has been submitted either in the wrong bid box or after the relevant closing date and time.
10. If any municipal rates and taxes or municipal service charges owed by the bidder or any of its directors to the municipality, or any other municipal entity, are in arrears for more than three months. The bidder has failed to submit paid up letters or proofs from their Municipalities that they do not owe any rates or taxes.
11. The accounting officer must ensure that irrespective of the procurement process followed, no award may be given to a
    Person -
    (a) who is in the service of the state, or;
    (b) if that person is not a natural person, of which any director, manager, principal shareholder or stakeholder, is a person in the service of the state; or;
    (c) who is an advisor or consultant contracted with the municipality in respect of contract that would cause a conflict of interest.
12. Failure to provide:
    (a) Written proof of registration with the CIDB, in an appropriate contractor grading designation **5CE or Higher or higher**, as required in the bid document.
13. Failure to attach a copy of a valid signed Joint Venture/Consortium agreement (if applicable) to the bid document.

N.B – Bids containing any or more of the following errors or omissions may be deemed non responsive:

1. Certified Copy of **Company Registration Certificate** from the Registrar of Companies.
2. Proof of shareholding documents
3. Proof of Banking Details and Bank Grading of C or higher. Certification from Bank to be submitted with Tender.
4. A Valid **SARS PIN**. In the event of a JV, SARS PIN for all parties
5. Recent statement as proof of payment of municipal services (rates and taxes) for both company and all directors of the company. Not older than three months
6. Proof of company addresses or lease agreements whichever applies obtainable from your local municipality, tribal authority or landlord. Proof is required for addresses listed on the CSD. In the case of lease agreements, proof is required to show that the lease agreement is active (e.g. recent proof of payment to the landlord / lessor - for those where the responsibility of rates and taxes lies with the landlord / lessor)
7. Proof of residence of all Directors as they appear on the company registration certificate obtainable from your local municipality or tribal authority
8. Postal address and contact details

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

9. Contact person for correspondence
10. Attendance of Clarification Meeting
11. Late Submissions after 12h00 on Thursday, 18 July 2024
12. Written proof of Registration with the CIDB.
13. Valid JV Agreement if Tenderer is tendering as a Joint Venture.
14. In the case of a Joint Venture Agreement, it must be tender specific.
15. Changes and correction in the tender documents not signed by tenderer.
16. Certified copies of identity documents (ID's) of all directors/members.
17. No copies of previously certified copies will be accepted
18. Proof of Company Registration on the Central Database (CSD) must be submitted. (Both JV Partners).

NOTE:
IN THIS DOCUMENT AND OTHER DOCUMENTS REFERRED TO BUT NOT ATTACHED, THE FOLLOWING WORDS ARE SYNONYMOUS WITH EACH OTHER.
1. CLIENT, EMPLOYER, JOE MOROLONG LOCAL MUNICIPALITY.
2. BID, TENDER AND VARIATIONS THEREOFF
3. JOINT VENTURE / CONSORTIUM

SECTION T1.1 –BID ADVERT

JOE MOROLONG LOCAL MUNICIPALITY

INVITATION FOR PROSPECTIVE BIDDERS

Prospective service providers with proven track records are invited to tender as follows:

Bid No.	Bid Description	CIDB Grading	Availability of Documents & Non-Refundable Fee	Briefing / Site Inspection Date Time and Venue	Closing date	Points System	Contact Person for Technical Enquiries
B239-2024	Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)	5CE or Higher	20 June 2024 from 12h00 for R1 693.95	N/A	18 July 2024 at 12h00	80/20	Technical Services Director: Mr. L Moinwe Tel No: (053) 773 9300 / (082) 829 3053 E-Mail: registry@joemorolong.gov.za

Minimum Specifications and other conditions are detailed in the bid documents. Bid documents with detailed bid specifications and detailed information are obtainable at the Cashiers office in the Finance Department (office hours: Monday to Friday 07h30 to 16h15) of the Joe Morolong Local Municipality, D320 Cardington Road, Churchill Village. Alternatively, they can be downloaded for free from the E-tender portal.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Bids will be adjudicated according to the Joe Morolong Local Municipality's Supply Chain Management Policy, the Preferential Procurement Policy Framework Act (Act 5 of 2000) and the Preferential Procurement Regulations, 2022, as well as the Broad Based Black Economic Empowerment Act (Act 53 of 2003). The evaluation of this bid is based on the Preferential Procurement Point System stipulated in the bid document where a maximum of 80 points are scored for Price and a maximum 20 points for achieving the Specific Goals. A validity period of **90** calendar days is applicable for this bid. Sealed Bids and supporting documents clearly marked with the above reference and description must be placed in the Tender box situated in the foyer of Joe Morolong Local Municipality, D320 Cardington Road, Churchill Village.

The submission of a valid up to date copy of the Tax Compliance reference pin issued by SARS is compulsory.

In terms of MFMA Circular No 81, issued by National Treasury, it is compulsory as from 1 July 2016 for all prospective service providers to Local Municipalities to be registered on the web based **Central Supplier Database (CSD)**. Bids received from service providers not registered on the **CSD** shall therefore be regarded as non-responsive and will not be further evaluated. Prospective service providers can utilise the following link to register on the **CSD**: www.csd.gov.za.

The Joe Morolong Local Municipality does not bind itself to accept the lowest or any bid and the Local Municipality reserves the right to accept the whole or part of any bid and further reserves the right to re-advertise if it so wishes to.

Please note that late, electronic, couriered, postal or faxed bid documents will not be accepted.

B Motlhaping

Municipal Manager

SECTION T1.2 –BID NOTICE

JOE MOROLONG LOCAL MUNICIPALITY

TENDER NO: B239-2024

Joe Morolong Local Municipality hereby invites registered, experienced and suitably qualified service providers to submit bids for Panel of Contractors for the Borehole Refurbishment Services (3 Years Period).

The bid document with detailed specifications and detailed information are obtainable at the Cashiers office in the Finance Department during office hours (Monday to Friday 07h30 to 16h15) and e-Tender Portal **www.etender.gov.za** from 12h00 on Thursday, 20 June 2024.

Bid briefing details:
N/A

Tender closing:	Thursday, 18 July 2024
Time:	12h00
A non- refundable cash deposit fee of R1 693.95 is required on collection of the bid document and for bid documents downloaded from the e-Tender Portal	

General Conditions of the bid

1. The prices must be valid for at least 90 days after closing date
2. Proof of payment must be attached to the Bid document (including bid documents downloaded from the e-Tender Portal website)
3. Bid prices must be inclusive of VAT
4. A copy of the Tax Compliance Status reference PIN issued by SARS, to enable the municipality to verify the bidder's tax compliance must be supplied

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

5. A certified copy of a B-BBEE Level Verification Certificate (only SANAS accredited or Sworn Affidavit will be accepted)
6. The 80/20 principle will be applied, in terms of the Supply Chain Management Policy of Council when bids are evaluated which is available upon request
7. The bidders are required to complete MBD forms (in case of Joint Venture agreement for both companies needs to complete MBD forms separately)
8. The Joe Morolong Local Municipality does not bind itself to accept the lowest or any bid and the municipality reserves the right to accept the whole or part of any bid. No reasons for the acceptance or rejection of any bid will be given
9. Bids will be adjudicated according to the Joe Morolong Local Municipality's Supply Chain Management Policy, the Preferential Procurement Policy Framework Act (Act of 2005) and the Preferential Procurement Regulations, 2022, as well as the Broad Base Black Economic Empowerment Act (Act 53 of 2003)
10. A copy of the company registration certificate (CK) obtainable from the Companies and Intellectual Property Commission must be attached
11. Proof of Rates and Taxes or lease agreement obtainable from the relevant local authority for each Director/s of the Company as they appear on the Companies and Intellectual Property Commission(CIPC) registration certificate and Central Suppliers Database summary report (CSD)
12. If the business is operated from the residence of a director/s a certified affidavit must be submitted stating the address of the business premises. If the premises from where business is conducted or where a director is residing, is leased a copy of the leased agreement must be submitted
13. Certified copies of identity documents (IDs) of all directors / members must be submitted
14. No Copies of certified copies will be accepted
15. In case of a Joint venture agreement, the agreement must be specific to this bid and not a generic / general agreement
16. Recognisable proof of company addresses or lease agreement whichever applies obtainable from your local municipality, tribal office or landlord
17. Proof of residence of all directors as they appear on the company registration certificate obtainable from your local municipality or tribal authority

The Bid document and supporting documentation must be enclosed in an envelope clearly endorsed with the Bid number and Description (B239-2024 - Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)). The Bid document is to be placed in Tender box situated in the foyer of Joe Morolong Local Municipality, D320 Cardington Road, Churchill Village not later than the prescribed time and date when Bids will be opened in public. The Bid will be evaluated and adjudicated in accordance with the Joe Morolong Local Municipality's Supply Chain Management Policy, Preferential Procurement Policy Framework Act No 5 of 2000 using 80/20 points system. The validity period of this Bid is 90 days.

NOTE:

- **The Municipality is not bound to accept the lowest or any bid and reserve its rights in this regard**
- **Please note that late, electronic, couriered, posted or faxed Bid documents will not be accepted**

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SECTION T1.3 - INVITATION TO BID (MBD1)

PART A

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE JOE MOROLONG LOCAL MUNICIPALITY					
BID NUMBER:	B239-2024	CLOSING DATE:	18 July 2024	CLOSING TIME:	12h00
DESCRIPTION	Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)				
THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (MBD7).					

Bids must be properly received and deposited in the Tender box situated in the foyer of Joe Morolong Local Municipality, D320 Cardington Road, Churchill Village on or before 12h00 on Thursday, 18 July 2024 at which time the bids will be opened in public. Bid offers must be submitted in a sealed envelope properly marked in terms of the bid number (B239-2024) and bid description (Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)). No bid offers will be accepted via e-mail, facsimile (fax) or telegram. NO LATE BIDS WILL BE ACCEPTED.

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				
TAX COMPLIANCE STATUS	TCS PIN:		CSD No:	
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE [TICK APPLICABLE BOX]	☐ Yes ☐ No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT	☐ 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]				
ARE YOU THE ACCREDITED REPRESENTATIVE **IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?**	☐Yes ☐No [IF YES ENCLOSE PROOF]		ARE YOU A FOREIGN BASED SUPPLIER FOR **THE GOODS /SERVICES /WORKS OFFERED?**	☐Yes ☐No [IF YES, ANSWER PART B:3]
TOTAL NUMBER OF ITEMS OFFERED			**TOTAL BID PRICE**	**R**
SIGNATURE OF BIDDER	.....		**DATE**	
CAPACITY UNDER WHICH THIS BID IS SIGNED				

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:		TECHNICAL INFORMATION MAY BE DIRECTED TO:	
DEPARTMENT	Finance	CONTACT PERSON	Technical Services Director: Mr. L Moinwe
CONTACT PERSON	SCM Manager	TELEPHONE NUMBER	Technical Services Director: Mr. L Moinwe Tel No: (053) 773 9300 / (082) 829 3053 E-Mail: registry@joemorolong.gov.za
TELEPHONE NUMBER	(053) 773 9300	FACSIMILE NUMBER	(053) 773 9350
FACSIMILE NUMBER	(053) 773 9350	E-MAIL ADDRESS	registry@joemorolong.gov.za
E-MAIL ADDRESS	scm@joemorolong.gov.za		

PART B
TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:

1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
1.2. **ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED–(NOT TO BE RE-TYPED) OR ONLINE**
1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.

2. TAX COMPLIANCE REQUIREMENTS

2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S PROFILE AND TAX STATUS.
2.3 APPLICATION FOR THE TAX COMPLIANCE STATUS (TCS) CERTIFICATE OR PIN MAY ALSO BE MADE VIA E-FILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED TO REGISTER WITH SARS AS E-FILERS THROUGH THE WEBSITE WWW.SARS.GOV.ZA.
2.4 FOREIGN SUPPLIERS MUST COMPLETE THE PRE-AWARD QUESTIONNAIRE IN PART B:3.
2.5 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
2.6 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
2.7 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.

3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

3.1.	IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?	☐ YES ☐ NO
3.2.	DOES THE ENTITY HAVE A BRANCH IN THE RSA?	☐ YES ☐ NO
3.3.	DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?	☐ YES ☐ NO
3.4.	DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?	☐ YES ☐ NO
3.5.	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 ABOVE.

NB: FAILURE TO PROVIDE ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.
NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE.

SIGNATURE OF BIDDER: ……

CAPACITY UNDER WHICH THIS BID IS SIGNED: ……

DATE: ……

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

JOE MOROLONG LOCAL MUNICIPALITY

BID NO : B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

BID DATA

The conditions of bid are the Standard Conditions of Tender as contained in Annex F of the Construction Industry Development Board's Board Notice 12 of 2009 (contained in Government Gazette No. 31823 of 30 January 2009), bound into section T1.6.

The Standard Conditions of Tender makes several references to the bid data. The bid data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the standard conditions of tender.

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

Clause	Addition or Variation to Standard Conditions of Tender
1.1	The Employer is JOE MOROLONG LOCAL MUNICIPALITY.
1.2	The Bid documents issued by the employer comprise one volume.
1.3	Replace the 2nd paragraph of the clause with the following: These Conditions of Bid, the Bid Data, List of Returnable Documents and Returnable Schedules which are required for bid evaluation purposes, shall form part of the Contract arising from the invitation to bid.
1.4	The Employer's agent is (also known as the Engineer): Name: BVi CONSULTING ENGINEERS Address: 17 President Steyn Ave Westdene Bloemfontein 9301 Contact person: Pieter Rossouw Tel: (051) 447 2137 Fax: (051) 447 6056 E-mail: pieterr@bvifs.co.za

Clause	Addition or Variation to Standard Conditions of Tender
2.1	Only those bidders who are registered with the CIDB at the time of closing of bids, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a 5CE or Higher or higher class of construction work, are eligible to have their bids evaluated. Joint ventures are eligible to submit bids provided that: 1. every member of the joint venture is registered with the CIDB; 2. the lead partner has a contractor grading designation of contractor grading designation 5CE or Higher or higher class of construction work; and 3. the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a 5CE or Higher or higher class of construction work.
2.2	Add the following to the clause: Accept that the Employer will not compensate the bidder for any costs incurred in attending interviews in the office of the employer or the employer's agent (if required).
2.7	Bid documents will not be made available at the site visit or clarification meeting. Details relating to the collection of bid documents is indicated in the Bid Notice and Invitation to Bid (Section T1.3 of the document)
2.10.5	Add the following to the clause: A digital copy of the Schedule of Rates can be obtained from the Client's agent at the office of the Engineer upon sufficient notice.
2.11	Add the following to the clause: To correct errors made, draw a line through the incorrect entry and write the correct entry above in black ink and place the full signatures of the authorised signatories next to the correct entry.
2.12.1	Add the following to the clause: All alternative bid offers shall be referred to in Section T2.2.6 – Amendment or Qualifications by the Bidder.
2.12.2	Should the Bidder wish to offer alternative designs and/or construction materials, he shall include with this Bid full details thereof, including a complete Schedule of Rates, formal design calculations, and full details of all alternative components

Clause	Addition or Variation to Standard Conditions of Tender
	proposed to be included in the Works. Refer also to the Contract Data in this regard. Failure to properly comply with this clause, thereby preventing the Employer and/or the Engineer to properly assess the full implications of the alternative bid, is likely to disqualify the alternative offered from further consideration. No submission by the Contractor after award for additional payment or time for completion of Works relating to the alternative offer will be considered, the tendered rates submitted shall be considered to reflect the full and final cost implications of the alternative offer.
2.13	Add the following to the clause: No claim will be entertained for faults in the bid price resulting from any discrepancies, omissions or indistinct figures.
2.13.2	Replace the contents of the clause with the following: Each bidder is required to return the complete set of documents as listed in the bid data with all the required information supplied and completed in all respects.
2.13.3	No copies of the bid offer are required.
2.13.4	Add the following to the clause: Only authorised signatories may sign the original and all copies of the bid offer where required in terms of 2.13.3.
2.13.5	The Employer's address for delivery of bid offers and identification details to be shown on each bid offer package are: Tender box location : Joe Morolong Local Municipality Physical address : D320 Cardington Road, Churchill Village, MOTHIBISTAD, 8474 Identification details : Panel of Contractors for the Borehole Refurbishment Services (3 Years Period) The name and address of the bid shall be entered on the back of the envelope.
2.13.6	A two-envelope procedure will not be followed.
2.13.9	Add the following to the clause: Accept that all conditions, which are printed or written upon any stationary used by the Bidder for the purpose of or in connection with the submission of a bid offer for this Contract, which are in conflict with the conditions laid down in this document

Clause	Addition or Variation to Standard Conditions of Tender
	shall be waived, renounced and abandoned.
2.14	Add the following to the clause: The Bidder is required to enter information in the following sections of the document: Section T2.2 : Returnable Schedules Section C1.1 : Form of Offer and Acceptance Section C1.2 : Contract Data (Part 2) Section C2.2 : Bill of Quantities The above sections shall be signed by the Bidder (and witnesses where required). Individual pages should only be initialled by the successful Bidder and by the witnesses after acceptance by the Employer of the Bid Offer. The Bidder shall complete and sign the Form of Offer (Section C1.1) prior to the submission of a Bid Offer. The Schedule of Deviations (if applicable) shall be signed by the successful Bidder after acceptance by the Employer of the Bid Offer. Accept that failure on the part of the Bidder to submit any one of the Returnable Documents listed in clause 2.23 within the period stipulated, shall be just cause for the Employer to consider the bid offer as being regarded as non-responsive. Accept that the Employer shall in the evaluation of bid offers take due account of the Bidder's past performance in the execution of similar engineering works of comparable magnitude, and the degree to which he possesses the necessary technical, financial and other resources to enable him to complete the Works successfully within the contract period. Satisfy the Employer and the Engineer as to his ability to perform and complete the Works timeously, safely and with satisfactory quality, and furnish details in section T2.2.2 of contracts of a similar nature and magnitude which they have successfully executed in the past. Accept that the Employer is restricted in accordance with clause 4.(4) of the Construction Regulations, 2003, to only appoint a contractor whom he is satisfied has the necessary competencies and resources to carry out the work safely. Accept that submitting inferior and inadequate information relating to health and safety (as required in clause 2.23) shall be regarded as justifiable and compelling reasons not to accept the Bid Offer of the Bidder scoring the highest number of bid evaluation points. **The Employer may appoint more than one Service Provider in this Programme.**

Clause	Addition or Variation to Standard Conditions of Tender
2.15.1	The closing time and location for the submission of bid offers are: Time : **Thursday, 18 July 2024 at 12h00** Location : Tender box situated in the foyer of Joe Morolong Local Municipality, D320 Cardington Road, Churchill Village
2.16.1	The bid offer validity period is 90 days.
2.16.1	Add the following to the clause: If the bid validity expires on a Saturday, Sunday or public holiday, the bid shall remain valid and open for acceptance until the closure of business on the following working day.
2.16.3	Add the following new clause: Accept that should the Bidder unilaterally withdraw his bid during this period, the Employer shall, without prejudice to any other rights he may have, be entitled to accept any less favourable bid for the Works from those received, or to call for fresh bids, or to otherwise arrange for execution of the Works, and the Bidder shall pay on demand any additional expense incurred by the Employer on account of the adoption of the said courses, as well as either the difference in cost between the bid withdrawn (as corrected in terms of clause 3.9 of the Conditions of Bid) and any less favourable bid accepted by the Employer, or the difference between the bid withdrawn (as corrected) and the cost of execution of the Works by the Employer as well as any other amounts the Employer may have to pay to have the Works completed.
2.18.1	Add the following to the clause: Accept that if requested, the Bidder shall within 7 days of the date upon which he is requested to do so, submit a full report from his banker as to his financial standing. The Employer may, in its discretion, and subject to the provisions of Section 4(1)(d) of the State Tender Board Act 86 of 1968, condone any failure to comply with the foregoing condition. Accept that the Employer or his agent, reserves the right to approach the Bidder's banker or guarantor(s) as indicated in the bid document, or the bankers of each of the individual members of any joint venture that is constituted for purposes of this Contract, with a view to ascertaining whether the required guarantee will be furnished, and for purposes of ascertaining the financial strength of the Bidder or of the individual member of such venture.

Clause	Addition or Variation to Standard Conditions of Tender
2.22	Return all retained bid documents prior to the closing time for the submission of Bid Offers.
2.23	The following certificates / information are to be provided with the bid offer: a. A valid Tax Clearance Certificate and SARS PIN issued by South Africa Revenue Services. In terms of Joint Ventures, original valid tax clearance certificates and SARS PIN must be submitted by each joint venture partner, b. An Accredited Certified Copy or Original BBBEE Certificate by SANAS or IRBA accreditation, c. Recent statement as proof of payment of municipal services (rates and taxes) for both company and all directors of the company. Not older than three months, d. Certified copy of Certificate of Incorporation (if bidder is a Company), e. Certified copy of Founding Statement (if bidder is a Closed Corporation), f. Certified copy of Partnership Agreement (if bidder is a Partnership), g. Proof of company address or lease agreement whichever applies obtainable from your local municipality, tribal authority or landlord, h. Proof of residence of all directors as they appear on the company registration certificate, obtainable from your local municipality or tribal authority, i. Certified copies of Identity Documents (ID's) of all directors/members, j. Joint Venture Agreement, bid specific (if bidder is a Joint Venture), k. Proof of Company Registration on Central Supplier Database (CSD), l. CIDB registration certificate in the grading designation stipulated in clause 2.1 above, m. Certified copy of a Workmen's Compensation Certificate, Act 4 of 2002, n. Proof of bank rating from bidder's bank. Grading of C or higher. **NOTE: No copies of certified copies will be accepted. All the above to be submitted with Bid. Courier or emailed forms will not be accepted**
3.1	Replace the contents of the clause with the following: Respond, to a request for clarification received in accordance with clause 2.8, within 7 days prior to the closing time stated in clause 2.15 and notify all bidders who drew procurement documents.
3.4	Bids will be opened immediately after the closing time for bids, at the same venue.
3.5	A two-envelope procedure will not be followed.

Clause	Addition or Variation to Standard Conditions of Tender
3.8.1	Add the following to the clause: Failure on the part of the Bidder to submit any one of the returnable documents or certificates listed in clause 2.23 within the period stipulated shall be just cause for the Employer to consider the bid offer as being non-responsive.
3.9.1	Replace the contents of the clause with the following: Check responsive bid offers for arithmetical errors, correcting them in the following manner: a) If a Schedule of Rates (or schedule of quantities or schedule of rates) applies and there is an error in the line item total resulting from the product of the unit rate and the quantity, the unit rate shall govern and the line item total shall be corrected. 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 bidder's addition of prices, the corrected total of the prices shall govern. c) Where there is a discrepancy between the amount indicated in the Bidders's bid offer and the corrected amount obtained after completing the above steps, the corrected amount shall govern.
3.11.1	Method 2 will be used to evaluate all responsive bid offers, where the value for W_1 is: 90 where the financial value inclusive of VAT of all responsive bids received have a value above R50 million; or 80 where the financial value inclusive of VAT of one or more responsive bid offers is equal to or above R30 000 and up to R50 million.
3.11.6	The financial offer will be scored in terms of formula 2 option 1 of the Standard Conditions of Bid (Section T1.5 of the document).
3.11.7	Add the following new clause:Scoring preference Up to (100-W_1) bid evaluation points (W_p) will be awarded to bidders who complete the preferencing schedule (bound into Section T2.2.15) and who are found to be eligible for the preference claimed. Refer to the Employer's Supply Chain Management Policy (Section C6.1).
3.12	Replace the contents of the clause with the following: If requested by any Bidder, submit for the Bidders' information the policies or

Clause	Addition or Variation to Standard Conditions of Tender
	certificates of insurance (or both) which the conditions of contract identified in the Contract Data require the Employer to provide.
3.13.1	A Bid offer will only be accepted on condition that such acceptance is not prohibited in terms of clause 44 of the Municipal Supply Chain Management Regulations published in terms of the Municipal Finance Management Act, 2003.
3.14	Replace the contents of the clause with the following: Notice of non-acceptance of bid will not be sent to individual unsuccessful bidders. Particulars of the accepted bid can be obtained from the Engineer.
3.18	The successful bidder/s shall receive one copy of the signed contract.

JOE MOROLONG LOCAL MUNICIPALITY

SECTION T1.5 –BID EVALUATION CRITERIA

1. Bid to be evaluated on Functionality (Preferential Procurement Regulations 2022)

This bid will be evaluated on functionality. The evaluation criteria for measuring functionality is objective. The minimum qualifying score for functionality on this bid is 70.00/100.00. A bid that fails to obtain the minimum qualifying score for functionality will be regarded as non-responsive. All bids that obtain the minimum qualifying score for functionality shall be evaluated further in terms of price and the preference point system. The evaluation criteria for measuring functionality and the points for each criteria and each sub-criterion are listed below:

No		Functionality criteria	Sub score weight	Main score weight	Reference
01		**PREVIOUS PROJECT EXPERIENCE** (NB: **Bidders to submit valid contact details of completed projects**. Non submission will result in loss of points)		40.00	
	01.01	Two (2) Similar project > R5 million completed successfully	10.00		
	01.02	Three (3) Similar projects > R5 million completed successfully	15.00		
	01.03	Two (2) Similar projects > R10 million completed successfully	20.00		
	01.04	Three (3) Similar projects > R10 million completed successfully	30.00		
	01.05	Four (4) Similar projects > R10 million completed successfully	40.00		
02		**FINANCIAL CAPACITY** (NB: **Bidders to submit proof**. Non submission will result in loss of points)		20.00	
	02.01	Bidder submitted only proof of banking details	5.00		
	02.02	Bank rating worse than a "C"	8.00		
	02.03	Bank rating of "C"	15.00		
	02.04	Bank rating better than a "C"	20.00		
03		**EXPERIENCE OF CONTRACT DIRECTOR / MANAGER** (NB: **Bidders to submit Curriculum Vitae and Certificates of Contract Director / Manager**. Non submission will result in loss of points)		10.00	
	03.01	Award 10 points for an acceptable CV content and positive feedback from references	10.00		
	03.02	Award 6 points for the qualification of the Contract Director / Manager with National Diploma or higher	6.00		

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

No		Functionality criteria	Sub score weight	Main score weight	Reference
	03.03	Award 4 points if the Contract Director / Manager was involved in similar projects, at least three, at Manager level	4.00		
04		**EXPERIENCE OF SITE AGENT** (NB: **Bidders to submit Curriculum Vitae and Certificates of Site Agent**. Non submission will result in loss of points)		10.00	
	04.01	Award 10 points for an acceptable CV content and positive feedback from references	10.00		
	04.02	Award 6 points for the qualification of the Site Agent with National Diploma or higher	6.00		
	04.03	Award 4 points if the Site Agent was involved in similar projects, at least three, at Site Agent level	4.00		
05		**EXPERIENCE OF FOREMAN** (NB: **Bidders to submit Curriculum Vitae and Certificates of Foreman**. Non submission will result in loss of points)		5.00	
	05.01	Foreman more than 2 years' relevant experience in building works and refurbishment	2.00		
	05.02	Foreman more than 5 years' relevant experience in building works and refurbishment	5.00		
06		**LOCATION OF BIDDER** (NB: **The registered address as per the company registration documents (CIPC - Company Intellectual Property Commission) will be used**. Only the single highest point allocation will apply to any bidder)		15.00	
	06.01	Bidder located outside Northern Cape Province, but still in RSA	5.00		
	06.02	Bidder located inside Northern Cape Province	10.00		
	06.03	Bidder located inside John Taolo Gaetsewe District Municipality area	15.00		
			TOTAL SCORE	**100.00**	

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

2. Preference points system for acquisition of goods or services (Preferential Procurement Regulations 2022)
The evaluation of this bid is based on the Preferential Procurement Point System stipulated in the bid document where a maximum of 80 points are scored for Price and a maximum 20 points for achieving the Specific Goals

Joe Morolong Local Municipality

Contract No: B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

STANDARD CONDITIONS OF TENDER

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These standard conditions of tender are identical to those published in Annex F of the Construction Industry Development Board's Board Notice 86 of 2010.

Joe Morolong Local Municipality

Contract No: B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

STANDARD CONDITIONS OF TENDER

1. GENERAL

1.1 Actions

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

1.1.2 The employer and the tenderer and all their agents andemployees involved in the tender process shall avoid conflicts of interestand 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.

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.

1.2 Tender Documents

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

1.3 Interpretation

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

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.

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

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

i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfil his or her duties impartially;

ii) an individual or 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.

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

1.4 Communication and employer's agent

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

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

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.

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.

2. TENDERER'S OBLIGATIONS

2.1 Eligibility

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

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.

2.2 Cost of tendering

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

2.3 Check documents

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

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.

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.

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.

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.

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.

2.9 Insurance

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

2.10 Pricing the tender offer

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.

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

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

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.

2.11 Alterations to documents

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

2.12 Alternative tender offers

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

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.

2.13 Submitting a tender offer

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.

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.

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.

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.

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.

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.

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.

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

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

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.

2.15 Closing time

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.

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

2.15.3 Tender submitted after closing on **Thursday, 18 July 2024 at 12h00** will not be considered.

2.16 Tender offer validity

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.

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.

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.

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

2.17 Clarification of tender offer after submission

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

Note: Sub-clause 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.

2.18 Provide other material

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.

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

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.

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.

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.

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 tenderdata.

2.23 Certificates

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

3. THE EMPLOYER'S UNDERTAKINGS

3.1 Respond to requests from the tenderer

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.

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

a) an individual firm, or a joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements;

b) the new partners to a joint venture were not prequalified in the first instance, either as individual firms or as another joint venture; or

c) in the opinion of the Employer, acceptance of the material change would compromise the outcome of the prequalification process.

3.2 Issue Addenda

If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date that tender documents are available until three 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.

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.

3.4 Opening of tender submissions

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.

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

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

3.5 Two-envelope system

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.

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.

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.

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.

3.8 Test for responsiveness

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.

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

a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,

b) significantly change the Employer's or the tenderer's risks and responsibilities under the contract, or

c) affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified.

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

3.9 Arithmetical errors, omissions and discrepancies

3.9.1 Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount in words shall govern.

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 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.

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.

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

a) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected.

b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.

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.

3.11 Evaluation of tender offers

3.11.1 General

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

3.11.2 Method 1: Financial offer

In the case of a financial offer:

a) Rank tender offers from the most favourable to the least favourable comparative offer.

b) Recommend the highest ranked tenderer for the award of the contract, unless there are compelling and justifiable reasons not to do so.

c) Re-rank all tenderers should there be compelling and justifiable reasons not to recommend the highest ranked tenderer and recommend the highest ranked tenderer, unless there are compelling and justifiable reasons not to do so and the process set out in this subclause is repeated.

3.11.3 Method 2: Financial offer and preference In the case of a financial offer and preferences:

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 3.11.7 and 3.11.8.

b) Calculate the total number of tender evaluation points (T_{EV}) in accordance with the following formula:

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

where: N_{FO} is the number of tender evaluation points awarded for the financial offer made in accordance with 3.11.7; and
N_p is the number of tender evaluation points awarded for preferences claimed in accordance with 3.11.8.

c) Rank tender offers from the highest number of tender evaluation points to the lowest.

d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.

e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points, and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this subclause is repeated

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 3.11.7 and 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 3.11.7; and
N_q is the number of tender evaluation points awarded for quality offered in accordance with 3.11.9.

c) Rank tender offers from the highest number of tender evaluation points to the lowest.

d) Recommend tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.

e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this subclause is repeated.

3.11.5 Method 4: Financial offer, quality and preferences

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

a) Score each tender in respect of the financial offer made, preference claimed, if any, and the quality offered in accordance with the provisions of 3.11.7 to 3.11.9, rejecting all tender offers that fail to score the minimum number of points for quality stated in thetender data, if any.

b) Calculate the total number of tender evaluation points (T_{EV}) in accordance with the following formula, unless otherwise stated in the Tender Data:

$T_{EV} = N_{FO}+N_p+ N_q$

where: N_{FO} is the number of tender evaluation points awarded for the financial offer made in accordance with 3.11.7;
N_p is the number of tender evaluation points awarded for preferences claimed in accordance with 3.11.8; and
N_q is the number of tender evaluation points awarded for quality offered in accordance with 3.11.9.

c) Rank tender offers from the highest number of tender evaluation points to the lowest.

d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.

e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this subclause is repeated.

3.11.6 Decimal places

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

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; and
W_1 is the maximum possible number of tender evaluation points awarded for the financial offer as stated in the tender data; and
A is the number calculated using the formula and option described in table 1 as stated in the tender data.

Table 1 – Formula for calculating the value of *A*[a]

Formula	Basis for comparison	Option 1[a]	Option 2[a]
1	Highest price or discount	A = $\left(1+\frac{(P-P_m)}{P_m}\right)$	$A = P/P_m$
2	Lowest price or percentage commission/fee	A = $\left(1-\frac{(P-P_m)}{P_m}\right)$	$A = P_m/P$
[a] P_m is the comparative offer of the most favourable comparative offer. P is the comparative offer of the tender offer under consideration.			

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.

3.11.9 Scoring quality

Score each of the criteria and subcriteria 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: So is the score for quality allocated to the submission under consideration; and
M_s is the maximum possible score for quality in respect of a submission; and
W_2 is the maximum possible number of tender evaluation points awarded for the quality as stated in the tender data

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.

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 technicalqualifications, 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.

3.14 Prepare contract documents

3.14.1 If necessary, revise documents that shall form part of the contract and that were issued by the employer as part of the tenderdocuments 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.

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

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.

3.16 Notice to unsuccessful tenderers

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.

3.16.2 The successful tenderer will be notified of the employer's acceptance of the tender, the other unsuccessful tenderer's can visit the website of Joe Morolong Local Municipality where the notification will be posted.

3.17 Provide copies of the contracts

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

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 offender, but withhold information which is not in the public interest to be divulged, which is considered toprejudice the legitimate commercial interests of tenderers or might prejudice fair competition between tenderers.

JOE MOROLONG LOCAL MUNICIPALITY

BID NO : B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

PORTION 1: THE BID

PART T2
Returnable Documents

BID NO: B239-2024

Section T2.1 LIST OF RETURNABLE DOCUMENTS

T2.1.1 Returnable Schedules required for bid evaluation purposes

Bidders must complete these forms and/ or submit them with the bid documents.

- Documentary proof of registration of the company
- Proof of shareholding documents
- Proof of Banking Details and Bank Grading of C or Higher. Certification from Bank to be submitted with Bid.
- BBBEE certificate if registered
- Proof of physical address
- Certificate of Authority for Signatory (also submit for joint ventures where applicable)
- Compulsory Enterprise Declaration Questionnaire
- Record of Addenda to Bid Documents
- Proposed Amendments and Qualifications
- Schedule of Plant and Equipment
- Schedule of the Bidder's Experience
- Previous Works carried out
- CIDB Registration Certificate
- Schedule for Labour Content

T2.1.2 Other Documents required for bid evaluation purposes

- Tax Clearance Certificate issued by South African Revenue Services and SARS PIN (**valid**)
- An Accredited certified copy or original BBBEE Certificate by SANAS or IRBA accredited
- Contract Participation Goal
- Schedule of Subcontractors
- Form of Bid
- Appendix to Form of Bid
- Financial References
- Preferencing Schedules
- Declaration of Interest
- Declaration of Bidders Past Supply Chain Management Practices
- Proof of company address or lease agreement whichever applies obtainable from your local municipality, tribal authority or landlord
- Proof of residence of all directors as they appear on the company registration certificate obtainable from your local municipality or tribal authority
- Recent statement as proof of payment of municipal services (rates and taxes) for both company and all directors of the company. Not older than three months
- Certified copies of identity documents (ID's) of all directors/members
- Joint Venture Agreement. Must be bid specific
- Proof of company registration on Central Supplier Database (CSD)

T2.1.3 Returnable Schedules that will be incorporated into the contract

- Record of Addenda to Bid Documents
- Preferencing Schedules
- BBBEE level of contribution
- CIDB Registration
- Tax Clearance Certificate issued by South African Revenue Services (**original valid**)
- Form of Bid

T2.1.4 Other Documents that will be incorporated into the contract

- Appendix to form of Bid
- General Conditions of Contract 2015

- Special Conditions of Contract as issued by the Department of Transport, Roads and Community Safety
- COLTO Standard Specifications for Road and Bridge Works for State Road Authorities (1998 Edition)
- Project Specifications as issued by the Employer's Agent
- Drawings as issued by Employer's Agent
- C1.1 Agreements
- C1.2 Contract Data
- C2.2 Bills of Quantities
- C6.1 Supply Chain Management Policy

Section T2.2 Returnable Schedules

BIDDERS ARE INSTRUCTED TO COMPLETE ALL THE SCHEDULES ATTACHED HEREIN. FAILURE TO COMPLETE ANY OF THE SCHEDULES WILL RESULT IN AUTOMATIC DISQUALIFICATION OF THE BID AS THE BID WILL BE CONSIDERED NOT RESPONSIVE. IF THE SCHEDULE IS NOT APPLICABLE BIDDERS ARE INSTRUCTED TO INDICATE NOT APPLICABLE AND SIGN THE SCHEDULE.

	Description	Compulsory	Tick
T2.2.1	Authority for Signatory	Yes	
T2.2.2	Certificate of Authority for Joint Venture	Yes	
T2.2.3	Schedule of Construction Plant	Yes	
T2.2.4	Schedule of Work Carried Out by Bidder	Yes	
T2.2.5	Present Commitments	Yes	
T2.2.6	Amendment or Qualifications by the Bidder	Yes	
T2.2.7	Schedule of Proposed Subcontractors	Yes	
T2.2.8	Estimated Monthly Expenditure	Yes	
T2.2.9	Details of Proposed Structured Training Programme	Yes	
T2.2.10	Labour Utilisation	Yes	
T2.2.11	Supervisory and Safety Personnel	Yes	
T2.2.12	Compliance with OHSA (Act 85 of 1993)	Yes	
T2.2.13	Record of Addenda to Bid Documents	Yes	
T2.2.14	Compulsory Enterprise Questionnaire	Yes	
T2.2.15	Preference points claim i.t.o. Preferential Procurement Regulations 2022 (MBD6.1)	Yes	
T2.2.16	Financial References	Yes	
T2.2.17	Rates for Special Materials	Yes	
T2.2.18	Declaration of interest (MBD4)	Yes	
T2.2.19	Declaration of Bidder's past Supply Chain Management Practices (MBD8)	Yes	
T2.2.20	Form of Bid	Yes	
T2.2.21	Construction Industry Development Board (CIDB) Registration	Yes	
T2.2.22	Company Registration	Yes	

Bidder…… Sign……

Date……

SECTION T2.2.1 : AUTHORITY FOR SIGNATORY

BID NO: B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

Signatories for companies shall confirm their authority by attaching to this form a copy of the relevant resolution of the board of directors, duly signed and dated.

An example is shown below:

"By resolution of the board of directors taken on ……

Mr ……

has been duly authorized to sign all documents in connection with the Bid for Bid No

B239-2024 and any contract which may arise there from on behalf of

(BLOCK CAPITALS) ……

……

……

SIGNED ON BEHALF OF THE COMPANY:……

IN HIS / HER CAPACITY AS: ……

DATE : ……...

SIGNATURE OF SIGNATORY……...

SECTION T2.2.2 : CERTIFICATE OF AUTHORITY FOR JOINT VENTURES

BID NO: B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

This Returnable Schedule is to be completed by joint ventures.

We, the undersigned, are submitting this bid offer in Joint Venture and hereby authorise:

FULL NAME

, authorised signatory of the company:

COMPANY

, acting in the capacity of lead partner, to sign all documents in connection with the bid offer and any contract resulting from it on our behalf.

NAME OF FIRM	ADDRESS	DULY AUTHORISED SIGNATORY
Lead partner		Signature:…… Name: ……... Designation: ……
		Signature:…… Name: ……... Designation: ……
		Signature:…… Name: ……... Designation: ……
		Signature:…… Name: ……... Designation: ……

The Joint Venture Agreement must be bid specific. All parties must be registered on the Central Supplier Database (CSD).

SECTION T2.2.3 : SCHEDULE OF CONSTRUCTION PLANT

BID NO: B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

The Bidder shall state below the Construction Plant that will be immediately available for this Contract, the Construction Plant that will become available by virtue of outstanding orders, and the Construction Plant that will be acquired or hired for the work should the company be awarded the Contract. **For short listed Bidders, visits will be made to verify available construction plant.**
Proof of ownership to be supplied with the bid.

(a) CONSTRUCTION PLANT IMMEDIATELY AVAILABLE

DESCRIPTION, SIZE, CAPACITY	NUMBER

(b) CONSTRUCTION PLANT ON ORDER THAT WILL BECOME AVAILABLE

Give details of arrangements made, with date of delivery. Proof to be provided with bid.

DESCRIPTION, SIZE, CAPACITY	NUMBER

(c) CONSTRUCTION PLANT THAT WILL BE ACQUIRED OR HIRED

Give details of delivery arrangements. Certification from Supplier that the plant will be available must be supplied with the bid.

DESCRIPTION, SIZE, CAPACITY	NUMBER

SIGNED ON BEHALF OF BIDDER……

DATE……

SECTION T2.2.4 : SCHEDULE OF WORK CARRIED OUT BY BIDDER

BID NO: B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

The Bidder shall list below the last ten civil engineering contracts of a similar nature awarded to him. This information is material to the award of the Contract.
Attach Completion Certificates for the projects listed.

EMPLOYER (NAME, TEL NO AND FAX NO)	CONSULTING ENGINEER (NAME, TEL NO AND FAX NO)	NATURE OF WORK	VALUE OF WORK	YEAR COM-PLETED

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

EMPLOYER (NAME, TEL NO AND FAX NO)	CONSULTING ENGINEER (NAME, TEL NO AND FAX NO)	NATURE OF WORK	VALUE OF WORK	YEAR COM-PLETED

SIGNED ON BEHALF OF BIDDER :……DATE……..

SECTION T2.2.5 : PRESENT COMMITMENTS

BID NO: B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

EMPLOYER (NAME, TEL NO AND FAX NO)	CONSULTING ENGINEER (NAME, TEL NO AND FAX NO)	NATURE OF WORK	VALUE OF WORK	YEAR COM-PLETED

SIGNED ON BEHALF OF BIDDER :……DATE……..

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SECTION T2.2.6 : AMENDMENTS OR QUALIFICATIONS BY THE BIDDER

BID NO: B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

PAGE	DESCRIPTION

SIGNED ON BEHALF OF BIDDER : .....

DATE.....

SECTION T2.2.7 : SCHEDULE OF PROPOSED SUBCONTRACTORS

BID NO: B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

The Bidder shall list below the subcontractors he wishes to employ for part(s) of the work.

Acceptance of this Bid shall not be construed as approval of any or all of the listed subcontractors. If any or all of the subcontractors are not approved subsequent to acceptance of the Bid, it shall in no way invalidate this Bid, and the tendered unit rates for the various items of work shall remain final and binding even if a subcontractor not listed below is approved by the Employer.

PART OR TYPE OF WORK	PROPOSED SUBCONTRACTOR	WORK RECENTLY EXECUTED BY SUBCONTRACTOR

SIGNED ON BEHALF OF TENDERER : .....

DATE.....

SECTION T2.2.8 : ESTIMATED MONTHLY EXPENDITURE

BID NO: B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

The Bidder shall state below the estimated value of work to be completed every month, based on his preliminary programme and his tendered unit rates.

The amounts for Contingencies and Contract Price Adjustment must not be included.*

MONTH	VALUE
1	R .....
2	R .....
3	R .....
4	R .....
5	R .....
6	R .....
7	R .....
8	R .....
9	R .....
10	R .....
11	R .....
12	R .....
13	R .....
Final Certificate etc	R…….. COMPLETION OF CONTRACT
TOTAL	R

SIGNED ON BEHALF OF BIDDER: .....

DATE……

SECTION T2.2.9 : DETAILS OF PROPOSED STRUCTURED TRAINING PROGRAMME

BID NO: B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

Health and Safety training

Training organization: .....

Address: .....

Tel number: .....

Contact person: .....

Number and details of trainers to be utilised:.....

Venue of training: .....

Course name				
Course duration				
Course venue				
Course content				

SIGNED ON BEHALF OF BIDDER : .....

DATE……

SECTION T2.2.10 : LABOUR UTILISATION

BID NO: B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

Labour Categories – Definitions

NOTE: These definitions serve as a guideline to complete the following table and will in no respect after the Project Specifications or Standardised Specifications.

1. General Foreman / Foreman

An employee who gives out work to and directly co-ordinates and supervises employees. His duties encompass any one or more of the following activities:

a) Supervision;

b) Maintaining discipline;

c) Ensuring safety on the workplace;

d) Being responsible to the Contractor for efficiency and production for his portion of the works and;

e) Performing skilled work, whether in an instructional capacity or otherwise.

2. Charge hand

An employee engaged in any one or more of the following activities;

a) Being primarily employed in a supervisory capacity, but who may also be doing the work of an artisan;

b) Giving out work to other employees under his control and supervision;

c) Ensuring safety on the workplace;

d) Maintaining discipline; and

e) Being directly responsible to a general foreman or foreman or the Contractor or the Contractor's representative for efficiency and production for his portion of the works.

3. Artisan

An employee who has successfully completed all prescribed courses at a practical institutional training centre for a particular trade and who has successfully completed the on-site period of training as prescribed and who has successfully passed the prescribed trade tests.

4. Team Leader

An employee engaged in any one or more of the following activities:

a) Being employed in a supervisory capacity, but who may also be doing the work of a skilled person;

b) Giving out work to other employees under his control and supervisory;

c) Maintaining discipline;

d) Being directly responsible to a Charge hand or a foreman or a general foreman or the employer's authorised representative for efficiency and production for his portion of the works.

5. Skilled Employee

An employee engaged in an ancillary trade or an assistant artisan.

6. Semi-Skilled Employee

An employee with any specified skills, an apprentice or a trainee-artisan.

7. Unskilled Employee

An employee engaged on any task or operation not specified above.

8. Imported Employee

Personnel permanently employed by Contractor.

9. Local Employee

Temporary workforce employed through Labour Desk

MAN DAYS

Categories	No. Of Man Days	
	Imported	Local
1. Contracts Manager		
2. Site Agent		
3. Foreman/Supervisors (specify type)		
3.1 _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _		
3.2 _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _		
3.3 _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _		
4. Safety Inspectors (specify type)		
4.1 _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _		
4.2 _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _		
5. Charge hands		
6. Artisans		
7. Operators/Drivers		
8. Clerks/Storeman		
9. Team Leader		
10. Skilled Labour		
11. Semi-skilled Labour		
12. Unskilled Labour		

SIGNED ON BEHALF OF BIDDER : .....

DATE……

SECTION T2.2.11 : SUPERVISORY AND SAFETY PERSONNEL

BID NO: B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

PREVIOUS EXPERIENCE ON WORKS OF A SIMILAR NATURE DURING THE LAST FIVE YEARS

Name	% Time on Site	Position (Current)	Service (Years)	Name of Project And year executed	Value of Works	Position Occupied
Contracts Manager						
Contractor's Site Agent						
Contractor's Foremen						
Constructional Health and Safety Officer						

Bidders shall indicate the percentage of working time these persons will be engaged on site. Bidders are required to provide copies of curriculum vitas of all supervisory and safety personnel.

SIGNED ON BEHALF OF TENDERER : .....

DATE.....

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SECTION T2.2.12 : COMPLIANCE WITH OHSA (ACT 85 OF 1993)

BID NO: B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

Bidders are required to satisfy the Employer and the engineer as to their ability and available resources to comply with the above by answering the following questions and providing the relevant information required below.

1. Is the Contractor familiar with the OHSA (ACT 85 OF 1993) and its Regulations? **YES / NO**

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

   _____

3. Does the Contractor have a health and safety policy? (If yes, provide a copy). **YES / NO**

   How is this policy communicated to all employees?

   _____

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

   _____

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

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

   _____

   _____

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

   _____

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

SIGNED ON BEHALF OF BIDDER : .....

DATE……

SECTION T2.2.13 : RECORD OF ADDENDA TO BID DOCUMENTS

BID NO: B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

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

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

Attach additional pages if more space is required.

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

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

Bidder .....

SECTION T2.2.14 : COMPULSORY ENTERPRISE QUESTIONNAIRE

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

Section 1: Name of enterprise: . . . . . .

Section 2: VAT registration number, if any: . . . . . .

Section 3: CIDB registration number, if any: . . . . . .

Section 4: Particulars of sole proprietors and partners in partnerships

Name*	Identity number*	Personal income tax number*

***** Complete only if sole proprietor or partnership and attach separate page if more than 3 partners

Section 5: Particulars of companies and close corporations

Company registration number . . . . . .

Close corporation number . . . . . .

Tax reference number . . . . . .

Section 6: Record of service of the state

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

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

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

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

*insert separate page if necessary

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

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

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

Name of spouse, child or parent	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		current	Within last 12 months

*insert separate page if necessary
The undersigned, who warrants that he/she is duly authorised to do so on behalf of the enterprise: i) authorizes the Employer to obtain a tax clearance certificate from the South African Revenue Services that my / our tax matters are in order; ii) confirms that the neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004; iii) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption; iv) confirms that I / we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest; iv) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signed ---------- Date ----------

Name ---------- Position ----------

Enterprise name ----------

SECTION T2.2.15 - PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022 (MBD6.1)

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

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

---

1. GENERAL CONDITIONS

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

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

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

1.3 Points for this bid shall be awarded for:

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

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

	POINTS
PRICE	**80**
SPECIFIC GOALS (20)	
• **B-BBEE status level of Contributor**	**10**
• **Locality**	**10**
Total points for Price and Specific Goals must not exceed	**100**

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

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

2. DEFINITIONS

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

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

(c) **"rand value"** means the total estimated value of a contract in Rand, calculated at the time of

bid invitation, and includes all applicable taxes;

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

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

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1 POINTS AWARDED FOR PRICE

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

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

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

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

Where

Ps = Points scored for price of bid under consideration

Pt = Price of bid under consideration

Pmin = Price of lowest acceptable bid

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

3.2.1 POINTS AWARDED FOR PRICE

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

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

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

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—

(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 bid 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 bidders: The bidder must indicate how they claim points for each preference point system.*)**

The specific goals allocated points in terms of this bid	Number of points allocated (90/10 system) (To be completed by the organ of state)	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (90/10 system) (To be completed by the bidder)	Number of points claimed (80/20 system) (To be completed by the bidder)
1. B-BBEE Status Level of Contributor	N/A	10	N/A	
2. Locality	N/A	10	N/A	

4.3 SPECIFIC GOALS CLAIM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022:

4.3.1 NOTE 1 – B-BBEE STATUS LEVEL OF CONTRIBUTOR

It must be noted that total 100% points are obtainable in relation to the requirements as mentioned on the table above. Proof of in the form of BBBEE/Certified Sworn Affidavit and ID Copy of business Owner (s) contained in the Central Suppliers Database (CSD) full report. Failure to submit evidential supporting documents (refer to Note: 1) is not an eliminating factor BUT zero point will be scored.

B-BBEE Status Level of Contributor	Number of Points for Preference (80/20)	Number of Points for Preference (90/10)
1	10	5
2	9	4.5
3	8	4
4	5	2.5
5	4	2
6	3	1.5
7	2	1
8	1	0.5
Non-compliant contributor	0	0

4.3.2 NOTE: 2 – LOCALITY

It must be noted that total 100% points are obtainable in relation to the requirements as mentioned on the table above. Proof of in the form of Updated record of Rates and Taxes, Lease Agreement, Affidavit and Tribal Authority Letter and Ownership Information contained in the Central Suppliers Database (CSD) full report. Failure to submit evidential supporting documents (refer to Note: 2) is not an eliminating factor BUT zero point will be scored

Category		Specific Goals Points
1.	Enterprises located within the Joe Morolong Local Municipality	10
2.	Enterprises located within the John Taolo Gaetsewe District Municipality	8
3.	Enterprises located within the Northern Cape Province	2

5. **DECLARATION WITH REGARD TO COMPANY/FIRM**

5.1 Name of company/firm:……

5.2 VAT registration number:……

5.3 Company registration number:……

5.4 TYPE OF COMPANY/ FIRM

Partnership/Joint Venture / Consortium
One person business/sole propriety
Close corporation
Company
(Pty) Limited
[Tick applicable box]

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 bidding process;

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

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

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

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

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

SECTION T2.2.16 : FINANCIAL REFERENCES

BID NO: B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

(a) FINANCIAL STATEMENTS

I/We agree, if required, to furnish an audited copy of the latest set of financial statements together with my/our Directors' and Auditors' report for consideration by the Employer.

(b) DETAILS OF COMPANY'S BANK

I/We hereby authorise the Employer/Engineer to approach all or any of the following banks for a reference:

DESCRIPTION OF BANK DETAIL	BANK DETAIL APPLICABLE TO COMPANY HEAD OFFICE	BANK DETAIL APPLICABLE TO THE SITE OF THE WORKS
Name of bank		
Branch name		
Branch code		
Street address		
Postal address		
Name of manager		
Telephone number	( )	( )
Fax number	( )	( )
Account number		
Bank Rating Attach Proof to Tender Document		

SIGNED AT ..... ON THIS ..... DAY OF ..... 200.....

SIGNED ON BEHALF OF BIDDER : .....

NAME OF SIGNATORY : .....

NAME OF COMPANY : .....

AS WITNESSES : 1 .....

2 .....

SECTION T2.2.17 : RATES FOR SPECIAL MATERIALS

BID NO: B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

NOT APPLICABLE TO THIS BID

SECTION T2.2.18 : DECLARATION OF INTEREST (MBD4)

1. No bid will be accepted from persons in the service of the state[1].

2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority.

3. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

3.1 Full Name of bidder or his or her representative:……..……..

3.2 Identity Number: ……..……...

3.3 Position occupied in the Company (director, trustee, .shareholder[2]):……..

3.4 Company Registration Number: ……..……

3.5 Tax Reference Number:……

3.6 VAT Registration Number: ……..……

3.7 The names of all directors / trustees / shareholders members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.

3.8 Are you presently in the service of the state? . **YES / NO**

3.8.1 If yes, furnish particulars.……..……

…..……..

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

3.9.1 If yes, furnish particulars.……..……...

…..……..

3.10 Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

3.10.1 If yes, furnish particulars.……..……

…..……..

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

3.11.1 If yes, furnish particulars.……..…….……

…..……..……..

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

3.12.1 If yes, furnish particulars.……..…….……

…..……..……..

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

3.13.1 If yes, furnish particulars.……..……..…….

…..……..……..

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

3.14.1 If yes, furnish particulars.……..……..…….

…..……..……..

[1]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.

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

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

Full Name	Identity Number	State Employee Number

CERTIFICATION

I, THE UNDERSIGNED

FULL 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
..... Capacity	..... Name of Bidder

SECTION T2.2.19 : DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES (MBD8)

1. This serves as a declaration 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.

2. 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. wilfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
   d. been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).

3 In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

Item	Question	Yes	No
3.1	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 Accounting Officer/Auth ority of the institution that imposed the restriction after the *audi alteram partem* rule was applied). **The Database of Restricted Suppliers now resides on the National Treasury's website (www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.**	Yes ☐	No ☐
3.1.1	If so, furnish particulars:		
3.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? **The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.**	Yes ☐	No ☐
3.2.1	If so, furnish particulars:		
3.3	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 ☐
3.3.1	If so, furnish particulars:		

Item	Question	Yes	No
3.4	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 ☐
3.4.1	If so, furnish particulars:		
3.5	Was any contract between the bidder and the municipality 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 ☐
3.5.1	If so, furnish particulars:		

CERTIFICATION

I, THE UNDERSIGNED

FULL NAME

CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM TO BE TRUE AND CORRECT.

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

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

SECTION T2.2.20 : FORM OF BID

BID NO: B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

1. I/We hereby bid to supply all or any of the supplies and/or to render all or any of the services described in the attached documents to the Joe Morolong Local Municipality on the terms and conditions and in accordance with the specifications stipulated in the bid documents (and which shall be taken as part of, and incorporated into, this bid) at the prices and on the terms regarding time for delivery and/or execution inserted therein.

2. I/We agree that -

   (a) the offer herein shall remain binding upon me/us and open for acceptance by the Joe Morolong Local Municipality during the validity period indicated and calculated from the closing hour and date of the bid;

   (b) This bid and its acceptance shall be subject to the terms and conditions contained in the General Conditions and Procedures in regard to Bid, Contract and Order and Preference Certificate with which I am/we are fully acquainted;

   (c) If I/we withdraw my/our bid within the period for which I/we have agreed that the bid shall remain open for acceptance, or fail to fulfil the contract when called upon to do so, the Joe Morolong Local Municipality may, without prejudice to its other rights, agree to the withdrawal of my/our bid or cancel the contract that may have been entered into between me/us and the Joe Morolong Local Municipality and I/we will then pay to the Joe Morolong Local Municipality any additional expense incurred by the Joe Morolong Local Municipality having either to accept any less favourable bid or, if fresh bids have to be invited, the additional expenditure incurred by the invitation of fresh bids and by the subsequent acceptance of any less favourable bid; the Joe Morolong Local Municipality shall also have the right to recover such additional expenditure by set-off against moneys which may be due or become due to me/us under this or any other bid or contract or against any guarantee or deposit that may have been furnished by me/us or on my/our behalf for the due fulfilment of this or any other bid or contract and pending the ascertainment of the amount of such additional expenditure to retain such moneys, guarantee or deposit as security for any loss the Joe Morolong Local Municipality may sustain by reason of my/our default;

   (d) If my/our bid is accepted the acceptance may be communicated to me/us by letter or order by ordinary post or registered post or by telegram and that SA Post Office Ltd shall be regarded as my/our agent, and delivery of such acceptance to SA Post Office Ltd shall be treated as delivery to me/us;

   (e) The law of the Republic of South Africa shall govern the contract created by the acceptance of my/our bid and that I/we choose domicilium citandi et executandi in the Republic at (full address of this place)

   ……..

   ……..

   ……..

3. I/We furthermore confirm that I/we have satisfied myself/ourselves as to the correctness and validity of my/our bid, that the price(s) and rate(s) quoted cover all the work/item(s) specified in the bid documents and that the price(s) and rate(s) cover all my/our obligations under a resulting contract and that I/we accept that any mistakes regarding price(s) and calculations will be at my/our risk.

4. I/We hereby accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me/us under this agreement as the Principal(s) liable for the due fulfilment of this contract.

5. I/We agree that any action arising from this contract may in all respects be instituted against me/us and I/we hereby undertake to satisfy fully any sentence or judgement which may be pronounced against me/us as a result of such action.

6. I/We declare that I/we have participation*/no participation* in the submission of any other offer for the supplies/services described in the attached documents. If in the affirmative, state name(s) of bidders(s) involved.

……

……

……

……

……

* Delete whichever is not applicable.

7. Are you duly authorised to sign the bid? * YES/NO

8. Has the Declaration of Interest (Section2.2.18) been duly completed and included with the other bid forms? * YES/NO

SIGNATURE (S) OF BIDDERS OR ASSIGNEE (S)	: ……
DATE	: ……

Capacity and particulars of the authority under which this bid is signed : ……

Name of tenderer : ……

Postal address (In block letters) ……

……

Telephone No.(s) (Toll free if applicable) : ……

Facsimile No. : ……

Bid No. : ……

Name of contact person (In block letters) : ……

I/we offer to construct, complete and maintain the Works, and remedy defects in the whole of the said Works in conformity with the Contract Documents for the sum of

.....
(Amount in Words)

.....

..... (R ..... *)
or such other sum as may be determined in accordance with the Contract. Our tendered

Goal Declaration is……%.

* Including VAT

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SECTION T2.2.21 : CONSTRUCTION INDUSTRY DEVELOPMENT BOARD (CIDB) REGISTRATION

BID NO: B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

The Bidder is to affix to this page :-

- Written proof of his registration with the CIDB as a Category 5CE or Higher or higher Contractor.

Note:-

1. Failure to affix such documentation as prescribed to this page shall result in this bid not being further considered for the award of the Contract.

2. All subcontractors are required to be registered in the relevant categories for them to participate in this contract

SECTION T2.2.22 : COMPANY REGISTRATION

BID NO: B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

The Bidder is to affix to this page :-

- Certified copy of Company/Close corporation registration documents from Registrar of Companies (eg. CK1, CM1, CM29 etc).
- Certified copy of Partnership Agreement (if bidder is a Partnership)
- Certified copy of deed of Trust (if a Trust is involved)
- Certified copies of Identity documents for all directors/members.
- Recent statement as proof of payment of municipal services (rates and taxes) for both company and all directors of the company. Not older than three months.
- Proof of company address or lease agreement whichever applies obtainable from your local municipality, tribal office or landlord.
- Proof of residence of all directors as they appear on the company registration certificate obtainable from your local municipality or tribal authority.
- Proof of company registration on the Central Supplier Database (CSD).

Note:-

1. Failure to affix such documentation as prescribed to this page shall result in this bid not being further considered for the award of the Contract.

JOE MOROLONG LOCAL MUNICIPALITY

BID NO : B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

PORTION 2: THE CONTRACT

PART C1
Agreements and Contract Data

C1 : AGREEMENTS AND CONTRACT DATA

C1.1 FORM OF OFFER AND ACCEPTANCE

A. OFFER

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

Contract No: **B239-2024** for the **Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)**

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

By the representative of the Bidder, deemed to be duly authorized, signing this part of this Form of Offer and Acceptance, the Bidder 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:

AS PER ATTACHED RATES PER THE BILL OF QUANTITIES (SECTION 2.2 / 2.3)

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 Bidder before the end of the period of validity stated in the Bid Data, whereupon the Bidder becomes the party named as the Contractor in the Conditions of Contract identified in the Contract Data.

Signature (of person authorized to sign the bid): _____

Name (of signatory in capitals): _____

Capacity (of signatory): _____

Name of Bidder (organisation): _____

Address: _____

_____

Telephone Number: _____ Fax Number: _____

Witness:

Signature: _____

Name (in capitals): _____

Date: _____

[Failure of a Bidder to sign this form will invalidate the bid]

B. ACCEPTANCE

By signing this part of the Form of Offer and Acceptance, the Employer identified below accepts the Bidder's Offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the Conditions of Contract as set out in the General and Special Conditions of Contract, and identified in the Contract Data. Acceptance of the Bidder's Offer shall form an agreement between the Employer and the Bidder upon the terms and conditions contained in this Agreement and in the Contract that is the subject of this Agreement.

The terms of the contract are contained in

Part C1 Agreement, and Contract Data, (which include this Agreement)
Part C2 Pricing Data, including the Bill of Quantities
Part C3 Scope of Work
Part C4 Site Information

and the schedules, forms, 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 Bid Data and any addenda thereto listed in the Bid Schedules as well as any changes to the terms of the Offer agreed by the Bidder and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Agreement. No amendments to or deviations from said documents are valid unless contained in this Schedule, which must be duly signed by the authorised representatives of both parties.

The Bidder shall deliver the Guarantee in terms of Clause 7 of the General Conditions of Contract 2004 within the period stated in the Contract Data, and he shall, immediately 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 other bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data, within 14 days of the date on which this Agreement comes into effect. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this Agreement.

Notwithstanding anything contained herein, this Agreement comes into effect on the date when the Bidder receives one fully completed original copy of this document, including the Schedule of Deviations (if any). Unless the Bidder (now Contractor) within five 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: _____

Name (in capitals): _____

Capacity: _____

Name of Employer (organization): _____

Address: _____

_____

Witness: **Signature**: _____ **Name**: _____

Date: _____

C. SCHEDULE OF DEVIATIONS

The extent of deviations from the bid documents issued by the Employer prior to the bid closing date is limited to those permitted in terms of the Bid Data and the Conditions of Bid.

A Bidder's covering letter will not necessarily be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid becomes the subject of agreements reached during the process of offer and acceptance; the outcome of such agreement shall be recorded here.

Any other matters arising from the process of offer and acceptance either as a confirmation, clarification or change to the bid documents and which it is agreed by the Parties becomes an obligation of the contract shall also be recorded here.

Any change or addition to the bid documents arising from the above agreements and recorded here shall also be incorporated into the final draft of the Contract.

1. Subject: _____
Details: _____
_____

2. Subject: _____
Details: _____
_____

3. Subject: _____
Details: _____
_____

4. Subject: _____
Details: _____
_____

By the duly authorised representatives signing this Schedule of Deviations, the Employer and the Bidder agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Bid Data and addenda thereto as listed in the Bid Schedules, as well as any confirmation, clarification or change to the terms of the offer agreed by the Bidder 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 bid documents and the receipt by

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

the Bidder of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this Agreement.

FOR THE BIDDER:

Signature: _____

Name: _____

Capacity: _____

Bidder (*Name and address of* _____

_____

Witness:

Signature: _____

Name: _____

Date: _____

FOR THE EMPLOYER:

Signature: _____

Name: _____

Capacity: _____

Employer (*Name and address of* _____

_____

Witness:

Signature: _____

Name: _____

Date: _____

Joe Morolong Local Municipality

BID NO: B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

CONTRACT DATA

GENERAL CONDITIONS OF CONTRACT

The General Conditions of Contract for Construction Works, 3rd Edition (2015), published by the South African Institution of Civil Engineering, is applicable to this Contract.

The General Conditions of Contract are not bound into this documents, but are available at the Contractor's expense from the Secretary of South African Institution of Civil Engineering, Private Bag X200, Halfway House, Midrand, 1685.

CONTRACT DATA

The terms of appendix 2 of the General Conditions of Contract for Construction Works, 3rd Edition (2015), The following Contract Data apply to this Contract.

The Contact Data consists of two parts. Part 1 contains information provided by the Employer, while Part 2 contains information to be provided by the Contractor.

Part 1: Data 1: Data provided by the Employer and amendments to the General Conditions of Contract

	CLAUSE	
Defects Liability Period	1.1.1.13	**12 months**
Name of Employer	1.1.1.15	**JOE MOROLONG LOCAL MUNICIPALITY**
Name of the Engineer	1.1.1.16	**BVi Consulting Engineers**
Contractor	1.1.1.9	Name: Address: Contact:
Contract sum	1.1.1.10	"Contract sum" means **the Price tendered by the Contractor and accepted by FUNDING AGENT: JOE MOROLONG LOCAL MUNICIPALITY and arithmetic errors has been corrected.**
Commencement	1.1.1.5	"Commencement Date" means the date of receipt by the Contractor of the following whichever date of receipt is the earliest: 1. Letter of appointment 2. Handover of site 3. Order to commence "Commencement of Work" will only take place once the following documentation was submitted to the office of the Consulting Engineer" 1. Letter of acceptance 2. **Original Construction Guarantee** 3. Letters of Appointment of Site Agent and OHS Person 4. Registration of Project at Department of Labour 5. **Original** Tax Clearance Certificate 6. Letter of Good standing – Workman's compensation 7. No commencement of work will be allowed unless there is a signed service level agreement between the main and sub-contractor with letter of appointment, with stated scope of word and budget allocated to the sub-contractor.
Address of Divisional Head :Roads Address of Employer	1.2.1.2	**Private Bag X117, Mothibistad, 8474** **Tel : (053) 773 9300** **Fax : (053) 773 9350**
Address of Engineer	1.2.1.2	**BVi Consulting Engineers** **P O Box 12441, Brandhof, 9324** **Tel : (051) 447 2137** **Fax : (051) 447 6056**

		E-mail : pieterr@bvifs.co.za
Year end break	1.6	If applicable during the duration of the construction period.
Workmen's Compensation	4.3	The Contractor shall also provide proof, that he has paid all contributions required in terms of the provision s of the Act.
Labour costs	4.3	The minimum statutory labour rates as set by the Department of Labour for the area where the site is located must be adhered to by the contractor or as per JOE MOROLONG LOCAL MUNICIPALITY
Cession Subcontractors and Material Suppliers	4.4	Add the following to the Clause: The Employer may, in order to avoid seizure by the owner, material supplier, subcontractor, at the Employer's option, pay to such owner, material supplier, subcontractor, the amount of any overdue installment, or any other sum payable under the agreement for purchase or services, and, in the event of so doing, any amount so paid by the Employer shall be a debt due from the Contractor to the Employer, and may be deducted by the Employer from any money due, or that may become due, to the Contractor in terms of the Contract, or may be recovered by the Employer form the Contractor by law. The Retention money due to the Contractor will not be payable to the contractor until all works are completed as per GCC 2015 and will only be paid to the Contractor once all cession suppliers and subcontractors and any other payments due has been paid in full.
Patent Rights	4.6	The following Sub clause is added to Clause 4.6: "The copyright in all documents, drawings and records related to the purpose and scope of the Works or related in any other manner to the Works, shall vest in the Employer and the Contractor shall not furnish any information in connection with the Works to anybody without the approval of the Employer."
Contractor's Employees	4.10 4.10	Add the following to Clause" The Contractor is to utilize labour where possible (Refer to Project Specifications) Add the following : "The Contractor is responsible for the behavior and performance of his own and his Sub-contractor's personnel and shall at his own cost, for the duration of the contract and maintenance period of Works, make the necessary arrangement to

		prevent unlawful or inappropriate behavior, and shall indemnify the Employer and the Engineer against any claims in connection with non-compliance with the act, for any loss or injury, or any other claim, for any action or neglect to act on the part of the Contractor's or his Sub-contractor's personnel."
Community Liaison Officer (CLO)	4.10 4.8.1.2	A CLO will be appointed by the Municipality for this contract and will be paid by the Municipality via the contractor on a monthly basis. In the event of different contractors appointed for different works, it is possible to appoint more than one CLO where it is deemed practical to do so by the employer. The CLO will be responsible for liaison between the contractor and community, with regard to labour, access, safety, etc.
Contractor's Employees	4.10 4.8.1.2	It is a specific condition of this Tender that the Contractor must employ all unskilled labour from the local communities and as many as possible skilled labour. All work specified in Schedule of Quantities and Project Specifications except excavations in hard rock and not applicable material must be done utilizing labour based construction methods. The requirement that all unskilled labour must be obtained from the local communities does not relieve the Contractor of any of his responsibilities under the clause. Add the following to the clause: "The contractor shall provide all the necessary on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the contract in a manner that does not compromise worker health and safety. The Contractor shall do nothing to dissuade targeted labour from participating in training programs and shall take reasonable steps to ensure that nominated labour is provided with two days formal training for every 30 days worked. Proof of compliance will be required from the Contractor prior to the submission of the final payment certificate." All Supervisory Staff of the contractor will be in possession of an associated NQF qualification or

		certification from an accredited training institution. (Minimum NQF level 2 for supervisory personnel i.e. team leaders and safety officer and Project Managers NQF 5). Where personnel are found not to be competent as per their qualification the personnel will be replaced on request of the Engineer/Project Manage.
Contractor's Obligations	4.12	Add to the clause: "All cost in complying with the provision of complying with Clause 4.8; 4.9; 4.10 and 4.11 shall be allowed for the rates tendered"
Contractor's superintendence	4.12	Add the following new clause: "The Contractor or his representative shall attend al site meeting with the Employer and/ or Engineer on the dates as nominated by the Engineer. The purpose of the meetings shall be to evaluate the progress of work and to discuss the matters relevant to the contract as required by the parties concerned. Unless specifically invited by the Engineer, the Sub-contractors of the Contractor may not attend these site meetings. Add the Following additional Clause 22.2: "The Tenderer is to fill in the names of the site agent and foreman in the space provided in T2.2.12
Commencement of works	5.3	Within 14 days of Commencement Date On the commencement of Work (Site handover) the Engineer shall deliver to the contractor 3 copies of the drawings. A copy of the signed contract document will be prepared after signing of the contract. Commencement of Work will only take place once the following documentation were submitted to the office of the Consulting Engineer: 1. Letter of Acceptance 2. Construction/Performance Guarantee 3. Health & Safety File 4. Letter of Appointment of OHS Rep or Officer 5. Letter of Good Standing Workman's Compensation 6. Prove of submission of Registration of Project at Department of Labour. 7. Signed service level agreement and appointment letter between the main contractor and the nominated sub-contractor.

Program of Works	5.6	**Within 14 days of Commencement Date**
Special Non-Working days	5.8.1	The period 16 December to 5th January inclusive, plus Good Friday, Human Rights Day, Freedom Day, Workers Day, Youth Day, Women's Day, Heritage Day and Easter Monday Holidays.
Extension of time for completion	5.12	In general, extension of time for the completion of Works will, in terms of the General conditions of Contract, be granted only for additional work and for circumstances which could not have been foreseen, and are beyond the control of the Contractor. No Extension of time for completion will be granted on accounts of normal inclement weather, but extension of time shall be determined for abnormal rainfall or wet conditions in accordance with the formula given below, separately for each calendar month or part thereof. It shall be calculated for the full period for the completion of the Contract including any extension thereof by the formula: $V = (Nw - Nn) + \frac{(Rw - Rn)}{X}$ The symbols shall have the following meanings: V = Extension of time in calendar days in respect of the calendar month under consideration. Nw = Actual number of days during the calendar month on which a rainfall of Ymm or more has been recorded. Nn = Average number of days, as derived from existing rainfall records provided in the table below on which a rainfall of Ymm or more has been recorded for the calendar month Rn = Average rainfall in mm for the calendar month, as derived from the rainfall records supplied in the table below. Rw = Actual Rainfall in mm for the calendar month under consideration. X = 10 Y = 10 If V is negative and its absolute value exceeds Nn, then V shall be taken as equal to minus Nn. The total extension of time shall be the algebraic sum of the monthly totals for the period of

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

		construction, but if the grand total is negative, the time for completion shall not be reduced due to abnormal low rainfall. Extension of time for part of a month shall be calculated using pro rata values of Nn and Rn. The factor (Nw – Nn) shall be considered to represent a fair allowance for variations form the average number of days during which rainfall exceeds Ymm. Rw - Rn The factor ---------- shall be considered to represent X a fair allowance for variations from the average in the number of days during which rainfall had not exceeded Ymm, but wet conditions had prevented or had disrupted work. The formula does not take into account flood damage which should be treated separately as far as extension of time is concerned. Accurate rain gauging shall be taken at a suitable point on Site. This information shall be regarded as the actual rainfall for this contract. The readings will be done by the Engineer and the Contractor may attend this readings and shall at his own expense take all necessary precautions to ensure that the rain gauge be interfered with by unauthorized persons.
Penalty for Delay	5.13	**R 5000.00 per calendar day**
Penalty for Non-Compliance		For any non-compliance of any item as stated in the tender document, with strong reference to Nominated Sub-Contracting, a total amount of **20%** of the total Construction cost per project will be applied upon approval by the Client.
Time for Completion	5.14	5 Months from commencement date
Completion, Approval Certificates and Defects Liability Period	5.14	Add the following to this Clause: “…..and a land surveyor’s certificate has been submitted certifying the presence and correctness of all erf and boundary pegs, where applicable”
Defects liability period	5.14.5.2	Add to Sub-Clause 5.14.5.2: “In the event of the Contractor not completing all the outstanding work within the period specified by the Engineer in terms of Clause 7.8, the Engineer shall have the right to extend the Period of Maintenance by the additional time taken by the Contractor to complete such outstanding work to the satisfaction of the Engineer. The full retention

		application to the Period of Maintenance shall apply such extension."
Guarantee Sum	6.2	**10% of total contract amount per project including Contingencies, VAT for the full construction period.**
Duration of Guarantee	6.2.3	Until issue of Certificate of Completion
Amendments to Schedule of Quantities	6.3	The extent of the Works that will be included under this contract will be determined by the availability of funds. Should the tender amounts exceed the available funds, the amounts will be adjusted and the extent of the works decreased. It is therefore emphasized that the tendered unit rates must be realistic and will not be affected should the quantities be adjusted. The rates under "Preliminary and General" will be adjusted proportionally with respect to tender and contract amounts. The tendered unit rates will remain applicable. The right to adjust the extent of the contract is, therefore, reserved by the Employer, but approval will be sought from the successful Tenderer before the contract is awarded.
Variations	6.4	The cost of any Variations ordered in writing by the Engineer and the applicable rates must be accepted by the Engineer in writing prior to execution, in order to be accepted. Special reference will be given to the tendered rates and the wide interpretation of the term "similar conditions" in determining rates.
Daywork percentages	6.5.1.1	As tendered in Schedule of Quantities
Scheduled of Quantities – Estimated quantities	6.7	Tenderer to note that all quantities supplied in Schedule of Quantities are estimated quantities and all items will be re-measured on site. Add to clause: "An allowance equal to 100% of the task rate or daily rate shall be paid by the contractor to workers who attend formal training.
Contract Price Adjustment	6.8.2	The following values for the different factors are to be used as per SAFCEC guidelines: X = 0.10 aLt (Labour) = 0.25 bPt (Plant) = 0.15 cMt (Material) = 0.55 dFt (Fuel) = 0.05 The different values for the calculation of the price

		adjustment factor shall be for the Northern Cape Province and the Diesel index shall be for the Kimberley area. The coefficient for fuel may need to be revised from time to time, as it has a tendency to increase out of proportion to the other factors in the CPA formula.
Contract Price Adjustment Schedule	6.8.2	**Applicable**
Site materials	6.8.3	**Not applicable to this contract**
Vesting of Materials	6.9	Add to Sub-Clause 6.9.1.2 "The Contractor shall where practicable before delivery and, in any event not later than 24 hours after delivery to the site, inform the Engineer of any materials which are not his sole property.
Valuation of material brought onto site	6.10	Add to Clause 6.10.1.5: "Payment for materials on site will only be considered for those materials which are physically on site. Any statement in which a claim for materials on site is included, shall have attached a declaration that the materials listed are owned by the Contractor, accompanied by proof of ownership(invoice; delivery note and receipt). The ownership of materials shall be transferred to the Employer in accordance with the pro forma "Transfer of Rights" bound in as an annexure to these Special Conditions of Contract"
Delivery of Contractors Statement	6.10.1	**Monthly**
Delivery of payment certificate by Engineer to Employer	6.10.1	**7 days**
Materials on Site	6.10.1.5	**80%**
Retention Money	6.10.3	**No interest will be paid on retention money.**
Retention Guarantee	6.10.3	**A Retention Guarantee is NOT Acceptable.**
Limit of retention money	6.10.3	**10%, Practical completion 5%**
After receipt by Engineer of Contractor's statement, Employer to pay Contractor within	6.10.4	**28 days**
Variation exceeding 15 per cent	6.11	***Change "15" per cent" whatever it appears in the margin or in the text to "60 per cent"**
Defects Liability Period	6.14.5.2	**12 Months**
Information in respect of plant	7.1	Add to Sub-Clause 7.1.1: a) Details in writing of all Constructional Plant and Temporary Works which is brought onto site by, or on behalf of, the Contractor for the purpose of the Works, and which is hired, leased or the subject of hire-

		purchase agreements, together with the names of the hirers, lessors or owners thereof, shall be supplied to the Engineer by the Contractor. b) The Employer may, in order to avoid seizure by the hirer, owner or lessor, at the Employer's option, pay to such hirer, owner or lessor he amount of any overdue installment, or any sum payable under the agreement for hire, lease of hire purchase, and, in the event of so doing, any amount so paid by the Employer, and may be deducted by the Employer form any money due, or that may become due, to the Contractor in terms of the Contract, or may be recovered by the Employer form the Contractor by law. c) Possession of all Constructional Plant and Temporary works provided by Sub-Contractors shall be deemed to vest in the Employer immediately the same is brought onto site, and shall mutatis mutandes be subject to the provisions of the Clause hereinbefore contained. The Contractor shall ensure that the foregoing provision will be inserted in all sub-contractors.
Contract Guarantee	7.1	Within 14 days of the Commencement Date Add the following to the Clause: "The contract may be awarded to a Subsidiary Company on the condition that the Holding Company shall in addition to the Surety specified, assume responsibility for the due and proper performance of the Works and the fulfillment of the contract, should the Subsidiary Company be unable to do so."
Quality of materials and workmanship	7.2	Add to Sub-Clause 7.2: "The source of supply of all materials including all stone, sand, gravel or soil or any other natural materials required in the execution of the Works shall be located by the Contractor. **No materials shall be used until it has been approved by the Engineer."**
Payment to labour-intensive component of the works	8.1	Payment for works identified in the Scope of Work as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the Scope of Work. Any non-payment for such works shall not relieve the Contractor in any way of his obligations whether in

		contract or in delict.
Insurances	8.6	Special consideration should be given to damage to existing infrastructure.
Other Insurances	8.6.1.2	Special Risk Insurance – SASRIA (coupon to be provided)
Limit of indemnity	8.6.1.3	R 5 000 000 per claim, claims unlimited (consultants only)
Cancellation of Contract	9.1	In addition if the contractor fails to adequately protect the existing works / infrastructure against damage and thereby unduly endanger the Works – the employer may cancel the contract and recover damages and losses.
Cancellation of the Contract by the Employer	9.2.1	14 days
Dispute Resolution	10	Adjudication, Arbitration and the Court will be acceptable dispute resolution mechanisms.
Time within which Works to be commenced	10.1	14 Days after the Commencement Date.
Preferred method for determination of disputes	10.7	Arbitration
Access to the site	11	Add the following: The Contractor shall as far as possible, confine his operations to the limits of the areas made available to him by the Engineer, but if the land is insufficient for the needs of the work, the Contractor shall make his own arrangements with the owners of tenants concerned for whatever additional land he may require and pay all rent and other charges in connection therewith. The Contractor shall be responsible for all damages and shall indemnify the Employer against all claims which may arise.
Programme to be furnished within	12.2	14 Days after the issuing of the Letter of Acceptance.

Part 2 DATA PROVIDED BY THE CONTRACTOR

Clause	Contract Data		
1.2.2	The address of the Contractor is:		
1.8	The name of the Contractor is:		
46.3	The variation in cost of special materials is:		
	Special Material	Method	Price for Base Month

BID NO: B239-2024

FOR

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

AGREEMENT IN TERMS OF OCCUPATIONAL HEALTH AND SAFETY ACT

AGREEMENT IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO 85 OF 1993)

THIS AGREEMENT made at .....

on this the ..... day of ..... in the year ……

between JOE MOROLONG LOCAL MUNICIPALITY (hereinafter called "the Employer") of the one part, herein represented by .....

in his capacity as .....

and delegate of the Employer in terms of the Employer's standard powers of delegation pursuant to the provisions of Act No 7 of 1998,

and .....

(hereinafter called "the Mandatary") of the other part, herein represented by .....

.....

in his capacity as .....

and being duly authorised by virtue of a resolution appended hereto as Annexure A;

WHEREAS the Employer requires certain works be constructed, viz Panel of Contractors for the Borehole Refurbishment Services (3 Years Period).
.....

and has accepted a Bid by the Mandatary for the construction, completion and maintenance of such Works and whereas the Employer and the Mandatary have agreed to certain arrangements and procedures to be followed in order to ensure compliance by the Mandatary with the provisions of the Occupational Health and Safety Act, 1993 (Act 85 of 1993).

NOW THEREFORE THIS AGREEMENT WITNESSETH AS FOLLOWS:

1 The Mandatary shall execute the work in accordance with the Contract Documents pertaining to this Contract.

2 This Agreement shall hold good from its Commencement Date, which shall be the date of a written notice from the Employer or engineer requiring him to commence the execution of the Works, to either -

(a) The date of the Final Certificate issued in terms of Clause 55 of the Committee of Land Transport Officials General Conditions of Contract 1998 (hereinafter referred to as "the GCC"), as contained in Volume 1 of the Contract Documents pertaining to this Contract, or

(b) The date of termination of the Contract in terms of Clauses 10.2 & 10.3 ofthe GCC 2010.

3 The Mandatary declares himself to be conversant with the following:

(a) All the requirements, regulations and standards of the Occupational Health and Safety Act (Act 85 of 1993), hereinafter referred to as "The Act", together with its amendments and with special reference to the following Sections of The Act:

(i) Section 8 : General duties of Employers to their employees

(ii) Section 9 : General duties of Employers and self-employed persons to persons other than employees

(iii) Section 37 : Acts or omissions by employees or mandataries

(iv) Sub-section 37(2) relating to the purpose and meaning of this Agreement

(b) The procedures and safety rules of the Employer as pertaining to the Mandatary and to all his subcontractors.

4 In addition to the requirements of Clause 36 of the GCC (as amended by Special Condition of Contract contained in Volume 3 of the Contract Documents pertaining to this Contract) and all relevant requirements of the above-mentioned Volume 3, the Mandatary agrees to execute all the Works forming part of this Contract and to operate and utilize all machinery, Plant and equipment in accordance with the Act.

5 The Mandatary is responsible for the compliance with the Act by all his subcontractors, whether or not selected and/or approved by the Employer.

6. The Mandatary warrants that all his and his subcontractors workmen are covered in terms of the Compensation for Occupational Injuries and Diseases Act, 1993 (Act No 130 of 1993) which cover shall remain in force whilst any such workmen are present on site. A letter of good standing from the Compensation Commissioner to this effect must be produced to the Employer upon signature of the agreement.

7. The Mandatary undertakes to ensure that he and/or subcontractors and/or their respective employers will at all times comply with the following conditions:

a) The Mandatary shall assume the responsibility in terms of Section 16.1 of the Act. The Mandatary shall not delegate any duty in terms of Section 16.2 of this Act without the prior written approval of the Employer. If the Mandatary obtains such approval and delegates any duty in terms of section 16.2 a copy of such written delegation shall immediately be forwarded to the Employer.

b) All incidents referred to in the Act shall be reported by the Mandatary to the Department of Labour as well as to the Employer. The Employer will further be provided with copies of all written documentation relating to any incident.

c) The Employer hereby obtains an interest in the issue of any formal enquiry conducted in terms of section 32 of the Act into any incident involving the Mandatary and/or his employees and/or his subcontractors.

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

SIGNED FOR AND ON BEHALF OF THE EMPLOYER : .....

Witness ..... Witness .....

(Name) ..... (Name) .....
(Print) (Print)

SIGNED FOR AND ON BEHALF OF THE MANDATARY : .....

Witness ..... Witness .....

(Name) ..... (Name) . .....
(Print) (Print)

ANNEXURE A

CERTIFICATE OF AUTHORITY FOR SIGNATORY TO AGREEMENT IN TERMS OF OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO 85 OF 1993)

The signatory for the company that is the Contractor in terms of the above-mentioned Contract and the Mandatary in terms of the above-mentioned Act shall confirm his or her authority thereto by attaching to this page a duly signed and dated copy of the relevant resolution of the board of directors.

An example is given below:

"By resolution of the board of directors passed at a meeting held on ..... 20.....,

Mr/Ms..... whose signature appears below, has been duly authorised to sign the AGREEMENT IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT 85 OF 1993) on behalf of .....

.....

SIGNED ON BEHALF OF THE COMPANY : .....

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

DATE : .....

SIGNATURE OF SIGNATORY : .....

WITNESS : ..... WITNESS : .....

NAME (in capitals): ..... NAME :.....

C1.4 FORM OF GUARANTEE

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

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means: …….

Physical Address: ……

"Employer" means: ……..

"Contractor" means: .....……

"Engineer" means: .....……

"Works" means: ....…….

"Site" means: ..……

"Contract" means: The Agreement made in terms of the Form of 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: R .....…….

"Guaranteed Sum" means: The maximum aggregate amount of R ....……..

Amount in words: .....……..

"Expiry Date" means: .....……..

CONTRACT DETAILS

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

PERFORMANCE GUARANTEE

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

4. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:
   4.1. A copy of a first written demand issued by the Employer to the Contractor stating that the payment of a sum certified by Engineer in an Interim Payment Certificate has not been made of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon Guarantor to make payment in terms 4.2;
   4.2. A first written demand issued by the employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.1 and the sum certified has not still been paid.
   4.3. A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.
5. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:
   5.1. the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 5; or
   5.2. a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called upon in terms of 5; and
   5.3. the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provision/final sequestration and/or the provisional liquidation court order.
6. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.
7. Where the Guarantor has made payment in terms of 5, the Employer shall upon 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.
8. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand tot the Guarantor.
9. Payment by the Guarantor in terms of 4 or 5 will only be made against the return of the original Performance Guarantee by the Employer.
10. The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.
11. The Guarantor chooses the physical address as stated above for the service of all notice for all purposes in connection herewith.
12. This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.

13. This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.
14. Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Acts 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)……

Part C1.5 CIDB ADJUDICATOR'S AGREEMENT

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 Contract No.....

(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:

1. The rights and obligations of the Adjudicator and the Parties shall be as set out in the Procedure.
2. The Adjudicator hereby accepts the appointment and agrees to conduct the adjudication in accordance with the Procedure.
3. 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.

4. 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.
5. 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: .....

JOE MOROLONG LOCAL MUNICIPALITY

BID NO : B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

PORTION 2: THE CONTRACT

PART C2
Pricing Data

Part C2.1: Pricing Instructions

CONTENTS **SECTION**

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2. Pay Items
3. Quantities
4. Rates

BILL OF QUANTITIES Section C2.2

SCHEDULE 1 : GENERAL
SCHEDULE 2 : PIPE WORK
SCHEDULE 3 : ELEVATED TANKS
SCHEDULE 4 : BOREHOLE TESTING
SCHEDULE 5 : DIESEL ENGINES AND GENERATORS
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SCHEDULE 7 : ELECTRICAL WORKS
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SCHEDULE 9 : BUILDING WORKS
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SUMMARY OF SCHEDULES Section C2.3

PRICING INSTRUCTIONS

1. GENERAL

These pricing instructions provide the Tenderer with guidelines and requirements with regard to the completion of the Bill of Quantities. These pricing instructions also describe the criteria and assumptions which will be assumed in the Contract to have been taken into account by the Tenderer when developing his prices.

The Bill of Quantities shall be read with all the documents which form part of this Contract.

The following words have the meaning hereby assigned to them:

Unit : The Unit of measurement for each item of work in terms of the Scope of Work.

Quantity : The number of units for each item.

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

Amount : The product of the quantity and the rate tendered for an item.

Lump sum : An amount tendered for an item, the extend of which is described in the (L.Sum) Pricing Instructions, Bill of Quantities or the Scope of Work but the quantity of work of which is not measured in any units.

2. PAY ITEMS

The method of measurement published by the South African Bureau of Standards in Clause 8 of the Standardised Specifications for Civil Engineering Construction (SANS 1200) is applicable, subject to the variations and amendments contained in section C3.4.2.

Descriptions in the Bill of Quantities are abbreviated and comply generally with those in the Standard Specifications. The measurement and payment clause of each Standard Specification, read together with the relevant clauses of the 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 Standard Specification, or the Scope of Work, conflict with the terms of the Bill of Quantities, the requirements of the Standard Specification or Scope of Work, as applicable, shall prevail.

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

mm	=	millimetre
h	=	hour
m	=	metre
kg	=	kilogram
km	=	kilometre
t	=	ton (1000kg)
m²	=	square metre
No.	=	number
m².pass	=	square metre pass
sum	=	lump sum
ha	=	hectare
MN	=	meganewton
m³	=	cubic metre
MN.m	=	meganewton-metre
m³.km	=	cubic metre-kilometre
PC sum	=	Prime Cost Sum
l	=	litre
Prov sum	=	Provisional sum
kl	=	kilolitre
%	=	per cent
MPa	=	megapascal
kW	=	kilowatt
Pa	=	kilopascal
wt	=	wall thickness
w/day	=	workday
dia	=	diameter
BH	=	borehole
R/only	=	rate only

3. QUANTITIES

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

3.2 The quantities set out in the Bill of Quantities are the estimated quantities of the Works, and do not necessarily represent the actual amount of work to be done. The quantities certified for payment, and not the quantities given in the Bill of Quantities, shall be used for determining payments to the Contractor. The Contract Price for the completed contract shall be computed from the actual quantities of work done, valued at the relevant unit rates and prices.

4. RATES

4.1 The prices and rates to be inserted in the Bill of Quantities are to be full inclusive prices for the work described under the specific item. Such 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. Reasonable prices shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out.

4.2 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 or where a word or phrase such as “included” or “provided elsewhere” will be accepted as a rate of nil (R0,00) having been entered against such items and covered by the other prices or rates in the schedule.

Any work executed to which such a pay item applies, shall be measured under the appropriate items in the Bill of Quantities and

valued at a rate of nil (R0,00). The rate of nil shall be valid irrespective of any change in the quantities during the execution of the Contract.

4.3 The Tenderer shall fill in a rate against all items where the words “rate only” appears in the amount column. The intention is that, although no work is foreseen under such item and no quantities are consequently given in the quantity column, the tendered rate shall apply should work under this item be actually required.

4.4 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.

4.5 The Tenderer shall not group together a number of items and tender one rate for such group of items.

4.6 All rates and sums of money quoted in the Bill of Quantities shall be in Rands and whole cents. Fractions of a cent shall be discarded.

4.7 All prices and rates entered in the Bill of Quantities must be excluding Value Added Tax (VAT). VAT will be added last on the summary page of the Bill of Quantities.

4.8 Should excessively high unit prices be tendered, such prices may be of sufficient importance to warrant rejection of a tender by the Employer.

4.9 Where the Contractor is required to furnish detailed drawings and designs or other information in terms of the Contract Documents, all costs thereof shall be deemed to have been provided for and included in the unit rates and sum amounts tendered for the items scheduled in the Bill of Quantities, and separate additional payments will not be made.

SCHEDULE 1 : GENERAL

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
	SABS 1200A	**SCHEDULE 1 : GENERAL**				
1.1	8.3	**FIXED-CHARGE ITEMS**				
1.1.1	8.3.1	Contractual Requirements				
		Contractual requirements including all sureties and insurance	Sum	1		
1.1.2	8.3.2 PSA 16.1	First Establishment of Facilities on the Site at the Depot or Contractor's Main Camp for the Contract :				
	8.3.2.1	a) Facilities for Engineer (SABS 1200				
		i) Nameboard (Two required) (PSAB1)	No.	1		
		ii) Furnished Office (PSAB2)	Sum	1		
		iii) Cellular telephone and combination fax telephone (One each required)	Sum	1		
		iv) Survey Equipment (PSAB6)	Sum	1		
		v) Carport (PSAB7)	Sum	1		
		vi) Personal Computer and	Sum	1		
		vii) Digital Camera (PSAB8)	Sum	1		
		viii) Survey Assistants (PSAB5)	Sum	1		
	8.3.2.2	b) Facilities for Contractor				
		i) Offices and storage sheds	Sum	1		
		ii) Workshops	Sum	1		
		iii) Living accommodation	Sum	1		
		iv) Ablution and latrine facilities	Sum	1		
		v) Tools and equipment	Sum	1		
		vi) Water, Electric power and Communications	Sum	1		
		vii) Dealing with water	Sum	1		
		viii) Access	Sum	1		
		ix) Plant	Sum	1		
1.1.3	8.3.3	Other fixed charge obligations				
		All other fixed charge and obligations	Sum	1		
TOTAL CARRIED FORWARD						

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

SCHEDULE 1 : GENERAL

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT	R
BROUGHT FORWARD							
1.1.4	8.3.4 PSA16.2	Removal of contractor's site establishment on completion of contract or interim de-establishment (only on written instruction)	Sum	1			
	8.3.4 PSA16.4	Additional establishment cost to the contractor when re-establishing (Only on written instruction)	Sum	1			
1.1.5	PSA16.3	Site movements as per clause PSA 16.3					
		a) To sites 10 km or less in distance for the following:					
		i) As per instruction less than R 50 000 in construction value (Excluding Schedule 1)	No.	1			
		ii) As per instruction > R 50 000 but < R 100 000 in construction value (Excluding Schedule 1)	No.	1			
		iii) As per instruction > R 100 000 but < R500 000 in construction value (Excluding Schedule 1)	No.	1			
		iv) As per instruction > R 500 000 but < R1 000 000 in construction value (Excluding Schedule 1)	No.	1			
		v) As per instruction > R1 000 000 in construction value	No.	1			
		b) Extra over Item 1.1.5(a) for sites in					
		i) As per instruction less than R 50 000 in construction value (Excluding Schedule 1)	km	1			
		ii) As per instruction > R 50 000 but < R 100 000 in construction value (Excluding Schedule 1)	km	1			
		iii) As per instruction > R 100 000 but < R 500 000 in construction value (Excluding Schedule 1)	km	1			
		iv) As per instruction > R 500 000 but < R1 000 000 in construction value (Excluding Schedule 1)	km	1			
		v) As per instruction > R1 000 000 in construction value	km	1			
TOTAL CARRIED FORWARD							

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 1 : GENERAL

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
1.2	8.4 PSA 16.5	**TIME-RELATED ITEMS (For Programme)**				
1.2.1	8.4.1	Contractual Requirements	month	1		
1.2.2	8.4.2	Operate and maintain facilities on the Site:				
	8.4.2.1	a) Facilities for Engineer for the duration of Construction (SABS1200AB)				
		i) Nameboards (PSAB1)	month	1		
		ii) Furnished Office (PSAB2)	month	1		
		iii) Telephone (PSAB3)	month	1		
		iv) Survey Equipment (PSAB6)	month	1		
		v) Carport (PSAB7)	month	1		
		vi) Personal Computer (PSAB4)	month	1		
		vii) Digital Camera (PSAB8)	month	1		
		viii) Survey Assistants (PSAB5)	month	1		
	8.4.2.2 PS7	b) Facilities for Contractor for duration of construction, except where [illegible] stated				
		i) Offices and storage sheds	month	1		
		ii) Workshops	month	1		
		iii) Living accommodation	month	1		
		iv) Ablution and latrine facilities	month	1		
		v) Tools and equipment	month	1		
		vi) Water supplies, electric power and	month	1		
		vii) Dealing with water	month	1		
		viii) Access	month	1		
		ix) Plant	month	1		
1.2.3	8.4.3	Supervision for duration of construction	month	1		
TOTAL CARRIED FORWARD						

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

SCHEDULE 1 : GENERAL

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						-
1.2.4	8.4.4	Company and head office overhead costs for the duration of the contract	month	1		
1.2.5	8.4.5	Other time related obligations. All other time related obligations, including custody of drawings and programme to be furnished.	month	1		
1.3	PSA11	**SUMS STATED PROVISIONALLY BY THE ENGINEER**				
1.3.1	PSA11.3	Materials for Dayworks	P.Sum	1	50 000.00	50 000.00
1.3.2		Overheads, charges and profit on Item 1.3.1	%			
1.3.3	PSA11.4	Royalties for Borrow Materials	P.Sum	1	60 000.00	60 000.00
1.3.4		Overheads, charges and profit on Item 1.3.3	%	60 000.00		
1.4	PSA12	**PRIME COST ITEMS**				
1.4.1	PSA12.3	Artisan and Skills Training	P.Sum	1	100 000.00	100 000.00
1.4.2		Overheads, Charges and Profit on Item 1.4.11	%	100 000.00		
1.4.3	PSA12.1	Acceptance Control Testing of Earthworks	P.Sum	1	6 000.00	6 000.00
1.4.4		Overheads, Charges and Profit on Item 1.4.13	%	60 000.00		
1.4.5	PSA12.4	Telephone calls and Rental for the Engineers Representative	P.Sum	1	1 250.00	1 250.00
1.4.6		Overheads, Charges and Profit on Item 1.4.15	%	1 250.00		
1.4.7	PSA12.5	Payments to ESKOM in respect of electrical connection fees for borehole equipment	P.Sum	1	40 000.00	40 000.00
1.4.8		Overheads, Charges and Profit on Item 1.4.17	%	40 000.00		
1.4.9	PSA12.6	Specialist Contractors	P.Sum	1	15 000.00	15 000.00
1.4.10		Overheads, Charges and Profit on Item 1.4.19	%	15 000.00		
TOTAL CARRIED FORWARD						

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

SCHEDULE 1 : GENERAL

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
1.4.11	PSA12.2	Payments made to Labour Desk Officers	P.Sum	1	40 000.00	40 000.00
1.4.12		Overheads, Charges and Profit on Item 1.4.111	%	40 000.00		
1.6		**OPERATION AND MAINTANCE**				
1.6.1		Operation and Maintance costs	P.sum	1	500 000.00	500 000.00
		Overhead, markup, charges and profit on Item 1.6.1	%	500 000.00		
TOTAL CARRIED FORWARD TO SUMMARY						

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

SCHEDULE 2 : PIPEWORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
		SCHEDULE 2 : PIPEWORK				
	SABS 1200DB	**EARTHWORKS : PIPE TRENCHES**				
		PRESSURE TESTING				
3.1.1		Pressure testing for dedicated pumping mains	m	1		
3.1.2		**SITE CLEARANCE**				
3.1.2.1	8.3.1(a)	Clear 3m wide vegetation and trees of girth up to 1m	m	1		
3.1.2.2	8.3.1(b)	Remove trees over 1 m and up to 2 m girth	No.	1		
3.2	PSDB12	**EXCAVATION - "MECHANICAL"**				
3.2.1		Excavate in all materials for trenches for pipes with a diameter between 20 mm and 200 mm, backfill compact and dispose of surplus/unsuitable material				
		Note : See different length categories				
3.2.1.1		Up to 1,5m in depth for the following:				
		a.) Total pipe line length (as per instruction) less than 200m	m³	1		
		b.) Total pipe line length (as per instruction) > 200m but < 500m	m³	1		
		c.) Total pipe line length (as per instruction) > 500m but < 2000m	m³	1		
		d.) Total pipe line length (as per instruction) > 2000m	m³	1		
3.2.1.2	8.3.2(b)	Extra-over item 3.2.1.1 incl. for excavation (provisional) in :				
		a) Intermediate material	m³	1		
		b) Hard rock material	m³	1		
3.2.1.3		Extra over Item 3.2.1.1				
		a) Backfill and compact by means of labour intensive construction	m³	1		
		ent beds, in layers of 200mm compacted to 93% mod AASHTO				
		b) Disposal of surplus material by	m³	1		
		means of labour intensive ent ion, material s, within 2km from the source of spoil utilising				
3.2.1.4	8.3.2(c)	Excavate unsuitable material from trench bottom and dispose thereof within the freehaul distance (Provisional)	m³	1		
3.2.2		EXCAVATION ANCILLARIES - "MECHANICAL"				
TOTAL CARRIED FORWARD						

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

SCHEDULE 2 : PIPEWORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						-
3.2.2.1	8.3.3.1(a)	Imported backfill materials from designated borrow pits (Only if approved by Engineer)	m³	1		
3.2.2.2	8.3.3.2	Opening up and closing down of designated borrow pit	No.	1		
3.2.2.3	8.3.3.3	Compaction in road reserves	m³	1		
3.2.2.4	8.3.3.4	Overhaul :				
		a) Short haul	m³	1		
		b) Truck haul	m³/km	1		
3.2.3		FINISHING - "MECHANICAL"				
	8.3.6.1	Reinstate road surfaces complete with:				
		a) Gravel	m²	1		
		b) 30mm premix	m²	1		
	SABS 1200LB	BEDDING (PIPES)				
3.2.4		PROVISION OF BEDDING "MECHANICAL"				
3.2.4.1	8.2.1	Provision of bedding material from trench excavations				
		a) Selected granular material	m³	1		
		b) Selected fill material	m³	1		
3.2.4.2		Provision of bedding material by importation from other necessary excavations (freehaul within the village boundaries)				
		a) Selected granular material	m³	1		
		b) Selected fill material	m³	1		
3.2.4.3		Provision of bedding material by importation from borrow pits (freehaul within the village boundaries)				
		a) Selected granular material	m³	1		
		b) Selected fill material	m³	1		
3.2.4.4	8.2.3	Concrete bedding	m³	1		
3.2.4.5	8.2.4	Encasing of pipes in Class 19/20 concrete	m³	1		
3.2.5.6	8.2.5	Overhaul of material for bedding cradle and selected fill blanket	m³km	1		
3.3	PSDB12	**EXCAVATION - "LABOUR BASED"**				
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

JOE MOROLONG LOCAL MUNICIPALITY

SCHEDULE 2 : PIPEWORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						-
3.3.1		Excavate in all materials for trenches for pipes with a diameter between 20 mm and 200 mm, backfill compact and dispose of surplus/unsuitable materials:				
3.3.1.1		Up to 1,5m in depth	m³	1		
3.3.1.2	8.3.2(b)	Extra-over item 3.3.1.1 incl. for excavation (provisional) in :				
		a) Soft excavation Class 2	m³	1		
		b) Soft excavation Class 3	m³	1		
		c) Intermediate material	m³	1		
		d) Hard rock material	m³	1		
3.3.1.3	8.3.2(c)	Excavate unsuitable material from trench bottom and dispose thereof	m³	1		
3.3.2		EXCAVATION ANCILLARIES - "LABOUR BASED"				
3.3.2.1	8.3.3.1(a)	Imported backfill materials from designated borrow pits (Only if approved by Engineer)	m³	1		
3.3.2.2	8.3.3.2	Opening up and closing down of designated borrow pit	No.	1		
3.3.2.3	8.3.3.3	Compaction in road reserves	m³	1		
3.3.2.4	8.3.3.4	Overhaul :				
		a) Wheel barrow haul				
		i) 0 - 100m	0.06m³	1		
		ii) 101 - 200m	0.06m³	1		
3.3.3		FINISHING - "LABOUR BASED"				
	8.3.6.1	Reinstate road surfaces complete with:				
		a) Gravel	m²	1		
		b) 30mm premix	m²	1		
	SABS 1200LB	BEDDING (PIPES)				
3.3.4		PROVISION OF BEDDING "LABOUR BASED"				
3.3.4.1	8.2.1	Available from trench within excavation (Subclause 3.3.1)				
		a) Selected granular material	m³	1		
		b) Selected fill material	m³	1		
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 2 : PIPEWORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						-
	8.2.2.2	Import from borrow pit within a distance of 0.2km (Only with written consent of Engineer) Import from borrow pit with wheelbarrow				
3.3.4.2		a) Selected granular material				
		i) 0 - 100m	0.06m³	1		
		ii) 101 - 200m	0.06m³	1		
3.3.4.3		b) Selected fill material				
		i) 0 - 100m	0.06m³	1		
		ii) 101 - 200m	0.06m³	1		
3.3.4.4	8.2.3	Concrete bedding	m³	1		
3.3.4.5	8.2.4	Encasing of pipes in Class 19/20 concrete	m³	1		
3.3.4.6	8.2.5	Overhaul of material for bedding cradle and selected fill blanket	m³km	1		
3.4	1200L	**PIPEWORK**				
	8.2.1	Remove, replace, lay, joint, bed, test and disinfect the following pipes complete with couplings to the relevant SABS standards including short lengths				
3.4.1		uPVC pipes				
		a) 400 Class 9	m	1		
		b) 400 Class 6	m	1		
		c) 355 Class 9	m	1		
		d) 355 Class 6	m	1		
		e) 315 Class 9	m	1		
		f) 315 Class 6	m	1		
		g) 250 Class 16	m	1		
		h) 250 Class 12	m	1		
		i) 250 Class 9	m	1		
		j) 250 Class 6	m	1		
		k) 200 Class 16	m	1		
		l) 200 Class 12	m	1		
		m) 200 Class 9	m	1		
		n) 200 Class 6	m	1		
		o) 160 Class 16	m	1		
TOTAL CARRIED FORWARD						

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

SCHEDULE 2 : PIPEWORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		p) 160 Class 12	m	1		
		q) 160 Class 9	m	1		
		r) 160 Class 6	m	1		
		s) 110 Class 16	m	1		
		t) 110 Class 12	m	1		
		u) 110 Class 9	m	1		
		v) 110 Class 6	m	1		
		w) 90 Class 16	m	1		
		x) 90 Class 12	m	1		
		y) 90 Class 9	m	1		
		z) 90 Class 6	m	1		
		aa) 75 Class 16	m	1		
		ab) 75 Class 12	m	1		
		ac) 75 Class 9	m	1		
		ad) 75 Class 6	m	1		
		ae) 63 Class 16	m	1		
		af) 63 Class 12	m	1		
		ag) 63 Class 9	m	1		
		ah) 63 Class 6	m	1		
3.4.2a		HDPE pipes Type IV				
		a) 63 mm class 4	m	1		
		b) 63 mm class 6	m	1		
		c) 63 mm class 10	m	1		
		d) 50 mm class 4	m	1		
		e) 50 mm class 6	m	1		
		f) 50 mm class 10	m	1		
		g) 40 mm class 6	m	1		
		h) 40 mm class 10	m	1		
		i) 32 mm class 6	m	1		
		j) 32 mm class 10	m	1		
		k) 25 mm class 10	m	1		
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 2 : PIPEWORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		l) 20 mm class 10	m	1		
3.4.2b		Supply, lay, joint, bed, test and disinfect the following pipes complete with couplings to the relevant SABS standards including short lengths for water supply during construction period.				
		a) 63 mm class 4	m	1		
		b) 63 mm class 6	m	1		
		c) 63 mm class 10	m	1		
3.4.3		GMS pipes (medium duty)				
		a) 15 mm Ø	m	1		
		b) 20 mm Ø	m	1		
		c) 25 mm Ø	m	1		
		d) 32 mm Ø	m	1		
		e) 40 mm Ø	m	1		
		f) 50 mm Ø	m	1		
		g) 80 mm Ø	m	1		
		h) 100 mm Ø	m	1		
		i) 150 mm Ø	m	1		
		j) 200 mm Ø	m	1		
		k) 250 mm Ø	m	1		
3.5		**REMOVE & REPLACE VALVES**				
3.5.1		Brass or similar approved valve complete - cutting of pipes and couplings included.				
		a) 25 mm	No.	1		
		b) 32 mm	No.	1		
		c) 40 mm	No.	1		
		d) 50 mm	No.	1		
3.5.2		Line valve assemblies.				
		Extra over item 3.4 Remove and replace, bedding and testing line valve assemblies, complete with manholes.				
		a) 63 mm	No.	1		
		b) 75 mm	No.			
		c) 90 mm	No.	1		
		d) 110 mm	No.	1		
		e) 160 mm	No.			
		f) 200 mm	No	1		
		g) 250 mm	No.	1		
TOTAL CARRIED FORWARD						

SCHEDULE 2 : PIPEWORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		h) 315 mm	No.	1		
3.5.3		Remove & Replace Scour valve assemblies				
		Extra over item 3.4 for Remove and replace, bedding and testing scour valve assemblies.				
		a) On 50mm and 63mm Ø main	No.	1		
		b) On 75 mm Ø main	No.	1		
		c) On 90 mm Ø main	No.	1		
		d) On 110 mm Ø main	No.	1		
		e) On 160 mm Ø main	No.	1		
		f) On 200mm Ø main	No.	1		
		g) On 250mm Ø main	No.	1		
		h) On 315 mm Ø main	No.	1		
3.5.4		Air valve assemblies				
3.5.4.1		Extra over item 3.4 for Remove, replace and testing air valve assemblies.				
		a) On 50 mm and 64 mm Ø main	No.	1		
		b) On 75 mm Ø main	No.	1		
		c) On 90 mm Ø main	No.	1		
		d) On 110 mm Ø main	No.	1		
		e) On 160 mm Ø main	No.	1		
		f) On 200 mm Ø main	No.	1		
		g) On 250mm Ø main	No.	1		
		h)On 315mm Ø main	No.	1		
3.5.4.2		Valve to be supplied and installed complete for the following:				
		a) 25ND double orifice "Bermad"	No.	1		
		b) 50ND double orifice "Bermad"	No.	1		
		c) 80ND double orifice "Bermad"	No.	1		
		d) 25ND "Vent-O-Mat"	No.	1		
TOTAL CARRIED FORWARD						

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

SCHEDULE 2 : PIPEWORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		e) 50ND "Vent-O-Mat"	No.	1		
3.5.5	8.2.3	Extra over item 3.4 for Remove, replace and testing Wafer type non-return valve assemblies.				
		a) On 50 mm and 64 mm Ø main	No.	1		
		b) On 75 mm Ø main	No.	1		
		c) On 90 mm Ø main	No.	1		
		d) On 110 mm Ø main	No.	1		
		e) On 160 mm Ø main	No.	1		
		f) On 200 mm Ø main	No.	1		
		g) On 250 mm Ø main	No.	1		
		h) On 315 mm Ø main	No.	1		
3.5.6		Watermeters				
3.5.6.1		Remove and replace of Meinecke Cosmos watermeters (Reducers excluded)				
		a) 50 mm	No.	1		
		b) 65 mm	No.	1		
		c) 80 mm	No.	1		
		d) 100 mm	No.	1		
		e) 150 mm	No.	1		
		f) 200 mm	No.	1		
		g) 250 mm	No.	1		
		h) 315 mm	No.	1		
3.5.7		Water Management Device				
3.5.7.1		Remove and replace of electronic bulk water meter management device including chamber and fittings(complete unit)				
		i) 25mm	No.	1		
		ii) 40mm	No.	1		
		iii) 50mm	No.	1		
3.5.7.2		Complete supply and installation of electronic water management device.	No.	1		
TOTAL CARRIED FORWARD						

SCHEDULE 2 : PIPEWORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
3.5.7.3		Remove and replace of Aquadata Automated Meter reading on any SABS approved pulse output water meter.	No.	1		
3.5.7.4		Remove and replace of Pulse output bulk water meter and Water Management Device including brick build Manhole and all fittings on the following oPVC pipe diameters.				
		i) 75mm	No.	1		
		ii) 90mm	No.	1		
		iii) 110mm	No.	1		
		iv) 160mm	No.	1		
		v) 200mm	No.	1		
		vi) 250mm	No.	1		
3.5.8	PSC6	Remove and replace of Stainers				
		a) 50 mm	No.	1		
		b) 65 mm	No.	1		
		c) 80 mm	No.	1		
		d) 100 mm	No.	1		
		e) 150 mm	No.	1		
		f) 200 mm	No.	1		
		g) 250 mm	No.	1		
TOTAL CARRIED FORWARD						

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

SCHEDULE 2 : PIPEWORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		h) 315 mm	No.	1		
3.7		**REMOVE AND REFURBISH FITTINGS AND SPECIALS**				
		Extra over item 3.4 for supplying, installing, bedding and testing in PVC mains the following fittings and specials complete. Cutting of pipes and couplings included				
		Fittings of PVC, cast iron or aluminium				
3.7.1		Bends 90 °				
		a) 315 Ø	No.	1		
		b) 250 Ø	No.	1		
		c) 200 Ø	No.	1		
		d) 160 Ø	No.	1		
		e) 110 Ø	No.	1		
		f) 90 Ø	No.	1		
		g) 75 Ø	No.	1		
		h) 63 Ø	No.	1		
3.7.2		Bends 45 °		1		
		a) 315 Ø	No.	1		
		b) 250 Ø	No.	1		
		c) 200 Ø	No.	1		
		d) 160 Ø	No.	1		
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 2 : PIPEWORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		e) 110 Ø	No.	1		
		f) 90 Ø	No.	1		
		g) 75 Ø	No.	1		
		h) 63 Ø	No.	1		
3.7.3		Bends 22 °				
		a) 315 Ø	No.	1		
		b) 250 Ø	No.	1		
		c) 200 Ø	No.	1		
		d) 160 Ø	No.	1		
		e) 110 Ø	No.	1		
		f) 90 Ø	No.	1		
		g) 75 Ø	No.	1		
		h) 63 Ø	No.	1		
3.7.4		Bends 11.25 °				
		a) 315 Ø	No.	1		
		b) 250 Ø	No.	1		
		c) 200 Ø	No.	1		
		d) 160 Ø	No.	1		
		e) 110 Ø	No.	1		
		f) 90 Ø	No.	1		
		g) 75 Ø	No.	1		
		h) 63 Ø	No.	1		
3.7.5		Tees				
		a) 63 x 63 mm	No.	1		
		b) 75 x 63 mm	No.	1		
		c) 75 x 75 mm	No.	1		
		d) 90 x 63 mm	No.	1		
		e) 90 x 75 mm	No.	1		
		f) 90 x 90 mm	No.	1		
		g) 110 x 75 mm	No.	1		
		h) 110 x 90 mm	No.	1		
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 2 : PIPEWORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		i) 110 x 110 mm	No.	1		
		j) 160 x 90 mm	No.	1		
		k) 160 x 110 mm	No.	1		
		l) 160 x 160 mm	No.	1		
		m) 200 x 160 mm	No.	1		
		n) 200 x 200 mm	No.	1		
		o) 250 x 200 mm	No.	1		
		p) 315 x 250 mm	No.	1		
3.7.6		Reducers				
		a) 75 x 63 mm	No.	1		
		b) 90 x 63 mm	No.	1		
		c) 90 x 75 mm	No.	1		
		d) 110 x 75 mm	No.	1		
		e) 110 x 90 mm	No.	1		
		f) 160 x 90 mm	No.	1		
		g) 160 x 110 mm	No.	1		
		h) 200 x 110 mm	No.	1		
		i) 200 x 160 mm	No.	1		
		j) 250 x 160 mm	No.	1		
		k) 250 x 200 mm	No.	1		
		l) 315 x 250 mm	No.	1		
3.7.7		End caps				
		a) 63 mm Ø	No.	1		
		b) 75 mm Ø	No.	1		
		c) 90 mm Ø	No.	1		
		d) 110 mm Ø	No.	1		
		e) 160 mm Ø	No.	1		
		f) 200 mm Ø	No.	1		
		g) 250 mm Ø	No.	1		
		h) 315 mm Ø	No.	1		
3.7.8		Double Socket				
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 2 : PIPEWORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		a) 75 mm Ø	No.	1		
		b) 90 mm Ø	No.	1		
		c) 110 mm Ø	No.	1		
		d) 160 mm Ø	No.	1		
3.7.9		Repair Coupling				
		a) 63 mm Ø	No.	1		
		b) 75 mm Ø	No.	1		
		c) 90 mm Ø	No.	1		
		d) 110 mm Ø	No.	1		
		e) 160 mm Ø	No.	1		
		f) 200 mm Ø	No.	1		
		g) 250 mm Ø	No.	1		
		h) 315 mm Ø	No.	1		
3.7.10		Adaptor for steel (BSP) pipes				
		a) 75 x 50 mm BSP	No.	1		
		b) 75 x 80 mm BSP	No.	1		
		c) 90 x 80 mm BSP	No.	1		
		d) 110 x 100 mm BSP	No.	1		
		e) 160 x 150 mm BSP	No.	1		
		f) 200 x 200 mm BSP	No.	1		
3.7.11		Flanged adaptor				
		a) 63 mm Ø	No.	1		
		b) 75 mm Ø	No.	1		
		c) 90 mm Ø	No.	1		
		d) 110 mm Ø	No.	1		
		e) 160 mm Ø	No.	1		
		f) 200 mm Ø	No.	1		
		g) 250 mm Ø	No.	1		
		h) 315 mm Ø	No.	1		
3.7.12		Saddle drilled 32 BSP				
		a) 63 mm Ø	No.	1		
TOTAL CARRIED FORWARD						

SCHEDULE 2 : PIPEWORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						-
		b) 75 mm Ø	No.	1		
		c) 90 mm Ø	No.	1		
		d) 110 mm Ø	No.	1		
		e) 160 mm Ø	No.	1		
		f) 200 mm Ø	No.	1		
		g) 250 mm Ø	No.	1		
		h) 315 mm Ø	No.	1		
3.7.13		Saddle tap drilled 25 BSP				
		a) 63 mm Ø	No.	1		
		b) 75 mm Ø	No.	1		
		c) 90 mm Ø	No.	1		
		d) 110 mm Ø	No.	1		
		e) 160 mm Ø	No.	1		
		f) 200 mm Ø	No.	1		
		g) 250 mm Ø	No.	1		
		h) 315 mm Ø	No.	1		
3.8		**REMOVE & REFURBISH FITTINGS FOR THREADED STEEL, MALLEABLE STEEL/IRON PIPE SPECIALS AND FITTINGS**				
3.8.1		Screwed flanges				
		a) 50 ND	No.	1		
		b) 65 ND	No.	1		
		c) 80 ND	No.	1		
		d) 100 ND	No.	1		
		e) 125 ND	No.	1		
		f) 150 ND	No.	1		
		g) 200 ND	No.	1		
3.8.2		Nipple				
		a) 15 ND	No.	1		
		b) 20 ND	No.	1		
		c) 25 ND	No.	1		
		d) 32 ND	No.	1		
TOTAL CARRIED FORWARD						

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

SCHEDULE 2 : PIPEWORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		e) 40 ND	No.	1		
		f) 50 ND	No.	1		
		g) 65 ND	No.	1		
		h) 80 ND	No.	1		
		i) 100 ND	No.	1		
		j) 125 ND	No.	1		
		k) 150 ND	No.	1		
		l) 200 ND	No.	1		
3.8.3		Tee				
		a) 15 x 15 ND	No.	1		
		b) 20 x 20 ND	No.	1		
		c) 25 x 25 ND	No.	1		
		d) 32 x 32 ND	No.	1		
		e) 40 x 40 ND	No.	1		
		f) 50 x 50 ND	No.	1		
		g) 65 x 65 ND	No.	1		
		h) 80 x 80 ND	No.	1		
		i) 100 x 100 ND	No.	1		
		j) 125 x 125 ND	No.	1		
		k) 150 x 150 ND	No.	1		
		l) 20 x 15 ND	No.	1		
		m) 32 x 20 ND	No.	1		
		n) 32 x 25 ND	No.	1		
		o) 40 x 25 ND	No.	1		
		p) 40 x 20 ND	No.	1		
		q) 50 x 40 ND	No.	1		
		r) 50 x 32 ND	No.	1		
		s) 50 x 25 ND	No.	1		
		t) 50 x 20 ND	No.	1		
		u) 65 x 50 ND	No.	1		
		v) 80 x 50 ND	No.	1		
TOTAL CARRIED FORWARD						

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

SCHEDULE 2 : PIPEWORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		w) 100 x 80 ND	No.	1		
		x) 125 x 100 ND	No.	1		
		y) 150 x 100 ND	No.	1		
3.8.4		Socket Union				
		a) 15 ND	No.	1		
		b) 20 ND	No.	1		
		c) 25 ND	No.	1		
		d) 32 ND	No.	1		
		e) 40 ND	No.	1		
		f) 50 ND	No.	1		
		g) 65 ND	No.	1		
		h) 80 ND	No.	1		
		i) 100 ND	No.	1		
3.8.5		Reducing Bush				
		a) 20 x 15 ND	No.	1		
		b) 25 x 15 ND	No.	1		
		c) 25 x 20 ND	No.	1		
		d) 32 x 20 ND	No.	1		
		e) 32 x 25 ND	No.	1		
		f) 40 x 20 ND	No.	1		
		g) 40 x 25 ND	No.	1		
		h) 40 x 32 ND	No.	1		
		i) 50 x 20 ND	No.	1		
		j) 50 x 25 ND	No.	1		
		k) 50 x 32 ND	No.	1		
		l) 50 x 40 ND	No.	1		
3.8.6		Bend				
		a) 90° M/F : 15 Ø	No.	1		
		b) 90° M : 15 Ø	No.	1		
		c) 90° M/F : 20 Ø	No.	1		
		d) 90° M : 20 Ø	No.	1		
TOTAL CARRIED FORWARD						

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

SCHEDULE 2 : PIPEWORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		e) 90° M/F : 25 Ø	No.	1		
		f) 90° M : 25 Ø	No.	1		
		g) 90° M/F : 32 Ø	No.	1		
		h) 90° M : 32 Ø	No.	1		
		i) 90° M/F : 40 Ø	No.	1		
		j) 90° M : 40 Ø	No.	1		
		k) 90° F : 50 Ø	No.	1		
		l) 90° F : 65 Ø	No.	1		
		m) 90° F : 75 Ø	No.	1		
		n) 90° F : 100 Ø	No.	1		
3.8.7		Cross, Flanged				
		a) 100 Ø	No.	1		
		b) 125 Ø	No.	1		
		c) 150 Ø	No.	1		
3.8.8		Cross screwed				
		a) 15 Ø	No.	1		
		b) 20 Ø	No.	1		
		c) 25 Ø	No.	1		
		d) 32 Ø	No.	1		
		e) 40 Ø	No.	1		
		f) 50 Ø	No.	1		
		g) 75 Ø	No.	1		
		h) 100 Ø	No.	1		
3.8.9		Sockets				
		a) 25 ND	No.	1		
		b) 32 ND	No.	1		
		c) 40 ND	No.	1		
		d) 50 ND	No.	1		
		e) 75 ND	No.	1		
		f) 100 ND	No.	1		
3.9		**FITTINGS FOR HDPE PIPES**				
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 2 : PIPEWORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		Plasson compression fittings to the relevant SABS specifications, or similar approved				
3.9.1		Elbow for :				
		a) 20 mm Ø	No.	1		
		b) 25 mm Ø	No.	1		
		c) 32 mm Ø	No.	1		
		d) 40 mm Ø	No.	1		
		e) 50 mm Ø	No.	1		
3.9.2		Equal Tees				
		a) 20 mm Ø	No.	1		
		b) 25 mm Ø	No.	1		
		c) 32 mm Ø	No.	1		
		d) 40 mm Ø	No.	1		
		e) 50 mm Ø	No.	1		
3.9.3		Unequal tees				
		a) 25 x 20 ND	No.	1		
		b) 32 x 25 ND	No.	1		
		c) 40 x 25 ND	No.	1		
		d) 40 x 32 ND	No.	1		
		e) 50 x 32 ND	No.	1		
		f) 50 x 40 ND	No.	1		
3.9.4		Reducers				
		a) 25 x 20 ND	No.	1		
		b) 32 x 25 ND	No.	1		
		c) 40 x 25 ND	No.	1		
		d) 40 x 32 ND	No.	1		
		e) 50 x 25 ND	No.	1		
		f) 50 x 32 ND	No.	1		
		g) 50 x 40 ND	No.	1		
3.9.5		Plugs				
		a) 20 mm Ø	No.	1		
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 2 : PIPEWORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		b) 25 mm Ø	No.	1		
		c) 32 mm Ø	No.	1		
		d) 40 mm Ø	No.	1		
		e) 50 mm Ø	No.	1		
3.9.6		HDPE/BSP adaptor				
		a) 20 mm Ø	No.	1		
		b) 25 mm Ø	No.	1		
		c) 32 mm Ø	No.	1		
		d) 40 mm Ø	No.	1		
		e) 50 mm Ø	No.	1		
3.9.7		Socket Adaptors				
		a) 20 ND	No.	1		
		b) 25 ND	No.	1		
		c) 32 ND	No.	1		
		d) 40 ND	No.	1		
		e) 50 ND	No.	1		
3.1		**SUNDRIES**				
3.10.1		Encasing in Class 15/19 concrete	m³	1		
3.10.2		Position markers	No.	1		
3.10.3		Position markers	No.	1		
3.10.4		Thrust blocks including formwork				
		a) Concrete Class 15/19	m³	1		
3.10.5		Existing Plot Fences (Provisional)				
	PS10.5	Taking down of existing fence, keep at a safe place and re-erect after construction activities.	m	1		
3.10.6		Stone pitching including supply and placing of stone and gravel backing		1		
		a) Grouted, minimum thickness 300mm	m²	1		
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 2 : PIPEWORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		b) Ungrouted, minimum thickness 300mm	m²	1		
3.11		**SERVICES**				
3.11.1	SABS 1200DB	Unknown Services (Provisional)				
	8.3.8.1	Excavate by hand in soft material to expose such as electrical cables and GPO cables	m³	1		
3.11.2	SABS 1200DB	Existing Services (Provisional)				
		Excavate in soft material to expose services (Depths up to 1,5 m)				
		a) Alongside service	m	1		
		b) When intersect a service	No.	1		
3.12		**MANHOLES**				
		a) 750 mm Ø	No.	1		
		b) 1200 mm Ø	No.	1		
3.13		**ROAD CROSSINGS**				
		a) Gravel Road crossings including the following sleeve pipes :				
		i) 350 ND Concrete Class 100D	m	1		
		ii) 450 ND Concrete Class 100D	m	1		
		iii) 355 ND uPVC Class 12	m	1		
		b) Tar Road crossings including the following sleeve pipes :				
		i) 350 ND Concrete Class 100D	m	1		
		ii) 450 ND Concrete Class 100D	m	1		
TOTAL CARRIED FORWARD TO SUMMARY						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 3 : ELEVATED TANKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
		SCHEDULE 3 : ELEVATED TANKS				
6.1		**Sectional Pressed Steel**				
6.1.1	1200D	Earthworks				
		a) Excavate in all materials for concrete bases	m³	1		
		b) Extra-over for item 6.1.1(a) for intermediate material	m³	1		
		c) Extra-over for item 6.1.1(a) for hard	m³	1		
6.1.2	1200G	Concrete				
	8.4.2	a) Soilcrete with approved gravel mixed with 8% by weight OPC	m³	1		
		b) No Fines concrete, using	m³	1		
		c) Blinding layer in 20MPa/19mm concrete, 75 mm thick	m²	1		
	8.4.3	d) Supply, mix and place Class 20/19 concrete for column bases	m³	1		
	8.4.3	e) Supply, mix and place Class 25/19 concrete for column bases	m³	1		
	8.4.3	f) Supply, mix and place Class 30/19 concrete for column bases	m³	1		
6.1.3	8.3	REINFORCEMENT				
6.1.3.1	8.3.1	Mild steel bars				
	8.1.2.2	a) Diameter 25mm : Basic price	kg	1		
		b) Extra over 6.1.3.1 (a) (Provisional				
		i) 8mm	kg	1		
		ii) 10mm	kg	1		
		iii) 12mm	kg	1		
6.1.3.2	8.3.1	High tensile steel bars				
	8.1.2.2	a) Diameter 25mm : Basic price	kg	1		
		b) Extra over 6.1.3.2 (a) (Provisional				
		i) 10 mm	kg	1		
		ii) 12 mm	kg	1		
		iii) 16 mm	kg	1		
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 3 : ELEVATED TANKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		iv) 20 mm	kg	1		
6.1.3.3	8.3.2	High tensile welded mesh reinforcement				
		a) Type reference 395 in standard sheet	m²	1		
		b) Type reference 500 in standard sheet	m²	1		
		c) Type reference 617 in standard sheet	m²	1		
6.1.4	8.2	Formwork				
6.1.4.1	8.2.1	Rough formwork	m²	1		
6.1.4.2	8.2.2	Smooth formwork	m²	1		
6.1.4.3		Chamfer 30 x 30 mm	m	1		
6.1.4.4	8.4.4	Unformed surface finishes				
		a) Woodfloated finish	m²	1		
		b) Steelfloated finish	m²	1		
6.1.5	PSHA/PH	Sectional steel tank				
		Remove & refurbish of the following sectional pressed steel tank with cover, access hatches, ventilator and pipework, all as specified in particular specification including surface dressing, surface				
		a) 50m³	No.	1		
		b) 65m³	No.	1		
		c) 100m³	No.	1		
		d) 150m³	No.	1		
		e) 200m³	No.	1		
		f) 250m³	No.	1		
		g) 300m³	No.	1		
		h) 350m³	No.	1		
		i) 400m³	No.	1		
6.1.6	PSHA/PH	Remove & refurbish of the following structural steel stands for the sizes of pressed steel tanks indicated and heights as specified. Structural steel stands with associated access ladder, surface dressing, surface				
TOTAL CARRIED FORWARD						

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

SCHEDULE 3 : ELEVATED TANKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT	R
BROUGHT FORWARD							
		Note : (All tank stands to have safety platform and landings as per relevant OH&S regulations)					
		a) For 50m³ tank volume on the following stand heights:					
		i) 15m heights	No.	1			
		ii) 20m heights	No.	1			
		b) For 65m³ tank volume on the following stand heights:					
		i) 15m heights	No.	1			
		ii) 20m heights	No.	1			
		c) For 100m³ tank volume on the following stand heights:					
		i) 15m heights	No.	1			
		ii) 20m heights	No.	1			
		d) For 150m³ tank volume on the following stand heights:					
		i) 15m heights	No.	1 1			
		ii) 20m heights	No.	1			
		e) For 200m³ tank volume on the following stand heights:					
		i) 15m heights	No.	1			
		ii) 20m heights	No.	1			
		f) For 250m³ tank volume on the following stand heights:					
		i) 15m heights	No.	1			
		ii) 20m heights	No.	1			
		g) For 300m³ tank volume on the following stand heights:					
		i) 15m heights	No.	1			
		ii) 20m heights	No.	1			
		h) For 350m³ tank volume on the following stand heights:					
		i) 15m heights	No.	1			
		ii) 20m heights	No.	1			
		k) For 400m³ tank volume on the following stand heights:					
TOTAL CARRIED FORWARD							

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 3 : ELEVATED TANKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT	R
BROUGHT FORWARD							
		i) 15m heights	No.	1			
		ii) 20m heights	No.	1			
6.1.7		Supply and deliver to site storage tanks during construction period					
		a) 5 000 l	No.	1			
		b) 10 000 l	No.	1			
6.1.8		Remove & refurbish 9m tankstands. Tank stands to include the safety ladder with cage and safety platform as per relevant OH&S Regulations. Tanks can be 5m³ or 10m³ and will be measured under Item 6.1.7)					
		a) Tankstand for 1 (one) tank	No.	1			
		b) Tankstand for 2 (two) tanks	No.	1			
		c) Tankstand for 4 (four) tanks	No.	1			
		d) Tankstand for 6 (six) tanks	No.	1			
6.1.9		Supply mix and place Class 25/19 concrete for tankstand base as detailed on Drawing No. NC451/1/2&35/33	m³	1			
6.2		REMOVE & REFURBISH PIPEWORK FOR STEELTANKS					
6.2.1		Flanged GMS Pipework at Structural Steel Tanks					
		a) 50ND	m	1			
		b) 65ND	m	1			
		c) 80ND	m	1			
		d) 100ND	m	1			
		e) 150ND	m	1			
		f) 200ND	m	1			
6.2.2		Flanged GMS Fittings					
		a) Bends 90°					
		i) 50ND	No.	1			
		ii) 65ND	No.	1			
TOTAL CARRIED FORWARD							

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 3 : ELEVATED TANKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		iii) 80ND	No.	1		
		iv) 100ND	No.	1		
		v) 150ND	No.	1		
		vi) 200ND	No.	1		
		b) Tees				
		i) 50ND	No.	1		
		ii) 65ND	No.	1		
		iii) 80ND	No.	1		
		iv) 100ND	No.	1		
		v) 150ND	No.	1		
		vi) 200ND	No.	1		
6.3		VALVES				
6.3.1		Remove and refurbish Non-rising Spindle valve complete, including cutting of pipes and couplings				
		a) 65ND	No.	1		
		b) 80ND	No.	1		
		c) 100ND	No.	1		
		d) 150ND	No.	1		
		e) 200ND	No.	1		
6.3.2		Remove and refurbish Leveldex Float valve complete				
		a) 50 mm Ø	No.	1		
		b) 80 mm Ø	No.	1		
TOTAL CARRIED FORWARD TO SUMMARY						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 4 : BOREHOLES TESTING							
ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT	R
		SCHEDULE 4 : BOREHOLE TESTING					
		Boreholes					
15		Testing of boreholes					
15.1		Yield testing	No.	1			
15.2		**Chlorination**					
15.2.1		Chlorination of boreholes	No.	1			
TOTAL CARRIED FORWARD TO SUMMARY							

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

SCHEDULE 5 : DIESEL ENGINES AND GENERATORS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
		SCHEDULE 5 : DIESEL ENGINES				
7.1		**DIESEL ENGINES**				
7.1.1	PD7	Remove and replace of air cooled diesel power units complete (with standard equipment as described in the particular specifications PD7)- Painted yellow to specification including fan belts and belt guard. (Belt guards must comply with all safety specifications and standards) (Pulleys and clutches measured elsewhere)				
7.1.1.1		Manufacturer : LISTER				
		a) LT 1	No.	1		
		b) LV 1	No.	1		
		c) TR 1	No.	1		
		d) TR 2	No.	1		
		e) TR 3	No.	1		
7.1.1.2	PD7	Installation and commissioning of power units (including plinths, baseplates, adjustable frames) for:				
		Manufacturer : LISTER				
		a) LT 1	No.	1		
		b) LV 1	No.	1		
		c) TR 1	No.	1		
		d) TR 2	No.	1		
		e) TR 3	No.	1		
7.1.1.3		Remove, replace, complete installation and commissioning of the following centrifugal clutches :				
		a) High speed :				
		i) 125 mm Ø	No.	1		
		ii) 180 mm Ø	No.	1		
7.1.2		Remove, replace, deliver, installation and commissioning of the following pulley ranges for wedge belts, including the required wedge belts:				
7.1.2.1		SPA Range :				
		a) Four groove, with pitch diameters				
		i) 80 mm and 85 mm	No.	1		
TOTAL CARRIED FORWARD						

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

SCHEDULE 5 : DIESEL ENGINES AND GENERATORS							
ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT	R
BROUGHT FORWARD							-
		ii) 90 mm to 150 mm	No.	1			
		iii) 160 mm to 315 mm	No.	1			
		iv) 400 mm to 630 mm	No.	1			
7.1.2.2		SPB Range :					
		a) Four groove, with pitch diameters					
		i) 125 mm and 150 mm	No.	1			
		ii) 160 mm to 315 mm	No.	1			
		iii) 355 mm to 630 mm	No.	1			
7.1.3		Remove,replace, deliver and installation of "optional" items for diesel engines as describe in PD7					
		a) Flexible exhaust	No.	1			
		b) 90 l Fuel tank with appurtenant pipework and tankstand	No.	1			
		c) Fuel filter & indicator	No.	1			
		d) Oil pressure gauge	No.	1			
		e) Typical machine tool kit (Details to be supplied)	No.	1			
		f) Vibration hour meter	No.	1			
7.1.4	PD7	Refurbish of air cooled diesel power units complete (with standard equipment as described in the particular specifications PD7)- Painted yellow to specification including fan belts and belt guard. (Belt guards must comply with all safety specifications and standards) (Pulleys and clutches measured elsewhere)					
7.1.4.1		Manufacturer : LISTER					
		a) LT 1	No.	1			
		b) LV 1	No.	1			
		c) TR 1	No.	1			
		d) TR 2	No.	1			
		e) TR 3	No.	1			
TOTAL CARRIED FORWARD							

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

SCHEDULE 5 : DIESEL ENGINES AND GENERATORS							
ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT	R
BROUGHT FORWARD							-
		Remove, replace off-load and installation of 230V Generator - set with Industrial water cooled diesel engine, 12VDC electrical system and battery charger, cartridge type fuel and oil filters, air filter, Battery(ies), rack and cables, alternator to be Electrical design to BS5000 Part 99, IEC60034-1, BS 9000, BS 5514, BS PT1184C. Automatic Voltage Regulator with Voltage regulation ± 0.5%, Heavy duty industrial exhaust silencer 25 dB reduction. Vibration isolated poweder coated steel enclosure with removable cover plate control panel and feeder MCCB, Heavy-duty fabricated steel base with lifting points with Anti-vibration pad complete with baseframe incorporates metal 8hr Fuel tank and 3 pin industrial outlet socket with wiring and labels for the following Generators complete with AVR, electrical start equal or similar to Olympian - GEK6SP-1, supplied by Barloworld Power, Caterpillar.					
		a) 6KVA/6kW	No.	1			
		b) 9KVA/9kW	No.	1			
		c) 11KVA/11kW	No.	1			
TOTAL CARRIED FORWARD							

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

SCHEDULE 5 : DIESEL ENGINES AND GENERATORS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						-
7.2.2		Diesel generator set (3 Phase) The complete supply, deliver, off-load and installation of a 400/230V Generator - set with industrial water cooled diesel engine, 12 VDC electrical system and battery charger, Cartridge type fuel and oil filters, Air filter, Battery(ies), rack and cables, Alternator to be Electrical design to BS5000 Part 99, IEC60034-1, BS 9000, BS 5514 BS PT1184C. Automatic Voltage Regulator with Voltage regulation ± 0.5%, Heavy duty industrial exhaust silencer 25dB reduction. Vibration isolated poweder coated steel enclosure with removable cover plate control panel and feeder MCCB, Heavy-duty fabricated steel base with lifting points with Anti-vibration pad complete with baseframe incorporates metal 8hr Fuel tank and 3 pin industrial outlet socket with wiring and labels for the following Generators complete with AVR, electrical start equal or similar to Olympian - GEK6SP-1, supplied by Barloworld Power, Caterpillar. a) 18KVA/14.14kW b) 22KVA/17.6kW	

SCHEDULE 5 : DIESEL ENGINES AND GENERATORS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		c) 44KVA/35kW	No.	1		
		d) 65KVA/53kW	No.	1		
		e) 88KVA/70.4kW	No.	1		
		f) 165KVA/135kW	No.	1		
7.2.3		Weather proof Canopy for Generator-Set Remove and replace of a weather proof canopy for Generator complete with pad-lockable doors to access motor, refuelling, battery charger and control panel inlets.				
		a) 6KVA/6kW	No.	1		
		b) 9KVA/9kW	No.	1		
		c) 11KVA/11kW	No.	1		
		d) 18KVA/14.14kW	No.	1		
		e) 22KVA/17.6kW	No.	1		
		f) 44KVA/35kW	No.	1		
		g) 65KVA/53kW	No.	1		
		h) 88KVA/70.4kW	No.	1		
		i) 165KVA/135kW	No.	1		
7.2.4		Automatic Main Fails Switch-over Panel (1 Phase) Remove and replace of AMF frame mounted complete with change-over contactors, mechanical interlocked, control unit, busbar, terminals and all material needed to complete the installation (As supplied from Generator manufature), for the following:				
		a) 6KVA/6kW	No.	1		
		b) 9KVA/9kW	No.	1		
		c) 11KVA/11kW	No.	1		
7.2.5		Automatic Main Fails Switch-over Panel (3 Phase) Remove and replace of AMF frame mounted complete with motorised switch, MCCB, control unit, busbar, terminals and all material needed to complete the installation (As supplied from Generator manufature), for the following:				
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 5 : DIESEL ENGINES AND GENERATORS							
ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT	R
BROUGHT FORWARD							
		a) 18KVA/14.14kW	No.	1			
		b) 22KVA/17.6kW	No.	1			
		c) 44KVA/35kW	No.	1			
		d) 65KVA/53kW	No.	1			
		e) 88KVA/70.4kW	No.	1			
		f) 165KVA/135kW	No.	1			
7.2.6		Diesel Fuel					
		Remove, replace and fill of fuel tank with Diesel.	lt	1			
7.2.7		Generator Earth					
		Remove, replace and installation of Generator LV-earthing, with 6m long, 35mm² BCEW, connected to Gen earth, supply cable and one 1.5m earth spikes complete with Lugs, bolts, nuts, washers, clamps and the excavation with equipment needed to complete the installation.	No.	1			
7.2.8		Testing, Inspection and Commissioning					
		After installation is complete, test and commission of installation. Contractor to allow for factory and site inspections all travelling to commission and handover. As part of the testing to provided the topped-up diesel fuel after tests and commissioning. Supply maintenance and operational manual and electrical diagram drawings of the following Gen set.					
		a) Remove, replace all inspections, test and commissioning equipment to commission and handover the single Phase to the client.	No.	1			
		b) Remove, replace all inspections, test and commissioning equipment to commission and handover the Three Phase to the client.	No.	1			
TOTAL CARRIED FORWARD							

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 5 : DIESEL ENGINES AND GENERATORS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT	R
BROUGHT FORWARD							
		c) The provision and delivery of a dummy load 6 - 11kWatt as part of the testing and commissioning to verify full load capacity.	No.	1			
		d) The provision and delivery of a dummy load 18 - 44kWatt as part of the testing and commissioning to verify full load capacity.	No.	1			
		e) The provision and delivery of a dummy load 88 - 165kWatt as part of the testing and commissioning to verify full load capacity.	No.	1			
7.2.9		Maintenance for one year The contractor shall arrange with the supplier as per unit maintenance program for one year in which at least one monthly trip is provided for to service, check and maintain the unit. A service contract shall be provided which shall be agreed to by the council before it is finally accepted.					
		a) Single Phase Generation Unit: 6 - 11kWatt	p/m	1			
		b) Three Phase Generation Unit: 18-44kWatt	p/m	1			
		c) Three Phase Generation Unit: 88-165kWatt	p/m	1			
7.2.10		Additional Items: (Supply details) a) b) c)					
TOTAL CARRIED FORWARD TO SUMMARY							

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

SCHEDULE 6 : PUMPS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
		SCHEDULE 6 : PUMPS				
8.1		**POSITIVE DISPLACEMENT PUMPS**				
8.1.1	PB8	Remove and replace of heads and positive displacement pumps complete with pulleys between 190 mm and 460mm in size for the following duty points (all pumps with a maximum of 1500 Rpm): Manufacturer : Mono (or similar approved)				
		a) BP 2 LM	No.	1		
		b) BP 2 M	No.	1		
		c) BP 2 MH	No.	1		
		d) BP 3 LM	No.	1		
		e) BP 3 MH	No.	1		
		f) BP 4 H	No.	1		
		g) BP 4 L	No.	1		
		h) BP 4 M	No.	1		
		i) BP 6 H	No.	1		
		j) BP 6 L	No.	1		
		k) BP 6 M	No.	1		
		l) BP 9 H	No.	1		
		m) BP 9 L	No.	1		
		n) BP 9 M	No.	1		
		o) BP 12 L	No.	1		
		p) BP 12 M	No.	1		
		q) BP 16 H	No.	1		
		r) BP 16 L	No.	1		
		s) BP 16 M	No.	1		
		t) BP 22 L	No.	1		
		u) BP 22 M	No.	1		
		v) BP 30 H	No.	1		
		w) BP 30 L	No.	1		
		x) BP 30 M	No.	1		
		y) BP 40 L	No.	1		
		z) BP 40 M	No.	1		
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 6 : PUMPS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		aa) BP 50 M	No.	1		
		bb) BP 65 L	No.	1		
		cc) BP 85 M	No.	1		
		dd) BP 105 M	No.	1		
8.1.2		Installation and commissioning of positive displacement pump heads and pumps complete with pulleys between 190 mm and 460 mm in size:				
		a) BP 2 LM	No.	1		
		b) BP 2 M	No.	1		
		c) BP 2 MH	No.	1		
		d) BP 3 LM	No.	1		
		e) BP 3 MH	No.	1		
		f) BP 4 H	No.	1		
		g) BP 4 L	No.	1		
		h) BP 4 M	No.	1		
		i) BP 6 H	No.	1		
		j) BP 6 L	No.	1		
		k) BP 6 M	No.	1		
		l) BP 9 H	No.	1		
		m) BP 9 L	No.	1		
		n) BP 9 M	No.	1		
		o) BP 12 L	No.	1		
		p) BP 12 M	No.	1		
		q) BP 16 H	No.	1		
		r) BP 16 L	No.	1		
		s) BP 16 M	No.	1		
		t) BP 22 L	No.	1		
		u) BP 22 M	No.	1		
		v) BP 30 H	No.	1		
		w) BP 30 L	No.	1		
		x) BP 30 M	No.	1		
		y) BP 40 L	No.	1		
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 6 : PUMPS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT	R
BROUGHT FORWARD							
		z) BP 40 M	No.	1			
		aa) BP 50 M	No.	1			
		bb) BP 65 L	No.	1			
		cc) BP 85 M	No.	1			
		dd) BP 105 M	No.	1			
8.2	PD8.2	**BOREHOLE COLUMN PIPES**					
		Remove, replace and installation of column pipes, shafts, bearings, stabilisers, for boreholes 150 mm diameter :					
		a) 50 mm Ø piping	m	1			
		b) 65 mm Ø piping	m	1			
		c) 80 mm Ø piping	m	1			
		d) 100 mm Ø piping	m	1			
8.3	PD10	**ANCILLARY PIPE WORK**					
8.3.1		Alternative 1 - Remove, replace and installation of ancillary pipework and Mechanical equipment as described in particular specification PD 10 and detailed on Drawings No. NC451/1/2&35/17 COMPLETE					
		a) 50 mm Ø piping	unit	1			
		b) 65 mm Ø piping	unit	1			
		c) 75 mm Ø piping	unit	1			
		d) 100 mm Ø piping	unit	1 1			
8.3.2	PD10	Alternative 2 - Remove, replace and installation of ancillary pipework and mechanical equipment as described in PD10 and detailed on Drawing No. NC451/1/2&35/16 COMPLETE					
		a) 50 mm Ø piping	unit	1			
		b) 65 mm Ø piping	unit	1			
		c) 75 mm Ø piping	unit	1			
		d) 100 mm Ø piping	unit	1			
8.4	PD9	**SUBMERSIBLE PUMPS**					
8.4.1		Remove, replace of centrifugal submersible pumps with installation and adequate lightning protection for the following duty points:					
TOTAL CARRIED FORWARD							

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 6 : PUMPS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		Manufacturer : _____				
		a) Head = 33m Flow = 1,6m³/h (Model: _____)	No.	1		
		b) Head = 47m Flow = 1,6m³/h (Model: _____)	No.	1		
		c) Head = 98m Flow = 1,6m³/h (Model: _____)	No.	1		
		d) Head = 148m Flow = 1,6m³/h (Model: _____)	No.	1		
		e) Head = 35m Flow = 2,8m³/h (Model: _____)	No.	1		
		f) Head = 70m Flow = 2,8m³/h (Model:_____)	No.	1		
		g) Head = 140m Flow = 2,8m³/h (Model: _____)	No.	1		
		h) Head = 38m Flow = 4,8m³/h (Model: _____)	No.	1		
		i) Head = 40m Flow = 4,8m³/h (Model:_____)	No.	1		
		j) Head = 80m Flow = 4,8m³/h (Model:_____)	No.	1		
		k) Head = 100m Flow = 4,8m³/h (Model: _____)	No.	1		
		l) Head = 40m Flow = 9,0m³/h (Model:_____)	No.	1		
		m) Head = 55m Flow = 9,0m³/h (Model: _____)	No.	1		
		n) Head = 105m Flow = 9,0m³/h (Model: _____)	No.	1		
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 6 : PUMPS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
8.4.2	PD9	Installation and commissioning of centrifugal submersible pumps of manufacturer in Item 8.4.11.		1		
		a) Head = 33m Flow = 1,6m³/h (Model: _____)	No.	1		
		b) Head = 47m Flow = 1,6m³/h (Model: _____)	No.	1		
		c) Head = 98m Flow = 1,6m³/h (Model: _____)	No.	1		
		d) Head = 148m Flow = 1,6m³/h (Model: _____)	No.	1		
		e) Head = 35m Flow = 2,8m³/h (Model: _____)	No.	1		
		f) Head = 70m Flow = 2,8m³/h (Model:_____)	No.	1		
		g) Head = 140m Flow = 2,8m³/h (Model: _____)	No.	1		
		h) Head = 38m Flow = 4,8m³/h (Model: _____)	No.	1		
		i) Head = 40m Flow = 4,8m³/h (Model:_____)	No.	1		
		j) Head = 80m Flow = 4,8m³/h (Model:_____)	No.	1		
		k) Head = 100m Flow = 4,8m³/h (Model: _____)	No.	1		
		l) Head = 40m Flow = 9,0m³/h (Model:_____)	No.	1		
		m) Head = 55m Flow = 9,0m³/h (Model: _____)	No.	1		
		n) Head = 105m Flow = 9,0m³/h (Model: _____)	No.	1		
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 6 : PUMPS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
8.5		**Remove, replace, installation and commissioning of submersible pump pipework (HDPE/10) and nylon rope (Electric cable measured under schedule 9) for :**				
		a) 40 mm HDPE	m	1		
		b) 50 mm HDPE	m	1		
		c) 65 mm HDPE	m	1		
8.6		**COMPLETE SUPPLY, DELIVERY & INSTALLATION OF:**				
8.6.1		Baseplates				
		a) 40mm	No.	1		
		b) 50 mm	No.	1		
		c) 65 mm	No.	1		
8.7		**MISCELLANEOUS**				
8.7.1		Piezometer Tubes				
		Remove, replace and install piezometer tubes in the boreholes. The tubes will consist of 25mm LDPE Class 6 pipe strapped to the pipework of the borehole equipment (See detailed Drawing No. NC451/1/2&35/22)	m	1		
8.7.2		Water Level Meters				
		Remove and replace of water level meters at Magalies Water office. The water level meter of the analogue type with non-stretching 2 core. Cabling on reel, pre-marked at 1m intervals with two brass weights (5mm and 10mm)				
		a) 100m	No.	1		
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 6 : PUMPS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
8.7.3		Borehole information plate Remove, replace and install the borehole information plate. (Information plate to be fixed inside the pumphouse)	No	1		
TOTAL CARRIED FORWARD TO SUMMARY						

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

SCHEDULE 7 : ELECTRICAL WORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
		SCHEDULE 7 : ELECTRICAL WORK				
9	PE 1	**ELECTRICAL WORK - LV INSTALLATION**				
		Note: All items to include for supply, design manufacture, delivery, installation, commissioning and maintenance as per specifications				
9.1		**ELECTRICAL MOTORS**				
9.1.1		Remove and replace electrical motors complete with pulleys, fan belts, wire guards, belt guards, brackets and required spacers in the following types:				
		Manufacturer: Siemens				
9.1.1.1		Single phase with D.O.L starting				
		a) 0,55 kW	No.	1		
		b) 0,75 kW	No.	1		
		c) 1,1 kW	No.	1		
		d) 1,5 kW	No.	1		
		e) 2,2 kW	No.	1		
		f) 3,0 kW	No.	1		
9.1.1.2		Three phase with D.O.L starting				
		a) 2,2 kW	No.	1		
		b) 3,0 kW	No.	1		
		c) 4,0 kW	No.	1		
		d) 5,5 kW	No.	1		
		e) 7,5 kW	No.	1		
		f) 11,0 kW	No.	1		
9.1.1.3		Three phase with star-delta starting				
		a) 15,0 kW	No.	1		
		b) 18,5 kW	No.	1		
		c) 22,0 kW	No	1		
9.1.2		Install and commission electrical motors complete with pulleys, fan belts,wire gaurds and required spacers in the following types:				
		Manufacturer as in Item 9.1.1				
9.1.2.1		Single phase with D.O.L starting				
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 7 : ELECTRICAL WORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		a) 0,55 kW	No.	1		
		b) 0,75 kW	No.	1		
		c) 1,1 kW	No.	1		
		d) 1,5 kW	No.	1		
		e) 2,2 kW	No.	1		
		f) 3,0 kW	No.	1		
9.1.2.2		Three phase with D.O.L starting				
		a) 2,2 kW	No.	1		
		b) 3,0 kW	No.	1		
		c) 4,0 kW	No.	1		
		d) 5,5 kW	No.	1		
		e) 7,5 kW	No.	1		
		f) 11,0 kW	No	1		
9.1.2.3		Three phase with star-delta starting				
		a) 15,0 kW	No.	1		
		b) 18,5 kW	No.	1		
		c) 22,0 kW	No	1		
9.1.3	PE1.7	Low Voltage Cables				
		Remove, replace and installation of stranded copper cables installed in cable trenches, on cable racks or trays or fixed to steel structure.Prices to include for terminations and all fixing materials.				
9.1.3.1		Supply Cable from Eskom Metering Kiosk to MCC's				
		a) 6 mm² x 4 core	m	1		
		b) 10 mm² x 4 core	m	1		
		c) 16 mm² x 4 core	m	1		
9.1.3.2		Supply Cable from MCC to Pumpset				
		a) 4 mm² x 3 core	m	1		
		b) 6 mm² x 3 core	m	1		
		c) 10 mm² x 3 core	m	1		
		d) 16 mm² x 3 core	m	1		
9.1.3.3		Control Cable from MCC to Reservoir				
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 7 : ELECTRICAL WORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT	R
BROUGHT FORWARD							
		a) 2.5 mm² x 4 core	m	1			
9.1.3.4		Control Cables to Protection Instruments					
		a) 1.5 mm² x 3 core	m	1			
9.1.4	PE1.7	Earth Conductors					
9.1.4.1		Remove, replace and installation of bare stranded copper conductors installed in the same route as the cables including terminations					
		a) 4 mm²	m	1			
		b) 6 mm²	m	1			
		c) 10 mm²	m	1			
		d) 16 mm²	m	1			
		e) 70 mm²	m	1			
9.1.5		Cable Trench Excavation					
9.1.5.1		Excavations of cable trenches, bedding, backfilling compacting and making good of cable trenches in:					
		a) Soft excavation 0-1 m deep	m³	1			
		b) Extra over (for intermediate excavation)	m³	1			
		c) Extra over (for hardrock excavation	m³	1			
9.1.6	PE1.8	Motor Control Centres					
9.1.6.1		TYPE ONE					
		Remove, replace, installation and commissioning of the following distribution boards/MCC's, complete with all telemetry, plc equipment, internal wiring, labels etc. as specified and shown on drawings including earth and conduit terminations but excluding cable terminations. Including fixing materials to install MCC in pumphouse					
9.1.6.1.1		Single phase with D.O.L. starting					
		a) 1,1 kW	No	1			
		b) 1,5 kW	No	1			
		c) 2,2 kW	No	1			
		d) 3,0 kW	No	1			
9.1.6.1.2		Three phase with D.O.L. starting					
TOTAL CARRIED FORWARD							

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

SCHEDULE 7 : ELECTRICAL WORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT	R
BROUGHT FORWARD							
		a) 2,2 kW	No	1			
		b) 3,0 kW	No	1			
		c) 4,0 kW	No	1			
		d) 5,5 kW	No	1			
		e) 7,5 kW	No	1			
		f) 11,0 kW	No	1			
9.1.6.1.3		Three phase with star-delta starting					
		a) 15,0 kW	No	1			
		b) 18,5 kW	No	1			
		c) 22 kW	No	1			
9.1.6.2		TYPE TWO					
		Remove, replace and installation of MCC's complete with all equipment, internal wiring, labels,protection equipment and earthing for the following kW ratings. Including fixing materials to install MCC in pumphouse.					
9.1.6.2.1		Single phase with D.O.L starting					
		a) 1,1 kW	No.	1			
		b) 1,5 kW	No.	1			
		c) 2,2 kW	No.	1			
		d) 3,0 kW	No.	1			
9.1.6.2.2		Three phase with D.O.L starting		1			
		a) 2,2 kW	No.	1			
		b) 3,0 kW	No.	1			
		c) 4,0 kW	No.	1			
		d) 5,5 kW	No.	1			
		e) 7,5 kW	No.	1			
		f) 11,0 kW	No	1			
9.1.6.2.3		Three phase with star-delta starting					
		a) 15,0 kW	No.	1			
		b) 18,5 kW	No.	1			
		c) 22,0 kW	No.	1			
9.1.6.3		TYPE THREE					
TOTAL CARRIED FORWARD							

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

SCHEDULE 7 : ELECTRICAL WORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		Remove, replace and installation of MCC's complete with all equipment, internal wiring, labels,protection equipment and earthing for the following kW ratings. Including fixing materials to install MCC in pumphouse.				
9.1.6.3.1		Single phase with D.O.L starting				
		a) 1,1 kW	No.	1		
		b) 1,5 kW	No.	1		
		c) 2,2 kW	No.	1		
		d) 3,0 kW	No.	1		
9.1.6.3.2		Three phase with D.O.L starting				
		a) 2,2 kW	No.	1		
		b) 3,0 kW	No.	1		
		c) 4,0 kW	No.	1		
		d) 5,5 kW	No.	1		
		e) 7,5 kW	No.	1		
		f) 11,0 kW	No	1		
9.1.6.3.3		Three phase with star-delta starting				
		a) 15,0 kW	No.	1		
		b) 18,5 kW	No.	1		
		c) 22,0 kW	No.	1		
9.1.6.4	**PE1.8**	Battery Boxes				
		Remove, replace and installation of 3CR12 battery boxes complete with rubber mat and Kopex connection to MCC as specified and indicated on the drawings.				
9.1.6.4.1		Battery Box	No	1		
9.1.6.5		Locks				
9.1.6.5.1		Remove, replace and installation of No. 2 locks in-acordance with Sedibeng standards				
		No. 2 Locks	No	1		
9.1.7		General Electrical Installation				
9.1.7.1		Conduit				
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 7 : ELECTRICAL WORK						
ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		Remove, replace and installation of heavy gauge galvanised conduit complete with draw boxes and accessories surface mounted.				
		i) 20mm dia	m	1		
		ii) 25mm dia	m	1		
		Remove, replace and installation of PVC conduit complete with fixing materials surface mounted				
		32mm dia	m	1		
9.1.7.2	PE1.9	Conductors and Earth Conductors				
		Remove, replace and installation of PVC insulated copper conductors drawn into conduit.				
		i) 2,5mm.sq PVC wire	m	1		
		ii) 2,5mm.sq earth conductor	m	1		
9.1.7.3	PE1.9	Light Switches				
		Remove, replace and installation industrial type, surface mounted light switches complete with outlet boxes.				
		i) 16A, one lever, one way, waterproof light switch	No	1		
9.1.7.4	PE1.9	Luminaries				
		Remove, replace and installation of 1500mm fluorescent waterproof light fitting including lamps, control gear and fixing materials as specified.				
		Fluorescent 1500mm light fitting	No	1		
9.1.7.5	PE2.8.11	Flow Switches				
		Remove, replace and installation of Flow Switches installed in steel pipe.The rate shall include for reduction of pipe work where required.				
		Flow Switch	No.	1		
9.1.7.6	PE2.8.1	Pressure Gauge				
		Remove, replace, installation, calibration and commissioning of pressure gauges as specified				
		Type Wika complete with macrolon contacts, snubber and shut-off valve installed onto stainless steel niple.				
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 7 : ELECTRICAL WORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		0 - 1600 kPA	No	1		
9.1.8	PE2.8.4	Reservoir Junction Box (Control panel)				
		Remove, replace, installation and commissioning of reservoir junction box inclusive of PLC, telemetry, instruments and other equipment specified plus fixing materials				
9.1.8.1		Reservoir junction box (Control panel)	No	1		
9.1.9	PE2.8.9	CCG Enclosures				
		Remove, replace and installation of CCG enclosures complete with Phoenix EMK type terminals				
9.1.9.1		CCG Enclosures complete with terminals	No	1		
9.1.10	PE2.8.4	Level Transmitter Reservoir Levels				
		Remove, replace, installation and commissioning of Level Transmitter. Multiranger 100 with echomax XPS-10 Transducer. Price shall include for steel flanged 100mm dia 300mm high pipe and ABB protection enclusure mounted on reservoir.				
9.1.10.1		Level Transmitter	No	1		
9.1.11	PE2.8.4	Antennas				
		Remove, replace and installation of antennas complete with all auxillary equipment and earthing as specified.				
9.1.11.1		Boreholes	No	1		
9.1.11.2		Reservoir	No	1		
9.1.12	PE2.6	Twisted Pair Instrument Cabling				
		Remove, replace and installation of the following instrument cabling inclusive of cable glands and terminations				
9.1.12.1		1 Pair	m	1		
9.1.12.2		2 Pair	m	1		
9.1.12.3		8 Pair	m	1		
9.1.12.4		16 Pair	m	1		
9.1.13		PLC Software				
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 7 : ELECTRICAL WORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		PLC Software and programming to ensure a fully functional system. Payment will only be certified for this item once the program has been submitted to the client in electronic format.				
9.1.13.1		Per Borehole	No	1		
9.1.13.2		Per Reservoir	No	1		
9.1.14		Termination, Cable and Wiring Numbers				
		Allow under this item for wire, cable and termination numbering not allowed for elsewhere per MCC	No	1		
9.1.15		Magnetic Door Monitors				
		Remove, replace and installation of magnetic door monitors as per specification inclusive of all fixing materials.	No	1		
9.1.16		Medium Duty Cable Tray				
		Remove, replace and installation of medium duty cable tray complete with bends, corners, T-pieces and fixing materials				
9.1.16.1		150mm	m	1		
9.1.16.2		T-piece	No	1		
9.1.16.3		90 deg bends	No	1		
9.1.17		Instrumentation Stand Pipe				
		Remove, replace and installation of instrumentation stand pipe to accommodate Wika pressure gauge. Including 3m 10mm stainless steel piping	No	1		
9.1.18		Double Pole Isolator				
		Remove, replace and installation of double pole isolator 16 Amp				
9.1.18.1		Type GEWEISS GW 70431	No	1		
9.1.19		Welding Socket Outlet				
9.1.19.1		Remove, replace and installation of Waco 32 Amp 5-Pin welding outlet	No	1		
9.1.20		Fan / Filter Unit				
		Remove, replace and installation of fan / filter unit type Freudenberg Varivent FK5G	No	1		
9.1.21		16 Amp Switch Socket Outlet				
		Supply and installation of 16 Amp switch socket outlet	No	1		
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 7 : ELECTRICAL WORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
9.1.23		General				
		a) Electrical spares per borehole	No.	1		
		b) Operation and maintenance manuel including circuit diagrams (3 sets) per borehole installation measured under Schedule 7	No.	1		
		c) Hardwood frame with plastic cover, containing circuit diagrams and schematic as specified (per system	No.	1		
		d) All items and labour necessary to complete test and commission the electrical installation including the testing of all relevant test certificates and the certificate of compliance.Per borehole)	No	1		
9.2	PE 3	**ELECTRICAL WORK - MV INSTALLATION**				
9.2.1		Poles and Strutpoles (Eucalyptus)				
		Remove, replace and installation of poles and strutpoles including planting of the pole and 300kv BIL down conductor as specified in the Eskom Electrification Standards (Excavations, backfilling & compaction measured elsewhere)				
		a) 7m pole with 120mm pole top	No	1		
		b) 8m pole with 160mm pole top	No	1		
		c) 11m pole with 160mm pole top	No	1		
		d) 12m pole with 160mm pole top	No	1		
		e) 13m pole with 160mm pole top	No	1		
		f) 10m pole with 160mm pole top	No	1		
		g) 11m pole with 180mm pole top	No	1		
		h) 12m pole with 180mm pole top	No	1		
		i) 13m pole with 180mm pole top	No	1		
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 7 : ELECTRICAL WORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
9.2.2		Stays and Strut Poles Remove, replace and installation of medium and low voltage stays and strut poles coplete. (Excavation and backfilling measured elswhere)				
9.2.2.1		Conventional stay with 1 insulator for MV poles	No	1		
9.2.2.2		Strut poles for 11m Structure	No	1		
9.2.3		Anti Climbing up Device				
		Total cost for the supply delivery and installation anti-climbing up devices at all switching-, transformer- and strut poles complete as specified.	No	1		
9.2.4		Excavations				
		Excavation, backfilling and compaction of the pole holes. The rate should include the opening of manholes. The rate should include the opening of manholes to determine the depth of sewer networks as well as the hand excavation of pole holes near existing services.				
		Pole holes (1500mm deep)				
9.2.4.1		In Soft Soil	No	1		
9.2.4.2		In Soft Rock	No	1		
9.2.4.3		In Hard Rock	No	1		
		Pole holes (1800mm deep)				
9.2.4.4		In Soft Soil	No	1		
9.2.4.5		In Soft Rock	No	1		
9.2.4.6		In Hard Rosk	No	1		
		Pole holes (2000mm deep)				
9.2.4.7		In Soft Soil	No	1		
9.2.4.8		In Soft Rock	No	1		
9.2.4.9		In Hard Rock	No	1		
		Pole holes (2400mm)				
9.2.4.10		In Soft Soil	No	1		
9.2.4.11		In Soft Rock	No	1		
9.2.4.12		In Hard Rock	No	1		
		Stay Holes for Medium Voltage Stays				
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 7 : ELECTRICAL WORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
9.2.4.13		In Soft Soil	No	1		
9.2.4.14		In Soft Rock	No	1		
9.2.4.15		In Hard Rock	No	1		
		Strut pole holes (2400mm deep)				
9.2.4.16		In Soft Soil	No	1		
9.2.4.17		In Soft Rock	No	1		
9.2.4.18		In Hard Rock	No	1		
9.2.4.19		Remove, replace and installation of agricultural lime for the backfilling of pole & stay holes	m³	1		
9.2.5		Stringing of ASCR Conductor				
		The total cost for the supply and installation of ASCR conductor including jointing, termination ecluding structure material Conductor shall bare Eskom mark.				
9.2.5.1		ASCR Code name Hare	m	1		
9.2.5.2		ASCR Code name Fox	m	1		
9.2.6		Material for pole Structures				
		The total cost for the removal, replacement and assembly of pole structures. The rates shall include for all material nescessary including bolts, nuts, washers, band-it straps, buckles.				
		Three phase structures (22k V)				
		a) Phase / Phase T Frame "Bird Friendly" 2000mm steel crossarm intermediate 0 deg deviation ESKOM DRW D-DT-1390	No	1		
		b) Phase / Phase T Frame "Bird Friendly" 2500mm wooden crossarm strain 0 deg deviation ESKOM DRW-D-DT-1343	No	1		
		c) Phase / Phase T Frame "Bird Friendly" 2500mm wooden crossarm strain (1-60) deg deviation ESKOM DRW-D-DT-1344	No	1		
		d) Phase / Phase T Frame "Bird Friendly" 2500mm wooden crossarm strain Terminal ESKOM DRW D- DT-1346	No	1		
		e) Phase / Phase H-Pole 2500mm wooden crossarm strain 0 deg deviation. ESKOM DRW D-DT-1373	No	1		
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 7 : ELECTRICAL WORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		f) Phase / Phase H-Pole 4500mm wooden crossarm strain (1-60) deg deviation. ESKOM DRW D-DT-1374	No	1		
		g) Phase / Phase H-Pole 4500mm wooden crossarm strain - terminal ESKOM DRW D-DT-1376	No	1		
		h) Phase /Phase Take-Off 2500mm wooden crossarm ESKOM DRW D-DT-1814	No	1		
		i) Three Phase T Frame "Bird Friendly" 2000mm steel crossarm intermediate 0 deg deviation ESKOM DRW D-DT-1870	No	1		
		j) Three Phase Delta "Bird Friendly" 2500mm wooden crossarm strain 0 deg deviation ESKOM DRW D-DT-1743	No	1		
		k) Three Phase Delta "Bird Friedly" 2500mm woode crossarm strain (1-60) deg deviation ESKOM DRW D-DT-1744	No	1		
		l) Three Phase Delta 2x2500mm wooden x-arm / 1700 steel strain crossarm strain (60-90) deg deviation ESKOM DRW D-DT-1745	No	1		
		m) Three Phase Delta 2500mm wooden crossarm strain - terminal ESKOM DRW D-DT-1747	No	1		
		n) Three Phase H-Pole 3500mm woodend crossarm strain 0 deg deviation ESKOM DRW D-DT-1763	No	1		
		o) Three Phase H-Pole 3500mm wooden crossarm strain (1-60) deg deviation ESKOM DRW D-DT-1764	No	1		
		p) Three Phase H-Pole 3500mm wooden crossarm strain - terminal ESKOM DRW D-DT-1766	No	1		
		q) Three Phase T Frame 2000mm steel crossarm intermediate small 1-10 deg deviation ESKOM DRW D-DT-1871	No	1		
		r) Transformer 5-100kVa / Single pole mounted. (Excluding transformer) ESKOM DRW D-DT-1860	No	1		
		s) Three Phase Take-Off 2500mm wooden crossarm ESKOM DRW D-DT-1804	No	1		
TOTAL CARRIED FORWARD						

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

SCHEDULE 7 : ELECTRICAL WORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		t) Three phase take-off H-Pole 3500 wooden crossarm structure DWG D-DT-1806	No	1		
		u) Fuse / cut-out assembly 3 x incl 2500mm wooden crossarm on single pole. Section links DWG D-DT-1848	No	1		
		v) Fuse / cut-out assembly 3 x incl 2500mm wooden crossarm on H-Pole. Equipment links DWG D-DT-1851	No	1		
9.2.7		Transformers				
		Remove, replace and installation of the following transformers complete incl. surge arrestors. To Eskom standards				
9.2.7.1		16kVa 22000 / 240V single phase	No	1		
9.2.7.2		25kVa 22000 / 415 / 240V three phase	No	1		
9.2.7.3		50kVa 22000 /415 /240V three phase	No	1		
9.2.8		Earthing				
		Remove, replace, installation and testing of transformer earthing as per Eskom Standard Specification (including excavation) ESKOM DRW D-DT-1860 AND D-DT-1861				
		a) Single pole mounted transformers	No	1		
		b) H-Pole mounted transformers	No	1		
9.2.9		Metering				
		Remove, replace,installation and testing of meter kiosk complete with meters, circuit breaker, terminals and cable from the transformer to the meter kiosk as per Eskom Standard Specification ESKOM DRW D-DT-1002 AND D-DT-1003				
		a) SPU 16kVa	No	1		
		b) SPU 25kVa Three Phase	No	1		
		c) SPU 50kVa Three Phase	No	1		
9.2.10		Numbering of Poles				
		Total cost for the numbering of poles in accordance with Eskom standards	No	1		
9.2.11		Connecting to existing line				
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 7 : ELECTRICAL WORK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		Connecting to existing line including all materials necessary for the complete installation. The price shall include for all co-ordination with Eskom. Price shall be per one take-off point.	No	1		
9.2.12		Connection Fee and Deposit payable to Eskom. The contractor shall be responsible for the payment to Eskom of the connection fees and deposit. Payment to the contractor shall be on submission of Eskom invoice / proof of payment. Per three phase point.				
		a) 25 kVA	No	1		
		b) 50 kVA	No	1		
		c) 100 kVA	No	1		
		Per single phase point				
		d) 16 kVA	No	1		
9.2.13		Arial Bundle Conductor Remove, replace and string of ABC complete including all hardware, terminations, clamping, tentioning and attachement to hardware.				
		a) 25mm sq 2 - core	m	1		
		b) 25mm sq 3 - core + bare neutral	m	1		
		c) 35mm sq 3 - core + bare neutral	m	1		
9.2.14		Bush Clearance a) Clear 6m wide vegetation and trees of girth up to 1m	m	1		
		b) Remove trees over 1m up to 2m girth	No	1		
TOTAL CARRIED FORWARD TO SUMMARY						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 8 : EMERGENCY MAINTENANCE

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
		EMERGENCY MAINTENANCE				
10.1		Removal of Existing Equipment				
		Rates : Rates tendered for the removal of existing equipment on boreholes must make provision for the following :				
		a) Complete dismantling of				
		b) Transport of equipment to the				
		c) Off-loading of equipment at the				
10.1.1		a) Removal of existing handpump equipment	No.	1		
		b) Extra-over item 10.1.1 (a) for the additional effort related to the depth of the borehole to remove existing	m	1		
10.1.2		a) Removal of existing windmill	No.	1		
		b) Extra-over item 10.1.2 (a) for the additional effort related to the depth of the borehole to remove existing	m	1		
10.1.3		a) Removal of existing motorised equipment	No.	1		
		b) Extra-over item 10.1.3 (a) for the additional effort related to the depth of the borehole to remove existing	m	1		
10.1.4		Removal of an existing standard pumphouse	No.	1		
10.1.5		Re-erection of the original standard pumphouse	No.	1		
10.1.6		Removal of and existing tank and tankstand complete with concrete base	No.	1		
10.1.7		Removal of existing Lister engine				
10.1.8		Complete removal of standard standpipe and disposal of concrete.	No.	1		
10.2		Other Emergency Maintenance (Only on instruction from Engineer)				
10.2.1		Replacing of 10kl Leaking Tanks, complete with dismantle and reinstatement of pipework	No.	1		
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 8 : EMERGENCY MAINTENANCE						
ITEM NO	**PAYMENT**	**DESCRIPTION**	**UNIT**	**SCHED QTY**	**RATE**	**AMOUNT R**
BROUGHT FORWARD						
10.2.2		The complete replacement of diesel engine concrete pumphouse foundations including the dismantle and disposal of the existing concrete	No.	1		
TOTAL CARRIED FORWARD TO SUMMARY						

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

SCHEDULE 9 : BUILDING WORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
		SCHEDULE 9 : BUILDING WORKS				
12.1		**PUMPHOUSES**				
12.1.1		Remove & Refurbish of pumphouse complete including 5x50x400mm Flat bar, welded borehole number.	No.	1		
		b) Leopard plastic chairs	No.	1		
12.2.6		Import Topsoil within village boundaries and levelling thereof in layers of 150mm. (Only on Engineer's instruction)	m²	1		
TOTAL CARRIED FORWARD						

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

SCHEDULE 9 : BUILDING WORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
12.3		**PUMP STATIONS**				
12.3.1	SABS 1200D	EXCAVATIONS				
	8.3.2(a)	a) Excavate in all materials for foundations.	m³	1		
	8.3.2(b)	b) Extra over item 11.3.1.a (provisional) for:				
		i) Intermediate excavation	m³	1		
		ii) Hard rock excavation	m³	1		
12.3.2		CONCRETE				
12.3.2.1		Prescribed mix concrete 3 parts sand to 1 part cement in screed to floor slabs. (50mm)	m²	1		
12.3.2.2	8.4.3	Strength Concrete: 20 MPa				
		i) Foundations	m³	1		
		ii) Floor slabs	m³	1		
12.3.3	8.4.4	SURFACE FINISHES				
		a) Woodfloated finish to:				
		i) Tops of bases / floor slabs	m²	1		
		b) Steelfloated finish	m²	1		
12.3.4		Gunplas or similar approved 250 micro metre PVC waterproof membrane	m²	1		
12.3.5	PART SPEC. PA	BRICK WORK				
12.3.5.1	8.1.1	Brickwork in approved facebricks, 230mm width, including all brickforce, plaster and damp proofing.	m²	1		
12.3.6	8.1.3	ROOFING				
12.3.6.1		Supply and fix wire ties 2mm dia. and 2m long.	No	1		
12.3.6.2		Supply and fix SA Pine trusses to wall plate for the following: (Roof Trusses designed to SABS 016.)				
		a) 114 x 50mm	m	1		
		b) 75 x 50mm	m	1		
TOTAL CARRIED FORWARD						

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

SCHEDULE 9 : BUILDING WORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		c) 50 x 38mm	m	1		
		d) 38 x 38mm	m	1		
12.3.6.3	8.1.2	Galvanised mild steel IBR roof cladding, sheeting 0,6mm thick, including pitch flashing, all in accordance with approved practice.	m²	1		
12.3.7	PART. SPEC. PA	Supply and install Transformer Room door - WISPECO type YV - complete, including all painting. (Vents to be fitted with insect proof gauze.)				
12.4	PB	**REMOVE & REFURBISH SECURITY FENCING**				
12.4.1		Remove and refurbish fencing				
		a) Corner posts	No.	1		
		b) Intermediate posts	No.	1		
		c) Gate posts	No.	1		
		d) Double gate 3,6m total width, with locking chain, hinges and drop bolts.	No.	1		
		e) Razor mesh with wires	m	1		
		f) Concrete Class 15/19 (200 x 200mm) around fence	m	1		
TOTAL CARRIED FORWARD TO SUMMARY						

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

SCHEDULE 10: HEALTH AND SAFETY

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
	PHS	**SCHEDULE 10: HEALTH AND SAFETY**				
14.1		**NOTIFICATION OF CONTRUCTION WORK**				
14.1.1		Allow for the cost of notification of construction work by the Principal Contractor.	Sum	1		
14.2		**HEALTH AND SAFETY PLAN**				
14.2.1		Allow for the cost of setting up a Health and Safety Plan as required in the specifications for the Principal Contractor. (To be approved by Agent before commencement of work.)	No.	1		
14.2.2		Allow for the cost of setting up a Health and Safety Plan as required in the specifications for each sub-contractor appointed by the Principal Contractor.	No.	1		
14.2.3		Overheads, charges and profit on Item 14.12.2.	%			
14.3		**HEALTH AND SAFETY MAIN FILE**				
14.3.1		Allow for the cost to compile a health and safety file to include all the required supporting documention as follows: (NOT TO BE REMOVED FROM SITE)				
		(All files shall be lever arch files with original colour document of acceptable standards including dividers. Emergency numbers to be displayed on the back of the file. The file will be expanded during the project as and when required by the client.)				
		Copy of H&S Act		1		
		Proof of registration with COID Insurer		1		
		Notification of construction work		1		
		Mandatory agreement		1		
		H&S Specification provided by client		1		
		Copy of tender document, drawings etc		1		
		Company Safety Policy to be signed by CEO		1		
		Company organogramme with respect to H&S on specific sites.		1		
		Letters of appointment for		1		
		List of sub-contractors		1		
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 10: HEALTH AND SAFETY

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		Evacuation plan Risk assessments and method statements Safe work procedures and material safety data sheets Fall protection plan Incident recordings Medical records Minutes of H&S meetings	Sum	1		
14.3.2		Allow for the cost of compiling a Health and Safety file for each sub-contractor including all the applicable supporting documentation as for the Principal Contractor. (NOT TO BE REMOVED FROM SITE)	No.	1		
		(All files shall be lever arch files with original colour document of acceptable standards including dividers. Emergency numbers to be displayed on the back of the file. The file will be expanded during the project as and when required by the client.)		1		
14.3.3		Overheads, charges and profit on Item 14.13.2	%	1		
14.4		**HEALTH AND SAFETY REGISTER FILE**				
14.4.1		Allow for the cost to compile a health and safety Register file to include all the required Registers.	Sum	1		
14.4.2		Allow for the cost of compiling a Health and Safety Register file for each sub-contractor including all the applicable supporting documentation as for the Principal Contractor.	No.	1		
14.4.3		Overheads, charges and profit on Item 14.14.12	%			
14.5		**HEALTH AND SAFETY TRAINING FILE**				
14.5.1		Allow for the cost to compile a health and safety Register file to include all the required Training material.	Sum	1		
14.5.2		Allow for the cost of compiling a Health and Safety Register file for each sub-contractor including all the applicable supporting documentation as for the Principal Contractor.	No.	1		
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 10: HEALTH AND SAFETY

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
14.5.3		Overheads, charges and profit on Item 14.15.2	%	1		
14.6		**SERVICE PROVIDER APPOINTMENTS**				
14.6.1		Allow for the appoinment of a SHE Coordinator to do monthly inspections. (Control on SHE Representative)	month	1		
14.6.2		Allow for the appointment of a H&S trainer to train the SHE representative.	Sum	1		
14.7		**TRAINING OF SITE**				
		Allow for the cost of training courses:				
14.7.1		Induction training for all workers of Principal Contractor.	No.	1		
14.7.2		Induction training for all workers of sub-contractors.	No.	1		
14.7.3		Public awareness training	No.	1		
14.7.4		Tool box talks on enviromental awareness	No.	1		
14.7.5		First aid training	No.	1		
14.7.6		Fire fighting awareness	No.	1		
14.7.7		HIV training - 7 Units	No.	1		
14.7.8		Tool box talks on hand tools	No.	1		
14.7.9		Tool box talks on hand tool accidents	No.	1		
14.7.10		Tool box talks on machine guarding	No.	1		
14.7.11		Tool box talks on lifting	No.	1		
14.7.12		Tool box talks on safe loading	No.	1		
14.7.13		Tool box talks on safety signs	No.	1		
14.7.14		Tool box talks on ten commandments of safety	No.	1		
14.7.15		Community training	No.	1		
14.8		**ACCREDITED TRAINING OFF SITE**		1		
14.8.1		Training on construction vechicles and mobile plant for each Operator.	No.	1		
14.8.2		First aid Level 1	No.	1		
14.8.3		Fire fighting Level 1	No.	1		
14.8.4		SHE representative Certificate	No.	1		
14.8.5		Insencident management Certificate	No.	1		
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 10: HEALTH AND SAFETY						
ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						
14.8.6		Risk assessment Certificate	No.	1		
14.8.7		COID Act Certificate	No.	1		
14.8.8		Scaffold erector training	No.	1		
14.9		**SHE REPRESENTATIVE**				
14.9.1		Allow for the cost of a SHE representative to be permanantly on site (for Principal Contractor).	month	1		
14.1		**FIRST AID EQUIPMENT**				
14.10.1		Fisrt aid box	No.	1		
14.10.2		First ais boxes for sub-contractor	No.	1		
14.10.3		Stretcher	No.	1		
14.11		**FIRE FIGTHINIG EQUIPMENT**				
		Allow for the cost of:				
14.11.1		Fire extinguishers	No.	1		
14.11.2		Fire extinguishers of sub-contractors	No.	1		
14.11.3		Fire extinguishers test certificates	No.	1		
14.12		**PERSONNEL PROTECTIVE CLOTHING**				
		Allow for the cost of:				
14.12.1		Hardhats	No.	1		
14.12.2		Safety shoes	No.	1		
14.12.3		Dust masks	No.	1		
14.12.4		Safety goggles	No.	1		
14.12.5		Gum boots	No.	1		
14.12.6		Welding helmet	No.	1		
14.12.7		Gas Welding goggles	No.	1		
14.12.8		Leather aprons	No.	1		
14.12.9		Overalls	No.	1		
14.13		**BARACADING**				
		Allow for the cost of baracading of excavations as instructed by Agent				
14.13.1		Danger tape	m	1		
14.13.2		1.2m Dayglo Mesh	m	1		
TOTAL CARRIED FORWARD						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 10: HEALTH AND SAFETY

ITEM NO	PAYMENT	DESCRIPTION	UNIT	SCHED QTY	RATE	AMOUNT R
BROUGHT FORWARD						-
14.14		**CHEMICAL TOILETS** Allow for chemical toilets on site as required by the specification				
14.14.1		For male workers	No.	1		
14.14.2		For female workers	No.	1		
14.15		**EATING FACILITIES**				
14.15.1		Allow for eating facilities in the form of a shaded net, table and chairs.	No.	1		
14.16		**SIGNS** Allow for sign boards to be displayed on site as required				
14.16.1		No entry signs	No.	1		
14.16.2		First aid signs	No.	1		
14.16.3		Fire equipment signs	No.	1		
14.16.4		Warning signs (Construction area boards)	No.	1		
14.16.5		Traffic control boards	No.	1		
14.17		**MEDICAL TESTS** Allow for medical tests for workers as required				
14.17.1		Medical fitness tests for operators on construction vehicles	No.	1		
14.17.2		Fitness tests for workers at heights	No.	1		
14.18		**LOAD TESTING ON CRANES**				
14.18.1		Allow for load testing of cranes to be used on site	No.	1		
TOTAL CARRIED FORWARD TO SUMMARY						

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Joe Morolong Local Municipality

BID NO: B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

PORTION 2: THE CONTRACT

SECTION C2.3
Summary of Schedule of Rates

Section C2.3: Summary of Schedules

SECTION NO	DESCRIPTION	AMOUNT Rand
SCHEDULE 1 :	GENERAL	
SCHEDULE 2 :	PIPE WORK	
SCHEDULE 3 :	ELEVATED TANKS	
SCHEDULE 4 :	BOREHOLE TESTING	
SCHEDULE 5 :	DIESEL ENGINES AND GENERATORS	
SCHEDULE 6 :	PUMPS	
SCHEDULE 7 :	ELECTRICAL WORKS	
SCHEDULE 8	EMERGENCY MAINTENANCE	
SCHEDULE 9	BUILDING WORKS	
SCHEDULE 10 :	HEALTH AND SAFETY	
	SUB-TOTAL Add 10 % Contingencies **SUB-TOTAL** Add VAT (15%)	
	TOTAL (INCL VAT)	R

JOE MOROLONG LOCAL MUNICIPALITY

BID NO : B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

PORTION 2: THE CONTRACT

PART C3

SCOPE OF WORK

Specifies and describes the supplies, services, or engineering and construction works which are to be provided and any other requirements and constraints relating to the manner in which the contract work is to be performed

SECTION C3.1: DESCRIPTION OF WORKS

C3.1.1 Employers Objectives

Bids are invited for the refurbishment of rural water supply infrastructure and the associated civil engineering works as part of the Joe Morolong Local Municipality's Rural Refurbishment Programme. Prospective tenderers must take note of the fact that the contract will be executed on the basis of a "Schedule of Rates" contract. The contract entered into between the Client and Contractor shall be binding on a year to year basis and will depend on a performance review over the period of 3 years, from the date of appointment of the Contractor.

C3.1.2 Overview of the Works

This contract comprises of the refurbishment of infrastructure in rural villages' water supply systems with in the Joe Morolong Local Municipality's area of jurisdiction. Details of the Works are included in Clause C3.1.3 hereof. The works will be executed by means of "mechanical" and/or "labour intensive" methods.

The works to be executed under this contract will consist of the removal of existing defective rural water supply infrastructure and the supply and installation of new equipment to ensure functional and operational status of water supply systems.

C3.1.3 Extent of the Works

(i) Establishment of the Contractor's base camp or depot.
(ii) Limited site clearance and earthworks (if necessary) to accommodate the removal and replacement of equipment and pipework. (Only on instruction of the Engineer or his Representative).
(iii) Remove and replace/repair/service borehole pumps and power units as specified by the Engineer (e.g. hand pumps, windmills, submersible, positive displacement or solar powered units).
(iv) Replace / repair structural steel, IBR cladded pump houses and/or pre-cast concrete pump house structures.
(v) Concrete work associated with the above-mentioned.

(vi) Assessment and reparation of electrical components associated with the installation of pumping equipment.
(vii) Pipe work and ancillary items associated with the installation of pumping equipment.
(viii) Leakage repair/replace of elevated tanks pressed steel and/or polypropylene tanks and appurtenant pipe work.
(ix) Leakage repair/replace of pipe work for rudimentary water distribution systems.
(x) Repair/replace of rudimentary communal draw-offs and house connections.
(xi) Repair/replace of rudimentary draw-offs.
(xii) Replace / repair of security fencing.
(xiii) Commissioning of the works on completion.
(xiv) Perform refurbishment to all of the above will be done on instruction only. On instruction, inspection of the set infrastructure will be done. Assessment inclusive of costs will be presented to the Client/Engineer for approval.

NOTE: No additional site movement will be payable for such instruction. Items not in the Bill of Quantities will be claimed under Item 1.3.1 Dayworks Materials (see PSA11.3) and all labour and transport costs will be handled under Schedule 2: Dayworks (see C3.5.1.11).

C3.1.4 Location of the Works

Works under this programme are to be executed in various rural villages within the Northern Cape Province and more specifically, in the Joe Morolong Local Municipality's area of jurisdiction.

SECTION C3.2: ENGINEERING

C3.2.1 Employers Design

The permanent works included in this contract has been designed by the Employer unless otherwise stated. The detail of the works is indicated on the drawings and in the specifications. The Tenderer may submit alternative offers for designs prepared by himself subject to the conditions specified in Clause 2.12 of Section T1.6 of the Standard Conditions of Tender.

C3.2.2 Drawings

Typical Detail Drawings for rural infrastructure are herewith included together with a drawing list.

SECTION C3.3: PROCUREMENT

C3.3.1 Procurement Principles

The Employer decided to adopt the Standard of Uniformity in Construction Procurement published by the Construction Industry Development Board (CIDB) for his procurement process.

The Standard for Uniformity in Construction Procurement establishes minimum requirements that:

a) promote cost efficiencies through the adoption of a uniform structure for procurement documents, standard component documents and generic solicitation procedures;
b) provide transparent, fair and equitable procurement methods and procedures in critical areas in the solicitation process;
c) ensure that the forms of contract that are used are fair and equitable for all the parties to a contract; and
d) enable risk, responsibilities and obligations to be clearly identified.

SECTION C3.4: CONSTRUCTION

STANDARD SPECIFICATIONS

The Standard Specifications on which this contract is based are the South African Bureau of Standard's Standardized Specifications for Civil Engineering Construction (SABS 1200). (Note: "SABS has been changed to "SANS"; the SABS 1200 specifications are due to be replaced in the foreseeable future by SANS 2001 amongst other specifications).

Although not bound in nor issued with this Document, the relevant sections of the standard specifications shall form part of this Contract. These documents are available at the Contractor's expense from the SA Bureau of Standards, Private Bag X191, PRETORIA, 0001.

The applicable SANS 1200 Standardised Specification for this Contract shall be the following:

A	-	General
AB	-	Engineers office
C	-	Site clearance
DA	-	Earthworks (Small Works)
DB	-	Earthworks (Pipe Trenches)
DK	-	Gabions and pitching
GA	-	Concrete (small works)
HA	-	Structural steelwork (sundry items)
HB	-	Cladding and sheeting
L	-	Medium pressure pipelines
LB	-	Bedding (pipes)

CONSTRUCTION INDEX

Section	Description
Section C3.4.1	Amendments to the Standard Specifications
Section C3.4.1.PSA	General
Section C3.4.1.PSAB	Engineer's Office
Section C3.4.1.PSC	Site Clearance
Section C3.4.1.PSDA	Earthworks (Small Works)
Section C3.4.1.PSDB	Earthworks (Pipe Trenches)
Section C3.4.1.PSDK	Gabions and Pitching
Section C3.4.1.PSGA	Concrete (Small Works)
Section C3.4.1.PSHA	Structural Steel (Small Works)
Section C3.4.1.PSL	Medium Pressure Pipelines
Section C3.4.1.PSLB	Bedding (Pipes)
Section C3.4.1.PSLF	Erf Connections

SECTION C3.4.1: Amendments to the Standard Specifications

The following variations and additions to the Standard and Particular Specifications will be applicable to this contract.

The various documents listed in C3.4 shall be treated as mutually explanatory. However, should any requirement of Section C3.4.1 or C3.4.2 conflict with any requirement of Standardised Specifications or with any requirements of the Particular specifications, then the requirement of Sections C3.4.1 and C3.4.2 shall prevail.

SECTION C3.4.1.PSA: Amendments to the Standard Specifications – General

PSA1 SPECIFICATION DRAWINGS (Clause 2.7)

Specification Drawings may be included in this document as annexures to the Project and Particular Specifications. Where such Specification Drawings depict items and standard structures according to layouts and details differing from those shown in the Standardised Specifications, the layouts and details shown in the annexures to the Project and Particular Specifications shall be adopted.

PSA2 QUALITY (Clause 3.1)

All material used in the Works shall, where such mark has been awarded for a specific type of material, bear the SABS mark. Alternatively, the Contractor shall furnish the Engineer with certificates of compliance of materials, which bear the official mark of the appropriate standard.

PSA2.1 DEFINITIONS

PSA2.1 Definitions

Add the following :

Task	-	a quantified activity or operation.
Daily task	-	a task that is required to be completed within a working day.
Task remuneration	-	remuneration as paid for a completed task or job.
Daily rate	-	the remuneration of a day's work.
Daily wage	-	See daily rate.
Daily task remuneration	-	the remuneration for a completed daily task.
Labour-intensive construction	-	the economically efficient employment of as great a portion of labour as is technically feasible to produce as high a standard of construction as demanded by the specifications and allowed by the funding available, thus the effective substitution of labour for equipment. (Note: This definition is not Contract specific, but applies to the project as a whole. This Contract is a part of such a project.)

PSA3 MATERIALS

PSA3.1 Supply of Materials

The Contractor will be responsible to supply all the materials necessary for the proper execution of the works. He shall also be fully responsible for quality of materials used and/or installed.

PSA4 PLANT (Clause 4.3)

Except where the use of plant is essential in order to meet the specified requirements by the Due Completion Date, the Contractor shall use only hand tools and equipment in the construction of those portion(s) of the Works that are required in terms of the Project Specifications to be constructed using labour intensive construction methods.

PSA5 CONSTRUCTION

PSA5.1 Setting Out of the Works

Where labour-intensive work is specified, the Contractor shall also be responsible for the setting out of daily tasks.

PSA6 TESTING (Clause 7)

a) All test results obtained by the Contractor in the course of his process control of the Works shall be submitted to the Engineer or his Representative prior to requesting inspection of the relevant portions of the Works. Any request for inspection shall be submitted on the prescribed forms that will be provided on commencement of Works Instructions.

b) The Contractor shall make suitable arrangements for process control prior to commencement with the Works. Should he intend using site personnel for this purpose he shall ensure that suitably trained and competent personnel take charge of the necessary test work, and that the necessary equipment is at their disposal prior to commencement of the Works. Failure to comply with these requirements shall be just cause for the Engineer to order suspension of the Works without additional remuneration in terms of Clause 5 of the Conditions of Contract, or for him to recommend termination to the Employer in terms of Clause 9 thereof.

c) The Contractor shall deliver to the Engineer, for his consideration, quality assurance programmes (as obtained from all the Contractor's proposed suppliers of pipes, valves and specials) prior to the Contractor's appointment of any suppliers.

PSA7 SITE CORRESPONDENCE

PSA7.1 Instructions by the Engineer

Site instructions by the Engineer, addressed to the Contractor at his office on the Site, will be numbered consecutively and will be deemed to have been received by the Contractor's Representative unless a break in the sequence of numbers is brought to the notice of the Engineer in writing immediately.

PSA7.2 Site Diary

A site diary, which will be supplied by the Engineer, must be filled in on a daily basis and submitted to the Engineer on a monthly basis. No claims will be considered without the site diary's schedule properly completed (on a daily basis) and submitted. A site diary will be kept one per site.

PSA8 SITE MEETINGS

Refer to Section C3.5.1.10.

PSA9 PAYMENT (Clause 8.2)

Refer to Section C3.5.1.11.

PSA10 REPORTS

The submission of each monthly payment certificate shall be accompanied by a completed Progress Report.

This report is a pre-requisite for the approval of each monthly payment certificate and shall be completed in full to illustrate all work completed the preceding month, as well as work in progress at the time of submission of the report.

Each of these reports must be accompanied with the relevant, completed appurtenant Borehole Schedules (refer to the Annexures). Relevant day work reference must be attached to each Equipping Schedule.

Labour intensive activities must be reported separately.

PSA11 SUMS STATED PROVISIONALLY (Clause 8.5)

PSA11.1 Contingencies

No provisional sum has been included in Schedule 1 for contingencies. No percentage mark-up will be applicable to any payments made using contingency money other than those included in prices for variations determined in terms of Clause 6.4 of the Conditions of Contract.

PSA11.2 Contract Price Adjustment

No provisional sum has been included in Schedule 1 for Contract Price Adjustment (CPA). No percentage mark-up will be applicable to any payments made using CPA money other than as determined by the CPA Formula applicable to the Contract.

PSA11.3 Materials for Dayworks

A Provisional Sum has been included in Schedule 1 for materials to be used during the execution of dayworks. In addition to the abovementioned amount, provision is made in Schedule 1 for a mark-up on the materials used during the execution of the dayworks by the Contractor. Payment made shall be regarded as full compensation for overheads, charges and profit on the materials that are used when executing dayworks.

PSA11.4 Royalties for Borrow Materials

A Provisional Sum has been included in Schedule 1 for any royalties that may become payable by the Contractor in obtaining suitable borrow materials from sources designated by the Engineer. Payment will be based on the royalties actually and necessarily paid. In addition to the above amounts, provision is made in Schedule 1 for a mark-up on any payments made by the Contractor in this regard. The mark-up shall be regarded as full compensation for overheads, charges and profits as provided for in clause 6.6 of the Conditions of Contract.

PSA12 PRIME COST ITEMS (Clause 8.6)

PSA12.1 Telephone Calls and Rental

A Prime Cost Item has been included in Schedule 1 for telephone calls and facsimile transmissions as well as rental and maintenance associated with the telephone(s) to be supplied to the Engineer's Representative(s) for the duration of the Contract as specified in section PSAB below. Payment will be based on call and rental costs, but excluding any deposits and installation costs which shall be priced under the preliminary and general items. In addition to the above amount, provision is made in Schedule 1 for a mark-up on any payments made by the Contractor. This mark-up shall be regarded as full compensation for overheads, charges and profits as provided for in Clause 6.6 of the Conditions of Contract.

PSA12.2 Labour Desk Officers

A prime cost item has been included in Schedule 1 for the compensation of the Labour Desk Officer. Payments will be done to the Labour Desk Officer on instruction of the engineer, in writing. In addition to the abovementioned amount, provision is made in Schedule 1 for a mark-up on the payments made to Labour Desk Officers. This mark-up shall be regarded as a full compensation for overheads, charges and profits as provided for Clause 6.6 of the Conditions of Contract.

PSA12.3 Artisan and Skills Training

A Prime Cost Item has been included in Schedule 1 for payments to be made to specialists for the training of unskilled or semi-skilled persons in industry accredited management and generic skills. Payment to the Contractor will be based on invoices certified by the Engineer and issued by training specialists to the Contractor for work undertaken in terms of this item.

In addition to the above amounts, provision is made in Schedule 1 for a mark-up on any payments made by the Contractor in this regard. The mark-up shall be regarded as full compensation for overheads, charges and profits as provided for in Clause 6.6 of the Conditions of Contract.

PSA12.4 Refurbishment of Existing Leaking Tanks

A prime cost has been included in Schedule 1 for payments made to Specialist Contractor, for the refurbishment of existing leaking tanks. In addition to the above-mentioned amount provision is made in Schedule 1 for a mark-up on the Specialist Contractor paid. This markup shall be regarded as full compensation for overheads, charges, administration and profits as provided for in Clause 6.6 of the Conditions of Contract.

PSA12.5 Electrical Connection Fees

A prime cost has been included in Schedule 1 for payments to Eskom in respect of electrical connection fees for borehole equipment. In addition to the above-mentioned amount, provision is made in Schedule 1 for a mark-up on the connection fees paid. This mark-up shall be regarded as full compensation for overheads, changes, administration and profits as provided for in Clause 6.6 of the Conditions of Contract.

PSA12.6 Specialist Contractors

A prime cost has been included in Schedule 1 for payments made to Specialist Contractors, which will be executed specialist work. In addition to the above-mentioned amount provision is made in Schedule 1 for a mark-up on the Specialist Contractors paid. This mark-up shall be regarded as full compensation for overheads, charges, administration and profits as provided for in Clause 6.6 of the Conditions of Contract.

PSA12.7 Prepaid Water Meters

A prime cost has been included in Section 1 for the supply and delivery of pre-paid water meter units and accessories. In addition to the abovementioned amount, provision is made in Schedule 1 for a mark-up for paying for the supply of pre-paid water meters and accessories. This mark-up shall be regarded as full compensation for overheads, charges and profits provided for Clause 6.6 of the Conditions of Contract.

PSA12.8 Initializing of Pre-paid Meters and Household Tokens

A prime cost has been included in Section 1 for the initializing of pre-paid meters and household tokens as well as the registration of households. In addition to the abovementioned amount, provision is made in Schedule 1 for a mark-up for paying for the initializing of pre-paid meters and household tokens as well as the registration of households. This mark-up shall be regarded as full compensation for overheads, charges and profits provided for clause 6.6 of the conditions of Contract.

PSA12.9 Accommodation for Engineer's Representative

A Prime Cost Item has been included in Schedule 1 for accommodation to be supplied to the Engineer's Representative(s) for the duration of the Contract as specified in section PSAB below. Payment will be based rental costs and include any deposits and /or booking costs. In addition to the above amount, provision is made in Schedule 1 for a mark-up on any payments made by the Contractor. This mark-up shall be regarded as full compensation for overheads, charges and profits as provided for in Clause 6.6 of the Conditions of Contract.

PSA12.10 Management of approved emerging local sub-contractors

A prime cost has been included in Schedule 1 for management of approved emerging local sub-contractors, which will be executed during works. In addition to the abovementioned amount provision is made in Schedule 1 for a mark-up on amounts paid to the approved emerging local sub-contractors. This mark-up shall be regarded as full compensation for overheads, charges, administration and profits as provided for in Clause 6.6 of the Conditions of Contract

PSA13 ADJUSTMENT OF PRELIMINARY AND GENERAL ITEMS DUE TO RAIN

Should the period for completion be automatically extended due to abnormal weather conditions occurring during execution of the Contract as provided for in the Project Specifications, no adjustment to the total for time-related preliminary and general items will be applicable.

PSA14 ADJUSTMENT OF PRELIMINARY AND GENERAL TIME RELATED ITEMS

An approved extension of time will qualify the Contractor to receive additional payment for each relevant time related item at a unit rate based on the sum originally tendered for such item, and which shall be fair and reasonable as contemplated in Clause 5.12 of the General Conditions of Contract.

PSA15 ADJUSTMENT OF PRELIMINARY AND GENERAL ITEMS DUE TO INTERRUPTION OF WORK SCHEDULE

Should the period of completion be automatically extended in terms of clause PS5.6 as a result of interruption in the contractors work schedule during execution of the contract, no adjustment to the total for time related preliminary and general items would be applicable. Time related preliminary and general items will be paid only if the Contractor has been established on site during a specific period. Therefore, if the Contractor was not established on site, time related P & G-items will not be paid.

If he was on site for only a limited period during a specific month, time related P&G items are to be paid in full for such a month.

PSA16 PAYMENT FOR ESTABLISHMENT OF FACILITIES AND ADDITIONAL ESTABLISHMENT ON THE CONTRACT

PSA16.1 Fixed Items

Amend clause 8.3.2 of SABS 1200 A as follows:

Change the heading of clause 8.3.2 to :

"First establishment of facilities on site at the depot or contractors main camp."

Item 8.3.2.1. to 8.3.3 as per the SABS 1200 A : No change

The purpose of this payment item is to remunerate the contractor for all establishment costs at the single main depot/camp where the contractor will establish for the duration of the contract. (Only payable at first establishment. For re-establishment, see Clause PSA 16.4).

Important Note :

The contractor will also not be paid any additional establishment costs in each village or inter-borehole movements, when the contractor moves into a village to re-do defective or maintenance work in that village.

PSA16.2 Fixed Items

Include the following clause 8.3.6

"Additional establishment cost payable to the Contractor on re-establishment."

- This item must cover all costs incurred by the Contractor when re-establishing after a previous de-establishment on instruction of the Engineer. Such re-establishment cost must not
- be confused with the initial establishment costs …… Unit: Sum

PSA16.3 Time Related Items

All time related items will be for the programme and not per single instruction or village.

PSA17 HEALTH AND SAFETY

The maintenance of safe work practice at all times and in all sections of the execution of the works is embedded in the day to day site activities of all the Contractor's management, staff and workforce on the contract.

However, the introduction of the Construction Regulations in 2003 requires from the Employer to ensure that the Contractor has made adequate provision for the execution of

the works within the specifications of said regulations. The following items have been identified as critical towards ensuring the minimum standards of safe work practice:

It must be noted that the lists below are not exhaustive and that many items have been traditionally priced by the Contractor as an integral part of his Preliminary and General items or as part of the overhead costs of other items. The tender document, although not detailed with regards the Construction Regulations, requires that the Contractor ensures adherence to the Occupational Health and Safety Act (Act 85 of 1993) the Construction Regulations, 2014.

PSA17.1 Fixed Items

Add the following new Clause (Clause 8.3.5): Unit

Compliance with the Occupational Health and Safety Act

(Act 85 of 1993) and its regulations and with the Employer's

Health and Safety Specification. .....Sum

The fixed charge item shall include but shall not be limited to the following:

- Preparation of Health and Safety Plan,
- Establishment of Health and Safety File,
- Health and Safety Training
- Personal Protective Clothing and Equipment
- Fences, Signs and Barricades
- Establishment of Safety Administration
- Other Health and Safety Fixed-charge Obligations

PSA17.2 Time-related Items

Add the following new Clause (Clause 8.4.6):

Compliance with the Occupational Health and Safety Act (Act 85 of 1993) and its regulations and with the Employer's Health and Safety Specification.

The time related item shall include but shall not be limited to the following:

- The employment cost of all health and safety personnel including consultants, health and safety officers, inspectors, supervisors and issuers required in terms of the Contractor's Health and Safety Plan,
- Updating the Health and Safety Plan as needed,

- Carrying out of periodic own audits and follow-up audits,
- Compiling ongoing risk assessments and risk assessment reports as required by the Works,
- Convening of regular safety meetings with the Safety Representatives,
- Accompanying and supporting the Employer or his Safety Agent during ad hoc audits,
- Compilation of monthly safety reports and statistics for the Employer or his Safety Agent,
- Implementation and maintenance of Training
- Maintenance of personal protective clothing and equipment
- Maintenance of fences, signs and barricades
- Implementation and maintenance of safety administration
- Other Health and Safety Time-related Obligations

SECTION C3.4.1.PSAB: Amendments to the Standard Specifications – Engineer's Office

PSAB1 NAME BOARDS (Clause 3.1)

Two name boards confirming to the standard requirements of the South African Association of Consulting Engineers and as shown on drawing 2019-12/G/D/001 must be provided and erected at points to be designated by the Engineer during the duration of the Contract for this purpose.

PSAB2 OFFICE BUILDING (Clause 3.2)

An office building shall be provided per appointed Contractor and maintained for the duration of the Contract. The following variations and additions to the requirements of SANS 1200AB shall apply:

a) The office shall have a floor area of at least 32 m2.

The office to be divided into two equal sections with access between offices.

b) The minimum glazed area shall be 6 m2.

c) The minimum window opening shall be 4.0 m2.

d) Ten (10) office chairs and three (3) desks of 1.5 m2 are required in addition to those furnishings specified in SANS 1200AB.

e) Rack for hanging contract drawings shall be provided.

f) One 15 amp plug point is to be installed within each of the offices.

g) A 0,75kW air conditioner with suitable power supply (reverse cycle/compressor type) is to be installed in each of the offices.

PSAB3 TELEPHONE (Clause 5.4)

Two cellular telephone of an approved type shall be provided for the exclusive use of the Engineer's Representative for the duration of the Contract.

The Contractor shall make all arrangements necessary for the provision of the cell phone, and shall pay all necessary deposits and installation costs that may be applicable. A prime cost item has been allowed in Schedule 1 to cover all call and rental costs that are associated with the provision of this facility for the Engineer's Representative.

PSAB4 PERSONAL COMPUTER

The Contractor shall provide and maintain in good working order two personal computers and printers on site for the exclusive use of the Engineer's Representatives with the following specifications:

(a) Computer:

- TravelMate TM7730 (TM7730-842G25Mn)
- Intel Centrino 2 Core 2 Duo P8400 (3MB L2 Cache, 2.26GHz, 1066MHz FSB) • 17" WXGA+ (CrystalBrite)
- Intel GMA 4500MHD
- 2GB (1*2048MB) DDR2 667
- 250GB HDD, DVD-Super Multi
- 802.11a/b/g/Draft-N, Two built-in Acer 3DSonic stereo speakers
- Gigabit LAN, 5-in-1 card reader, Bluetooth
- 6cell battery, 4 USB ports, PC Card slot (Type II)
- 5-in-1 Card reader, HDMI, 0.3MP Acer CrystelEye Webcam, Finger Print Reader

(b) Printer

- HP Laserjet P2014 or similar approved
- 23ppm

PSAB5 SURVEY ASSISTANTS (Clause 5.5)

Two suitably educated and trained survey assistant shall be made available for the sole use of the Engineer's Representative(s) for the duration of the construction.

PSAB6 SURVEY EQUIPMENT

The survey equipment listed hereunder shall be made available for the exclusive use of the Engineer for the duration of the Contract. Equipment shall be insured and maintained for the full duration of the Contract.

(a) Automatic surveyor's level complete with tripod and leather carry case such as Zeiss N1-2 or equivalent 2 No.
(b) 20-second tachometer with optical plum bob complete with and leather carry case such as Sokkisha TM20C or equivalent. 2 No.
(c) Nylon-coated steel surveyor's tape 100m long and 10mm wide 2 No.

(d) 5m long steel tape 2 No.

(e) 5m long three-piece telescopic survey staves (metric double-face) complete with angle bracket level 2 No

(f) 2kg hammer with rubber handle 2 No.

(g)	Steel pegs, 300mm long and 12mm dia	200 No.
(h)	Measuring wheel	2 No
(i)	Tripod holders for ranging rods (heavy duty)	4 No.
(j)	Optical square (Sokkisha or Wild), complete with telescopic aluminium rod and bubble	2 No.
(k)	100m long 50 kg strength fish line	2 No.
(l)	One metre long spirit level	2 No.
(m)	DCP	2 No.
(n)	100m Dip meter (water level meter)	2 No.
(o)	A Troxler nuclear system complete with accessories and store in a suitable transit case as supplied by the manufacturer. A detailed description of each unit and principles of operation should be given in the manual for the nuclear instrument. (Troxler Model 341B).	

PSAB7 CARPORTS

The Contractor shall provide four carports of at least 30 m2 each, two at each Engineers Office, which is so constructed as to provide shelter for the vehicles from the rain and the direct rays of the sun. The floor shall consist of crushed aggregate to alleviate dusty and muddy conditions.

PSAB8 DIGITAL CAMERA

The Contractor shall provide, insure and maintain for the full duration of the contract two approved digital cameras complete with data zoom features.

SECTION C3.4.1.PSC: Amendments to the Standard Specifications – Site Clearance

PSC1 DISPOSAL OF MATERIAL (Sub-Clauses 3.1 and 8.2.1)

Materials arising from clearing and grubbing shall be disposed of at a site to be arranged by the Contractor, in accordance with the provisions of Clause PSD4. Trees and stumps necessarily removed shall not be burnt unless authorised by the Engineer, but shall be cut and stacked at areas designated by the Engineer.

PSC2 AREAS TO BE CLEARED AND GRUBBED (Clause 5.1)

The areas to be cleared and grubbed will be indicated by the Engineer. Should a portion or the whole of the site have been cleared and grubbed by nature or by others prior to the start of construction, then no clearing and grubbing will be ordered or payment made with respect to the applicable portion of the site.

PSC3 PRESERVATION OF TREES AND SHRUBS (Sub-Clause 5.2.3)

The penalty in respect of every individual tree and shrub designated as a tree or shrub to be preserved that is damaged or removed unnecessarily by the Contractor, shall be R2,000. Trees that fall within areas upon which the Works are to be constructed or within areas that the Contractor must occupy for the proper construction of the Works will not be designated for preservation.

PSC4 OVERHAUL (New Sub-Clause)

No overhaul will be payable on the disposal of material arising from clearing and grubbing.

SECTION C3.4.1.PSDA: Amendments to the Standard Specifications - Earthworks (Small Works)

PSDA1 FREEHAUL AND OVERHAUL (Clause 5.2.5)

The freehaul distance for all material to be imported or spoiled shall be considered as 5 km for mechanically driven vehicles and a 200m for wheelbarrows from the outer ring of houses which defines the village, or as agreed upon in the specified case of “wheelbarrow haul”.

PSDA2 BORROW PITS (Clause 5.2.2.2)

Borrow materials shall be obtained from designated borrow pits approved by the Engineer.

PSDA3 DISPOSAL OF SURPLUS MATERIAL

All surplus or unsuitable materials arising from excavation shall be spoiled and spread where indicated by the Engineer. The Engineer shall determine the point of spoil and spreading depending on the nature of the material.

PSDA4 HAUL AND SPOIL ROADS

The contractor shall be responsible for the provision of all haul and spoil roads that he may require for the construction of the works and that the engineer may approve. No additional payment will be made in this regard.

SECTION C3.4.1.PSDB: Amendments to the Standard Specifications – Earthworks (Pipe Trenches)

PSDB1 MATERIALS (Clause 3)

PSDB1.1 Methods of classifying (Clause 3.1)

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

PSDB1.1.1 Save and except in respect of those portions of the Works which are specified in Portion 1 of the Project Specifications to be executed utilising Labour Intensive Construction Methods, the Contractor may use any method he chooses to excavate any class material, but his chosen method of excavation shall not determine the classification of the excavation. The Engineer will determine the classification of the materials.

PSDB1.1.2 The classification will be based on the specified construction methods, inspection of the material to be excavated and on the criteria given in PSDB1.2 below, as applicable.

PSDB1.1.3 Where the utilisation of Labour Intensive Construction Methods is specified in Portion 1 of the Project Specification for certain classes of excavation only, the material for those classes of material to be excavated using Labour Intensive Construction Methods will be classified in terms of PSDB1.2.2 and for those classes of excavation which are not required to be executed by Labour Intensive methods, classification will be based on the criteria given in PSDB1.2.1 (i.e. Where it is specified that the excavation of soft materials only shall be executed using Labour Intensive Construction Methods, the classification of the soft material to be so excavated will be based on the criteria given in PSDB1.2.2(a) and the Contractor will be required to excavate all such soft material by Labour Intensive methods. However, when the material is classified in terms of PSDB1.2.2(b) to be "intermediate" and is thus no longer required to be excavated by Labour Intensive methods, the classification of the material not required to be excavated using Labour Intensive methods will be based on the criteria given in PSDB1.2.1 (thus a material classified as "intermediate" in terms of PSDB1.2.2(b) may in terms of PSDB1.2.1 be deemed to be "soft" and will be measured and paid as such under such circumstances.).

PSDB1.1.4 All tools and equipment referred to in PSDB1.2 shall be in good mechanical and operational condition.

PSDB1.1.5 "Efficiently" as used in PSDB1.2.2(a) - (c) shall be taken to mean "in a manner that can be reasonably expected of a Contractor, having regard to the production achieved".

PSDB1.1.6 The classification of material other than "soft excavatability" shall be agreed upon before excavation may commence.

PSDB1.1.7 The Contractor shall immediately inform the Engineer if and when the nature of the material being excavated changes to such an extent that a new classification is warranted for further excavation. Failure on the part of the Contractor to advise the Engineer in good time shall entitle the Engineer to reclassify, at his discretion, such excavated material.

PSDB1.2 Classes of Excavation (Sub-Clause 3.1) Add the following new sub-clause:

PSDB1.2.1 Classes of excavation where Labour Intensive Construction Methods are NOT specified

The excavation of material will, in the case of work which is NOT required in terms of the Contract to be executed utilising Labour-Intensive Construction Methods, be classified according to SANS 1200D for the purpose of measurement and payment.

Add the following new sub-clause:

PSDB1.2.2 Classes of excavation where Labour Intensive Construction Methods are specified

Classes of excavation where Labour Intensive Construction Methods are specified.

The excavation of material will, in the case of work which is required in terms of the Contract to be executed utilising Labour Intensive Construction Methods, be classified in accordance with Table B.1 and Table B.2 in Annex B of SANS 1921-5:2004, i.e. based on the number of blows which causes a dynamic cone penetrometer (DCP) to drop by 100mm. Failing such classification, the excavation of material will be classified in accordance with Table B.3 of the same document (pro-rated to an 8 hour task). The said appendix makes provision for the following material classifications:

a) Soft excavation, Class 1,

b) Soft excavation, Class 2,

c) Soft excavation Class 3,

d) Intermediate excavation, and

e) Rock excavation.

For soft excavation classes 1, 2 or 3, the excavation of isolated boulders not exceeding 0,04 m³, will be considered to be included in their respective category. The excavation rates are those of an average able-bodied labourer or group of such labourers.

The following definitions will in addition to those provided in Table B.1 apply:

a) Intermediate excavation

Intermediate excavation shall be excavation in material which requires ripping or loosening by mechanical means prior to removal of the loosened material utilising the methods described for Soft material.

b) Hard rock excavation

Hard rock excavation shall be excavation of undecomposed boulders exceeding 0,04 m³ and excavation in solid rock occurring in bulk or in banks or ledges, which requires loosening or breaking up by drilling, wedging, splitting or blasting

or by other approved quarrying methods, prior to being excavated and removed from the excavation utilising only picks, crowbars, shovels and similar hand tools.

(NOTE : Such excavation generally includes materials such as formations of unweathered rock that can be removed only after blasting.)

The Engineer will instruct which portions of the Works, based on evidence provided from trial holes excavated at approximately 200 m spacing by the Contractor for this purpose, will be executed utilising Labour Intensive Construction methods. The Trial hole shall be excavated to trench depth utilising a Cat 416 Backactor or similar."

PSDB2 PLANT

PSDB2.1 Excavation Equipment (Sub-Clause 4.1)

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

a) To the extent that the provisions of the Specifications permit the use of mechanical plant and equipment in the excavation of trenches, the Contractor may use trenching plant that will excavate to a width such that the side allowance does not exceed the appropriate value specified in 5.2 by more than 50%, except that where in terms of the Project Specifications or of the Drawings, the base width of a trench for a pipeline or a portion of a pipeline is not to exceed the minimum base width or a stated value, the Contractor may use trenching plant which will produce the required trench width or he shall accept the responsibility for all costs incurred in strengthening the relevant pipeline.

PSDB2.2 Compaction Equipment (Sub-clause 4.2)

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

PSDB2.2.1 Machine Compaction

(a) Where the compaction is not required to be executed utilising Labour Intensive Construction methods, or where the utilisation of mechanical compaction plant and equipment is allowable in terms of the contract, the contractor may use mechanical compaction equipment, but he shall select such equipment and operate it in such a manner that the pipeline, duct or cable is not stressed or damaged during the compaction operation.

(b) Machine compaction shall not be used directly above the pipe until sufficient backfill has been placed to ensure that machine compaction loads transmitted to the top of the pipe are no greater than would be imposed by normal traffic loads over a pipeline with cover of 600mm.

PSDB2.2.2 Labour Intensive Construction Methods

(a) Unless and to the extent as may be otherwise provided in Portion 1 of the Project Specifications, the contractor shall, in the compaction of materials by Labour Intensive Construction methods, utilise only hand held manually powered tampers, rollers and similar compacting hand tools and equipment.

(b) Compaction shall be carried out in such a manner as to ensure that the pipeline cable or duct is not stressed or damaged. The material above the pipe shall not be compacted until sufficient backfill has been placed to ensure that the compaction loads transmitted to the top of the pipe are no greater than would be imposed by normal traffic loads over a pipeline with cover of 600mm.

PSDB3 ACCOMMODATION OF TRAFFIC (Sub-Clause 5.1.3)

Traffic must be accommodated along construction works which falls within or adjacent to any road reserve.

The Contractor shall tender a lump sum in Schedule 8 for accommodating traffic during the duration of the Contract, which sum shall cover all his obligations in this regard, including but not limited to temporary barricades; the erection and re-erection of existing and/or temporary traffic signs; lights and flagmen for the guarding and protection of the Works; and for making all necessary arrangements with the applicable traffic authorities. Payment shall be made monthly pro-rata to the overall progress of the Works.

If crossing of the road in half widths is allowed, the road shall remain continuously open to traffic. The Contractor shall make provision to ensure the safe passage of traffic using this public road whilst installing the pipe through the road, and to ensure that any disruption to the public is kept to a minimum providing safe detours when so instructed by the Engineer. Each half width shall be completed in one day. No open trenches will be allowed overnight. If the half width is not completed by 16:00 the trench shall be backfilled, in which case the Contractor shall re-excavate the trench at a later stage to complete the work at his own expense. All detours and signs shall be erected and maintained in accordance with the latest issue of Road Signs Note 13 as issued by CSRA and CUTA.

PSDB4 EXISTING SERVICES (Sub-Clauses 5.1.4)

Where any existing service occurs within the specified trench excavation, and the presence of such service is known before being uncovered, then the protection of the service will be scheduled and measured as provided for in Clause 8.3.5 of 1200DB. Only known services (as defined in Clause 5.4 of 1200A) shall be measured for payment.

Where an unknown existing service is damaged during construction, and the Engineer orders that the Contractor should undertake the repair of such service, then such repair will either be measured and paid as dayworks or alternatively as a contractual variation in terms of Clause 6.4 of the General Conditions of Contract.

No construction activity which may affect the integrity of telephone or electrical poles or stays may be carried out without the prior written approval of the Engineer, which approval shall only be given subject to the acceptance of a modus operandi that will ensure the integrity of such structures during construction.

PSDB5 TRENCH WIDTHS (Sub-Clauses 4.1 and 5.2)

Trenches in general shall not exceed the widths laid down in Sub-Clause 8.2.3. If trenches exceed the specified width the Contractor shall be liable for the cost of any thicker pipes or more expensive bedding which may be required as a result of the additional trench width.

PSDB6 MINIMUM BASE WIDTH (Sub-clause 5.2)

Side allowance for pipes of diameter 125 mm or more (Sub-clauses 5.2 and 8.2.3):

The minimum base width of trench for pipes of external diameter less than 125 mm but larger than 70 mm laid at a depth of 1,5 m or less shall be 550 mm.

The minimum base width of trenches for pipes of external diameter less than 70 mm laid at a depth of 1,0 m or less shall be 400 mm.

The minimum base width of trenches where labour-based excavation is concerned, shall be at least 150 mm on either side of the pipe's outer diameter to allow proper compaction of backfilling materials.

PSDB7 TRENCH BOTTOMS (Sub-Clause 5.5)

Replace the first paragraph of this sub-clause "Material that ..... compacted as directed" with the following :-

Where a firm foundation cannot be obtained at the grade indicated due to soft or unsuitable material, the Engineer may instruct the Contractor to remove such unsuitable material and to backfill the excess depth with approved selected material or concrete, as directed by the Engineer in each particular case, at the cost of the Employer. Backfill other than concrete, shall be placed in layers of 100mm un-compacted thickness, each layer thoroughly compacted to the entire satisfaction of the Engineer, to provide adequate support for the pipe bedding to be placed on top of it.

Should the Contractor remove more ground than is required to secure the proper grade of the pipeline, the Contractor must, at his own cost, backfill the excess excavation with approved selected material or concrete, as directed by the Engineer in each particular case.

PSDB8 DISPOSAL OF EXCAVATED MATERIAL Error! Bookmark not defined.(Sub-Clauses 5.6.3 and 5.6.4)

All surplus or unsuitable materials arising from excavation shall be disposed of in accordance with Clause PSD4.

PSDB9 FREEHAUL AND OVERHAUL (Sub-Clause 5.6.8)

The provisions of Clause PSD1 shall apply.

PSDB10 AREAS SUBJECTED TO TRAFFIC LOADS (Clause 5.7.2)

The requirements of Clause 5.7.2 shall apply to all pipes crossing roads and streets whether the roads and streets are to be constructed under this Contract or to be constructed at some time in the future. Compaction of pipe trenches running parallel to the roadway shall be considered areas subject to traffic loads where instructed by the engineer.

PSDB11 REINSTATEMENT OF EXISTING BITUMEN SURFACED ROADS (Clause 3.6 and 5.9.4)

Pipe trenches through the existing bitumen surfaced roads shall be reinstated with a 150mm upper selected subgrade layer compacted to 93 % mod AASHTO density, followed by a 150mm sub base layer compacted to 95 % mod AASHTO density and a 150mm graded crushed stone base compacted to 98 % of mod AASHTO density. The road shall be provided with a 25mm thick asphalt seal.

The upper selected subgrade layer shall have a CBR of at least 15, a grading modulus of at least 0.75 and a maximum PI of 12. The sub base shall conform to SANS 1200 ME and the base to SANS 1200 MF.

PSDB12 MEASUREMENT AND PAYMENT (Clause 8.3.2)

PSDB12.1 Basic Principles (Clause 8.1)

Insert the following heading for Clause 8.1.2:

"Trenches not required to be excavated by Labour Intensive Construction methods" Add the following new sub-clause : (Clause 8.1.5)

"Works required to be executed utilising Labour Intensive Construction methods

Separate items will be provided for works covered by this Specification which are required to be executed by Labour Intensive Construction methods and for works for which the utilisation of such methods is not required.

The trench depth increments referred to in Clause 8.1.2(b) and the trench depth increment for 8.1.5 shall be:

a) up to 1.5 m in depth

Trenches shall be measured volumetrically, irrespective of length.

Measurement and payment for works covered by this Specification and required to be executed utilising Labour-Intensive Construction (LIC) methods shall, unless otherwise stated, be mutatis mutandis in accordance with the provisions of SANS 1200DB as amended in this Project Specification.

PSDB12.2 Excavation (Sub-Clause 8.3.2)

Excavate, in all materials for trenches 0 – 1.0 m wide, backfill, compact and dispose of surplus material utilising Labour Intensive Construction methods up to

(a) 1.5 m in depth m ³

Extra over the above for:

(1) Soft excavation Class 2 (refer PSDB1.2.2) m ³

(2) Soft excavation Class 3 (refer PSDB1.2.2) m ³

(3) Intermediate excavation (refer PSDB1.2.2) m ³

(4) Hard rock excavation (refer PSDB1.2.2) m ³

Excavate, in all materials for trenches 0 – 1.0 m wide, backfill, compact and dispose of surplus material utilising Conventional Construction methods

(a) up to 1.5 m in depth m ³

Extra over the above for:

(1) Intermediate material m ³

(2) Hard rock excavation m ³

(3) Backfill and compact by means of Labour Intensive

Construction methods m ³

(4) Disposal of surplus material by means of Labour Intensive Construction methods within 20 m from the source of spoil material using wheel barrows m ³

Backfill should be in 200 mm thick layers compacted to 90% Mod AASHTO.

Payment for the excavation and backfilling of trenches shall be made at the tendered rates and at the following stages of the construction:

(i) upon completion and approval of the trench bottom, prior to bedding : 40 %
(ii) upon completion and approval of top of selected backfill: 70% (cumulative)
(iii) upon completion and approval of the mainfill: remaining 30 %.

PSDB12.3 Excavation of Trial Holes

Excavation of trial holes as described in PSDB1.2.2 will be measured by number and shall include for backfilling after inspection.

PSDB12.4 Stone Bedding

Stone bedding will be measured per cubic metre under the appropriate item in SANS 1200LB. Type A bedding (crushed stone wrapped in a geotextile blanket) shall be measured per linear metre along the centreline of the trench. The provision, operation and removal of (a) de-watering pump where authorised by the Engineer will be measured as day works under the appropriate item in Schedule 2.

SECTION C3.4.1.PSDK: Amendments to the Standard Specifications – Gabions and Pitching

PSDK1 GEOTEXTILE (Sub clause 3.1.4)

Shall be Kaytech Geotechnical Fabric U24, or similar approved.

PSDK2 PITCHING (Sub clause 3.2.1.2)

Type of pitching shall be grouted Ordinary Stone Pitching, unless otherwise instructed by the Engineer.

SECTION C3.4.1.PSGA: Amendments to the Standard Specifications – Concrete (Small Works)

PSGA1 CEMENT (Sub-Clause 3.2.1)

Only the use of Ordinary Portland Cement to SANS 471 will be permitted.

PSGA2 CONCRETE FINISHES (Sub-Clause 4.4.2)

Concrete against which earth will be backfilled shall be classified as rough. All exposed concrete surfaces shall be classified as smooth. Degree of accuracy II shall prevail.

PSGA3 STRENGTH CONCRETE (Sub-Clause 5.4.1.5)

The grade of concrete and nominal size of aggregate shall be as specified on the Drawings. The successful tenderer will be required to submit samples of the coarse and fine aggregate, which he proposes using, to the Engineer's Representative(s) for tests regarding the suitability of such aggregates. The Contractor shall prepare trail mixes. These mixes shall be designed for vibration. All data and reports prepared by the Contractor shall be submitted to the Engineer for information and approval prior to the commencement of concreting operations.

PSGA4 ANCHOR AND THRUST BLOCKS

At tees, bends, terminal valves, end caps, and where otherwise directed, anchor/thrust blocks shall be constructed to dimensions ordered, shown on the Drawings or agreed to by the Engineer. Unless otherwise specified, anchor/thrust blocks and pedestals shall be constructed of prescribed mix 15/37.5 concrete.

The concrete shall be well punned round the pipe and, if in trenches, against the undisturbed faces and bottom of the trench. Backfilling behind or under thrust faces will not be permitted. Excess excavation shall be replaced with the prescribed mix concrete given above for anchor/thrust blocks at the Contractor's expense, unless an item is scheduled to cover payment of over break. Care shall be taken to leave the joints accessible. No anchor/thrust blocks and pedestals shall be concreted until the approval of the Engineer has been obtained.

Anchor and thrust blocks will be measured by volume of concrete; the rate tendered shall include for any form work required constructing the block.

Should the Contractor offer an alternative method of coupling involving flexible joints, he shall design suitable thrust and anchor blocks in order to prevent movement of the pipeline under operating and test conditions. The working and test pressure to be used by the Contractor for the calculation of anchor and thrust blocks shall be in accordance with the design information that is issued together with the tender. The earth bearing pressure to be used for the calculation of anchor and thrust blocks shall be based on field tests. The factor of safety to be used in calculating the above shall be 2.5.

PSGA5 GROUTING TO MACHINE AND STRUCTURAL BED PLATES (Sub-clause 5.5.13)

PSGA5.1 Materials

a) Water. Water for grout shall comply with the requirements given in sub-clause 3.3 of SANS 1200G.

b) Aggregates. Notwithstanding the requirements of Sub-clause 3.4.1 of SANS 1200G, the grading of fine aggregate (sand) and coarse aggregate (stone or pea gravel) shall conform to the gradings given in Tables 1 and 2, respectively, below.

c) Cement. Cement shall be ordinary Portland cement complying with SANS 471.

d) Admixtures. Admixtures shall comply with the requirements of Sub-clause 3.5 of SANS 1200 G, and shall have a proven record of satisfactory performance under conditions encountered in the Northern Cape Province.

e) Proprietary Grouting Materials. Unless otherwise approved by the Engineer, Proprietary Grouting Materials shall be obtained ready mixed in sealed pockets as supplied by the manufacturers.

Table 1 - Sand		Table 2 - Stone or Pea Gravel	
1	2	1	2
Test sieve Nominal aperture size, mm	% Passing (by mass)	Test sieve aperture size, mm	% Passing (by mass)
9.5	100	9.5	100
4.75	95-100	4.74	95-100
1.18	45-65	2.36	0-5
0.3(300)	5-15		
0.15(150)	0-05		

* Portland cement (ordinary, rapid-hardening, and sulphate-resisting).

PSGA5.2 Preparation and Procedures

a) Before a machine or structural bed plate is placed on the concrete the following shall be carried out :

1) All defective concrete, laitance, dirt, oil, grease and loose material shall be removed from the concrete foundation by bush-hammering, chipping, or other means until sound clean concrete is obtained. The surface of the foundation shall be scabbled, but shall not be so rough as to interfere with proper placing of the grout. All foundation bolt sleeves shall be cut out, or cut off flush if the sleeves cannot be removed. The top of the foundation shall be reshaped if necessary.

2) The underside of each steel base, particularly in the bearing areas, shall be cleaned and any burrs and ragged edges removed before the base is placed in its final location.

3) All holding-down bolt sleeves shall be thoroughly cleaned of any materials that may prevent the grout from flowing freely to the bottom of the bolt sockets.

b) The base shall be properly aligned and levelled and shall be maintained in that position during grouting.

c) After the machine or structural bed plate has been placed the following precautions shall be observed:

1) Shimming shall be kept to a minimum. Steel plates shall be used for packing and shall be ground to the required thickness, where necessary.

2) Before grouting is started all loose dirt, oil, grease and other foreign matter on the surface of the foundation, the underside of bed plates, and in the bolt holes shall be removed by means of compressed air or other approved means. The surface of the foundation slab shall be thoroughly saturated with clean water and free water shall be removed from the surface and the bolt holes just before the grout is placed.

3) The grouting shall not be carried out until the alignment of all units to be grouted has been checked and approved by the Engineer.

4) Special care shall be taken with grouting in hot or cold weather to ensure proper setting and gain of strength and, in the case of Proprietary Grouting Materials, by having ice or hot water available, as the case may be, in accordance with the instructions of the manufacturer. Enclosures shall be provided for the grout such that, until it has set, its temperature will be in the range 15-27oC. Shields to protect the grout from the sun and from hot winds shall be provided by the Contractor when so ordered.

PSGA5.3 Form work

Form work for grouting shall comply with the applicable requirements of Sub-clause 5.2 of SANS 1200 G. Forms shall be caulked where necessary. Adequate clearance between forms and bed plates shall be provided to enable the grout to be worked into place.

PSGA4.4 Mixing (All free-flowing grouts except epoxy grouts)

The grout shall be mixed to a homogenous uniform mixture and delivered ready for placing at a temperature between 15oC and 25oC.

The materials and water shall be mixed in a mortar mixer for at least 3 min. or, in the case of small jobs only, shall be thoroughly mixed by hand, the entire mass being turned over enough times to ensure even distribution of its components.

The mixing shall be done as close as possible to the place(s) where the grout is placed. No more grout shall be mixed at any one time than can be placed in a period of 20 min. After the grout has been mixed it shall not be re-tempered by the addition of water.

PSGA4.5 Grouting (All free-flowing grouts except epoxy grouts)

The grout shall be placed quickly and continuously to avoid the undesirable effects of over-working. (These effects are segregation, bleeding and breaking-down of initial set). The method of placement shall be subject to approval. The means of placing the grout shall be such that the grout will completely fill the space to be grouted, will be thoroughly compacted, will be free of air pockets and will have evenly distributed contact over an area in excess of 80 % or, in the case of expanding grout, 95 % of the bearing area of the item to be supported.

Wherever applicable, grout shall be placed from one side only and where this is not practicable, care shall be taken to ensure that any entrapped air is released. After the grout has taken its initial set:

a) the forms shall be removed;

b) excess grout shall be so cut away as to leave a smooth and neatly finished job;

c) except where the grout is intended to provide resistance to side thrust, all edges shall be trimmed at 45oC to the vertical, from the bottom edge of the bed plate;

d) all excess grout on or about the bed plate shall be removed.

Damage to paint work, if any shall be repaired within 24 hours. Packing plates, shims and other levelling devices shall remain in position.

PSGA4.6 Dry-packed grout (Standard dry sand and cement grout)

Dry-packed grout shall have a minimum compressive strength at 28d of 20MPa. The quantity of water after placing shall be kept to a minimum consistent with placing conditions, and the cement, sand and, where applicable, pea gravel proportioned by mass shall be as follows:

a) Where the clearance between bed plate and foundation is 25 mm or less : 1 part of Portland cement, and 2 parts of sand;

b) Where the clearance exceeds 25 mm : 1 part of Portland cement, 1 part of sand and 1 part of pea gravel. Dry-packed grout shall be rammed by means of tamping rods against form work placed along three sides of the bed plate.

PSGA4.7 Non-shrink grout with metallic aggregate

The manufacturer instructions shall be observed when non-shrink grout with metallic aggregate is used.

Where the clearance between the bed plate and the foundation is less than 50 mm a sand-based mix shall be used. Where the clearance exceeds 50 mm the Engineer may order a mix with a base of sand plus pea gravel to be used.

PSGA4.8 Expanding grout with powdered aluminium additive

The manufacturer instruction shall be observed when the expanding grout powdered aluminium additive is used.

Where the clearance between the bed plate and the foundation is less than 25 mm, a sand-based mix shall be used. Where the clearance exceeds 25 mm the Engineer may order mix with a base of sand plus pea gravel to be used.

Each batch shall be mixed for at least 6 minutes after the powdered aluminium has been added. Where a ready-mixed grout is used, the powdered aluminium shall be added at the placing site and the batch mixed as specified. Grout shall be placed within 45 minutes after the addition of the powdered aluminium.

The Contractor shall not use powdered aluminium additive when the ambient temperature is below 5oC.

PSGA4.9 Epoxy grout (epoxy mortar type only)

The manufacturer's instructions shall be observed when an epoxy grout is used.

SECTION C3.4.1.PSHA: Amendments to the Standard Specifications – Structural Steel (Small Works)

PSHA1 GRADE OF STEEL (Sub-Clause 3.1.1)

Structural cold-formed steelwork to be to Grade 43A or 43B with the minimum properties as tabled in Table B-2 of SANS 0162-1982.

Structural hot-rolled steelwork to be to Grade 300W with the minimum properties as tabled in "Steel design date: No. 6" of the South African Rolled Steel Producers Co-ordinating Council and the South African Institute of Steel Construction.

PSHA2 SHOP DRAWINGS (Sub-Clause 5.1.2)

The contractor is to provide shop details.

Steelwork generally of welded construction with site connections bolted:

All holes 18 dia. for M16 bolts All gussets ex 8 mm U.O.S. All welds, 6 mm fillet

The Engineer must be notified, (at least 72 hours before hand) of the completion of the fabricated steelwork at the contractors' workshops, to enable him to make an inspection if he so desires. The fabricated steelwork, thus to be inspected shall be in its prepared specified state immediately before the application of prime coat painting.

PSHA3 WELDING (Sub-Clause 5.3.4)

Delete this clause in its entirety and add the following clause:

Welding shall be done in accordance with the relevant requirements of SABS 0162 BS5135 and AWS.D.1/18 (American Welding Society).

Welding shall be Grade B welding.

The qualification of welders shall be in accordance with the relevant clauses of the above standards, and specifically SABS 044 Part III and shall be Grade I welders. Grade 2 welders 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.

PSHA4 PROTECTIVE TREATMENT (Sub-Clause 5.3.9)

PSHA4.1 Shop Painting

a) Steelwork after fabrication shall be wire brushed to a finish equal to or better than Grade St3 or SIS 05 59 00.

b) Within 4 h after the completion of wire brushing, 2 coats of an approved primer such as a Type II. Grade 2 red lead, on a zinc chromate or red oxide (see Sub clause 3.7 of SABS 1200 H) shall be applied to provide a dry film of thickness between 25 and 30 micron. Except that red lead shall not be sprayed, a primer may be applied by means of brush, roller, or spray.

PSHA4.2 Painting after erection

a) After the erection of steelwork, all areas where the primer coat has been damaged shall be touched up as specified in PSH2.1.

b) An intermediate coat of an approved general-purpose alkyd undercoat shall then be applied to provide a dry film of thickness between 25 and 30 micron. The paint may be applied by means of brush, roller, or airless or conventional spray.

c) Provided that the undercoat is touch-dry within 2 hours, the finishing coat may be applied the following day. One coat of an approved alkyd enamel, the non-volatile vehicle of which contains at least 24 % authalic anhydride, shall be applied to provide a dry film of thickness between 25 and 30 micron.

d) The total dry film thickness of the paint and primer coats shall be between 70 and 100 micron.

PSHA4.3 Galvanising

Where galvanising is specified, it shall be carried out by the hot dip process in accordance with SABS 763-1977 (or latest amendment).

The minimum thickness of the zinc coating shall be for general application and shall in all cases be at least 65 micron, thus giving a minimum equivalent mass per unit of 455 g/m2.

PSHA5 SITE WELDING (NEW CLAUSE)

No welding shall be permitted on site without the express approval of the Engineer, with the exception of those details shown on the drawings as site welded.

PSHA6 CUTTING (NEW CLAUSE)

No oxy-acetylene or other gas cutting and bending will be permitted on site without the Engineer's approval.

The Engineer will have no hesitation in considering any relevant component, member or unit should oxy-acetylene or other gas cutting and bending, process be carried out by the Contractor without the Engineer's approval.

PSHA7 ERECTION PROCEDURE (NEW CLAUSE)

The setting out of all holding-down bolts shall be accurately checked by the Contractor. Any discrepancies in excess of the permissible deviations of the positions of these bolts shall be reported immediately to the Engineer.

The Contractor shall not be permitted to make any relevant adjustment in the steelwork without the Engineer's approval. (Refer to paragraph 2 of PSHA6).

SECTION C3.4.1.PSL: Amendments to the Standard Specifications – Medium Pressure Pipelines

PSL1 REFURBISHMENT MAINS

The pipes to be used for pressure mains are as follows:

1. 50 mm and larger - Unplasticised Poly vinyl Chloride (uPVC)

   Fibre Cement (FC)

   HDPE

2. 40 mm and smaller - High density Polyethylene Type IV

Couplings for uPVC pipes to be watertight and be able to withstand the relevant test pressures, unless otherwise indicated. uPVC pipe fittings shall be cast iron or aluminium.

Couplings for HDPE pipe fittings shall be compression fittings only.

PSL2 GRADE OF STEEL FOR STEEL PIPES

All steel piping shall be made electric welded low carbon steel pipes in accordance with the requirements of SANS 719-1971 and BS 534-1966. Where non-standard specials have been detailed on the drawings, such dimensions shall be adhered to. All flanged pipes and fittings shall have flanges as specified, and shall be supplied complete with all packings, nuts, bolts and washers. Steel piping shall be made from Grade A steel. The minimum wall thickness for steel pipes of nominal outside diameter exceeding 500 mm shall be 6 mm. Viking Johnson couplings complete with all seals, bolts, nuts, etc. shall be used where detailed. Where new installations couple up with existing, the Contractor shall ascertain what the flange drillings are the same as all existing fittings prior to any placement or order and shall confirm this information with the Engineer.

PSL2 PIPE COUPLINGS FOR OTHER PIPES (Additional to clause 3.7)

PSL2.1 Polyvinyl Chloride pipes and fittings shall be supplied with factory fitted 'Z type' couplings. Solvent welded joints will be permitted for pipes of diameter smaller than 50 mm. PVC pipe fittings shall be Aluminium or Cast Iron.

PSL2.2 Polyethylene pipes shall be supplied suitable for, and with compression or insert type fittings as scheduled. No screwed fitting shall be used without written approval. Polyethylene pipe fittings shall be Nylon.

PSL3 FIBRE-CEMENT PIPE FITTINGS (Clause 3.8.1)

Fibre Cement pipe fittings shall be Cast Iron or Steel. Where steel fittings are provided, they shall be adequately reinforced against ovalness (over the entire circumstances and width corresponding to half the width of the approximate standard AC coupling) by means of welded collars of minimum thickness 12mm.

PSL4 VALVES (Clause 3.10)

PSL4.1 Gate Valves

i) General

All gate valves in compliance with SANS 664, waterworks application, clockwise closing, with a non-rising spindle and plain thrust collar. Valves and flanges (if any) to be to the class specified.

Valves to be operated by either hand wheel, cap top and tee-key or extended spindle and hand wheel/tee-key. Operation to be specified. Valves to be flanged or spigot ended as specified.

Note :

"As specified" will mean as described in the schedule of quantities. In the event of no description in the schedule the following will prevail:

Valves to be at least class 10 with a standard hand wheel operator and valves to be flanged.

ii) Gate valves of 300mm diameter or smaller

All gate valves falling into this category to be fitted with resilient seal, rubber lined gates similar to "Elypso compression-sealing valves".

PSL4.2 Butterfly valves

All Butterfly valves to be of the 'Boving' (or similar approved) resilient sealing type and shall be supplied complete with geared operator and hand wheel. All geared operators shall have horizontal spindles.

PSL4.3 Valve spindles

All extended valve spindles shall be supplied at both ends with cast iron tops for valve key operation. The spindle shall be fitted into the valve box with a bearing for easy operation. The lengths of extended spindles are to suit the dimensions of their installation positions, all spindles supplied supported at 4m max. intervals.

PSL5 STEEL FLANGES (Clause 3.8.3)

PSL5.1 All flanges to be drilled to SANS 1123 table 15 unless otherwise specified.

PSL5.2 All valve and hydrant tee flanges to be drilled as follows:

AIR VALVE SIZE (inlet dia. mm)	FLANGE OD (mm)	BOLTS no. x dia.	PCD
50	203	4 x M16	165
80, 100 and 150	SANS 1123	Table 15	

Flange holes to be drilled to allow exact alignment vertically and horizontally as detailed on the drawings of all pipe work and equipment.

PSL6 CORROSION PROTECTION (Clause 3.9)

PSL6.1 General

No separate payment will be made for work described in this sub-section.

PSL6.2 Mechanical preparation

The valves shall be rendered smooth and free from undercuts, protrusions, sharp edges and spatter. Edges should have minimum radius of 1 mm.

Cast materials shall only be cast in a mould coated with a suitable mould wash.

Costings shall similarly be ground smooth and surface blow holes accepted after mechanical inspection shall be filled with weld metals or an approved epoxy filler and ground down to a smooth surface.

PSL6.3 Surface Cleaning

Surfaces to be coated shall be abrasive blast cleaned in accordance with SABS 064, Section 4.3, especially Procedure 4.3.4, to the following parameters.

DESCRIPTION AND MATERIAL	BLAST MEDIUM	PROFILE MICROMETRES	CLEANLINESS SA	RESIDUE
Fabricated or cast-iron valves	Clean, fine nonmetallic & nonrecycled or metallic	Fabricated max. 75 Casting Max 50 Min 30	3	0.3%

Other preparation methods, where required or agreed upon shall also be in accordance with SABS 064 as described in the appropriate sections. Laminations, scabs and occluded scale which become visible after cleaning shall be ground out and the ground area re-cleaned. Excessive grinding depth may be repaired by welding, or the metal shall be rejected at the discretion of the Engineer.

PSL6.4 Casting

The first cast shall be applied as soon as possible, but never exceeding 4 hours after blast cleaning if the relative humidity (RH) is below 70% or 2 hours if the RH is between 70% and 85%. Coating shall not take place if the RH is 85% or above, nor when the surface is less than 2 above dew point.

If unfavourable conditions prevent applications of the first coat, the surface shall be re-cleaned when conditions are acceptable.

Strict cleanliness between costs shall be maintained. The directions laid down by the specification and by the paint manufacturer for mixing, curing, use of solvents, suitable environmental conditions, and over-coating times shall be strictly adhered to. Adequate ventilation to remove volatile matter shall be ensured.

PSL6.5 Quality of coating

The fully cured coating system shall be uniform, smooth, glossy and have acceptable adhesion. Excessive runs and sags, wrinkling, bubbling, blisters, change in colour or gloss, excessive orange peel, dirt, dust or fluff occlusions and other visible defects shall not be permitted. Paint work showing evidence of entrapped solvents after full cure will also be rejected. No inter-cast lamination must take place.

The colour of each coat shall be different to that of the previous coat except where two finishing costs of the same colour are necessary to achieve colour uniformity.

All coating surfaces for water immersion or frequently wetted in service shall show no electrical insulation defects when tested in accordance with the inspection parameters.

Finishing coat colours.

In addition to the finishing coat colour, if specified, the colour recommended for identification marking in SANS 0140 shall apply. Where not specified, the selection of paint colours shall be decided.

All damage that occurs during handling, assembly, transport, storage and erection shall be repaired to the requirements of the specifications. All damage sustained during transport will be repaired by the Contractor.

Proprietary items

Components supplied already painted or protected e.g. gear boxes, etc, may be accepted in this condition provided that they meet the requirements of this specification in general.

Quality control by the Contractor

The Contractor shall produce his own quality control records and tests carried out during all stages of corrosion protection procedures. These shall be made readily available to the Department's Inspector.

PSL6.6 Paint Systems required

All valves and fittings shall be coated as follows:

SURFACE	COATING	THICKNESS (MICROMETRES)
Lining (inside surface)	Epoxy	300
Coating *outside surface)	(i) Epoxy plus (ii) Vinyl enamel colour Brilliant Green	200 25
Flange faces	Epoxy	125
Stainless steel components	Pickled and passivated with Duva chemicals or equivalent	-
Fasteners	Cadmium plated and dichromate (yellow) passivated	15 to 20

The epoxy applied shall be polyamide cured and preferably be solvent free in accordance with SANS 1217. Solvent containing epoxies will, however, be considered.

All external fasteners shall be Epoxy coated after assembly and testing.

PSL7 HANDLING AND RIGGING (Clause 4.1)

PSL7.1 Transportation

Pipes and valves shall be protected during transportation and handling against damages caused by impact, dropping, etc. Special care shall be taken during transportation to

protect pipes. Rubber lined vertical posts shall be spaced on the sides of transporting vehicles to provide adequate support to the loaded pipes. Large diameter fibre cement and concrete pipes (that is, diameter above 800mm) shall be supported on supporting stools in transit. All pipes shall be inspected for defects immediately before laying and faulty pipes or pipes which have suffered damage which would affect their serviceability shall not be used in the Works.

PSL7.2 Off-loading and storage

Pipes which cannot be off-loaded by hand shall only be lifted by means of suitably approved broad band slings. The use of wire, chains, hooks, crowbars and similar items shall not be permitted and the pipes, fittings and specials shall not be handled in such a manner as could cause damage to occur.

Pipes, fittings and specials shall at no time be laid, stacked or rolled directly onto the ground but shall be supported on suitable padded cradles or other approved material near each end of the pipe, fittings or special. Particular care shall be taken where pipes with fitted couplings are handled or stacked to prevent any pressure on the couplings. Where loose AC-couplings are provided, the couplings shall be stored flat on their sides and under no condition be rolled or stored in an upright position.

All PVC-pipe work as well as the rubber sealing rings in pipe couplings shall be protected from the elements to prevent deterioration of the pipe work.

PSL7.3 Inspection on delivery

The Engineer's Representative will thoroughly inspect all pipes, fittings and specials delivered to the site but his acceptance of same as being in good condition shall not relieve the Contractor of any of his obligations or responsibilities under this Contract.

Materials rejected by the Engineer shall be removed from the site and shall be replaced by other approved materials by the Contractor at his own expense.

PSL8 SETTING OUT (Clause 4.2)

Alignment of the pipes may be done either by means of infrared sighting equipment or by sight rails. The following method should be followed if alignment is to be done by sight rails :

Prior to the preparation of the pipe bedding, the Contractor is to erect sight rails of 38mm x 150mm timber at intervals of a maximum of 60m or at points of change of pipe gradient, whichever may be the lesser. These shall be supported by wooden posts on each side firmly fixed on solid ground and the rails shall be accurately placed in position as regards alignment and invert level of the proposed trench.

The centre line of the trench (i.e. pipeline) shall be denoted on each sight rail, both back and front by a single vertical line drawn therein, and the rail on either side of the centre line painted in two contrasting colours. The Contractor shall also provide boning rods of

an approximate length marked in even decimetres for use in the fixing of the trench bottom to the correct line and level.

PSL9 LAYING AND JOINTS

No pipe laying shall commence on any particular section until the Engineer has approved of the trenches and bedding. No pipes shall be laid in trenches with free standing water. The pipes shall be laid true to the lines, levels and grades shown on the drawings or ordered by the Engineer, to within a tolerance specified.

The open ends of all pipes and fittings shall be suitably closed to prevent the ingress of soil or other matter into the pipes. After the pipes have been laid, they shall be inspected and checked by the Engineer for grade, direction and line. If any pipes have been inaccurately laid, the work shall be rectified as ordered by the Engineer at the Contractor's expense.

All valves and fittings are to be checked beforehand to ensure their operational order before being placed in the line. They are to be set correctly in position as indicated on the drawings or as ordered by the Engineer, and where required, are to be supported by bedding or concrete supporting stools. Care shall be taken to ensure that no loose fill material or foreign matters enter the pipes or fittings. After the pipelines have been inspected and passed by the Engineer, backfilling shall proceed and brought up evenly on both sides of the pipe with selected material as specified.

Jointing of pipes shall be carried out strictly in accordance with the manufacturer's instructions. Ends of pipes and joints shall be completely free of dirt and grit when the joints are assembled.

PSL10 BACKFILL

Following the inspection by the Engineer with respect to the grade, direction and line, as well as the successful testing of the pipeline, the Contractor shall promptly refill trenches and excavations.

PSL10.1 Material and Method

The Contractor shall promptly refill trenches and excavations as soon as the works have been inspected, tested and passed by the Engineer.

The backfilling in contact with pipes and for a distance of 200 mm above the barrels of the pipes shall consists of selected material from the excavations, free form excess clay, vegetable matter and stones. Shortages of selected material in any section of a trench shall be made up free of additional cost by borrowing from adjacent excavations containing a surplus of suitable material.

The selected material shall be brought up in 150mm layers, uniformly moistened to the optimum moisture content to attain the specified compaction and shall be thoroughly compacted round the pipes and joints. Special care shall be taken in filling joint holes

and the selected material shall be firmly punned in, slightly moistened if required in order to ensure bearing for the length of each pipe.

Sufficient topsoil shall be set aside during excavation to form not less than the upper 150 mm of backfill material for re-establishment of vegetation.

In no case shall any filling be deposited in water. Trenches shall be kept free of water until backfilling has been completed. From above the top of the selected backfilling, unselected excavated material, excluding stones larger than 150 mm in any dimensions, shall be used for backfilling, which shall be compacted in layers not exceeding 150 mm.

Only equipment approved by the Engineer shall be used for the compaction of the fill.

The superimposed loading resulting from the use of self-propelled or tractor-drawn compaction equipment shall not exceed the maximum external loading for any particular pipe in accordance with H20 Highway Loading as specified by the manufacturers.

The backfill shall be mounded to a height of 100 mm above ground level with gaps allowed at regular intervals for cross drainage.

Immediately after completion of the backfilling all surplus materials shall be levelled off adjacent to the pipeline.

Any settlement during the excavation of the contract and the period of maintenance shall immediately be made good by the Contractor with topsoil of the same type as that adjacent to the trench.

The Contractor shall fill in with approved material and consolidate all cavities caused by slips, rain, floorings, etc. or any other cause whatever at his own expense, to the satisfaction of the Engineer.

The Contractor shall make good promptly, to the entire satisfaction of the Engineer at his own expense, during the whole period that the works are in his hands, including maintenance period and, as often as necessary, any settlement that may occur in the surface of roads, footpaths, private or public property, etc., caused by his trenches or excavations. He shall be liable for any accidents caused thereby and repair at his own cost any damage caused to property by such settlement.

During the execution of the Contract, the Contractor shall maintain a regular patrol, particularly after rains, of all completed backfilled excavations, in order to locate any subsidence, which he shall make good properly without any delay and shall not defer such action until complaints are received.

PSL11 TOLERANCES

The more stringent of SANS 1200 L 6.2 and 6.3, and the following relative deviation shall be applicable to pipe work.

a) Relative Deviation laterally from line : 0,1% of distance between points.

b) Deviation from gradient

Design gradient less than 1% : 0,04%

Design gradient greater than 1% : 0,08%

PSL12 PIPELINE MARKERS

A detail of the required concrete pipeline marker is included in the Annexures to the Specifications. Measurements will be per unit and the payment made accordingly shall be full compensation for the supply and installation of the pipeline marker.

PSL13 MARKING OF ROUTE AND POSITION

The route and position of reticulation and bulk supply mains shall be marked on the surface by one of the following methods:

- pipeline route markers
- standard service markers
- painted service marking

PSL15 STANDARD HYDRAULIC PIPE TEST (Clause 7.3)

Field test pressures shall be 1,5 times the recommended maximum working pressure for the class of pipe and/or valves, specials and fittings being tested.

PSL16 MEASUREMENT AND PAYMENT

PSL16.1 Principles

Measurements of the pipelines, specials and valves shall be as per the appropriate items in SANS 1200L i.e. Items 8.2.1, 8.2.2 or 8.2.3.

Payment shall be subdivided as follows:

a) Supply of pipes to site - the percentage allowed for in the Appendix to the Form of Tender. (i.e. 80%)

b) Successful testing of pipeline - remainder of the tendered amount, save for the normal retention.

PSL16.2 Scheduled Items

PSL16.2.1 Supply, Lay and bed Pipes complete with couplings Unit : m

Pipelines will be measured by length over all lengths as laid. No deduction will be made for specials and valves. Separate items will be scheduled for each diameter and each type and class of pipe laid. The rates shall cover the cost of the provision of the pipes

complete with couplings, and the costs of the handling, inspecting, transporting, bedding, laying, jointing, cutting, testing and when relevant, disinfecting of the pipes and the joints.

PSL16.2.2 Extra-over 15.2.1 for the supplying, laying and bedding of specials complete

with couplings Unit : no

PSL16.2.3 Extra-over 15.2.1 for the supplying, fixing and bedding of

valves Unit : no

Specials and valves will be measured by the number of each type, class and size.

The rates which shall be extra-over the rates for 16.2.1, shall cover the cost of provision of each special or valve, complete with couplings and the cost of the handling, fixing, bedding and testing of the special or valve, as applicable and the cutting of the pipes.

No extra payment over and above the rates will be made in respect of any additional cutting, turning and jointing of pipes required for the location of valves, specials, etc., in the positions given on the drawings.

Unless specific provision is made in the schedule, no separate payment will be made for the supply and fitting of any additional joints and jointing materials which may be required for the connection of shortened pipe lengths.

SECTION C3.4.1.PSLB: Amendments to the Standard Specifications – Bedding (Pipes)

PSLB1 BEDDING (Sub-Clause 3.3)

PSLB1.2 Rigid Pipes

All steel, clay and concrete pipes shall be laid on a class C bedding as shown on Drawing LB-1 of SANS 1200LB.

PSLB1.3 Flexible pipes

uPVC, mPVC, and polyethylene pipes will be regarded as being flexible and shall be bedded as per Drawing LB-2 of SANS 1200 LB.

PSLB2 MATERIAL NOT AVAILABLE FROM TRENCH EXCAVATION (Clause 3.4.2)

Bedding and selected fill materials shall be obtained from trench excavation, other necessary excavations or from borrow pits in accordance with the provisions of Clause PSD3. The engineer reserves the right to designate alternative sources. He also reserves the right to make a ruling whether special efforts must be made to construct specifically a separate bedding for pipes where the in-situ material proved to be of good quality.

PSLB3 CLASS A BEDDING (Sub-Clause 5.2.1)

Concrete to be used in class A bedding to pipes shall be of grade 20/19.

PSLB4 CONCRETE CASING TO PIPES (Sub-Clause 5.4)

Concrete to be used in the casing of pipes shall be of grade 20/19.

PSLB5 TOLERANCE ON COMPACTION OF BEDDING MATERIAL

Degree of accuracy II shall prevail.

SECTION C3.4.1.PSLF: Amendments to the Standard Specifications – Erf Connections

NOT APPLICABLE FOR THIS BID

SECTION C3.4.2: Particular Specifications

Sub Section	Description
PA	Building Work
PB	Fencing
PC	Finishing and Cleaning Up
PD	Equipping of Boreholes
PE	Electrical and Electronics Installation
PH	Tanks and Tank stands
PLN	Manufacture, Supply and Testing of Steel Pipes

PA BUILDING WORK

PA1 SCOPE

This section of the Specifications deals specifically with all the building work associated with the Works.

Concrete work, steelwork, cladding, pipe laying, mechanical and electrical equipment, etc. forming part of or to be housed in a building erected in terms of this specification shall conform to the requirements of the relevant standardised or particular specifications referred to in the Project Specification.

PA2 INTERPRETATIONS

The relevant SANS 1200 Standardised Specifications such as Site Clearance, Earthworks, Earthworks (pipe trenches), Concrete (structural), Low pressure pipelines, Bedding (pipes), Sewers and Stormwater drainage shall also apply to the work under this section.

PA3 MATERIALS

All materials used for the Building Work shall, where such mark has been awarded for a specific type of material bear the SABS mark.

PA3.1 Brick and Plasterwork

Cement, sand and water shall conform to the requirements of SANS 1200 G - Concrete.

Unless otherwise described, cement mortar shall be composed of six parts by volume of sand to one part by volume of cement. The materials are to be mixed dry until the mixture is of a uniform colour and then clean water is to be added gradually through a fine rose and the mixture turned over until the ingredients are thoroughly incorporated.

Cement mortar must be mixed in small quantities and must be used within one hour of mixing, as the use of cement mortar that has commenced to set will not be permitted.

Plaster on concrete ceilings, beams, columns, etc. shall be mixed one part cement to three parts sand.

Bricks shall be of the best quality sound hardburnt pressed bricks or in the absence of clay bricks, concrete bricks; even in size and shape and equal to a sample submitted to an approved by the Engineer prior to commencement of work.

Clay bricks shall conform with the requirements of SANS 227 and concrete bricks to SANS 987.

Damp proof courses, unless otherwise described, shall be an asphaltic damp proof course with a base of fibre felt, and complying with the requirements of SANS 248

Horizontal Damp Proof Courses, and with a mass of 3,25kg/m2 or a plastic damp proof course of 15 micron thickness as Type B, complying with the requirements of SANS 952.

PA3.2 Fascias, Barge Boards and Window sills

Asbestos cement fascia and barge boards, where specified, shall be 10mm thick pressed sheets, 200mm wide free from cracks, twists, blemishes or other defects and complying with the requirements of SANS 685.

Internal asbestos cement sills shall be in single lengths cut between reveals, fitted with fixing lugs and solidly bedded in 3:1 cement mortar with a slight projection beyond the finished wall face below. Sills shall be pressed asbestos cement of approved manufacture 152 x 15m thick set level.

PA3.3 Paintwork

PA3.3.1 Primers

Plastered surfaces must be cleaned down and have one coat alkali resisting primer of an approved brand applied in strict accordance with the manufacturer's instructions, before any undercoats are applied.

Galvanised metal surfaces must be treated with one coat Metal Elch Primer complying with the requirements of SANS 723.

Steel surfaces must be treated with one coat Tupe Zinc Chromate Primer complying with the requirements of SANS 679.

Steel windows and doors and steel door frames, before being built in, must have all loose primer together with all rust spots, dirt, etc. removed and be treated with one coat red oxide zinc chromate primer complying with the requirements of SANS 909.

Wood surfaces to receive paint finish must be cleaned down, all knots treated with knotting and be primer with Type I Wood Primer externally and Type III Wood Primer internally, both complying with the requirements of SANS 678.

PA3.3.2 Emulsion paint for interior use must be Grade I Emulsion Paint complying with the requirements of SANS 663. Emulsion paint for exterior use must be of the Synthetic Polymer Base Type complying with the requirements of SANS 634.

PA3.3.3 High Gloss Enamel Paint shall be used on all surface other than specified above. High Gloss enamel paint must be Grade I paint complying with the requirements of SANS 630 for decorative High Gloss Enamel Paints with a Non-Aqueous Solvent Base, for Interior and Exterior use.

Undercoats for paints, except Emulsion paints, must be Type I undercoat Paint complying with the requirements of SANS 681.

PA3.4 Doors, Windows and Glazing

PA3.4.1 Doors

Unless indicated otherwise on drawings all doors and door frames shall be of solid hardwood. Frames shall be fitted with suitable tie bars and braces at bottom, and lugs for building in, three to each jamb or frames with fanlights. All doors shall be provided with locks to the requirements of SANS 4 and each lock shall be provided with a duplicate key.

PA3.4.2 Windows

Steel windows must be of approved manufacture and design, constructed of rolled mild steel sections, properly mitred and welded at angles with welding cleaned off smooth on all faces and complying with the requirements of SANS 727. Window types and sizes shall be as specified on the drawings.

PA3.4.3 Glazing

Sheeting glass for glazing, unless otherwise specified, must be flat drawn clear glass of the thicknesses indicated below:

For panes not exceeding 0,65 m2	: 3mm
For panes exceeding 0,65 m2 and not exceeding 1,5 m2	: 4mm

PA3.5 Tiling

PA3.5.1 Adhesive and Grouts

a) Wall adhesive
A grey, cement-based thin bed, wall tile powder adhesive for fixing tiles to walls.

b) Floor adhesive
A grey, cement-based thick bed, floor tile powder adhesive for fixing heavy tiles to floors or walls.

c) Wall grout
A cement-based, plasticized grouting compound for wall tile installation.

d) Bonding agent
A latex modified for use with adhesives and grouts to improve water resistance.

PA3.5.2 Tiles

Tiles shall be of first grade quality, white in colour, a maximum size of 160mm square, of a minimum thickness of 5mm and shall be glazed ceramic tiles (unless specified to the contrary).

PA3.6 Vinyl Asbestos Floor Tiles and Accessories

Vinyl asbestos floor tiles shall be semi-flexible vinyl floor tiles, 300mm x 300mm and 2,5mm thick to the colours specified. The colour scheme shall be approved by the Engineer before any tiles are ordered - irrespective whether colours has already been specified on the drawings.

Skirtings shall match the colour of the floor tiles and shall reach 100mm up against the wall.

Stair nosings shall be provided where vinyl asbestos tiles are to be provided on the stairs.

PA3.7 Electrical connection

Electrical wiring and fittings are to comply with the requirements laid down by:

(i) The latest issue of the "Standard Regulations for wiring of premises" issued by the South African Institute of Electrical Engineers.
(ii) The Factories, Machinery and Building Works Act of 1941.
(iii) The local authorities By-laws and any special requirements of the Local Supply Authority.

PA3.8 Sink units

Sink units shall be fitted with one shelf and a stainless steel sink and fluted drainer unit, with tiling key to one or more sides as required, complying with the requirements of the relevant SANS specification and bearing the standardisation mark of the SANS. The stainless steel shall be of Grade 1770 and of such gauge as laid down for the particular size of fitting. Outlet of bowls shall be fitted with chromium-plated brass work fittings with vulcanite plug and chromium-plated chain. Each 1500mm long sink unit shall have a single bowl, either left hand or right hand as shown, size 460 x 350 x 150mm deep. Each sink to be fitted with chromium-plated bibcocks and connected to hot and cold Refurbishment.

PA3.9 Sanitary equipment

PA3.9.1 Pedestal Water Closet Pans

Pedestal water closet pans shall be of wash-down type approximately 450mm high, of white glazed fireclay or vitreous china, complying with the requirements of the relevant SANS specification.

Pans shall be bedded on the floors in 3:1 cement mortar. Pans shall be fitted with approved plastic seats with double flap of size and shape required to fit the pans and each attached to pan with two non-ferrous metal fixing bolts.

PA3.9.2 Flushing Cisterns

Low level P.V.C cisterns, no less than 12mm thick in any part, shall be provided complying with the relevant SANS specification and shall have a capacity of +- 12 litres and shall be of the valve less siphonic type of approved manufacture.

Cisterns shall be fixed to walls with 6mm brass bolts, 150mm long, two to each cistern, built into walls in 3:1 cement mortar, with leather compression washers and brass nuts.

PA3.9.3 Hand wash basins

Hand wash basins shall be of the bracket type of white fireclay or vitreous china, complying with the requirements of the relevant SANS specification and having overflow, fitted with chromium plated grid.

Unless otherwise specified, basins shall be size 585 x 430mm each fitted with 38mm plug and chromium-plated chain, and with two 12mm chromium-plated brass easy clean pattern screw down pillar to PHS. Basins shall be fixed on concealed wall hangers fixed to walls with 6mm brass bolts, 150mm long.

PA4 PLANT

Plant, equipment, tools, scaffolding, etc. utilised in building work shall be of suitable capacity, condition and design to ensure the satisfactory and timeous completion of the Works within the specified period and in terms of these specifications and good building practices.

Only registered artisans (e.g. plumbers, electricians, etc.) shall be employed on any work where this is compulsory building practise.

PA5 CONSTRUCTION

PA5.1 Brick-and-Plasterwork

PA5.1.1 Normal brick walls

Brickwork, wherever practicable, and not otherwise described, must be built in English bond. Half brick walls, walls in two skins and cavity walls must have the separate skins built in stretcher bond. No false headers are to be used and none but whole bricks except where legitimately required to form bond. The bricks are to be well wetted (saturned in hot weather) with water before being laid and the course of bricks last laid is to be well wetted before bedding fresh bricks upon it. All perpends and angles are to be kept plumb. The brickwork is to have the joints flushed up at every course solid throughout the whole width of the course, and each course is to be laid on a solid bed of mortar. Pointing is to be done as the work proceeds.

The joints of all walls to be plastered or tiled are to be raked out 15mm as the work proceeds to form a key for plaster or screed. All walls are to be built up in regular and horizontal courses and carried out so that no part built is more than 1,2m higher than any adjoining walls. Mortar beds generally are not to exceed 12mm thickness.

PA5.1.2 Face brick walls

In all faced brickwork the bond must be set out on the first level course of brickwork, at floor level internally and two courses below ground level externally. The bond, if necessary, is to be broken in the centre of panels under windows or to piers between windows. All perpend must be kept true and all courses must be built to gauge rods. Facings must be carefully protected from damage, mortar droppings, paint splashes, etc. during the whole period of the Contract and, on completion, they must be thoroughly cleaned down and left perfect. The practice of oiling facings on completion will not be allowed.

PA5.1.3 Cavity Walls

Cavity walls are to be built with two brick skins with a cavity between the skins and the two skins tied together with wire ties, four to the metre square, carefully laid and in no case to fall inwards towards the inner skin of the wall.

Care must be taken to keep the cavity free of mortar droppings or other matter by movable boards or other means, and temporary openings must be left at plinth level through which any such droppings, etc. can be removed, and the openings made good on completion.

At door, window and other openings, the cavities shall be stopped 102,5mm back from heads, jambs and sills of openings.

PA5.1.4 Reinforced Brick Lintels

Brick lintels are to be built of normal, sound, well burnt, good quality building bricks, similar to the facings where exposed properly bonded longitudinally and bedded and pointed in cement mortar as described. Special care must be taken to ensure solid bedding, particularly where the reinforcement occurs.

The lintels are to be reinforced with straight continuous mild steel rods of the size and number scheduled. The rods must each extend 300mm on each side of the opening and are to be evenly spaced across its thickness in the first horizontal joint above the soffit.

Brick lintels in cavity walls must have all rods placed below the solid sections of the walls, excepting for those rods specifically scheduled to occur below the cavity.

Cavity walls must be built solid for the number of courses scheduled above the lintel soffit. This solid section must extend the full width of the opening, plus 300mm on each side. Combined brick and concrete lintels may have the reinforcement divided proportionately between the brick and the concrete skis. Where two or more openings are less than 665mm apart, the lintel shall be continuous over all such openings and the dividing piers, plus 300mm bearing at each extreme end as before, shall have such height and reinforcement as scheduled for widest openings spanned.

Span in mm	Min. height of lintels above soffit course, in brick courses	Reinforcement per half-brick thickness of wall above for solid walls		Additional reinforcement for cavity, placed below cavity	
		No. of Rods	Dia. mm	No. of Rods	Dia. mm
600	2	1	6	1	6
900	3	2	6	2	6
1200	3	3	6	1	6
1500-1800	4	2	10	1	10
2100-2400	5	3	10	1	10

PA5.1.5 Damp proof courses

The sheeting is to be cut into strips of the required width and laid on all foundation walls to the full thickness of the walls to the full thickness of the walls and without any longitudinal joints. At ends, angles and intersections the sheeting must be lapped 150mm and sealed. In cavity walls the sheeting must be laid across the full width of the wall, including the cavity, and must be stepped up one course in the cavity, over a cement triangular fillet, so that the sheeting under the inner skin of the wall is higher than that under the outer skin of the wall.

Under all window sills exposed to the weather, the sheeting must be laid to form damp proof course as detailed above for solid walls and cavity walls.

PA5.1.6 Reinforcing in Brick walls

Reinforcing (brickforce) on an approved manufacture shall be place on every fifth course in all brick walls. In half-brick and cavity walls 80mm wide reinforcing mesh shall be used and 150mm wide mesh in the case of the one-brick walls.

PA5.1.7 Plasterwork

All chases must be cut and electrical conduiting and boxes fixed before any plastering is done. On no account will chasing be allowed in finished plaster work, and if such chasing is necessary, the entire wall surface must be hacked off and re-plastered.

Except where otherwise described, all external plaster is to be finished with a wooden float and all internal plaster is to be finished with steel trowel, all to perfectly true and even surfaces, free from tool marks and other defects on completion.

All finished surfaces are to be protected from injury. All joints in brickwork are to be well raked out, all surfaces, brickwork and concrete, to be plastered must be brushed down to remove all dirt and dust and be thoroughly wetted directly before plastering. Concrete surfaces must be roughened or hacked as necessary to give a proper key for plaster. The surfaces must then be sloshed with coarse cement grout before plastering is commenced. The surfaces of all internal plaster must be steel trowelled to a smooth even and true finish. External plaster must be finished to a true and even surface with a wood float. Plaster must be returned into reveals and soffit of openings and all angles and edges must be true and straight. All plaster surfaces must be free from blemish and any cracks, blisters, or other defects must be cut out and made good and the whole left perfect at completion. Plaster on walls must be not less than 12mm or more than 20mm in thickness, and plaster on concrete work must be not less than 10mm or more than 15mm in thickness, except where specifically otherwise described.

PA5.1.8 Slip Joints

Slip joints shall be provided between brickwork and concrete slabs and beams by levelling up and steel trowelling smooth the bearing surfaces of brickwork with 3:1 mortar and covering the bearing surface before concrete is cast with 2 layers of 500m five hundred micron) black general purpose sheeting membrane.

The ends and sides of beams and edges of concrete slabs shall be separated from the brickwork with 12mm polystyrene placed vertically against the brickwork before the concrete is cast.

PA5.1.9 Beam Filling

Unless otherwise specified, beam filling shall be half brick thick, built in cement mortar, cut in between roof timbers and carried hard up to underside of roof covering and flushed up in mortar with a groove formed between covering and mortar to the satisfaction of the Engineer.

PA5.1.10 Securing of Roofs

Roof plates shall be fixed to walls with bands of 1,6mm thick galvanised hoop iron, 32mm wide, built six (6) courses deep into brickwork or embedded 300mm deep into concrete, at not exceeding 1,5 metre centres, and well lapped and spiked to plates and to roof trusses where adjacent, otherwise taken up to a lapped round the nearest purlin and well spiked thereto. A layer of brickforce shall be provided at each alternate course above the building in of the hoop iron to fix the roofs.

PA5.2 Rainwater Goods

All gutters, downpipes and flashings shall be 0,6mm thick galvanised sheet iron. Rates for sheet iron eaves gutter and rainwater pipes shall include for short lengths and for lapped, riveted and soldered joints. Eaves gutters are to be screwed or welded to fascia boards or roof timbers/beams with 38 x 3mm galvanised mild steel gutter brackets at approximately 900mm centres, or as otherwise described. Rainwater pipes are to be fixed with sheet iron ears to and including 25 x 76 x 150mm chamfered hardwood blocks, plugged to brickwork or concrete and oiled, or with 38 x 14 gauge galvanised hoop iron straps build into walls not more than 2 meter apart, bent around pipe and bolted at back.

Finishings shall be properly cut, lapped and shaped to render a waterproof finish. Flashings turned up against walls must be finished with cover flashing bent to shape, dressed over the under flashing and with top edge wedged into joint of brickwork and pointed or secured by other approved means.

PA5.3 Paintwork

All surfaces not being painted such as face brickwork, sills, floors and stained woodwork, must be covered up and protected against paint and distemper sports before any painting is commenced. All floors must be swept clean and walls dusted down before any paintwork is commenced and no sweeping or dusting must be done while painting is in progress.

All plastered wall; ceiling and similar surfaces must be perfectly dry and in a fit state to receive the finishings, before the work is put in hand.

All coats of paints, etc. must be thoroughly dry before subsequent coats are applied, and rubbed down where necessary.

All work must be finished to colours approved by the Engineer.

The tints of undercoats must approximate those of the finishing colour and in order to indicate the number of coats applied and to avoid misses when applying a succeeding coat a slight difference shall be made in the tint of each coat.

The Contractor must provide all necessary dust sheets, covers, etc. and shall exercise all necessary care to prevent marking the surfaces of joinery, walls, floors, glass, electrical fittings, etc. and must keep all parts of the works perfectly clean and free at all times from spotting, accumulation of rubbish, debris or dirt arising from the painting operations. Any surface disfigured or otherwise damaged must be completely renovated or replaced as necessary, by the Contractor at his own expense. The premises must be left clean and fit for occupation at the completion of the work.

PA5.4 Floor Finishes

Where a floated concrete floor finish is specified on the drawings, the requirements of SANS 1200G or GA, whichever is irrelevant, shall apply.

Granolithic finish to floors, treads and risers of steps, thresholds, landing etc. must be composed of two parts hard stone chippings; half part sand and one part cement, steel trowelled to a true and even surface. The granolithic must be laid before the concrete surface bed has matured, otherwise the surface of the concrete must be thoroughly cleaned with a wire brush and a coat of neat cement grout applied immediately before the granolithic is laid. The granolithic must be laid in panels not exceeding 6 m2 in areas, and jointed to lines of panels and lined into smaller square as directed with sunk V-joint. The joints between the panels should coincide with joints in the concrete surface bed, where these occur. No dusting on of colouring pigment will be allowed.

Terrazzo floor tiles shall be even in size and shape, free from cracks, chips, twists, blemished or other defect uniform in colour and equal to samples to be submitted to and approved by the Engineer. Special care must be taken to preserve arises and faces during transit and handling.

Pointing, etc.: Terrazzo floor tiles are to be bedded and jointed solidly in cement mortar and unless otherwise described, flush pointed on all exposed faces with semi-dry cement mortar pressed in. On no account must liquid grout be poured in. Terrazzo floor tiles work must be well protected to prevent all possibility of damage or discoloration and thoroughly off cleaned on completion.

Vinyl floor tiles shall be fixed on to a screed of thickness at least 25mm. The screed shall have a wood floated finish and shall be smooth with no obstruction greater than 3mm protruding and with the screeded surface level in such a way that no gap greater than 5mm would show underneath a 3m straight-edge or part thereof.

Vinyl tile adhesives shall carry the same product name as the vinyl tiles and the adhesives shall be applied as stipulated by the suppliers.

The acceptable tolerance of the final filed floor shall be similar to that specified for the screeded surface underlying the tiles.

PA5.5 Tiling Work

The area to be tiled, shall first be plastered as described under plasterwork leaving a wood float finish. The plastered surface shall be left for two weeks to cure before any tiling may start.
Tiles shall only be cut by approved tungsten tile cutters, or for irregular shapes by approved tile saws. The use of nibblers shall not be permitted.

A tiled panel shall be planned beforehand to minimise cuts. An initial perpendicular tiling configuration shall be laid against perpendicular fixed battens. A clear space of 1 to 2mm shall be left between tiles by inserting positive temporary spacers.

Prior to the application of any adhesives the rendering shall be vacuum cleaned. Adhesives shall be mixed with a bonding agent and not with water. The mixing proportions shall be as specified by the supplier. Adhesives shall be applied within a 15minutes period after mixing with those adhesives or used during such time to be thrown away.

Adhesives shall be applied in a solid bed, some 6mm thick and then struck with an approved serrated steel trowel. Adhesives shall not be applied by "the fire point tiling method".

Grouting of the joints shall only start 48 hours after a tiled section has been completed. The grout shall also be mixed with the bonding agent as specified by the supplier. The

grout shall be worked off leaving a neat superficial rut in the joint centre. All the faces shall be cleaned directly after grouting.

No tiling shall be done over a structural joint. In large tiled panels, a movement joint shall be left every 3 metres in the horizontal and vertical direction as detailed. At a structural joint (contraction or expansion joint) the rendering, adhesive and tiles shall be interrupted over the joint and the joint sealed at the surface.

The permissible deviation on the final surface shall be a maximum gap of 3mm measured under a 3m straight edge or part thereof.

PA6 TOLERANCES

Where tolerances are not specified in the clauses above those generally accepted as representing good workmanship in the building trades shall apply.

PA7 TESTING

The Engineer reserves the right to order any tests, whether at place of manufacture or on site, necessary to evaluate the quality of the work and to ensure the finished building conforms to all the specified requirements.

PA8 MEASUREMENT AND PAYMENT

PA8.1 Schedule items

PA8.1.1 Brickwork

Brickwork, if measured as a separate item, shall be measured in square metre of the nett brick-walled area (with the wall width and type of brick-finish, indicated). No adductions will be made for small openings such as air bricks, etc. The tendered price per square metre of brickwork shall include also for the following, if such items are not listed separately:

(a) Plaster work as indicated
(b) Damp proofing
(c) Brick forcing (every fifth layer)
(d) Reinforcing of lintels
(e) Miscellaneous items built into brickwork shown on the drawings such as air bricks.

PA8.1.2 Wall, ceiling, roof and floor finishes

Cement plaster on walls and ceilings, roof screeds, floor screeds, paint and any other finish described or specified, shall if measured as separate item be measured in square metre of the nett surface are. No deductions shall be made for small openings nor shall additions be made for small protrusions and reveals. No separate payment shall be made for the processes involved and material supplied for the complete painting of all fixtures and fittings, as specified herein and the cost thereof shall be included in the tendered price for the supply, manufacturing and erection of all such items to be erected.

PA8.1.3 Miscellaneous

(a) Timber doors and windows shall be measured per unit of door or window complete with door frame, lock keys, glazing, painting, etc., for each type and size of door or window or as a lump sum payment for all doors and windows included in the door and window schedule of the Works.
(b) Other items of building work, fixtures and fittings, shall be measured and paid for in the units of measurements listed in the Schedule of Rates.

PB FENCING

PB1 SCOPE

This sub-section includes all work in connection with the erection of shockproof, vermin proof, residential or security fencing as shown on the drawings or as directed by the Engineer. It also includes any work necessary on the lifting and re-erecting of existing fences. The standard of fencing, the positioning of the gates and the quantities shown in the Schedule of Quantities against each item under this section, may be subject to variation and the Contractor shall ascertain from the Engineer, the exact location of, and specification to which the fencing shall be constructed, before placing any orders for material. The minimum standards of fencing required are indicated on the drawings.

PB2 MATERIALS

PB2.1 Vermin, Shockproof and Residential Fencing

Straining posts and stays, standards, and droppers shall be either of timer or steel sections. All sections shall be to the dimensions and masses indicated on the drawings. Timber sections shall be of creosote impregnated hardwood. Steel sections shall be either galvanised or painted to the specifications indicated on the drawings.

All plain wire, barbed wire, wire netting, diamond mesh and binding wire shall be according to the diameters and specifications indicated on the drawings.

PB2.2 Security Fencing

All posts, standards and droppers for security fencing shall be galvanised steel sections to the dimensions and details indicated on the drawings. Plain and diamond wire and other fencing materials shall all be according to the details indicated on the drawings.

Gates

All gates shall be to the details indicated on the drawings and components shall either be galvanised or painted according to the specifications on the drawings.

PB2.3 Bolts

Bolts shall be galvanised steel bolts of the required length and diameter which shall not be less than 12mm. Eyebolts to gates of 18mm diameter. All the necessary bolts together with nuts and workers, shall be supplied with each post or gate.

PB3 CONSTRUCTION

PB3.1 Clearing of Fence Site

All brush scrub and other obstructions which may interfere with the proper construction of the fences shall be removed and surface irregularities shall be graded so that the fence will conform to the general contour of the ground.

No separate payment will be made for this clearing and full provision for these costs must be made in the tender.

PB3.2 Connections

Existing cross fences shall be connected to the new fences. Straining posts with stays for every direction of strain shall be placed at the junction with existing fences and the wires in both fences properly fastened to the posts.

PB3.3 Placing of Posts

All posts, struts and standards shall be firmly planted into the natural ground, be it soil, gravel or rock to the depths detailed. Gate posts and struts shall be erected at all gates and straining posts and struts shall be erected at all ends and corners or bends in the line of the fence and at all junctions with other fences. Intermediate straining posts and struts, and standards shall be spaced at the intervals indicated on the drawings.

All posts (except struts), standards and droppers shall be placed in a vertical position except in unusual locations where, in the opinion of the Engineer, it will be more satisfactory to place such member perpendicular to the slope of the ground. All posts, struts, standards and droppers shall be set in holes dug to the specified depth even in rock where blasting might be necessary to obtain the required depth. All gate posts shall be set in concrete and other members shall either be set in concrete or in well compacted backfill as indicated on the drawings. No concreting or backfilling shall be done until all members have been properly aligned.

All posts and struts for security fencing shall be set in concrete as shown on the drawings. Steel members are not buckled or otherwise damaged after being driven in, and provided further that the correct alignment or the driven members is maintained.

PB3.4 Attaching Wire

After all posts, struts and standards have been set firmly and after all concrete has hardened for at least four days the fence wire shall be attached according to the details indicated on the drawings. All wire shall be attached to the sides of the posts and standards furthest from the object being fenced. Wire shall be carefully stretched and strung in true alignment and without sag. Wire shall be attached to each post and standard by one of the following methods:

a) by notching the member and securing the wire by means of binding wire or,
b) by drilling holes through the member and stapling the wire with plain iron staples passing completely through the member, or
c) where iron members are used, by securing the wire by means of binding wire must pass through the hole in the standard.

Droppers shall be placed parallel to the standards at the intervals detailed on the drawings. Droppers shall be fixed to each fence wire with binding wire in such a manner as to prevent any slipping.

PB3.5 Attaching Wire Netting or Diamond Mesh

Wire netting and diamond mesh covering shall be securely fixed to the fence according to the details on the drawings. In addition, the wire netting on vermin proof fencing shall be fixed according to the Engineer's instruction by one of the following methods:

a) by packing stones, placed end to end, on both sides of the fence so that no gaps exist beneath the fence, or
b) by folding back the bottom 150mm of wire netting so that it lies flat on the ground, and packing stones end to end on this flap, or
c) by embedding the lower part of the wire netting at least 100mm into the ground and ramming the earth thoroughly to secure the netting.

PB3.6 Installing Gates

Gates shall be installed in the position indicated by the Engineer. The gates shall be erected so as to swing in a horizontal plane at right angles to gate post clear of the ground in all positions.

PB4 FINISHING: TRIMMING AND PAINTING

Where timber posts have been used, the tops of the posts shall be trimmed after the fencing has been erected, such that the top of the completed fence has a pleasing profile. The cuts shall be liberally painted with creosote. An un-galvanised metal components of fencing has been erected, any chipped or damaged paint work shall be touched according to the same paint specifications.

PB5 MEASUREMENT AND PAYMENT

PB5.1 Vermin proof, Shock proof, Residential and Security Fencing

This fencing shall be measured in metres between the centres of gate and end posts along the general slope of the ground. Payment shall include full compensation for the clearing of the line, for the supply, painting and erection of all standards, intermediate straining posts and stays, droppers, plain wire, barbed wire, binding wire and all other components on the drawings but shall specifically exclude corner, end and gate posts and their stays. Payments shall also include for the concreting of posts where specified.

PB5.2 Corner, Bends and Ends

Corners, bends and ends shall be measured by the number and shall include compensation for the supply, painting and erection of all posts and stays required at such ends, corners or bends and shall include for any concreting where so specified.

PB5.3 Gates

Gates shall be measured by the number. A double gate as required for security fencing shall be measured as one number double gate. Payment shall include full compensation for the supply, painting and erection of the gate and ancillary components, as well as for the supply, painting and erection of gate posts and struts and for the concreting of such posts and struts (where required).

PB5.4 Pay Items

1.	Vermin proof Fencing	:	m
2.	Shockproof Fencing	:	m
3.	Residential Fencing	:	m
4.	Security Fencing	:	m
5.	Corners, bends and ends (shall distinguish between the different type of fencing)	:	no
6.	Gates (shall distinguish between the different type of fencing and between the different types and dimensions of gates)	:	no

PC FINISHING AND CLEANING UP

PC1 GENERAL

No section of the work will be regarded as satisfactorily completed until the final cleaning up has been performed.

PC2 SCOPE

All completed work shall be trimmed and all the debris of construction, such as unsuitable or rejected materials and spillage, shall be removed. The site and its environs shall be rehabilitated, where practically possible, by taking the following measures: -

* The site of work shall be cleaned of all rubbish, excess materials, falseworks, temporary structural installations and abandoned equipment.
* All construction scars resulting from this contract shall be treated to blend with the contour and vegetation of the surroundings.
* All trench subsidence shall be made good and surcharged backfill materials shall be removed unless otherwise directed.

PC3 ACCEPTANCE

Three weeks before the anticipated date of completion of any section to be handed over, the Contractor shall formally request a check list of defects from the Engineer.

Within one week the Engineer will detail in writing the particulars of the work to be done in finishing the Works, and the general standard of aesthetics to be observed in trimming and cleaning.

Before offering the work for acceptance on a completion certificate the Contractor shall satisfy the Engineer's site representative that all the work scheduled on the checklist has been attended to.

PC4 PAYMENT

Payment shall be the tendered lump sum and shall become due on the date of signature of the Certificate of Completion.

PD EQUIPPING OF BOREHOLES

PD1 SCOPE

This sub-section includes all work related to the installation of borehole equipment including but not limited to the following:

- Hand pumps
- Windmills
- Diesel driven engines
- Positive displacement pumps
- Submersible pumps and associated electrical work.
- Solar powered pumps (submersible and positive displacement)

The service to be rendered is the provision, installation, erection and commissioning of all the borehole equipment and appurtenant works.

PD2 GENERAL

Depending on borehole test results, the borehole will be equipped upon the Engineer's site instruction. The pump set shall comprise one complete borehole pump, including all pipe work to couple to main pipeline, electric or diesel driven, pulleys, driving belts, etc. The complete installation is to be housed in the standard pump house as detailed on drawings 2019-12/W/D/025 and 2019-12/W/D/026.

It should be noted that although provision is made for floor space to accommodate chlorination equipment, no chlorination equipment is called for under this contract.

Drawings 2019-12/W/D/023 and 2019-12/W/D/024 illustrates the standard layout of equipment and pipe work to be installed in each pump house.

PD3 REMOVAL OF EXISTING EQUIPMENT FROM BOREHOLES

In cases where the boreholes listed are presently equipped (hand pump, power head, engine and shelter or windmill), all such equipment shall be carefully dismantled by the contractor and stored securely at the Contractors' camp, all to be handed over to the Employer. (Refer to clause PS10.9 of Section C3.4.1).

Where boreholes are sealed, the Contractor shall remove these entirely and demolish the seals. All such debris shall be dumped at spoil sites indicated by the Engineer.

The Contractor will only be permitted to expose the boreholes immediately prior to equipping such boreholes as instructed by the Engineer and shall at all times exercise great care to prevent the ingress of debris or any foreign material into the borehole.

PD4 DESIGN, MEASUREMENTS AND RECORDS

PD4.1 Prior to the ordering of any materials to be used for the equipping of boreholes, the Engineer shall issue a selection lists to the Contractor, specifying the equipment to be installed at each borehole.

The contractor shall, before ordering any equipment, verify the specific selection of equipment with the supplier.

The Contractor must proceed with the immediate ordering and/or installation of the specified equipment after reception of these lists.

PD4.2 Prior to equipping of each borehole, the Contractor shall measure and record the diameter of the borehole at natural ground level, the static water level (in metres below ground level), the depth of the casing and the total depth (in metres below ground level). These measurements shall be verified with the Engineer prior to equipping of such borehole.

PD5 HAND PUMPS

Boreholes to be equipped with hand pumps shall be equipped with Reciprocating type or Positive displacement type hand pumps, or similar approved in writing. All handpumps shall be manufactured from Brass HCP (Hard Chrome Plated).

PD6 WINDMILLS AND WINDMILL EQUIPMENT

PD6.1 Windmills

All windmill heads shall be reciprocating double geared, oil lubricated, with the gearbox comprising one single piece casting, positively weather sealed. The main bearings shall be of white metal. All wind-wheels shall have a nominal diameter as specified.

The windmill shall have a concave shaped wheel with a gravity governing action reefing system. The tower is to be galvanised and with the number and quality of legs to the manufacturer's specification.

All components of windmills shall be assembled and erected to the Manufacturer's details and requirements and to the satisfaction of the Engineer. The Contractor shall at all times have at his disposal one neat complete set of erection instruction manuals at the erection site.

All windmills shall be completely covered by the Manufacturer's guarantee of not less than twelve months as dated from the date of commissioning the particular plant.

PD6.1.1 General Safety Regulation of Safety Legislation no.13A(6)(a) and 13A(6)(b)(i)

1. An employee shall ensure that every ladder is constructed of sound material and is suitable for the purpose for which it is used, and-

(a) is fitted with non-skid devices at the bottom ends and hooks or similar devices at the upper ends of the stiles which shall ensure that stability of the ladder during normal use; or
(b) is so lashed, held or secured whilst being used as to ensure the stability of the ladder under all conditions and at all times.

2. No employer shall use a ladder, or permit it to be used, if it-

(a)(i) has rungs fastened to the stiles only by means of nails, screws, spikes or in like manner; or
(a)(ii) has rungs which have not been properly let into the stiles;
Provided that in the case of welded ladders or ladders of which the rungs are bolted or riveted to the stiles, the rungs need not be let into the sides; or (b) has damaged stiles, or damaged or missing rungs.

3. No employer may permit that-

(a) a ladder which is required to be leaned against an object for support be used which is longer than 9m; and
(b) except with the approval of an inspector, the reach of a ladder be extended by fastening together two or more ladders;

Provided that the provisions of this sub-regulation shall not apply to extension or free-standing ladders.

4. In the case of wooden ladders, the employer shall ensure that -

(a) the ladders are constructed of straight grained wood, free from defects, and with the grain running in the length of the stiles and rungs; and
(b) the ladders are not painted or covered in any manner, unless it has been established that there are no cracks or other inherent weaknesses; Provided that ladders may be treated with oil or covered with clear varnish or wood preservative.

5. When work is done from a ladder, the employer shall -

(a) take special precautionary measures to prevent articles from falling off; and
(b) provide suitable sheets or receptacles in which hand tools shall be kept when not being used.

6. An employee shall ensure that a fixed ladder which exceeds 5m length and is attached to a vertical structure with an inclination to the horizontal level of 750 or more -

(a) has its rungs at least 150mm away from the structure to which the ladder is attached; and
(b) is provided with a cage which -
    (i) extends from a point not exceeding 2,5m from the lower level to a height of at least 900mm above the top level served by the ladder;
    and
    (ii) shall afford firm support along its whole length for the back of the person climbing the ladder, and for which purpose no part of the cage shall be more than 700mm away from the level of the rungs:

Provided that the foregoing provisions of paragraph (b) shall not apply is platforms, which are spaced not more than 8m apart and suitable for persons to rest on, are provided.

Important Note:

One windmill manufacturer was granted the following exemptions for windmill towers:

This exemption is subject to the following conditions:

1. There shall be at least 150mm clear space between each rung of the ladder and any part of the tower horizontally behind it.

2. The cage shall extend from a point not exceeding 3.5m from the lower level to a height of at least the level of the wooden platform.
3. A notice shall be displayed at the top rung of the ladder warning persons to attach their safety belts before proceeding further.
4. A notice shall be displayed on the ladder at a height of approximately 1.8m above ground level warning persons to apply the windmill brake before proceeding to climb the ladder.
5. The notices mentioned in 3.3 and 3.4 shall include symbolic signs which can be understood by all language groups.

PD6.2 Borehole Cylinders

Unless otherwise specified, all boreholes are drilled to a minimum of 150 mm diameter.

Heavy duty mushroom type borehole cylinders, of which the barrel is of seamless brass (alt. stainless steel) tubing shall be used in all cases. The nominal bore of the cylinder shall be as specified. The cylinder stroke shall be in compliance with the windmill specified. Each borehole cylinder is to be fitted complete with suitable brass strainer, screwed directly into the cylinder. Plungers are to be fitted with neoprene buckets.

PD6.3 Borehole Pump Rods

Galvanised solid mild steel pump rods, diameters as specified, with screwed joints in lengths of 3 metres complete with socket and two lock nuts shall be used.

The pump rods shall be supplied, complete with the necessary approved galvanised pump rod couplings to connect the pump rods to the plunger rod of the cylinder, to the packing box rod and to the mill rod connection. Prior to assembly of pump rods, the screwed ends shall receive one coating of an approved protective pipe threading compound in the form of a layer of paste.

Approved galvanised steel mill rod connections complete with bolts and nuts to the Manufacturer's recommendations shall be used to connect the wood mill rods to the pump rods.

PD6.4 Borehole Rising Mains

Screwed and socketed medium galvanised iron piping to SANS62 shall be used for the borehole rising columns. Internal diameters of the rising columns shall be as specified. Prior to assembly of pipe columns, the screwed ends shall receive one coating of an approved protective pipe-threading compound in the form of a layer of paste. Following

assembly, all excess paste shall be wiped off, and the pipe area 300 mm above and below the socketed joint shall be covered with a layer of bitumen-based paint. Stabilisers shall be provided at 12 m spacing on the rising mains.

PD6.5 Tee and Spill Pieces (Standpipe)

At the top of the delivery column a galvanised tee-piece shall be provided to take the discharge pipe. Except in the case of packing box installations, a spill piece (standpipe), having an equal diameter to the rising main, shall be provided to prevent water spilling over the top of the column. Standpipes shall be used only in cases where the discharge head is less than 5 metres. The standpipe shall be securely braced to the tower posts at the top end of the pipe.

PD6.6 Packing Box / Stand Pipe Gland / Force head

Heavy duty seamless brass tube type packing boxes with positive neoprene sealing buckets and screwed externally to fit the specified borehole rising main or equivalent units, shall be provided in all cases where the discharge head exceeds 5 metres. Packing boxes shall further comply with the maximum specified discharge head of 12 metres.

Packing boxes shall be installed complete with all necessary fittings required for the proper couplings of pump rods and mill rods.

PD6.7 Base Plates

The Contractor shall supply over each borehole one set of cast iron clamps and base plate of a size conforming to the diameter of the borehole rising main, complete with four 250 mm long by 12 mm dia foundation bolts and nuts. The foundation bolts are to be embedded into a Class 15/20 mix concrete footing of 600 mm minimum depth and 600 mm square surface dimensions. The bolts shall be located thus, that each half of the clamp (provided with slotted holes) can be moved back and forward sufficiently when column pipes are being lowered or raised. The base plate halves shall be clamped together using two bolts.

PD6.8 Discharge Pipe Work

Discharge pipe work comprising one horizontal length piping, GMS to SANS 62.450 mm long, two 900 female bends and one vertical length piping 750 long, shall be fitted to the horizontal outlet of the tee piece at the top of the rising column main. Internal diameters of the discharge piping shall be as follows :

Rising column dia mm	Discharge pipe dia mm
40	40
50	50
65	50

In the latter case, a 65 x 50 reducing bush shall be fitted to the rising main tee outlet. All discharge pipe work shall be medium galvanised steel and pipe lengths shall be screwed both ends.

PD6.9 Air Chambers

Air chambers shall provide adequate capacity of air cushion and be fitted with externally fitted release plugs.

PD6.10 Concrete Foundations

Foundations holes shall be excavated to the positions, depths and widths as recommended by the Manufacturers of the particular plant but shall however not have dimensions of less than 1.00 metre in depth and 1.00 m diameter at the bottom of the foundation hole.

Following completion of the excavation of the foundation holes, a layer of about 150 mm thick concrete, class 15/20 mix, shall be placed in the bottom of the holes ensuring that the concrete surface in the different holes are at the same level. Four 600 mm long 20 mm diameter mild steel bars with 100 mm of both ends bent ninety degrees, shall be placed 150 mm from the circumference of the holes, into the concrete layer of each hole. After the concrete has set, the steel anchor posts of the tower shall be carefully placed and positioned into the holes and each hole shall be filled with another layer of 300 mm of concrete. Care shall be taken that the surface of the older concrete is clean before new concrete is placed. The concrete shall completely cover all foundation plates. By using circular shuttering of approximately 250 mm diameter, concrete shall then be poured around each tower post bringing the top of the concrete to ground level where it shall be neatly rounded off. Earth shall then be rammed around the concrete.

The Contractor shall ensure that the tower is perfectly level when erected and if applicable that the borehole is in the centre of the tower posts and with a plumb line or other means that the centre of the tower cap is directly above the borehole.

PD6.11 ROTARY WINDMILLS

The windmill head, wheel and tail unit, as well as the tower shall be to PD6.1. The rotary screw pumps shall be self-priming positive displacement pumps or similar approved as per PD8.

The windmill shall be supplied with a gearbox of ratio 1:10 and shall translate reciprocal motion into rotary motion. It shall be furnished with a double set of gears. The discharge head shall be to the specifications given under PD8.

The borehole pump rods shall be to PD6.3 for the rods above the gearbox, but shall be as for positive displacement borehole pumps (PD8), below the discharge head. The former borehole pump rods shall be guided by flanged bearings attached to the lower portion of the tower structure, including a quick-release coupling for attachment of the pump to an electrical or diesel driven power source. Stabilisers shall also be installed every 12 m on the borehole rising mains.

Column piping and ancillary pipe work shall be to PD8 and PD10, respectively.

The concrete foundations for the tower shall be constructed to PD6.10, while the concrete work related to the installation of the discharge head shall be similar to that specified under PD8.

PD7 DIESEL DRIVEN ENGINES

PD7.1 Quality Control

All diesel engines shall be manufactured in accordance with BS 5514, ISO 3046 and DIN 6271.

PD7.2 Handling and Transport

The Contractor and/or his accredited agent/distributor is fully responsible for the compliance of the Items with the specification up to the relevant point of delivery to site.

PD7.3 Standard Compliance

The tenderer must indicate to which specification his engine and accessories comply with.

PD7.4 Technical Data

An installation and maintenance manual with a complete part list shall be provided with each engine purchased.

The service to be rendered is the supply, delivery in working condition, install and commission of 4 stroke, diesel engines. They shall be direct injection, naturally aspirated and of modular construction, with common spares within each diesel engine family range as more fully specified hereunder.

All engines ordered shall have undergone a 45 minutes Dynometer test up to 100% full load and pre-delivery service in the factory and certified proof thereof shall be submitted for each engine on delivery.

PD7.5 Faulty Components

In the event of a product problem being experienced, a new component shall be delivered immediately. Credit shall then be given to the Employer on return of the faulty component, if found that the Item is in fact a warranty claim. A full report shall be submitted indicating the cause of failure, and shall be directed to the Employer.

PD7.6 Identification Details - Diesel Engines

(a) All engines and attached components shall be painted with heat resistant bright yellow paint for identification purposes, ex engine block, head, flywheel, metal covers etc.
(b) The engine serial number shall also be punched or engraved on the flywheel and engine block. The minimum size of the script shall be 5 mm.

PD7.7 Technical Specification

(a) Sliding base and frame assembly

- Sliding base and frame complete with M12 securing bolts, and M20 anchor bolts.

(b) Exhaust system

The exhaust system shall comprise the following:
- 0,5 m flexible pipe with flange adapter at both ends;
- 1,5 m exhaust pipe with flange adapter at one end;

- Pepper-pot silencer, to be mounted on the exhaust pipe end complete with clamps;

(c) Fuel tank and stand assembly

Weatherproof 90 l steel diesel tank on stand, mounted inside the pumphouse to the steel structure.

(d) Centrifugal clutch

Engine shall be fitted with a centrifugal clutch. Detail drawings of clutch to be submitted. The clutch shall be able to transfer the maximum rated torque at 1 300 rpm. The engaged speed must be stamped on the clutch body.

(e) Gauges
A suitable vibration hour meter and oil pressure gauge shall be fitted on a permanent engine mounting (twin gauge panel with anti-vibration mountings).

(f) Suitable V-belts with totally enclosed belt guards shall be supplied with each complete unit.

(g) Diesel driven engines shall be air-cooled type.

(h) Complete Machine tool kit to be supplied with each engine for servicing purposes;

(i) Metal identification plate with the following information embossed on it: Make & Model No. Serial No. Rotation Speed (rpm) & Continuous Rating (kW).

PD8 BOREHOLE PUMPS

Pumps shall be of the type specified and be self-priming, positive displacement rotary type, vertical spindle borehole pump, suitable for pumping potable water to a concrete reservoir or elevated tanks. Solar powered positive displacement pumps are also to be considered for installation.

i) Column piping shall be standard galvanised medium class water piping. Column stabilisers shall be fitted to at least every fourth column pipe to secure a neat fit against the borehole perimeter. During assembly of pipe columns, the pipe area 300 mm above and below each socket shall be covered with a protective coating of bitumen base paint, following securing of the socketed joint.

ii) The inlet of the pump unit shall be fitted with a suitable strainer.

iii) The discharge head shall incorporate the pulley housing and shall be mechanically safeguarded against incorrect direction of rotation. The discharge head shall be provided with a cast iron or fabricated steel bed plate fixed to a concrete foundation block of adequate size by means of suitable anchor bolts.

Pump and electrical/diesel driven shall be accurately aligned on an integral steel frame according to installation instructions of the pump manufacturer and shall allow adjustment in any direction on the horizontal plane for both engine and pump. Length of V-belts shall be as recommended by the pump manufacturer. A detachable steel plate guard, painted red, shall cover the entire V-belt drive. Provision to be made for adjustment of the guard to suit occasional V-belt tension adjustments.

After installation of all mechanical and electrical equipment, the supplier must check the alignment of the pumps as well as starting and commissioning of the pump installations. When satisfied, the supplier shall issue a certificate stating that the installation complied with the manufacturer's specifications.

Centrifugal clutches will be provided where pumps are driven by diesel engines and where instructed by the Engineer. Alternatively drive shafts of the engine and pump shall be connected by a flexible coupling as recommended by the manufacturers of the diesel unit.

vi) A metal identification plate shall be attached to the discharge head with the following information embossed there-on : Make and model no. (pump and discharge head), Serial no. (pump and discharge head, driven rotational speed (rpm), delivery (l/s) and head (kPa).

PD8.1 Positive displacement borehole pump elements

(a) Bell-mouth pump bodies are not acceptable.
(b) Elements must be fitted with at least one (1) spider bearing.

PD8.2 Complete columns

(a) Columns with a diameter less than 65 mm shall be manufactured from medium galvanised tubing according to SANS 62 specification.

(b) Columns with a diameter of 65mm or more shall be manufactured from heavy wall tubing with a 4,85 mm minimum wall thickness according to SANS 62 specification.

(c) Bell-mouth columns are not acceptable.

(d) Columns must include sockets, shafts and bobbin bearings.

(e) A sufficient quantity of lubricant, as prescribed by the manufacturer, shall be included. (minimum 500 ml).

(f) All threads shall be parallel truncated.

(g) Sockets shall be precision machined from seamless heavy wall tubes.

(h) Standard galvanised sockets for sizes above 25 mm diameter are not acceptable.

(i) Sockets: Outer diameter and length of sockets

Size	Outer diameter	Length
40 mm	54	76
50 mm 65 mm 80 mm	70 89 100	76 90 100
100 mm	126	100

(j) All pipes shall be tested in accordance with the applicable SANS specification by the pipe manufacturer.

(k) The Manufacturer's name/logo and inspection number shall be stamped on the pipes and sockets.

(l) A socket shall be fitted on the one end of the pipe after pipe sealant has been applied. The open thread at the other end shall be protected by means of a thick wall plastic cap. The manufacturer's stamp must be visible.

PD8.3 Drive heads

(a) Light duty drive heads for motor/engine size up to 5,5 kW absorbed power. Heavy duty drive heads for motor/engine size over 5,5 kW. Refer to manufacturer installation instructions. All drive heads shall be supplied complete with discharge base, bearing assembly, pulley, adapter column, top rod, gland packing, gland follower, flanges if required and all fasteners.

PD8.4 MATERIALS

The following items shall be manufactured from the material as indicated against the relevant item.

Strainer	Galvanised mild steel
Stator	Nitrile rubber
Rotor	Alloy steel (EN8 HCP)
Flexible shaft	Stainless steel (EN57)
Spider bearing	Lumenite or Nitrile rubber
Borehole pump drive shafts	Carbon steel (070M20) (EN 3B)

PD9 SUBMERSIBLE PUMPS

PD9.1 Submersible pumps shall be properly insulated and provided with an adequate lightning protection system. Tenderers are required to state which lightning protection system would be provided.

PD9.2 Submersible positive displacement pumps shall have a single rotating rotor in a resilient rubber stator. The rotor shall be hard chrome plated with a stainless-steel pump casing.

PD9.3 Submersible centrifugal pumps shall be suitable for either 220 volt or three phase 380 volts.

PD9.4 Metal identification plates shall be fixed to the outside of the electrical control box. The following information shall be embossed on it : Pump make and model no, Serial no, Rotation speed (rpm), delivery (l/s), head (kPa).

PD10 ANCILLARY PIPEWORK

See Specification Drawings 2019-12/W/D/023 and 2019-12/W/D/024 for the ancillary pipework to be supplied and installed on the delivery side of each borehole pump. All Sedibeng Water standards must be taken into consideration.

PD11 EQUIPMENT

All equipment should be installed according to the prescribed specifications. Sizes of bases and plinths should be as the DWS or Sedibeng standard specifications. Civil work should be constructed as per the applicable specifications.

The holding down bolts of diesel engines shall have a longer thread than required for proper installation, and shall be supplied with two nuts each. One nut shall be used to anchor the engine to the frame, while the second shall be screwed-on and spot-welded to the upper end of the threaded bar.

PD12 ELECTRIC MOTORS

PD12.1 Electric motors shall comply with SANS 0157, Part 1, for quality, and SANS 948, Part 1 (1978) for performance. Insulation of motors shall be class "F" to BS2757.

PD12.2 Motors up to 3 kW shall be fan cooled single phase, 220 Volt, 2-pole, 50 Hz, TEFC induction motor suitable for D.O.L. starting.

PD12.3 Motors between 3 kW and 5 kW shall be fan cooled, aluminium framed, foot mounted, 380 Volt, 3-phase, 50 Hz, TEFC type, squirrel cage induction motors suitable for D.O.L. starting and be suitable for Star Delta starting when the rating exceeds 5 kW.

PD12.4 Pulleys supplied with motors shall be between 102 mm and 259 mm, be 2-grooved B-sectional taper-lock pulleys and be supplied complete with suitable fan belts. The rate tendered for the motors shall be deemed to include for the pulley and fan belts.

PD12.5 Metal identification plates shall be attached to the motors, with the following information embossed there-on : Make and model number, serial no, insulation class, frame type, rotation speed (rpm), power output (kW) and current at duty point (A).

PD12.6 Electrical motors shall comply with the minimum standards of Sedibeng Water of which a copy is included into this document (PW).

PE ELECTRICAL AND ELECTRONIC INSTALLATION

PE1 SCOPE

This specification includes the detail on the project to insure the manufacturing, delivery, transport, handling, protection, storage, installation, successful complete the Electrical and Electronic Installation
The general specifications of the works covered by this section shall be defined in the Particular Specifications, Schedule of Quantities and relevant Drawings.

The project specifications shall have preference over the Particular Specification and shall be considered as alterations to the general specifications.

PE2 DETAILS OF CONTRACT

This section includes the design, manufacture, supply, delivery, offloading, storing if necessary, erection, painting, commissioning, testing and maintenance during the Maintenance Period, and final handing-over of all necessary electrical equipment for the electrical works for the Refurbishment in various villages under the Joe Morolong Local Municipality Rural Refurbishment Programme.

The electrical contractor shall be a sub-contractor to the principle mechanical contractor.

The work to be undertaken is generally in or near existing townships and inhabited areas. Access to the site is deemed adequate.

PE3 ELECTRICAL PROJECT SPECIFICATIONS

All materials and equipment supplied under this Contract must be new and of the best quality available. All materials must comply with the requirements of the latest editions of the relevant SABS and NRS Specifications.

In addition, all materials and equipment shall bare the SABS mark of approval. Where no mark is available, RCC (Regulatory Conformance Certificates) shall be provided to the engineer, indication the materials & equipment's compliance to relevant local statutory and/or international standards. The SABS 1200 specifications form part of the electrical works.

PE3.1 General

The project specification must be read together with the standard specification, bill of quantities, and the drawings (if applicable).

The work covers the complete supply, delivery, installation, testing, commissioning, and free maintenance during the guarantee period of the installation as detailed in the specifications, bill of quantities and accompanying drawings.

The Contractor shall provide all materials, equipment, labour, and services necessary for the complete and efficient operation of the electrical installations in accordance with the intent of the specification.

The work shall be carried out strictly in accordance with:

- The Occupational Health and Safety Act and Regulations (Act no. 85 of 1993 as amended).
- The SANS code of Practice for Wiring of Premises, SANS 10142-1: 2008 as amended.
- The project -, particular - and standard electrical specifications.
- Any municipal by-laws and regulations.
- The local authority requirements.

PE3.2 Standards, Inspections and Tests

All material/equipment shall bare the SABS mark of approval. Where it is not practical and/or furnished on the material/equipment, full RCC's (Regulatory Conformance Certificates) will be provided to the engineer. The contractor will note, on the Certificate of Compliance (CoC), the RCC's and exclude them accordingly from his responsibility. The aforementioned shall apply to any other material/equipment and COC's, which must be provided under this contract, but will not be directly supplied, installed etc. by the appointed subcontractor e.g. Lighting Protection System material/equipment and COC's.

As stated previously and further on in this document, all equipment must comply with all relevant standards, specifications and requirements indicated respectively. In addition, there may be materials/equipment not specified in the project specification etc., which may have to be used in order to achieve the required outcome e.g. masts, flood lights etc. Alternatively, there may be certain equipment mentioned in the specification which will not be project specific and may be ignored unless otherwise specified.

Where materials are not specified accordingly, it will evidently be the responsibility of the contractor to furnish the engineer with the manufacturer's details, designs, recommendations, instructions etc. of the specific product, for relevant approvals prior to order or installation etc. The aforementioned will be in conjunction with all other relevant clauses pertaining to information provision to the engineer for approval.

The manufacturer's details, designs, recommendations, instruction etc. shall complement all statutory regulations & standards. Where the manufacturer's details, designs, recommendations, instruction etc. are in conflict with the project specifications and requirements, the engineer shall inform the contractor accordingly as to which requirements to use in order to accomplish project requirements.

Where it is indicated in the Bill of Quantities, or any other part in this document, the information required for approval by the engineer, it shall be seen to form part of the specifications and requirements.

The Contractor shall inform the Engineer of any equipment which is ready for despatch, in which case the Engineer will arrange for an inspection at the factory of the manufacturer if it is deemed necessary. Such notification of the Engineer must be 10 days prior to despatch.

Three copies of all equipment test reports, whether these tests have been carried out in the presence of the Engineer or not, shall immediately after they become available, be submitted to the Engineer.

PE4 DETAILS OF ELECTRICAL WORKS

The electrical subcontractor will be responsible for the supply, delivery, installation, testing, commissioning, and handing over in proper working condition of the complete new electrical and electronic installation, as specified in detail in this document.

Items covered under the electrical specification include as applicable, but is not restricted to the following:

a) Liaison and supply authority supply connection application, arrangements, etc.
b) The manufacture, supply, testing, and inspection at the manufacturer's premises, installation, connection, testing and commissioning of Motor Control Centres, distribution boards and switchgear.
c) Supply, installation, and connection of all control instrumentation such as level, flow, thermal and pressure transmitters.

d) Supply, installation, and connection of all cable trays, wire ways, conduit, draw and outlet boxes, and sleeves
e) Supply, installation, and connection of all cables, control circuit, wiring and conductors.
f) Supply, installation, and connection of all circuit equipment for small power and lighting installation, i.e. socket outlets, light switches, isolators, etc.
g) Supply, installation, and connection of all luminaires.
h) Connection of electrical power to all mechanical equipment and systems, i.e. Pump, values, pressure and level transmitters to complete the plant, etc.
i) Supply, installation, connection, and testing of an earthing system.
j) Excavations for all cable trenches, compaction, backfill, and making good of existing surfaces.
k) Testing, commissioning, and handing over of the complete electrical installation, in accordance with the requirements of the Electrical Contracting Board of South Africa and the issue of a Certificate of Compliance (COC) for each and every installation.
l) Removal of redundant electrical equipment where necessary.

The successful tenderer shall allow the representative of the Engineer access to the manufacturer's works at all reasonable times to inspect the progress of the work and the witness all tests.

PE5 SUPPLY AUTHORITY SUPPLY CONNECTION

The contractor shall submit the supply connection application to the supply authority and liaison with them to complete the connection point.

Each installation will require its own connections point as determine by the size of the pumps. Existing supply points might have to be upgraded.

The contractor shall install a supply a new cable from the supply point to the pump station, if existing cable exist the contractor shall test the cable to insure workability.

PE6 LOW VOLTAGE DISTRIBUTION BOARDS

Distribution Boards shall be installed in the positions indicated on the drawings and shall comply with SANS 1765. Electrical Contractors are advised to order their purposed made distribution boards from a reputable manufacturer, as inferior boards will definitely not be accepted. It shall further be noted that late approval of drawings and distribution boards due to noncompliance with the specification will not relieve the Electrical Contractor from

his obligations to complete the installation according to programme. No claims for delays or extension of time in this regard, will be entertained.

Some installations shall be provided with a Local DB- section in the MCC panel.

All DB-Boards shall comply with PMC particular specification, schedule of quantities and drawings.

PE7 CONDUIT AND WIRE WAYS

All conduits and accessories shall bear the SABS mark of approval.

Cables shall be installed on a galvanized welded wire ray, from the MCC to the pump and controls, 300mm AFFL along the wall of the pump station. The following conduits shall be used:

- Galvanised BOSAL conduit for any surface mounted installation and shall be mounted by means of raised saddles, for outdoor use.
- PVC conduit will only be permitted indoors in roof and ceiling spaces and chased into slabs or chased in walls.

Conduits installed in ceiling or roof spaces shall, where practical, be run parallel and at right angles to roof members and clear spans of metal and plastic conduit shall not exceed 1 500 mm and 900 mm respectively. Conduit installations for confined spaces of less than 900 mm clearance, or where the space after completion of the work will be inaccessible, shall be such that wiring can be carried out from outside such space as would be the case for a conduit installation cast into concrete.

No draw boxes or inspection tees or bends shall be installed in confined roof spaces and where draw boxes are unavoidable; these shall be installed flush with ceiling.

PE7.1 Chasing and Built In

It is the responsibility of the electrical contractor to ensure that conduits, wall boxes, distribution boards, etc. are correctly positioned and built or chased in as the work progresses.

Conduits shall generally be installed at such a depth that the outside surface of the conduit is at least 12mm below the finished plaster surface. Chasing in face brick will not be allowed.

Conduits shall be cast into concrete slabs wherever possible and no conduits will be installed in floor screeds unless approved by the Engineer. Where conduits are cast into beams these shall be located close to the neutral axis of the beam.

PE7.2 Conduit in Concrete

Conduit shall be installed as close as possible to the neutral axes of concrete beams or slabs. Conduit and outlet boxes shall be securely fixed to shuttering to obviate displacement during the pouring of concrete.

Conduit shall drop to the lower face of concrete and terminate at outlet boxes only at points where such boxes are to be installed. On existing concrete structures, conduit shall be run only in approved positions and depth of chasing of such structures, where unavoidable, shall be carried out after approval has been obtained from the building contractor.

The electrical contractor will be required to liaise closely with the building contractor as regards to the incorporation of conduit runs with structural steel in reinforced concrete slabs. Where required, outlet boxes shall be of the deep type to allow structural steel to pass below conduits at outlet boxes. No elbows or bends of radius less than 120mm shall be installed in concrete slabs.

The electrical contractor shall be present during the casting process, so as to ensure that no damage or displacement occurs to conduit.

Immediately after each section of shuttering has been stripped, the electrical contractor shall by means of steel tape establish whether all conduit boxes are accessible and all conduit runs intact and clear. Any shortcoming detected at this juncture must be immediately rectified in approved manner. No beams or pillars shall be cut to install any conduits.

PE7.3 Conduit Surface mounted

Where surface work is permitted, conduit runs shall be perfectly straight and plumb or level. Galvanised conduits shall be fixed at intervals not exceeding 1 500mm and 900mm respectively. Conduit saddles shall be fixed to roof timber by means of suitable wood screws. Nails will not be permitted.

After completion of surface work, no exposed thread shall show, except where running joints occur. The latter shall only be resorted to where absolutely unavoidable, and must be fitted with a sliced coupling as a locknut.

Saddles for all conduits installed on surface shall be fixed by means of expandable tapered plastic wall plugs and corrosion proofed steel round-headed screws. Wood plugs and plugs in mortar joints between bricks are not acceptable. Where surface conduits are installed in conspicuous areas and on steelwork, spacer bar saddles shall be used.

Fixing onto steelwork shall be by means of drilling, tapping and screwing or where more practical, by means of stainless-steel strapping or conduit clamps. Explosive driven devices which will facilitate easy removal of the saddles may be used provided that the type of fixing device has been approved by the Engineer.

PE7.4 Bends and Draw/Wall boxes

Normal bends or elbows will not be allowed except where specially approved. All sets shall have a radius of at least five times the outside diameter of the conduit and conduit showing signs of flattening or cracking shall be rejected.

Draw boxes shall be installed in approved positions so that not more than two bends occur between the one ends of the run and draw box or between boxes. Draw boxes shall be arranged so as to be accessible after the completion of the building and must be provided with cover plates which shall finish neatly and flush with the final surface.

Draw boxes shall, where possible, be located in inconspicuous places allowing for a common cover. Rectangular boxes shall be square with respect to walls.

Flush-mounting wall boxes for socket outlets, switches, isolators, etc. shall be of heavy gauge (minimum 1mm thickness) pressed steel galvanised type, complying with the relevant requirements of SABS 1085. Substantial lugs, drilled and tapped for fixing screws, shall be provided.

Each wall box shall be provided with Knockout conduit entry holes, on all sides and at the back.

Cover plates shall comply with the relevant requirements of SABS 1084 and shall have a thickness and finish as specified in the Detailed Specification. Fixing screws shall be rust proofed by plating to suit the cover plate finish. An assortment of fixing screws will not be acceptable.

The nominal dimensions of flush-mounting wall boxes shall be as follows:

• Single switch units	-	50 x 100 x 50mm
• Switched socket outlets (single/double)	-	100 x 100 x 50mm
• Draw boxes in ceiling space	-	300 x 300 x 150mm
• Round Draw boxes light points		

Under no circumstances shall flush-mounting boxes be used in a surface installation. The electrical contractor shall supervise the building-in of wall boxes to ensure correct positioning.

Where a number of flush-mounting wall boxes are to be installed at the same height adjacent to each other or back to back, the electrical contractor shall fit two couplings secured by means of male bushes between each pair of adjacent boxes to ensure that the boxes are uniformly spaced and located at the same level.

Lighting and plug circuit wiring shall always run in separate conduits but may, with the approval of the Engineer, be run in a common wire ways. More than one circuit may be run in the conduit provided that the number of conductors drawn into the conduit does not exceed the wiring capacity of the conduit as specified in the Code of Practice.
The electrical contractor shall install hot-dip galvanised draw wire of at least 1.6mm diameter in all unwired conduits.

Mixed loading of circuits shall be in accordance with the requirements of the Code of Practice.

Likewise, each power point shall be wired through a conduit dedicated to that power point only, except where otherwise specified.

PE7.5 Expansion joints

The expansion joints shall be made in a draw box with an over one side terminated and other conduits inserted 30 mm into the draw box to allow for movement. All slab and wall expansion joints shall be crossed at 900with the joint.

Earth continuity shall be maintained where slip joints are installed.

PE7.6 Conduit Accessories

All conduits shall have a minimum diameter of 20mm and unless otherwise specified or approved as such by the Engineer, all conduit fittings shall be of the same material as that of the conduit used.

Metal conduit shall comply with SABS 162 and shall bear the SABS mark. Except where otherwise stated, all conduits shall be black enamelled. Galvanised conduit shall however be used in all damp locations, and where conduit is exposed to the weather.

All coast metal conduit accessories shall be of the malleable iron inspection type.

Metal conduit shall be screwed and socket or system of plain-end conduit and fittings complying with SABS 1007 may be used. All accessories used on plain-end conduit shall be assembled by means of the special fittings and tools produced for this purpose by the manufacturer.

Draw boxes of rigidly moulded plastic may not be employed. All draw boxes shall be the galvanised pre-punished type.

Plastic conduit shall be assembled by means of the solvent adhesive supplied by the manufacturer to all PVC accessories, his instructions being closely followed.

PE7.7 Wiring Channels

Wiring channels shall be installed in the positions as indicted on the drawings.

All wiring channels to be installed shall be of the O-line or Cabstrut type and fixed in the positions indicated on the drawings, complete with couplings bends end caps and cover lids. The wiring channel shall be pop riveted at each joint or bend by means of at least four suitably sized pop rivets.

The Contractor shall ensure that there are no sharp edges on the inside of the channel that may damage wiring.

Wiring channels shall be installed horizontally and vertically as determined by the route and the Electrical Contractor shall take all measures to ensure a neat installation.

Channel shall not be more than 45% full. Under no circumstances may power and control circuit conductors be installed in the same wiring channel.

All the accessories shall be factory-made pre-manufactured from the same type and make such as; end covers, 900 bends, T-pieces, hangers, brackets, etc., and shall be made to fit neatly and accurately to the Engineer's approval. No onside 450 cutting of corners or bends shall be accepted

The following wire channels will be standard:

- P9000 for feeder wire channel circuits.
- P8300 for Lighting and Aircons circuits, with 5Amp socket outlets
- P8000 for other circuits.

PE7.8 General Position of Switches and Sockets

Switch sockets shall be mounted with the centre line 1200mm above finished floor level, unless otherwise specified or indicated on the drawings.

Switches for lights are to be mounted with the centre line 1200mm above the floor, except where otherwise specified or indicated on the drawings.

Unless otherwise approved, the switches controlling lights and installed adjacent to doors are to be placed at the lock side of the door at a distance of 200mm from the door jamb to the centre line of the box, in each case. If the lock side of the door is not shown on the drawing, it must be ascertained before the switch is positioned.

The position of the lighting and socket points and their controlling switches are indicated on the drawings.

PE7.9 Low Voltage Cables

All multi core cables shall comply with the PCA Particular specification.

PE8 BUILDING WIRING

The wiring of any circuit shall only be carried out after the whole of that particular circuit's conduit installation has been installed and fixed in position. No wires shall be drawn through before the conduit has been thoroughly cleaned of all debris and moisture.

It should also be possible for wires to be drawn or threaded through the completed conduit installation without any undue strain. The terminal ends of the wires shall be of sufficient length to facilitate the connecting of apparatus, fittings, appliances, etc.

Lighting circuits shall be wired with 1.5mm2 and plug circuits with 2.5mm2 conductors, except where otherwise specified.

Not more than four conductor-ends plus two earth wires shall appear at any ceiling outlet box except where specifically approved.

All circuit wiring is to be carried out on the loop-in system and no joints in the conduit or boxes will be allowed. Where joints are unavoidable, due to alterations or extensions, these shall only be located at draw boxes and shall only be of the insulated crimping ferrule type. Not more than four 2,5mm2 or three 4mm2 wires together with earth wires where applicable will be allowed in 20mm conduit, except where otherwise specified.

All conductors shall be in colours selected to facilitate identification of the circuit and switch wiring, black being reserved for neutral conductors, and green only for insulated earth conductors. Three phase circuits shall be colour coded to identify phases, blue, red and white.

PE8.1 Termination of Wiring

The end strands of all wires, whether single or looped, which are to be connected to the connection terminals of switches, plugs, holders, ceiling roses or fittings are to be securely connected to the terminals. All terminal screws shall be properly tightened and care shall be exercised not to cause undue damage to the conductor strands. The cutting away of wire strands will NOT be allowed.

Crimping lugs must be used on cable ends for connections to busbars or circuit breakers, except where box terminals are employed.

PE8.2 Inspection of Wiring

To ensure that wiring may be easily withdrawn from any circuit run, the Engineer may, at his own discretion, direct that wires must be withdrawn; the electrical contractor shall withdraw the wires concerned.

If the wires are withdrawn easily and without showing damage, the costs of the withdrawal and replacement will be borne by the employer; if, however, it is found that it is not possible to withdraw wires without damage, the cost of the withdrawal test, and the cost of rectifying the work shall be borne by the electrical contractor.

PE8.3 Innovative wiring systems and Deviations from the Specification

This specification covers wiring systems of the conventional type in which continuous metal or rigid plastic conduit of circular cross section is used.

No deviation or alteration from the requirements of the specification, schedules or drawings shall be made without first obtaining the written approval of the Engineer.

Should the specification permit or specify the use of innovative wiring systems such as surface mounted wire trucking with removable covers, prewired multicore conduit, (twin and earth or Norse cable) or any other authorised innovative wiring system, such an installation shall comply with SABS 1500 SF - 1983, as amended.

PE8.4 Balancing of Loads

The connection and termination of equipment shall be according to the schematic diagram, but the electrical contractor will be required to balance the load as equally as possible across multiphase supplies.

PE10 POWER INSTALLATION

PE10.1 Switched Socket Outlets

i) Normal power outlets

The switched socket outlets shall be of the standard round, 3-pin, shuttered type, rated at 16A/250V and shall comply with SABS 169: 1980 and shall bear the SABS mark.

The plastic insulation around each pin-socket shall be annular and be raised to protrude through the cover plate which shall be punched with three separate holes for the pinsocket.

Alternatively, a single opening may be punched in the cover plate on condition that at least 5mm clearance is provided between the cover plate and the edge of the live and neutral pin sockets. The terminal screws of the live and neutral sockets shall be recessed so that inadvertent contact with the earth conductor will be impossible when the wired socket is pushed back into the wall box during installation.

The socket unit shall be controlled by a 16A/250V single-pole switch operated by a white piano-type lever matching the lighting switches specified. Double switch socket outlets shall each have its own individual switch.

ii) Three phase outlets

The three-phase outlet socket shall be of the industrial type 5pin wall mounted, different type and size will be as specified, with lid on the female socket, socket to be mounted 1400mm above finishing floor level.

iii) UPS power outlets

UPS power outlet shall be the same standard as the switch dedicated socket outlets, but with a flat pin earth for a dedicated circuit with separated earth and with red colour moulding. Contractor shall allow to supply and connection of the correctly specified type of 3-pin plug (red) to the Employers equipment.

PE10.2 Extract fans

Small, single-phase extract fans installed in window panes shall be connected to 5A, 3-pin, socket outlets which shall be installed in the ceiling above the fan or in the wall adjacent to the fan.

Where specified or indicated on the layout drawing, the switched socket outlet(s) feeding the fan(s) shall be connected to the lighting circuit so that the fans are switched on and off by means of the lighting switch for the room concerned.

PE11 LIGHTNING PROTECTION

The complete lightning installation shall comply with SABS Code of Practice 03 and 03A.

All electrical, telephone, data, signal, communication, antenna and other conductors entering a lightning protected building or structure shall be protected against potential surges and a safe current discharge shall be provided for each conductor in the event of a direct or induced lightning strike.

PE11.1 Three Story buildings and Less

The height and roof type and structure of the building determines the type of lightning installation requirements i.e. steel roof, tiled roof, concrete roof or thatched roofs.

The schedule of quantities made provision for lightning down runners and connections to steel roof, cutters and steel ring beam, it tiled roof it would have conductor running along the roof nocks, with forked on the roof nock corners, and down runners.

i) Materials

The installation may be carried out in copper or suitable corrosion resistant aluminium alloy. The use of copper shall be avoided at ground level to avoid the possibility of theft.

Aluminium shall not be installed in direct contact with soil or any concrete or plaster surface. Connections between aluminium and copper shall only be by means of cadmium plated or tinned connectors. Jointing of conductors shall be with suitable crimped ferrules.

Connections between copper and galvanised steel shall only be by means of tinned connectors above ground. Steel components shall be hot dipped galvanised to SABS 763. Steel reinforcing of concrete may be used as down conductors only when specific approval has been obtained from the Civil Engineer.

ii) Fixings

Fixing support holders or brackets material shall be of the same material as the conductors. Conductors shall be fixed at intervals not exceeding 1.5m. The fixing shall be as such to allow for the thermal expansion and contraction of the conductors. Fixing materials shall be durable to resist deterioration because of environmental conditions.

iii) Testing Points

Testing points shall consists of a two stud moulder test block with bridge connector plate, for testing, the block terminations shall take a conductor up to a 70mm2 BCEW.

The test point shall be mounted at the connection point between every down conductor and earth electrode cable, mounted 400mm above finished ground level.

A test certificate shall be submitted with the following test results:

- Earth resistance of every earth electrode, to be below <50Ω
- Continuity of down conductor system by measuring from one down conductor to the other down conductors with all down conductors disconnected.
- Certificate of Compliances as specified by SANS.

PE12 MOTOR CONTROL CENTRE

The MCC shall comply with PMC Particular specification, schedule of quantities and drawing.

The MCC for the new Pump station shall comprise of a surface mounted panel with doors, powered coated “Electric orange”, complete with all equipment specified.

Supply and installation of motor control centres as specified, with the following:

- A suitably rated isolating isolator (pad lockable in off position)
- A set of "STOP/START/RESET" push buttons for local manual control.
- Emergency stop mounted on the outside of panel or close to the motor with movable parts.
- Adjustable thermal overload trip relays in each phase.
- Protection against under/over voltage and single phasing, independent of the settings of the overload trip relay.
- Flow switch with timer delay and control relay, on the delivery side of the pumps
- An ammeter in one of the phases for all motors rated above 1kW. Associated current transformers for non-direct reading ammeters.
- An running hour meter
- An voltmeter with selector switch, to measure between phases
- An selector switch to facilitate the selection of either manual control or automatic control where applicable
- A set of 5 LED type indicator lights as follows
- Yellow - 'Supply on'
- Green - 'Motor Running’
- Amber - 'Motor Tripped'
- Blue – ‘Motor start delay’
- Red - “Emergency stop engaged”
- Surge arrestors for each phase and neutral
- A power factor correction capacitor unit for motors of 5 kW and more

- A thermistor relay for motors of 15kW or more
- A Start delay timer for motors of 1.5kW and higher

i) Type One: Control by means of 24hr. timer

• A mains operated 24hr anti-cycle timing device to operate starts/stop as per schedule

ii) Type Two : Control by means of pressure

• A mains operated 24hr anti-cycle timing device to limit starts per hour;

Different types of starters are provided for and have to be priced accordingly:

a) A direct on line air break contactor type starter (230/400V motors to 9kW)

Each of these units shall comprise amongst other the following components:

- A Mains 1 or 3 phase Contactor correctly rated;
- A Mains operated timing device to limit the starts per hour; and
- All necessary relays.

b) Star/Delta Starters (400V motors above 9kWatt)

These starters shall be of the automatic star/delta type and each starter shall be contained in its own separate compartment on the relevant motor control board.

Each of these units shall comprise amongst others provided for direct-on-line starters the following components as:

- A Mains 3 phase Contactor correctly rated;
- A Star Contactor correctly rated;
- A Delta Contactor correctly rated;
- A Star to Delta timer of the clockwork or electromagnetic type;
- A Mains operated timing device to limit the starts per hour;

- A Three-phase Power Factor Correction Capacitor unit for motors of 5kW or more; and • All necessary relays.

c) Variable Speed Drives (where specified)

These variable speed drives shall each be contained in its own separate panel, manufactured and equipped to the satisfaction of the variable speed drive manufacturer to suit their own requirements with regard to ventilation of the variable speed drive. Small drives below 1kW can be combined into one panel but sufficient ventilation by means of extractor fans must always be allowed for

The variable speed drive panel shall be equipped with ventilation fans and air filters. The ventilation fan shall be interlocked with the relevant motor and shall only be in operation when the motor is running. Failure of the ventilation fan shall stop the motor and a visible indication of the cause of the failure shall be provided on the panel.

The frequency converter shall make use of flux vector control without encoder or tacho generator feedback and shall incorporate direct torque control technology so that the overall effectiveness of the drive shall only be limited by the performance of the motor.

Semi-conductor switching shall be determined by the values of flux and torque and shall not have a predetermined pattern as in conventional pulse width modulation flux vector drives.

Each of these drives shall comprise amongst others the following components:

- A main isolator/circuit breaker that shall be interlocked with the door of the panel to prevent opening of the door with the switch closed and to prevent closing of the switch with the door open;
- Three ultra-rapid fuses rigidly connected to the load side of the above-mentioned mains isolator and the rating of which shall comply with the manufacturers specifications for the drive;
- A direct torque control frequency converter;

A door mounted control panel complete with cable connections (also for small drives);

- A set of START and STOP push buttons for manual control of small drives;
- One dial type potentiometer for manual speed control;
- A manual/off/auto selector switch for manual control of s mall drives;
- Thermistor relay for motors of 15kW or more;
- A external EMC line filter;
- All equipment necessary for remote emergency stop device;
- All bus system interface equipment necessary for remote speed control via a monitoring and control SCADA system as well as PLC control;
- All equipment necessary for remote motor status and speed monitoring; and
- LED type red “Emergency stop engaged” indicator light.

A 3CR12 steel gland plate must be provided at least 250mm above floor level for cable connections.

The control panel shall be the user interface for monitoring, adjusting parameters and controlling the drive operation. It shall be possible to:

- Enter start-up data into the drive;
- Control the drive with start, stop and reference signals;
- Display actual values of motor performance; and

- Display information on at least the five most recent faults.

The drive shall satisfy the following technical requirements:

- The static speed control error shall not exceed ± 0,5% of motor nominal speed;
- Fundamental power factor shall be at least 0,97 at nominal load;
- Efficiency shall be at least 98% at nominal power level;
- The drive shall operate satisfactorily under all ambient temperature conditions between -5°C and + 40°C at an altitude of 1260m above sea level and humidity up to saturation point;

The drive shall provide output protection for motor overload, over current, short circuit at start, earth fault, missing motor phase and over frequency;

- The drive shall satisfy the following minimum harmonic voltage limits: Total harmonic distortion of 6%, odd harmonic distortion of 4% and even harmonic distortion of 2%. The Contractor shall measure these harmonic distortion parameters after commissioning of the system and if the equipment fails to comply with this requirement, the Contractor will have to rectify the same to the satisfaction of the Engineer;
- The drive shall be equipped with an AC choke for harmonic current reduction and shall be placed on the AC side of the rectifier bridge in order to protect the rectifier semiconductors against power line transients;
- Torque step rise time shall typically be less than 5ms; and
- Stringent precautions must be taken in the design of the protection equipment to assure adequate lightning and surge protection.

d) Electronic Soft Starters (where specified)

The soft starter shall be installed in the relevant motor starter panel but sufficient ventilation by means of extractor fans must always be allowed for and shall be interlocked with the relevant motor and shall only be in operation when the motor is running. A bypass contactor for motor running conditions is a requirement and shall either form part of the soft starter or shall be a separate unit.

The soft starter shall have soft start and stop programmable capabilities with torque and current control. The normal motor protection facilities such as over/undercurrent, start limit, long start time, electronic overload, phase loss and phase sequence and load loss shall be available.

At least a 2 line 16 character LCD display unit with control function keys shall form part of the soft starter and shall preferably be separate motor starter front panel mountable. The LCD unit shall display all statistical data and trip conditions and shall allow functional key changes to programmable parameters.

The full motor protection capabilities shall be maintained when motor is operating in bypass contactor mode.

The soft Starter shall satisfy the following technical and diagnostics requirements:

- Overload;
- Ground fault;
- Line fault;
- Power loss;
- Voltage imbalance / Under / Over;
- Phase rotation;
- Over temperature;
- Excessive starts per hour; and
- RS 485, MODBUS, PROFIBUS communication shall be possible.

The soft Starter shall satisfy the following metering requirements:

- Three-phase currents;
- Three-phase voltages;
- Power in kW;
- Power usage in kW/hr.;
- Motor thermal;
- Power factor of the running motor;
- Capacity usage; and
- Elapsed time of motor operation.

e) Mains surge arrestors

The surge arrestors shall be Type 2 and voltage compatible to the relevant installation and shall be able to withstand a lightning impulse current wave form 8/20µs at a maximum discharge current of 40kA.

f) Earthing

The contractor shall supply and install all bonding of steel works and MCC earth comprising of a 1.5m earth road connected by a 16mm2 BCEW to the MCC earth strut. An earth résistance test certificate shall be provided to insure the earth is below 10ohms.

The MCC shall be in accordance with the drawings, specifications and Sedibeng standards.

PE13 MOTOR CONTROL PHILOSOPHY

PE13.1 General

The new installation shall intergrade with the existing installation providing more supply to existing water systems, at different villages. The control of the new system shall be via 24hr rotation timer to pre-set time schedules, or per pressure control valve is required.

PE13.2 Control Philosophy

- Type One: Control by means of 24hr. timer

An 24hr anti-cycle timing device, shall control the operational time of the pump, to the prescribed schedule and held of the bore hole.

- Type Two : Control by means of pressure

Pressure switches shall be installed at each pump. These pressure switches will be installed in conjunction with the necessary relay units and adjustable timers to prevent unnecessary stop/start operations.

The operating will rely on the closing off of a reliable level control valve which will prevent any return flow back into the supply main. The closing action of this valve would result in a positive increase in a pump discharge pressure, which will initiate the stopping cycle of the borehole pump's electrical motor.

PH TANKS AND TANK STANDS

PH1 APPLICABLE STANDARDS

The latest issues of the following standards form part of this specification:

- SANS 136: ISO metric precision hexagon-head bolts and screws and hexagon nuts (coarse thread medium fit series);
- SANS 0162: The structural use of steel;
- BS 4360: Weldable structural steel;
- SANS 62: Steel pipes and pipe fittings up to 150mm nominal bore suitable for screwing to ISO R7 pipe threads;
- SANS 135: ISO metric black bolts, screws and nuts;
- SANS 455: Covered electrodes for the manual are welding of mild steel and medium high tensile steel; • SANS 763: Hot-dipped (galvanised) zinc coatings (other than on continuously zinc-coated sheet and wire);
- SANS 1123: Steel pipe flanges;
- SANS 0104: Hand and guard rails (Safety aspects);
- Safety Legislation No. 13A(6)(a) and 13A(6)(b)(i).

PH2 SCOPE

This specification covers the requirements for tanks (with or without covers) intended for the storage of liquids and constructed of bolted square pressed steel plate sections and of depth not exceeding 4880mm.

PH3 REQUIREMENTS

PH3.1 Materials

PH3.1.1 Covers: Sheeting used for covers shall be of steel having a nominal thickness of at least 2,5mm or of ISCOR Z600 closed profile pre-galvanised steel sheet of thickness of at least 0,8mm (subject to normal milling tolerances).

PH3.1.2 Electrodes: The electrodes shall be of a quality at least equal to that of electrodes complying with SANS 455, and the deposited metal shall have a tensile strength and an elongation of at least equal to the appropriate minimum specified for the parent plate.

PH3.1.3 Plates, stags, cleats and pads: Plates, stags, cleats and pads shall be of mild steel, complying with the relevant requirements of BS4360.

PH3.1.4 Jointing Compound: The jointing compound shall be non-toxic , shall not leach out, shall be insoluble in the liquid to be stored (and in the case of tanks for potable water, shall not impart any off-flavour or off odour to the water), and shall provide an effective seal between the plate flanges under conditions of temperature specified. (The contractor should obtain from the Supplier a statement of the optimum period that should be allowed for the jointing compound to mature before the tank is put into commission).

PH3.2 Size

The nominal size of a tank, based on dimensions each of which is a multiple of 1220mm, 1200mm or 1000mm, as relevant and subject to a maximum depth of 4880mm.

PH3.3 Components

PH3.3.1 Plates

(a) Size

The nominal overall size of plates (after flanging) shall be 1220mm x 1220mm, 1200mm x 1200mm, or 1000mm x 1000mm, appropriate to the size of the tank specified.

(b) Thickness

In the case of tanks of stored liquids of nominal density not exceeding 1000kg/m2, the nominal thickness of the plates shall conform to the appropriate value(s) given in Table 1.

Table 1: Plate Thickness

Depth of Tank (mm)	Plates	Plate Thickness (mm) min
1000 – 1220	Bottom; sides; ends	3
2000 – 2440	Bottom; sides; ends	3
3000 – 3660	Bottom; first tiers of sides and ends Second and top tiers of sides and ends	4,5 3,0
4000 - 4880	Bottom, first tier of sides and ends Second tier of sides and ends Third end top tiers of sides and ends	6,0 4,5 3,0

Strengthening

The plates shall be strengthened by suitable embossment (i.e. a pattern pressed into the plates) or by the welding of suitable ribs to the plates.

Flanges

The plates shall have flanges of width of at least 44mm and of the following form and arrangement:

- A combined double flange at angles of 45 degrees and 90 degrees to the plane of the plate, pressed on each side of the plate.
- A single flange at an angle of 90 degrees to the plane of the plate, pressed on two, three or four sides (depending on the position of the plate in the tank) and with flanged corners welded.

The flanges shall have bold holes of diameter such as to provide a bolt clearance of 1,5mm evenly spaced at a pitch of 75 plus minus 1,5mm.

PH3.3.2 Connections

Connections shall be one of the following types:

- Flanged bolted type connections complying with the relevant requirements of SANS 1123 for flanges for nominal pressures of 600 kPa;
- Screwed type connections complying with the relevant requirements of SANS62.

PH3.3.3 Covers

When so specified, tanks shall be supplied complete with covers. Each cover shall be so fitted as to prevent the ingress of water and any foreign matter into the tank.

Each cover shall have a clear opening of diameter or smallest dimension, as relevant of at least 450mm, and shall be so constructed that it can be fitted with a lock.

Unless otherwise specified, each tank that is provided with a cover shall be equipped with a vent fitted with a cowl. The vent shall be so screened as to prevent the entry of rodents, other small animals and mosquitoes.

PH3.3.4 Access ladders and safety platforms

Access ladders and safety platforms shall be provided as follows and the design and construction of the rails shall be such as to comply with the relevant requirements for safety in SANS 0104.

External ladders and platforms; Each tank shall be supplied with an external access ladder and safety platform. It shall comply with the relevant clauses of the Occupational Health and Safety Act and possess a safety cage from 2,5m above ground level and landing stages at 9m intervals.

Internal Access Ladders: Each tank of depth exceeding 1220mm shall be provided with an internal access ladder. In the case of a tank that is not provided with a cover, the ladder shall be located as specified and in the case of a tank that is supplied with a cover, the holder shall be located below the manhole.

PH3.4 Construction

PH3.4.1 Design Strength: The design strength of the tank and of all members (stags, cleats, bolts, coverframe members, etc.) shall comply with the relevant requirements of SANS 0162 and shall include allowances as relevant for the following:

- Exposure of the tank to corrosive conditions
- Eccentric loading
- Fatigue stresses caused by turbulence of the stored liquid.

PH3.4.2 Flanging: Tanks shall be constructed of externally flanged plates, unless otherwise agreed upon

PH3.4.3 Attachment of connections: Connections shall be supplied in the positions specified and shall be welded to the tank. Flanged bolted connections shall be as follows:

- Where the size of the connection and the specified location are such that the connection can be welded to a plate that is free from embossment, single-stooled flanges shall be provided for connections that are to be made in one side of the plate only and double-stooled flanges for connections that are to be made on both sides of the plate, as specified.

PH3.4.4 Staying: When necessary, the sides and ends of the tank shall be supported by stays. Each end of each stay shall be bolted to a cleat. Cleats shall be bolted or welded to the plates.

The connections of stays shall be arranged in one or more of the following ways, as necessary:

- Sides to bottom
- Ends to bottom
- Sides to sides
- Sides to ends

PH3.4.5 Welding: All welds shall be acceptable fusion welds. The weld metal, the heat-affected zone and the surrounding parent shall be free of cracks. Weld faces shall be free of porosity, cavities and trapped slag, shall show now pronounced humps or craters and shall merge smoothly into the adjacent surfaces of the parent plate without overlap or excessive undercut. The throat thickness of fillet welds shall be at least 4,5mm. In the case of corner welds, the leg length shall be equal to the plate thickness.

PH3.5 Workmanship

The workmanship of all components shall be such that they are free from defects that are detrimental to the ease of assembly or the performance of the tank in service, or both.

PH3.6 Finish

Unless a different type of protective coating is specified, all components shall be protected from corrosion by hot-dip galvanising that complies with the relevant requirements of SANS 763.

PH4 FOUNDATIONS AND STANDS

PH4.1 Design, Drawings and Quantities

The Contractors must submit the design and workshop drawings for the steel tank and stand to the Engineer for approval prior to commencement of the work.

The foundations for the tank and stand will be designed by the Engineer, while the design for the stand shall be designed by the supplier and checked by the Engineer.

The cost for the design of the steel tank and stand must be included in the tender sum and rates.

PH4.2 Lighting Protection

The stand shall be earthed using a suitable approved copper connector between the bottom of the tank leg and on earth spike.

PH5 DISINFECTION OF THE TANK

On completion of construction, but before commencement of testing, the reservoir shall be disinfected as follows:

a) The reservoir shall be flushed with clean water until all sediment and other foreign matters have been removed.
b) Potable water treated with sodium hypochlorite or calcium hypochlorite or chlorine gas shall be introduced into the reservoir. On completion of filling with chlorinated water, the chlorine concentration in water sampled at any point shall not be less than 3 mg/l free available chlorine.

After 24 hours retention of chlorinated water in the reservoir, samples drawn at any point shall contain not less than 0,5 mg/l free residual chlorine. Where necessary, additional chlorine shall be injected to maintain chlorine residuals.

PH6 TESTING OF TANK

The complete tank shall be watertight and the work will not be certified until the tank has been proven by testing to be watertight.

Upon completion of the erection and when so agreed by the Engineer, the tank shall be filled by gradual admission of water until level reaches the overflow level. The tank shall be allowed to remain filled for 24 hours upon which a visible inspection will be done on the tank. If at any time during the test, visible leaks appear, the test will be discontinued and remedial work done. Upon completion of the remedial work, the 24 hours test will restart. The tank will be deemed watertight if no leaks are present at the end of test and so noted by the Engineer.

PH7 MEASUREMENT AND PAYMENT

PH7.1 Galvanised- Stand & Pressed Steel Tank

The Contractor shall tender a sum under schedule 6 in the schedule of rates to allow for the complete stand and tank and all related charges and profit.

PLN MANUFACTURE, SUPPLY AND TESTING OF STEEL PIPES

PLN 1 SCOPE

This specification covers the manufacture and supply of bare, electric welded low carbon steel pipes and steel pipe special items for the conveyance of water at ambient temperatures and at medium pressures.

PLN 2 STANDARDS

Pipes and specials shall be manufactured, tested and inspected in accordance with the latest issues of the following standard specifications unless amended in subsequent clauses in this specification.

a) Pipes

SABS 719 :	Steel Grades A, B and C
SABS 1431 :	Steel Grades 300 WA
API 5L :	Steel Grades X42, X46, X56 and X60

b) Specials

- Specials of 150 mm nominal diameters and smaller to be manufactured with pipe conforming to ASTM Schedule 40.
- Specials larger than 150 mm nominal diameter shall be manufactured from pipes complying with this specification.
- The radiographic technique, adjudication of radiographs and repair of defects shall be in accordance with API 1104.

c) Qualifications of Welders

All manual or semi-automatic welds and repair welds shall only be undertaken by welders qualified under the tests laid down in accordance with API 1104.

d) Non-destructive Tests and Adjudication

- Radiographic inspection: API 1104
- Ultrasonic inspection : API 5L

e) In this Specification reference is made to the latest issues of the following specifications:

SABS	719
API	5L
API	1104
ASME	Section V
BS	2971
BS	2633

PLN 3 STRESSES

a) All pipes shall be hydrostatically tested as described in PLN 6.5 to a pressure such as to produce a circumferential tensile stress in the steel of not less than 90% of the minimum yield stress.
b) The design stress for pipes subjected to the specified design pressures shall be 60% of the minimum yield stress of the steel.

PLN 4 PROCESS OF MANUFACTURE FOR PIPES

PLN 4.1 General

Pipes shall be manufactured by an approved semi automatic submerged-arc welding process or shall be electric resistance welded. Where semi automatic submerged-arc welding is employed, at least one pass shall be made on the inside and at least one pass on the outside. The number of longitudinal weld seams shall not exceed:

a) one seam for pipes up to 1 000 mm nominal diameter
b) two seams for pipes larger than 1 000 mm and up to 2 000 mm nominal diameter

Circumferential welds by semi automatic submerged-arch welding method for factory double jointed pipes shall have at least one pass on the inside and at least one pass on the outside.

PLN 4.2 Welds

SABS 719, BS 2971 and BS 2633 shall generally apply.

For fusion welded pipes and specials, the internal weld bead shall not protrude more than 1 mm into the bore of the pipe or special.

For electric resistance welded pipes, the height of upset metal and flash on the inner surface shall not exceed 1,0 mm.

For pipes to be jointed by butt welding, the internal weld bead shall be ground flush with the pipe body for a length of 200 mm from ends to be jointed.

For pipes to be coupled by flexible couplings, external weld reinforcement or upset metal and flash shall be ground flush with the pipe body for a length of 200 mm from the end to be coupled.

PLN 5 DIMENSIONAL REQUIREMENTS

PLN 5.1 Pipes

All dimensions will be in accordance with SABS 719 clause 4.

PLN 5.2 Specials

The tolerances on specials will be in accordance with BS 534, Section 4.

PLN 6 TESTING AND INSPECTION AT MANUFACTURER'S WORKS AND AT SITE

PLN 6.1 General

Factory and Site inspection, supervision of tests and adjudication of test records shall be carried out by an independent Inspectorate.

Tests and inspections shall be carried out at the manufacturer's works at the expense of the Contractor who shall provide all necessary testing facilities, labour, instruments, equipment and samples that might be required, free of charge. The Inspectorate shall be afforded every facility during the course of manufacture and testing to enable the inspection to be carried out effectively.

All test samples shall be selected by the appointed Inspectors and all instruments used for testing purposes shall be approved by the Inspectors and if in the opinion of the Inspectors any instrument should require calibration, such instruments shall be calibrated at the expense of the Contractor by the SABS or such other body as may be approved by the Inspectorate.

PLN 6.2 Moving of Pipes

No mechanical working or straining of pipes and specials shall be allowed after testing and inspection.

PLN 6.3 Visual Inspection

All finished pipes and specials shall be visually examined and shall be free of injurious defects as defined in API 5L Section 10.7.

PLN 6.4 Non-destructive Inspection

PLN 6.4.1 Ultrasonic Inspection

Pipes shall be made by an approved welding process and 100 percent of all longitudinal or spiral welds on straight pipes shall be checked with an approved ultrasonic method capable of continuous and uninterrupted inspection of the weld seam in accordance with API 5L Section 9.10, 9.11 and 9.12 except that the equipment shall be checked with an applicable reference standard at least twice every working turn.

PLN 6.4.2 Radiographic Inspection

a) Longitudinal Weld Pipe

All electric fusion welded pipes, shall be inspected by radiological methods for a distance of 200 mm from each pipe end.

b) Spiral Weld Pipe

All electric fusion welded pipes shall be inspected by radiological methods for a distance of 100 mm from each end of each length of pipe and of the complete "H" at all scalp and welds including 150 mm of the spiral welds in both directions away from the intersection points with the scalp and welds.

c) Circumferential Butt Welds

100 percent of the length of circumferential butt welds shall be examined provided, when consistently acceptable results are obtained, the number of welds to be so tested may be reduced by mutual agreement between the Engineer, the Inspectorate and the Contractor.

d) Specials

100 percent of all manual or semi-automatic welds in specials shall be examined radiographically provided, when consistently acceptable results are obtained, the number of welds to be so tested may be reduced.

Where specials cannot be hydrostatically tested, all welds shall be liquid penetrate tested as per ASME Section V.

e) Repairs

Straight Piping :
100 percent of the total length of all repairs shall be examined radiographically provided, that where repairs are made before ultrasonic inspection and such repairs pass ultrasonic inspection, no further radiographic inspection of same is required.

f) Pipes for Rail, Road and River Crossings 100 percent of the total length of all welds shall be examined radiographically.

PLN 6.5 Hydrostatic Testing

a) Each individual straight pipe shall be subjected to a hydrostatic test in accordance with the methods described in API 5L, Section 5. Test pressures shall be such as to produce tensile fibre stresses in the pipe wall of not less than 90% of the minimum specified yield strength of the steel or shall be 9 MPa whichever is the lesser. Leaks or sweats shall be considered injurious defects.

b) Should it not be possible to hydrostatically test straight piping and/or specials the through liquid penetrate test as per ASME Section V shall be done on all welds over and above the non-destructive tests specified above. This shall only be applicable with the prior written approval of the Engineer.

PLN 6.6 Repair of Injurious Defects

Injurious defects found by non-destructive testing of welds, visual examination, hydrostatic testing or determined by any other means to exceed the limitations in API 5L, Section 10.7 shall be repaired in accordance with API 5L Section 10.8 and 10.9 but subject always to the requirements of this specification.

PLN 6.7 Destructive Testing

PLN 6.7.1 General

The following destructive tests shall be performed in accordance with SABS 719 clause 7.2 on the first pipe and thereafter on one pipe every 500 subsequent pipes.

a) Transverse Tensile Test
b) Root Bent Test (Electric Fusion Welds)
c) Flattening Test (Electric Resistance Welds)

PLN 6.7.2 Sampling for Destructive Tests

a) First Sample

A section long enough to provide all the test specimens and material shall be cut from the selected pipe.

b) Second Sample

If the test specimens and material from the first selected pipe fail to pass any of the tests, a section long enough to provide the appropriate specimens for the tests failed by the first sample shall be cut from two further pipes.

c) Third Sample

If the test specimen from the second sample fails to pass the test(s) a similar section shall be cut from each of a further ten pipes.

d) Compliance

The piping shall be considered as complying with the specification if after testing of the first or the second or the third sample no defect is found.

PLN 7 FLANGES

a) Material - shall be steel plates to conform to the requirements of SABS 1123.
b) Dimensions - shall be in accordance with SABS 1123 unless otherwise specified in the Schedule H of Quantities or on the drawings.

c) Type - all flanges shall be of the steel-plate for welding type and shall have flat joint faces unless otherwise specified in the Schedule or Quantities or on the drawings.
d) Finish - joint surfaces shall be in accordance with SABS 1123 clause 4.5.
e) All flanges shall be supplied complete with bolts, nuts and washers of a material to conform to the requirements of SABS 1123 where applicable, otherwise to the requirements of the Engineer.

Gaskets for flanged joints shall be of compressed asbestos fibre to BS 2815 Grade A and full faced, unless otherwise specified in the Project Specification, with a minimum thickness of 3 mm.

PLN 8 FLEXIBLE COUPLINGS

Flexible couplings shall be of the Viking Johnson or Klamflex type with centre register except where specified to the contrary in the Schedule of Quantities or on the drawings. Couplings must be able to withstand hydrostatic test pressures of 1.5 times the specified design pressures and coupling flanges must be designed to withstand all stresses due to tightening of the bolts. Rubber rings shall generally comply to SABS 974 Class F. The internal face of the sleeve section of each coupling shall be grit blasted to SIS 055900 Grade Sa3 finish with an anchor pattern profile not exceeding 75 micrometres in depth as determined by micrometer gauge or portable microscope fitted with a calibrated focussing knob. Within four hours of grit blasting provided surfaces are kept dry and clean, one coat of an approved epoxy resin, Copon or similar shall be spray applied, followed by further coats to a dry film thickness of not less than 300 micrometres over the average profile peak. All other surfaces of coupling components shall be grit-blasted to the same minimum finish and shall receive one coat of an approved protective paint which shall be compatible with materials to be used for the exterior moulding of the coupling in the field. Flexible couplings shall be supplied complete with all necessary bolts, nuts and rubber jointing rings.

PLN 9 MARKING OF PIPES

All pipes and specials shall be clearly hand stamped alongside a longitudinal or spiral weld on one end of the pipe with the following.

a) Grade and thickness of steel
b) Serial number of the pipe or specials
c) Nominal diameter
d) Hydraulic test pressure

SECTION C3.5: MANAGEMENT

SECTION C3.5.2: HEALTH AND SAFETY SPECIFICATION

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1 INTERPRETATIONS

Occupational Health and Safety Act, Act 85 of 1993 shall apply to this Contract. The Construction Regulations promulgated on 7 February 2014 and incorporated into the said Act by Government Notice R. 10113, published in Government Gazette 37305 apply to any person involved in construction work. These regulations are hereinafter referred to as "the Construction Regulations" and the said Act as "the Act".

Construction work is defined as:

"Any work in connection with: -

a) the erection, maintenance, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure;
b) the installation, erection, dismantling of or maintenance of a fixed plant where such work includes the risk of a person falling;
c) the construction, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system or any similar civil engineering structure; or
d) the moving of earth, clearing of land, the making of an excavation, piling, or any similar type of work".

2 GENERAL

2.1 The Contractor shall ensure that all employees and visitors are informed, instructed and trained regarding safety conditions on site.

2.2 Proof of induction training to all workers shall be filed in the Health and Safety file on site. All employees shall sign the relevant induction training forms.

2.3 The Contractor shall ensure that all professionals entering the site are informed, instructed and trained regarding safety conditions on site. Proof of Professional site safety induction shall be signed by professionals and filed in the Health and Safety file on site.

2.4 The Contractor shall ensure that all visitors are informed, instructed and trained regarding safety conditions on site. Visitors have to sign the visitors register before entering the site. Hardhats shall be issued to visitors. No visitor shall enter the site without the appropriate safety shoes.

2.5 Should the Contractor at any stage in execution of the Works -

a) fail to implement or maintain his health and safety plan;
b) execute construction work which is not in accordance with his health and safety plan; or act in any way which may pose a threat to the health and safety of persons, the Employer will stop the Contractor AT HIS/HER OWN COSTS from executing construction work.

2.6 The Contractor shall provide proof of this registration and good standing with the Compensation Fund or with a licensed compensation insurer when submitting a tender. Tenders without this will be regarded as non-responsive.

2.7 The Contractor shall, in submitting his tender, demonstrate that he has made provision for the cost of compliance with the specified health and safety requirements, the Act and the Construction Regulations.

2.8 The Contractor shall consistently demonstrate his competence and adequacy of resources to perform the duties imposed on the Contractor in terms of this Specification, the Act and the Construction Regulations.

3 INDEMNITY OF EMPLOYER AND HIS AGENTS

a) The annexures to this Contract Document contain a “Mandatory Form of Authority and Agreement in terms of Section 37(2) of the Occupational Health and Safety Act, No. 85 of 1993" which agreement shall be entered into and duly signed by both the Employer and Contractor prior to commencement with work.

A copy of the signed agreement shall be included in the Contractor’s health and safety plan.

b) Any acceptance, approval, check, certificate, consent, examination, inspection, instruction, notice, observation, proposal, request, test or similar act by either the Employer, any of his agents or the Engineer (including absence of disapproval) shall not relieve the Contractor from any responsibility he has under the Contract, the Act and the Construction Regulations, including responsibility for errors, omissions, discrepancies and non-compliances.

c) A Section 37(2) agreement shall be entered into and duly signed by both the Principal Contractor and Sub Contractor prior to commencement with work by Sub Contractor.

A copy of the signed agreement shall be included in the Principal’s Contractor’s health and safety plan.

d) Any acceptance, approval, check, certificate, consent, examination, inspection, instruction, notice, observation, proposal, request, test or similar act by either the Employer, any of his agents or the Engineer (including absence of disapproval) shall not relieve the Sub Contractor from any responsibility he has under the Contract, the Act and the Construction Regulations, including responsibility for errors, omissions, discrepancies and non-compliances.

4 SCOPE

4.1 The specification as set out in this Portion is known as the Health and Safety Specification for the Construction work to be carried out by the Principal Contractor as per regulations of the Construction Regulations July 2003.

4.2 Information herein addressed might affect the Health and Safety of employee's or persons carrying out the construction work as per this tender document.

4.3 The Contractor shall ensure that it is fully conversant with the requirements of this Specification.

4.4 This Specification is not intended to supersede the Act nor the Construction Regulations.

4.5 Those sections of the Act and the Construction Regulations, which apply to the scope of work to be performed by the Contractor in terms of this Contract, continue to be a legal requirement of the Contractor.

4.6 The principal Contractor will be appointed in writing to be in overall control of the Construction site.

4.7 A Health and Safety Plan must be submitted by the Principal Contractor to the Client or the Client's Agent containing all the relevant documentation as required by this specification and terms of the provisions of this Specification, the Act and the Construction Regulations.

4.8 A Health and Safety Plan must also be submitted by the Sub Contractor to the Principal Contractor containing all the relevant documentation as required by this specification and terms of the provisions of this Specification, the Act and the Construction Regulations

4.9 The H&S plan shall be submitted before commencement of any work on site

4.10 The H&S plan shall contain the following items where applicable:

1. Description of contract
2. Construction site address / Building site address
3. Construction period
4. Name and details of client –telephone, fax, address
5. Name and details of consultants –telephone, fax, address
6. Name and details of principal contractor–telephone, fax, address
7. Name and details of sub-contractors–telephone, fax, address
8. Company's policy towards health & safety
9. Company's policy towards drug and alcohol abuse
10. Company's policy towards disciplinary procedures
11. Company's policy towards environment.
12. Workmen compensation – number and expire date
13. Management and Supervision rules
14. Structure, Supervision of construction work and responsibilities
15. Health and Safety Officers/Representatives
16. Health and Safety Committees\
17. First Aid
18. Medical tests
19. Incident/ Accident reporting procedures
20. Emergency/evacuation procedures
21. Subcontractor agreements and requirements and super positioning
22. Material Safety Data Sheets
23. Transport of workers
24. Proposed PPE
25. Scope of works – describe type
26. Sequence and phases of the work to be performed describe stages involved in project
27. List of all equipment to be used on the specific site – tools, construction vehicles, mobile plant.
28. Company's approach toward hygienic facilities on the construction site (toilets, eating areas, drinking water, showers, refuge removal)
29. Company's approach towards other facilities as required by law (the transport act, the smoking act, PPE)
30. Local labour agreements, requirements, policies
31. Fire extinguishers and fire equipment
32. Oxygen, acetylene and LP gas cylinders
33. Welding, cutting , grinding and heating
34. Signs and symbols to be displayed
35. Lock – out procedures

36. Public safety, hoarding and fencing
37. Risk assessment methods
38. Company's monitoring plan
39. Company's review plan.
40. Identification of risks and hazards
41. Appointments of personnel to be made (Safety reps, Supervisors, First Aiders, Fire equipment inspectors
42. Registers to be completed by appointed employees (Checklists)
43. List of training material to be used for educational purposes of construction workers (Induction, Fire fighting, First Aid, etc.)
44. List of safe work procedures to be explained to workers.
45. Company's Policy on House Keeping
46. Stacking and storage on sites
47. Construction welfare facilities
    i. Explosive power tools
    ii. Ladders
    iii. Welding flame cutting and soldering
    iv. Electrical installations and machinery
    v. Boatswain chairs
    vi. Suspended platforms
    vii. Material hoists/ Builders hoist
    viii. Batch plants
    ix. Water Environments
48. List of plans to be used:
    i. Fall protection plan
    ii. Tunnelling plan
    iii. Pile driving plan
    iv. Steel assembling and placing plan
    v. Emergency/evacuation plan
    vi. Demolition plan
    vii. Scaffold erection procedures plan
    viii. Erection of structural steel plan
    ix. Electrical installations plan.
    x. Excavation plan
    xi. Form work and support work plan
    xii. Material Hoist rules
    xiii. Lifting machines and tackle rules
    xiv. Rules on Construction vehicle and mobile plant procedures
    xv. Rules on mobile and tower cranes
    xvi. Fire precautions on the construction site
    xvii. Rules on Hazardous chemicals on the site, storage and use

xviii. Rules on storage and use of Flammable liquids and substances on site
xix. Rules on compressed gas cylinders
xx. Rules on handtools
xxi. Rules on portable electrical equipment

49. List of Risk Assessments
50. Clearing and Grubbing of the area/site
51. Site establishment including:
52. Office/s
53. Secure/safe storage for materials, plant and equipment
54. Ablutions
55. Sheltered eating area
56. Maintenance workshop
57. Vehicle access to the site
58. Dealing with existing structures
59. Location of existing services
60. Installation and maintenance of temporary construction electrical supply, lighting and equipment
61. Adjacent land uses/surrounding property exposures
62. Boundary and access control/public liability exposures (NB: the Employer is also responsible for the OH&S of non-employees affected by his work activities.)
63. Health risks arising from neighbouring as well as own activities and from the environment e.g. threats by dogs, bees, snakes, lightning etc.
64. Exposure to noise
65. Exposure to vibration
66. Protection against dehydration and heat exhaustion
67. Protection from wet and cold conditions
68. Dealing with HIV/Aids and other diseases
69. Use of portable electrical equipment including
    i. Angle grinder
    ii. Electrical drilling machine
    iii. Skill saw
70. Excavations including
    i. Ground/soil conditions
    ii. Trenching
    iii. Shoring
    iv. Drainage of trench
71. Welding including
    i. Arc welding
    ii. Gas welding
    iii. Flame cutting
    iv. Use of LP gas torches and appliances

72. Loading and offloading of trucks
73. Aggregate/sand and other materials delivery
74. Manual and mechanical handling
75. Lifting and lowering operations
76. Driving and operation of construction vehicles and mobile plant including
    i. Trenching machine
    ii. Excavator
    iii. Bomag roller
    iv. Plate compactor
    v. Front end loader
    vi. Mobile cranes and the ancillary lifting tackle
    vii. Parking of vehicles and mobile plant
    viii. Towing of vehicles and mobile plant
77. Use and storage of flammable liquids and other hazardous substances
78. Layering and bedding
79. Installation of pipes in trenches
80. Pressure testing of pipelines
81. Backfilling of trenches
82. Protection against flooding
83. Gabion work
84. Use of explosives
85. Protection from overhead power lines
86. As discovered by the principal contractor's hazard identification exercise
87. As discovered from any inspections and audits conducted by the client or by the principal contractor or any other contractor on site
88. As discovered from any accident/incident investigation

4.11 The Health and Safety Plan provided for by the Principal Contractor may be adjusted by the Client to suit the requirements. The approved Health and Safety Plan will be implemented on the construction site.

4.12 The Health and Safety Plan of the Principal Contractor shall include al relevant Health and Safety Plans of Contractors (Sub-Contractors). The Contractor shall, throughout execution of the Contract, ensure that all sub-contractors have similar Health and Safety Plans in place which must be available on site.

4.13 The execution of the H&S plan shall be documented in the form of a H&S file which shall contain items as described elsewhere in this specification. A lever arch file shall be used with a clear index and dividers. Numbering of items shall be done clearly with numbers as specified elsewhere.

4.14 The file shall be available at all times and kept on site and made available for inspection by an Inspector, Client, Client Agent or Principal Contractor.

4.15 Provision for costs in respect to Health and Safety in the tender shall be tendered for in the Schedule of Quantities. The Tendered price is fixed. A provisional sum will be included in the schedule of quantities to make provision for an approved H&S Service Provider to assist the contractor in performing the H&S activities required by law.

4.16 The following paragraphs summarize the Health and Safety Activities to be performed by Contractors.

(Terms and definitions in the following paragraphs are explained elsewhere in this specification)

4.17 The following activities shall be strictly performed by the Principal Contractor and Sub Contractors on acceptance of the tender and before commencement of any work on the construction site.

(Terms and definitions in the following paragraphs are explained elsewhere in this specification)

4.18 The contractor will only be allowed to start working once the submitted Health and Safety plan are approved by the client or the client's agent.

4.19 A prior Risk Assessment shall be done on site before the commencement of any work by a competent Risk Assessor.

4.20 The Risk Assessment shall:

a) Address hazards on site and hazards related to the type of work performed, Possible consequences of these hazards,

b) Refer to legislative requirements concerning these hazards on the construction site

c) Calculate the value of the risk associated with the hazard by an approved method taking into consideration the probability of occurrence, the degree of injury, lost time, production costs, influence on the environment and frequency of occurrence.

4.21 The outcome of the Risk Assessment will determine:

a) Protective equipment to be issued,
b) Type of training required,
c) Type and number of Safe Work Procedures to be introduced to workers in the form of Toolbox Talks

4.22 Protective clothing as determined by the Risk Assessment shall be issued and the employees shall sign the issue register to indicate the type and number of equipment received by each employee

4.23 No work shall commence on the construction site prior to induction training of all employees intended to work on site.

4.24 Training shall be done by a competent Health and Safety Induction Trainer. Proof of training in the form of a register signed by the trained employees shall be kept in the H&S file. The contents of the training shall also be displayed in the H&S file.

4.25 Appointments of people/workers related to Health and Safety as required by law and the Risk Assessment shall be done prior to the commencement of any work. Letters of appointment shall be kept in the H&S file for inspection by the Client, Agent or any Inspector.

4.26 All appointed workers shall have a proof of competency attached to the letter of appointment. The Construction Supervisor 6(1) shall have a detailed CV attached to his/her appointment letter.

4.27 Medical Fitness Certificates shall be obtained for the workers/operators as determined by the Risk Assessment.

4.28 During the construction period the Contractor shall ensure that all employees and visitors are informed, instructed and trained regarding safety conditions on site. All employees will carry proof of this induction on their persons while employed on site in the form of identification cards. The type of additional training required on this project will be describe elsewhere.

4.29 Notification of Construction work shall be done to the Department of Labour within 7 days from commencement of the construction work.

4.30 Follow-up Risk Assessments shall be done during the construction period as and when the scope of work changes indicating new introduced hazards.

4.31 Additional appointments shall follow as required by the Risk Assessment.

4.32 Should the Contractor at any stage in execution of the Works

a) fail to implement or maintain his health and safety plan;
b) execute construction work which is not in accordance with his health and safety plan; or
c) act in any way which may pose a threat to the health and safety of persons,

the Employer will stop the Contractor AT HIS/HER OWN COSTS from executing construction work.

4.33 The Employer will take reasonable steps to ensure that the Contractor's Health and Safety plan is implemented and maintained. The steps taken will include periodic audits at intervals once every month.

4.34 Upon completion of the Works, the Contractor shall hand over a consolidated Health and Safety file to the Client.

5 HEALTH AND SAFETY FILE

5.1 The following documentation shall be in the Health and Safety File of the Principal Contractor and Sub Contractors:

A1 Copy of the Occupational Health and Safety Act No 85 of 1993 including the Construction Regulations – February 2014
A2 Proof of registration with Compensation Commissioner (Principal Contractor)
A3 Copy of Notification of Construction work to the Department of Labour
A4 Agreement in terms of section 37(2) of the Occupational Health and Safety Act, No. 85 of 1993. To be signed by client and Principal contractor in presence of witnesses
A5 Health and Safety Specifications provided by the client
A6 Copy of all Drawings – Schematics, Detail Drawings, As-Build Drawings etc.
A7 Health and safety plan describing all activities as mentioned elsewhere.
A8 Company Safety Policy – To be signed by the Chief Executive Officer of the Company.
A9 Organogramme indicating site specific organizational structure with reference to requirements of the construction regulations.

A10 Letters of Appointment

The following appointments are required for the project. Deviations will only be allowed with the approval of the Agent. Appointment of an employee for more than one responsibility will be allowed and shall be approved by the Agent.

Basic Appointments

a) Appointment of Principal Contractor by Client
b) Appointment of Contractors (Sub Contractors) by Principal Contractor (where applicable)
c) Appointment of Construction Work Supervisor (full time employee on site)
d) Appointment of Assistant Construction Work Supervisor (full time employee on site if required)

Appointments of Specialists (Refer to a Specialist Company)

a) Appointment of Risk Assessment Officer
b) Appointment of a SHE Coordinator
c) Appointment of a Health and Safety Induction Trainer

Appointments of full-time employees on site

a) Appointment of a SHE Representative (Competent employee to control/monitor all H&S activities)
b) Appointment of an Accident and Incident Investigator
c) Appointment of the Safety Committee Members (Employees actively involved in H&S)
d) Appointment of an Excavation Inspector.
e) Appointment of Construction Vehicle and Mobile Plant Inspector
f) Appointment of Construction Vehicle and Mobile Plant Operators
g) Appointment of Concrete Mixer Operator (If required)
h) Appointment of Hand Tool Inspector
i) Appointment of a Portable Electrical Equipment Inspector.
j) Appointment of a Ladder Inspector (If ladders are used)
k) Appointment of a Hygiene and Facility Inspector (Ablutions and eating places)
l) Appointment of Fire Equipment Inspector
m) Appointment of Fire Team Members (employees trained in firefighting awareness)
n) Appointment of First Aid Equipment Inspector

o) Appointment of First Aid Team Members (employees trained in first aid awareness)

A11 List of Contractors (Sub-Contractors)
A12 Evacuation plan
A13 The contents of all Training Material used on sited – eg. Accredited and non-accredited training, Toolbox talks and all training records signed by workers.
A14 Risk Assessments - All Risk Assessments done before and during the Construction period
A15 Registers as required
A16 Safe Work Procedures and material safety data sheets
A17 Fall protection plan
A18 Incident recording forms
A19 Medical records
A20 Minutes of safety meetings

5.2 Emergency telephone numbers to be displayed on the back of the file

6 NOTIFICATION OF CONSTRUCTION WORK – REGULATION 3 OF THE CONSTRUCTION REGULATION – FEBRUARY 2014

6.1 The Employer will appoint the Contractor in writing for execution of the Works. The Contractor shall accept its appointment under the terms and Conditions of Contract. The Contractor shall sign and agree to those terms and conditions and shall, before commencing work, notify the Department of Labour of the intended construction work in terms of Regulation 3 of the Construction Regulations. The Contractor shall submit the notification in writing prior to commencement with work. The annexures to this Contract Document contain a "Mandatory notification of construction work in terms of regulation 3 of the construction regulations (2014) of the Occupational Health and Safety Act no 85 of 1993" which shall be filled in by the contractor and forwarded to the Department of Labour. A copy of this notification shall be included in the Contractors Health and Safety file.

6.2 The Principal Contractor must notify the Provincial Director of:

a) Construction work on a form similar to Annexure A in the Construction Regulation 2014 of the Occupational Health and Safety Act and Regulations.

6.3 A copy of the notification form must be available on site for inspection by an Inspector.

6.4 No notification is required from the Sub Contractors.

7 CONTRACTOR'S SHE REPRESENTATIVE

7.1 Before commencing work, the Principal Contractor shall designate a competent Safety, Health and Environmental representative (SHE Rep) who shall be acceptable to the Agent, to represent and act for the Contractor and Sub Contractors.

7.2 It should be noted that the Principal Contractor is held responsible for the activities of the Sub Contractors.

7.3 Failure of Health and Safety measures by the Sub Contractor will revert directly back to the Principal Contractor.

7.4 The Contractor shall inform the Agent in writing of the name and address of the Contractor's SHE Rep and of any subsequent changes in the name and address of the SHE Rep, together with the scope and limitations of the SHE Rep's authority to act for the Contractor. The Contractor's SHE Rep shall make available to the Employer an all-hours telephone number at which the SHE Rep can be contacted at any time in the event of an emergency involving any of the Contractor's employees, or other persons at the Works.

8 SUPERVISION OF CONSTRUCTION WORK – REGULATION 6

8.1 The appointed Project Manager (Reg.16(2)) of the Principal Contractor shall appoint a fulltime employee (Reg 6(1)) in writing as the construction supervisor. An assistant Construction Supervisor (Reg 6(2)) may also be appointed where required.

8.2 The same procedure applies to the Sub Contractors.

9 RISK ASSESSMENT – REGULATION 7

9.1 The Principal Contractor as well as all other Contractors shall appoint a competent person in writing to carry out a risk assessment before any construction work is started. The Risk Assessment shall form part of the Health and Safety Plan.

9.2 The Risk Assessment shall include:

a) Identification of risks and hazards.
b) Possible consequences
c) A documented plan of safe procedures to mitigate, reduce or control the risks and hazards. (SAFE WORK PROCEDURES AND PROTECTIVE CLOTHING)
d) A monitoring plan
e) A review plan

9.3 Copies of the risk assessment shall be available on each site for inspection.

9.4 All employees shall be informed, instructed and trained by an appointed competent person regarding all hazards and work related procedures.

9.5 No employee shall enter the premises without induction training.

9.6 All employees on site shall be in the possession of a certificate of Health and Safety induction training.

9.7 The contents of the induction training shall be in writing and kept in the safety file.

10 LOCAL SERVICES

10.1 Contractor must establish all local services in area of excavations.

10.2 Plan of local services shall be documented in the Health and Safety file.

10.3 Local services include :

a) Telkom,
b) Gas,
c) Water,
d) Electricity Supplies and
e) Other similar services.

11 SAFE WORKING LOADS

11.1 The Contractor shall ensure that -

a) the safe working loads of hoists, load-bearing beams and cranes are prominently displayed at all times.
b) the safe working loads are not exceeded under any circumstances.
c) all lifting gear is marked with a unique identity number and recorded in a register.

12 MACHINE GUARDING

12.1 All power tools and machinery driven by belts, gears, ropes, chains, couplings and similar drives shall be adequately guarded. The Contractor shall prohibit the use of any equipment with a damaged, missing or inadequate guard.

13 CONSTRUCTION VEHICLES AND MOBILE PLANT – REGULATION 21

13.1 The Contractor shall ensure that drivers of motor vehicles are in possession of a driver's licence, valid for the class of vehicle which they are required to drive, and shall produce the licence on request.

13.2 The Contractor shall not permit any driver to be in control of a vehicle at the Works while under the influence of alcohol, drugs or other substance.

13.3 All vehicles of the Contractor shall display a name board bearing the Contractor's name. Hired vehicles shall bear an identifying sticker.

13.4 A register shall be kept of workers operating construction vehicles and mobile plant.

13.5 The register shall contain proof of training of operators to operate construction vehicles and mobile plant, certification of competency and authorization of operators to operate machinery, vehicles or plant.

13.6 Names of operators and their relevant training with date and time stamps together with name of course instructor shall be kept in the Health and Safety File on site.

13.7 Physical and Psychological fitness shall be proved by way of a medical certificate of fitness of the said operators before allowing operators to operate machinery, vehicles or plant.

13.8 The Health and Safety File shall include the written training material offered to operators for the different construction vehicles and mobile plant.

13.9 Each and every driver shall be trained on risks involved and safety procedures.

13.10 All Construction vehicles and mobile plant must be of acceptable design and construction and used according to their design.

13.11 All construction vehicles and mobile plant must be maintained in good working order.

13.12 A register of all vehicles and plant shall be kept on site together with names of operators responsible for each.

13.13 The register shall report all maintenance activities performed on these vehicles and plant as well as signatures certifying the condition of the vehicles as in a good working order.

13.14 All requirements on the vehicles and mobile plant with regard to safety and health shall be inspected and certified.

13.15 These requirements include:

a) Portable fire extinguishers mounted in specified positions on construction vehicles – 9kg dry powder Fire Extinguisher b) Safety belts and harnesses
b) Inspection for leaking fuel or gasses which can cause a fire hazard
c) Safe and suitable means of access
d) Adequate signalling or other control arrangements to guard against the dangers relating to movement of vehicles and plant.

13.16 Attention must be paid to

a) Turn indicators
b) Stop lights x2 – where poor visibility conditions warrant
c) Reverse siren or acoustic device iv)
d) Tail lights
e) Head lights x2 - where poor visibility conditions warrant
f) Rotating amber flashing light with lens heights of at least 200mm and an output of at least 100Watt on roof or other visible position

g) Warning boards mounted at least 1.5m above ground level to be clearly visible
h) Inspections of appropriate structures fitted to protect the operator from falling material or from being crushed should the vehicle or mobile plant overturn.
i) Appropriate seats must be firmly secured and adequate in number on vehicles used to transport employees

13.17 During use of Construction vehicles or mobile plant the following rules shall be adhere to:

13.18 Construction vehicles or mobile plant must be prevented from falling into excavations, water or any other area lower than the working surface. This protection must consist of adequate edge protection eg. guard rails and/or crash barriers

13.19 No person shall be allowed to or require to ride on any Construction Vehicle or Mobile Plant in a position otherwise than a safe place provided for on the construction vehicle or mobile plant as designed for that purpose.

13.20 The construction site must be organized in such a way that as far as is reasonable practical, pedestrians and vehicles can move safely and without risks to health and safety.

13.21 Traffic routes shall be of sufficient size, sufficient in number and in suitable positions to be used safely by construction vehicles, mobile plant and pedestrians.

13.22 Each and every traffic route shall be indicated by suitable signs for reasons of safety and health.

13.23 No tools and/or material shall be transported in the same compartment as the operators/drivers/employees unless the said are secured against movement during transportation.

13.24 All Construction Vehicles and Mobile Plant left unattended at night adjacent to a freeway in normal use or adjacent to construction areas where work is in progress, shall have appropriate lights or reflectors, or barricades equipped with appropriate lights or reflectors, in order to identify the location of vehicles or plant

13.25 Bulldozers, scrapers, loaders and other similar mobile plant are, when being repaired or when not in use, fully lowered or blocked with controls in a neutral position, motors stopped and brakes set.

13.26 Reflective indicators must be provided to workers in the form of reflective yellow jackets or vests as specified and worn by workers working on/or adjacent to public roads

14 SIGNS AND NOTICES

14.1 The use of colour codes, symbolic signs and notices are means of communication whereby information is visually conveyed to people and also provides early warning of dangers.

14.2 Safety signs provide for immediate recognition of danger, information, actions allowed or not allowed and procedures that have to be done.

14.3 There are 5 types of safety signs:

a) Black triangle on yellow background => WARNING
b) Red (round) on white background => PROHIBITORY
c) White on blue background => MANDATORY
d) White on green background => INFORMATION
e) Red (square) on white background => FIRE

14.4 The following signs shall be provided for on the site:

a.	Traffic control signs	ROAD CLOSE DETOUR DIRECTION ARROWS
b.	Warning signs	DANGER - MEN AT WORK
c.	Prohibitory signs	NO ENTRY
d.	Fire	POSITION OF EQUIPMENT ARROWS
e.	First Aid	INFORMATION SIGNS

14.5 All signs shall be new or in good condition and approved by the Engineer.

14.6 All temporary signs shall be mounted on portable supports to facilitate moving.

14.7 Defective or missing items shall be replaced immediately.

14.8 All signs shall be inspected at least twice a day.

14.9 Prohibited area – TR208

14.10 Men at work – TW 336

15 EXCAVATION WORK – REGULATION 11

15.1 Excavation:

15.1.1 Definition: A space made by digging.

15.1.2 An excavation could be a hole or trench of any size and shape.

15.1.3 A Risk Assessment must be done prior to making an excavation.

15.1.4 The following must be taken in consideration when doing the Risk Assessment:

a) Depth of the excavation
b) Length of the excavation
c) Existing services
d) Barricading and demarcation

15.2 Depth of the excavation

a) Should an excavation be more than chest deep (1.5m), it must be adequately shored or braced.

b) Slopes or trenches shall be as flat as possible, 1 x vertical to 2 x horizontal must be considered maximum for dry conditions. In wet conditions either a much lower slope shall be used, or if space is a constraint, shoring and de-watering shall be applied.

c) A competent person shall be appointed to supervise excavation work.

d) Stability evaluation of ground must be done and a certificate shall be issued.

e) A plan for prevention of persons being trap due to collapse shall be provided by Contractor

f) The design of shoring shall be documented by Contractor in the Health and Safety file as provided by the competent designer of shoring.

g) The maximum loading of sides of an excavation must be documented in a usable format

15.3 If adjacent structures and buildings are present and can be affected a design and construction of supporting details shall be represented.

15.4 Provision shall be made for access routes to the excavation. Routes must not be more than 6 meters away from worker.

15.5 Contractor must establish all local services in area of excavations.

15.6 Plan of local services shall be documented in the Health and Safety file.

15.7 Local services include:

a) Telkom, Gas, Water, Electricity Supplies and other similar services. Inspection shall be done on all bracing and shoring on a; -

I. daily basis
II. prior to each shift
III. after every blasting operation
IV. after an unexpected fall of ground
V. after substantial damage to supports - after rain

15.8 An inspection register shall be completed by the Excavation Inspector during each and every inspection.

15.9 Barricading and Demarcation:

a) Excavations shall be fenced at least 1 meter high and as close to the excavation as possible, when accessible by public or other employees, or adjacent to public roads or thoroughfares.

b) Protection around excavations must be in the form of a physical barrier, to prevent persons from falling into the excavation.

c) Excavations must be provided with clearly visible boundary indicators and illuminated at night or where/when visibility is poor.

d) Precautionary measures in terms of confined spaces must be met and employees must be declared fit and not claustrophobic.

e) Explosives regulations must be adhered to if explosives are required to carry out the excavation. Competent persons with blasting certificates must be in charge.

f) Warning signs must be posted next to an excavation in which persons are working or carrying out inspection or tests.

16 BARRICADING AND DEMARCATION

16.1 The construction site shall be barricaded completely to prevent pedestrians and vehicles to enter the construction area.

16.2 Protection around the site must be in the form of a physical barrier and appropriate signage, to prevent public from entering the area.

16.3 It is advised to use 1.2m high Dayglo Mesh (barrier netting) to prevent pedestrians on pavements to enter the construction area.

17 LADDERS

17.1 You are only to use ladders that are undamaged and are of sound construction.

17.2 Ladders must be placed on a register and inspected on a monthly basis by an appointed person.

17.3 Ladders are to be secured during use. If it is necessary to use a ladder before it can be secured, a second person must hold it steady at all times. Place the ladder's feet on a level base. (wooden blocks or bricks are not to be used).

17.4 Ladders are not to be used as scaffolds or work platforms.

17.5 When used as access to trenches and work areas, the ladder must extend one meter above the step off point and be placed at an angle where the base of the ladder is one quarter of the ladder height away from the base of the structure, and must be fitted with nonskid devices.

17.6 Ladders must not be used nearer than 3 metres to any exposed electrical power source and never in substations or on electrical installation work.

17.7 Ladders are not to be used in a horizontal position.

17.8 Maintain 3-point contact by keeping two hands and one foot or two feet and one hand on the ladder at all times.

17.9 Do not carry objects in your hands while on a ladder.

17.10 Ladders must be fitted with non-skid devices at the bottom ends and hooks or similar devices at the upper ends.

17.11 Ladders with damaged stiles, or damaged or missing runs should never be used.

17.12 Ladders must never be fastened together to increase the reach.

17.13 Wooden ladders must never be painted.

18 CONCRETE MIXERS – REGULATION 18

18.1 The Contractor shall ensure that all concrete mixers are operated and supervised by a competent person who has been appointed in writing.

18.2 The Contractor shall ensure that all devices to start and stop the concrete mixers are provided and that these devices are

a) placed in an easily accessible position; and
b) constructed in such a manner to prevent accidental starting

18.3 All dangerous moving parts of a mixer must be placed beyond the reach of persons by means of covers.

18.4 No person shall be permitted to remove or modify any guard or safety component unless authorized to do so by the appointed person

18.5 A Contractor shall ensure that all persons authorized to operate the concrete mixers are fully:

a) aware of all dangers involved in the operation thereof
b) conversant with the precautionary measures to be taken in the interest of health and safety

18.6 No person supervising or operating a concrete mixer shall authorize any other person to operate the plant, unless such a person is competent to operate such machinery.

19 SCAFFOLDING – REGULATION 14

19.1 All scaffolding must be in compliance to SABS 085.

19.2 A competent person shall be appointed in writing to supervise the erection of all scaffolding operations. The Scaffolding erecter shall have the required accredited qualifications for scaffold erecting.

19.3 A competent scaffold inspector shall be appointed in writing to inspect the erected scaffolds and shall not be the same person as the erector.

19.4 An Inspection Register on scaffolding shall be kept in the Health and Safety File.

19.5 A copy of SABS 085 as amended shall be available on site and kept in the Health and Safety File.

20 HOUSE KEEPING AND CONSTRUCTION SITES – REGULATION 25

20.1 The Contractor shall at all time carry out the Works in a manner to avoid the risk of bodily harm to persons or risk of damage to any property. The Contractor shall take all precautions, which are necessary and adequate to eliminate any conditions, which contribute to the risk of injury to persons or damage to property. The Contractor shall continuously inspect all work, materials and equipment to discover and determine any such conditions and shall be solely responsible for the discovery, determination and elimination of such conditions.

20.2 During the period of this Contract, the Contractor shall be responsible for the safe storage of all materials and equipment required for execution of the Contract, and for disposal of all non-usable waste material in an orderly manner.

20.3 All materials, whether stored on the construction site or within the Contractor's signated area, shall be stored neatly and safely to prevent possible injury to any personnel. The material shall be stored to facilitate safe access to, and removal of the material from the storage area.

20.4 Any flammable material, such as paint, diesel fuel and oil, shall be stored in lockable noncombustible structures, which shall be clearly marked to indicate the hazardous nature of the materials stored within. The flammable materials stores shall be located in

safe areas away from hazardous surroundings and adequate and suitable fire-fighting equipment shall be provided within easy reach of the materials stores.

20.5 Loose material need for use shall not accumulate so as to obstruct means of access to and egress from the workplace.

20.6 Scrap and waste shall not be allowed on site and must be removed daily.

20.7 The construction sites adjacent to build up area or public way shall be effectively fenced and controlled with access points.

21 STACKING AND STORAGE ON CONSTRUCTION SITES – REGULATION 26

21.1 A competent person shall be appointed in writing with the duty of supervising all stacking and storage of material on site.

21.2 Adequate storage areas shall be provided which includes demarcated areas.

21.3 All storage areas shall be kept neat and under control.

21.4 Registers and checklist on housekeeping shall be kept on site

22 FALL PROTECTION – REGULATION 8

22.1 A contractor shall cause-

a) the designation of a competent person, responsible for the preparation of a fall protection plan;

b) the fall protection plan contemplated in paragraph (a) to be implemented, amended where and when necessary and maintained as required;

c) steps to be taken in order to ensure the continued adherence to the fall protection plan.

22.2 The fall protection plan contemplated in sub regulation (1), shall include-

a) a risk assessment of all work carried out from an elevated position which shall include the procedures and methods used to address all the risks identified per location;

b) the processes for evaluation of the employees' physical and Psychological fitness necessary to work at elevated heights.

22.3 Safety Harness:

a) The wearing of an approved type of safety harness fitted with a shock absorber and correctly secured to any approved anchorage, is compulsory for personnel working at heights.

b) Safety harnesses must be worn where a leaning bar cannot be installed, where handrails are not available, in instances where there is a risk of injury due to falling, and generally whenever work is undertaken at a height of more than "a person's height".

c) Where roof work is undertaken, harnesses must be attached to a lifeline or other substantial support.

d) The single support waist type safety belts should not be used; therefore, a full parachute type harness of an approved type is required.

e) It is the contractor's responsibility to train his employees on the correct use of harnesses.

f) Safety belts may only be used as a fall restraint and not as a fall protection device.

22.4 Identify Risks:

a) Lanyards must be used to attach tools and equipment used in elevated positions.

b) Scaffolding where possible must be provided.

c) On windy/rain days, special precautions are to be taken especially when working with loose roof sheets.

d) Walking on asbestos roofs is prohibited unless supporting ladders or crawl boards are placed thereupon.

e) Consult your supervisor in that area if in any doubt.

23 STRUCTURES – REGULATION 9

23.1 A contractor shall ensure that-

a) all reasonable practicable steps are taken to prevent the uncontrolled collapse of any new or existing structure or any part thereof, which may become unstable or is in a temporary state of weakness or instability due to the carrying out of construction work:

and

b) no structure or part of a structure is loaded in a manner which would render it unsafe.

23.2 The designer of a structure shall-

a) before the contractor is put out to tender, make available to the client all relevant information about the design of the relevant structure that may affect the pricing of the construction work;

I. inform the contractor in writing of any known or anticipated dangers or hazards relating to the construction work, and make available all relevant information required for the safe execution of the work upon being designed or when the design is subsequently altered;
II. subject to the provisions of paragraph (a) and (b) ensure that the following information is included in a report and made available to the contractor- (iii) a geo-science technical report where appropriate;
III. the loading of the structure is designed to withstand; and
IV. the methods and sequence of construction process;

b) not including anything in the design of the structure necessitating the use of dangerous procedures or materials hazardous to the health and safety of persons, which could be avoided by modifying the design or by substituting materials;

c) take into account the hazards relating to any subsequent maintenance of the relevant structure and should make provision in the design for that work to be performed to minimize the risk;

I. carry out sufficient inspections at appropriate times of the construction work involving the design of the relevant structure in order to ensure compliance with the design and a record of those inspections is to be kept on site;
II. stop any contractor from executing any construction work which is not in accordance with the relevant design;

d) conduct a final inspection of the completed structure prior to its commissioning to render it safe for commissioning and issue a completion certificate to the contractor; and

e) ensure that during commissioning, cognizance is taken of ergonomic design principles in order to minimize ergonomic related hazards in all phases of the life cycle of a structure.

f) A contractor shall ensure that all drawings pertaining to the design of the relevant structure are kept on site and are available on request by an inspector, contractors, client, client's agent or employee.

g) Any owner of a structure shall ensure that inspections of that structure upon completion are carried out periodically by competent persons in order to render the structure safe for continued use: Provided that the inspections are carried out at least once every six months for the first two years and thereafter yearly and records of such inspections are kept and made available to an inspector upon request.

h) Any owner of a structure shall ensure that the structure upon completion is maintained in such a manner that the structure remains safe for continued use and such maintenance records shall be kept and made available to an inspector upon request.

24 FORMWORK & SUPPORT WORK – REGULATION 10

24.1 A competent person shall be appointed in writing to supervise all formwork and support work.

24.2 The name and address of such a person shall be included in the Health and Safety Plan of the Principal Contractor.

24.3 The contractor must ensure that all formwork and support work structures are adequately designed, erected, supported, braced and maintained so that they will be able to support all anticipated loads.

24.4 All drawings pertaining to formwork and support work must be kept on site and available for inspection by an inspector, contractor, client, client's agent or employee.

24.5 All formwork and support work must be inspected and checked for suitability by a competent person under the following conditions:

a) Before use
b) During placement of concrete or any other imposed load
c) After placement of concrete or any other imposed load
d) On a daily basis after placement of concrete until the structure is removed.
e) Ensure that concrete gains sufficient strength before the support work is removed.

24.6 Record must be kept of these inspections.

24.7 Weakened formwork or support work must be immediately reinforced.

24.8 Deck panels must be secured against displacement.

24.9 Persons must be prevented from slipping on support work.

24.10 Persons must not be affected by the use of solvents or any other similar substances.

24.11 Safe access must be provided for all support work.

24.12 Employees involved must be adequately trained and instructed to perform the work in a safe manner.

24.13 Foundations of formwork must be adequate to sustain the applied load.

25 FIRST AID

25.1 Safety Notice Board

The Contractor shall provide a Safety Notice Board where safety notices, site regulations concerning safe working practices and information on the location of the nearest first aid station, can be conspicuously displayed to all staff. The size of the notice board shall be at least 600 mm x 800 mm.

25.2 First Aid Equipment

The Contractor shall provide for its employees a stretcher for emergencies and an approved first aid box. The first aid box shall be checked weekly by a responsible person, who shall be appointed by the Contractor, and a record shall be kept of the contents. Any deficient medical supplies shall be promptly replenished by the Contractor.

25.3 Hazard Notices

The Contractor shall display hazard notices in all areas where hazardous conditions prevail or may occur.

25.4 Reporting of Incidents and/or Injuries

All incidents in respect of damage to Works, property or machinery, or injury to persons, shall be reported by the Contractor's SHE Rep by the quickest means possible.

A mandatory incident report form, containing full details of the incident, shall be completed and submitted to the Site Agent and the Department of Labour within twenty four (24) hours of the occurrence of the incident.

26 FIRE PRECAUTIONS ON CONSTRUCTION SITES – REGULATION 27

26.1 A register shall be kept on all Acetylene and Oxygen cylinders used on the site.

26.2 Condition of components, sub-components and safety components (e.g. Flame back arrestors) shall be listed in the register and signed by the construction supervisor at regular intervals as required with time and date stamp.

26.3 Acetylene, Oxygen and LP Gas cylinders shall be stored in suitable places to minimize the risk of fire.

26.4 Suitable storage to be provided for flammable liquids, e.g. petrol, diesel, paint, thinners.

26.5 Smoking shall be prohibited in the workplace and notices posted accordingly.

26.6 Suitable and sufficient firefighting equipment shall be placed in strategic positions in the work place. (On vehicles and other positions as deemed necessary).

26.7 A register shall be kept on type and number of equipment for each site in the Health and Safety File.

26.8 A competent person shall inspect all firefighting equipment.

26.9 A sufficient number of employees shall be trained in the use of firefighting equipment.

26.10 A register shall be kept in the Health and Safety File on site with names of employees and type of firefighting training completed with date.

26.11 Suitable signs shall be erected in work places indicating escape routes.

26.12 Escape routes shall be kept clear. Evacuation plans shall be in Health and Safety File as part of Induction Training.

26.13 Combustible materials shall not accumulate on site.

27 CONSTRUCTION WELFARE FACILITIES – REGULATION 28

27.1 On each site where existing facilities are not present, at least one sanitary facility shall be erected for every 10 workers, one shower for every 15 workers, a changing facility for each sex and sheltered eating areas.

27.2 Mobile toilets with bucket system shall be installed at the site.

27.3 Cleaning of buckets shall be arranged with the City Council.

27.4 Where applicable chemical toilets shall be provided.

27.5 Eating facilities shall be made available in the form of a shaded net, table and chairs.

27.6 For sites in remote areas, transport shall be made available for workers to and from sites.

28 TOXIC MATERIALS

28.1 The Contractor shall exercise all necessary care in the handling of toxic compounds and shall be able to identify the major chemical components in the event of medical treatment being required.

29 HAZARDOUS CHEMICALS AND MATERIALS

29.1 The Contractor shall provide suitable and adequate protective equipment when working in an area where hazardous chemicals and materials are being used.

29.2 The Contractor shall ensure that its employees have familiarised themselves with the hazardous material data sheets applicable to the specific site as well as the location of fire fighting equipment, safety showers / baths and other washing facilities, prior to commencement of work.

30 COMMISSIONING SAFETY PRECAUTIONS

30.1 The Contractor shall ensure that wherever repairs, adjustments or any other work are undertaken on any plant or machinery, the power supply is switched off, disconnected or the plant / machinery disengaged until the work or repairs have been completed.

31 ELECTRICAL INSTALLATIONS AND MACHINERY ON CONSTRUCTION SITES – REGULATION 22

31.1 Before construction commences or any other related works and during the progress thereof adequate steps must be taken to establish the presence of and guard against any danger to the workers in respect to electrical cables or apparatus.

31.2 In areas where it cannot be established where electrical devices are, the employees must use tools of which the handles are insulated or rubber insulated gloves.

31.3 Any temporary electrical installation set up by the principal contractor or contractor must be inspected at least once a week by a competent person. The inspections shall be recorded in a register and kept in the Health and Safety File.

31.4 When working on or next to live electrical Machinery the Principal Contractor or Contractor must provide insulated stands, trestles and mats.

31.5 When Distribution Boards are removed the incoming power supplies, shall be cut by the client's authorized Electrician. The incomer electricity supply feeder shall be earthed by a suitable earth wire or spike to prevent cable of becoming live during the installation of new Distribution Boards.

31.6 No person shall continue with wiring of premises unless the supply to the premises has been rendered dead and the above effective measures has been taken to ensure that such cables remains dead. When rewiring of premises is done the feeder breakers at the other end of the supply cables shall be locked out and the cable earthed to prevent any injury to workers by Electrical Shock.

31.7 A register shall be kept on site in the Health and Safety File indicating all signatures of competent persons switching electricity supply on or off with time and date stamPHS.

31.8 No person shall use or permit to use a portable electric load operating at a voltage exceeding 50V to earth unless it is connected to a source of electrical energy incorporating an earth leakage protection device.

31.9 A register shall be kept on site in which all daily checks of portable electric tools are performed and signed by the responsible person. Checks shall include condition of plug top, power cord, on-off switch and insulation condition of electric tool. All tools shall be numbered and entered accordingly into the register. Condition of tools as listed in the register shall be inspected and signed by the construction supervisor at regular intervals as required by the nature of the equipment.

32 REGISTERS REQUIRED ON SITE

31.1 PPE - Personal Protective Clothing and Equipment issued

31.2 MACHINERY

a) Daily Checklist - Compaction Machinery – Bowmag
b) Daily Checklist - Compaction Machinery – Plate Compactor
c) Daily Construction Vehicle Pre-ignition Checklist – Tractors
d) Daily Checklist - Compaction Machinery – Tipper
e) Daily Checklist - Compaction Machinery – Excavator
f) Daily Construction Vehicle Pre-ignition Checklist – TLB

g) Daily Checklist - Compaction Machinery – Material Handler
h) Daily Checklist - Compaction Machinery – Water Lorry
i) Daily Checklist - Compaction Machinery – Bowmag
j) Daily Checklist - Compaction Machinery – Mini Excavator
k) Daily Checklist - Compaction Machinery – Bobcat
l) Daily Checklist - Compaction Machinery – Concrete Mixer
m) Operators on Construction Vehicles and Mobile Plant
n) Training and Fitness Register

31.3 EQUIPMENT

a) Ladder Inspection Register
b) Scaffold Inspection Register
c) Safety Harness Inspection Register
d) Gas Cutting and Welding Inspection Register

31.4 TOOLS

a) Monthly Checklist on Hand Tools
b) Monthly Checklist on Portable Electrical Equipment

31.5 HOUSE KEEPING

a) Stacking Inspection Register
b) Excavations Inspection Register
c) Monthly Environmental Checklist and Deviation
d) Monthly Hygiene Facility Inspection Register – Mobile Ablutions and Eating areas

31.6 INCIDENTS

a) Incident Register
    I. (Injury/ occupational disease record book
    II. Recording and investigation of incidents)
b) Motor Vehicle Accident Report

31.7 FIRE

a) Fire Extinguishing Equipment Register
b) Register of Trained Employees in Fire Fighting • Fire Awareness Attendance Training Register

31.8 FIRST AID

a) First Aid Box and Equipment Checklist
b) Register of Trained Employees in Basic First Aid
c) First Aid Awareness Attendance Training Register

31.9 TRAINING

a) Induction Training Attendance Registers
b) Risk Assessment Communication Registers

31.10 PERMITS

a) Lock-out Request Forms (Water and Electricity)
b) Lock-out Permits (Water and Electricity)

31.11 INSPECTIONS

a) SHE Coordinator Inspection Register – Monthly checklist and deviations
b) Minutes of Safety Committee Monthly meetings

33 SAFE WORK PROCEDURES REQUIRED IN HEALTH AND SAFETY FILE

a) Stacking of material
b) Working with angle grinders
c) Excavating of trenches
d) Loading and transport of material
e) Working with cement and concrete mixers
f) Driving company vehicles
g) Approaching Construction Vehicles
h) Maintaining Scaffolding
i) Form work repair guide
j) Roof work
k) Correct use of Fire Extinguishers
l) Engaging and working with Contractors
m) Heat Stress
n) Electrical Safety
o) Maintenance of Ladders
p) Silica
q) Trenches and open excavations

34 WRITTEN TRAINING COURSE MATERIAL TO BE FILED IN HEALTH AND SAFETY FILE

a) Induction Training (Workplace awareness – Site specific)
b) Training of operators on Construction Vehicles and Mobile Plant
c) First Awareness
d) Fire Fighting Awareness
e) Toolbox talks on Hand Tools
f) Toolbox talks on Machine Guarding
g) Toolbox talks on Hand Tool Accidents
h) Toolbox talks on Ten Commandments of Safety
i) Toolbox talks on Fire prevention
j) Toolbox talks on lifting materials by hand
k) Toolbox talks on safe loading
l) HIV Training Unit 1 - The Nature of HIV/Aids
m) HIV Training Unit 2 - Transmission of the HI virus
n) HIV Training Unit 3 - HIV/AIDS preventative measures
o) HIV Training Unit 4 – Voluntary HIV/AIDS counselling and testing
p) HIV Training Unit 5 – Living with HIV/AIDS
q) HIV Training Unit 6 – Treatment options for people with HIV/AIDS
r) HIV Training Unit 7 – The rights and responsibilities for workers in the workplace with regard to HIV/AIDS
s) Toolbox talks on Environmental influences

35 TRAINING COURSES TO BE PRESENTED

PHASE 1

a) Toolbox talks on the functions of the SHE Representative
b) Induction Training (Workplace awareness) - Ten Commandments of Safety
c) Training of the Community on Construction Workplace Hazards
d) HIV Training Unit 1 - The Nature of HIV/Aids
e) Toolbox talks on Environmental Awareness

PHASE 2

a) Training of Operators on Construction Vehicles and Mobile Plant
b) First Aid Awareness
c) Fire Fighting Awareness

d) Toolbox talks on Hand Tools and Hand Tool Accidents
e) Toolbox talks on Machine Guarding
f) Toolbox talks on lifting materials by hand
g) Toolbox talks on Safe Loading
h) Toolbox talks on Safety Signs
i) HIV Training Unit 2 - Transmission of the HI virus
j) HIV Training Unit 3 - HIV/AIDS preventative measures
k) HIV Training Unit 4 – Voluntary HIV/AIDS counselling and testing
l) HIV Training Unit 5 – Living with HIV/AIDS
m) HIV Training Unit 6 – Treatment options for people with HIV/AIDS
n) HIV Training Unit 7 – The rights and responsibilities for workers in the workplace with regard to HIV/AIDS
o) Toolbox talks on Environmental Awareness

36 EQUIPMENT ON SITE

a) First Aid Kit (basic)

b) Fire Extinguishers

37 PERSONAL PROTECTIVE CLOTHING

The Contractor shall provide the necessary personal protective clothing for its employees in hazardous areas, appropriate to the nature of the hazard.

37.1 Hard Hats

All employees of the Contractor shall wear hard hats in areas where appropriate hazard notices are displayed. The Engineer shall have the right to ban certain colours if they are similar to the Employer's identifying colours. Hard hats shall not be painted or otherwise defaced.

37.2 Eye Protection

Suitable eye protection shall be worn in areas where appropriate hazard notices are displayed, or when grinding, chipping, breaking, drilling, arc-welding, cutting with oxyacetylene equipment or similar activities are taking place.

37.3 Hearing Protection

Suitable hearing protection shall be worn in areas where appropriate hazard notices are displayed.

37.4 Foot Wear

All employees of the Contractor shall wear undamaged, laced-up safety boots or safety shoes, suitable for the intended purpose, in prescribed areas where appropriate hazard notices are displayed.

37.5 Gloves

All employees of the Contractor shall wear suitable protective gloves in areas where appropriate hazard notices are displayed, or when handling hot or hazardous materials or chemicals.

37.6 Clothing

All employees of the Contractor shall wear suitable protective clothing when working in proximity of machinery, power tools, hazardous materials or chemicals. Proposed Personal Protective Equipment required on this project:

	TYPE	WHEN TO WEAR
1.	Hard Hats	Always
2.	400mm Shoulder Length PVC Gloves	Working with cement
3.	Plastic Trousers	Working with cement
4.	Safety Goggles	Grinding, Cutting Cement
5.	Gumboots	Working in water
6.	Welding helmet	Welding
7.	Gas welding safety goggles	Gas Welding
8.	Safety shoes	Offloading and positioning of materials
9.	Dust Masks	Grinding
10.	Ear Muff	Grinding
11.	Leather apron	Welding/ gas welding

AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, NO. 85 OF 1993

The Employer and the Contractor hereby agree, in terms of the Provisions of Sections 37(2), 9 and 8(2) of the Occupational Health and Safety, Act No. 85 of 1993, hereinafter referred to as 'the Act', that the Contractor as an employer in its own right and in its capacity as Contractor for the execution of the works, shall have certain obligations and that the following arrangements shall apply between them to ensure compliance by the Contractor with the provisions of the Act, namely:-

i) The Contractor undertakes to acquaint the appropriate officials and the employees of the Contractor with all relevant provisions of the Act, and the regulations promulgated in terms of the Act, and
ii) The Contractor undertakes that all relevant duties, obligations and prohibitions imposed in terms of the Act and regulations will be fully complied with, and
iii) The Contractor hereby accepts sole liability for such due compliance with the relevant duties, obligations and prohibitions imposed by the Act and regulations and expressly absolves the Employer and the Employer's Consulting Engineers from being obliged to comply with any of the aforesaid duties, obligations and prohibitions.
iv) The Contractor shall be obliged to report forthwith to the Employer any investigation, complaint, or criminal charge which may arise as a consequence of the provisions of the Act and regulations pursuant to work performed on behalf of the Employer, and shall, on written demand, provide full details in writing of such investigation, complaint or criminal charge.

SIGNED at ..... on this ..... day of

..... 20.....

For and on behalf of the Contractor:

_____ Print Name: _____

AS WITNESSES:

1. _____ 2. _____

Print Name: _____ Print Name: _____

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

For and on behalf of the Employer:

_____ Print Name: _____

AS WITNESSES:

1. _____ 2. _____

Print Name: _____ Print Name: _____

MANDATORY NOTIFICATION OF CONSTRUCTION WORK
IN TERMS OF REGULATION 3 OF THE CONSTRUCTION REGULATIONS (2014) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, NO. 85 OF 1993

This document is to be forwarded by the Contractor to the Office of the Department of Labour prior to commencement of the Works. The Contractor shall ensure that all Sub-Contractors accountable to him forward similar documents to the mentioned Authority prior to commencement with the Works.

A. Particulars of Contractor

Name:
.....

Postal Address :
.....

Compensation Fund Registration No.
.....

B. Particulars of Contractor's MD/ CEO/Managing Member of cc

Name:
.....

ID No.
.....

Postal Address:
.....

Tel No. ..... Cell phone No. .....

C. Particulars of Contractor's designated Construction Safety Officer appointed in terms of Clause 6(1) as the Construction Supervisor, with the duty of supervising health and safety at the Works:

Name:
.....

ID No.
.....

Postal Address:

.....

Tel No. ..... Cell phone No. .....

D. Particulars of Contractor's sub-ordinate supervisors at the Works, appointed in terms of Clause 6 (2):

Name	ID No.	Postal Address	Tel No.	Cell phone no.

E. Physical address of the Works (Construction Site)

.....
.

.....
.

Co-ordinates (if available) Latitude (S)
.....

Longitude (E)
.....

F. Nature of the construction work:

.....
.

.....
.

G. Expected commencement date: …….

H. Expected completion date: ……

I. Estimated maximum number of persons on the construction site.
……..

J. Planned number of Sub-Contractors on the construction site accountable to Principal Contractor:

.....

Name(s) of Sub-Contractors.

.....
.

.....
.

.....
.

K. Particulars of Employer (client)

Name: ……

Postal Address:
.....

.....
.

Name of Employer's designated Representative / Agent.

.....
.

Tel No. ..... Cell phone No. .....

L. Particulars of Design Engineer

Name: ……

Postal Address:
.....

Tel No. ..... Cell phone No. .....

Signed at ..... on this ..... day of ……..…. 20.....

INFORMATION TO BE SUPPLIED BY THE TENDERER

This following forms shall be completed by the Tenderer.

A. Particulars of WCF

Compensation Fund Registration No. .....

Expiring Date

.....

B. Particulars of Contractor's designated Construction Safety Officer appointed in terms of Clause 6(1) as the Construction Supervisor, with the duty of supervising health and safety at the Works:

Name:

.....

ID No.

.....

Postal Address:

.....

Tel No. ..... Cell phone No. .....

C. Particulars of Contractor's Health and Safety Representatives:

Name: ……Qualifications……..

Name: ……Qualifications……..

Name: ……Qualifications……..

D. Particulars of First Aider

Name:

.....

ID No.
.....

Valid First Aid Certificate: Yes……

No……..

E. Particulars of Fire Fighter

Name:
.....

ID No.
.....

Valid Fire Training Certificate: Yes……..

No……..

F. Training Records of Construction Vehicle Operators

Name: ……Qualifications……..

Name: ……Qualifications……..

Name: ……Qualifications……..

G. Incident Statistics:

Incidents during last 12 months	Date	Degree of Injury	Production days lost	Costs involved.

1				
2				
3				
4				
5				
6				
7				

SECTION C3.5: MANAGEMENT

Section C3.5.1 MANAGEMENT OF THE WORKS

C3.5.1.1 Concurrent Construction Contracts

Refer to Section C3.4.1 (PS10.1.)

C3.5.1.2 Construction Programme

Refer to Section C3.4.1 (PS5.)

C3.5.1.3 Drawings, Operation and Maintenance Manuals

Refer to Section C3.4.1 (PS11.)

C3.5.1.4 Site Administration

Acceptance control, record keeping and payment certificates shall be done in accordance with the Engineer's standard system except if the Engineer approves that the Contractor's standard system may be used.

C3.5.1.5 Daily Site Diary

The daily site diary shall be kept up to date by the Contractor's Site Agent and will be signed on a daily basis by the Engineer's Representative.

C3.5.1.6 Information in Respect of Plant

Information relating to plant on Site shall be recorded in the daily site diary. In addition, the Contractor shall deliver to the Engineer, on a monthly basis, a detailed summary of construction plant kept on the Site, full particulars given for each day of the month. Distinction shall be made between plant in working order and plant out-of-order. Such inventory shall be submitted by the first day of the month following the month to be reported.

C3.5.1.7 Information in Respect of Employees

Information relating to labour and management on Site shall be recorded in the daily site diary. In addition, the Contractor shall deliver to the Engineer, on a monthly basis, a detailed summary of supervisory staff, labour employed (own and local labour) by category, and sub-contractors (both local and imported) for each day of the month.

Such return shall be submitted by the first day of the month following the month to be reported.

C3.5.1.8 Rainfall Records

Rainfall records for the period of construction shall be taken on Site and recorded in the daily site diary. The Contractor shall provide and install all the necessary equipment for accurately measuring the rainfall. The Contractor shall also provide, erect and maintain a security fence plus gate, padlock and keys at each measuring station, all at his own cost. The Engineer or his Representative shall take and record the daily rainfall readings. The Contractor shall be permitted to attend these readings, in the company of the Engineer's Representative. Access to the measuring gauge(s) shall at all times be under the Engineer's control.

C3.5.1.9 Site Instructions

Site instructions by the Engineer, addressed to the Contractor at his office on the Site, will be numbered consecutively and will be deemed to have been received by the Contractor's Representative unless a break in the sequence of numbers is brought to the notice of the Engineer in writing immediately.

C3.5.1.10 Site Meetings

The Contractor and his authorised representative shall attend all meetings held on the Site with the Employer and the professional team at dates and times to be determined by the Engineer. Such meetings will be held to evaluate the progress of the Contract, and to discuss matters pertaining to the Contract which any of the parties represented may wish to raise. It is not the intention to discuss day-to-day technical matters at such meetings.

C3.5.1.11 Payment Certificates

Monthly Progress Payment Certificates shall be submitted to the Engineer's Representative on Site not later than the 20th of each month (or on the last working day prior to this date) in order to allow for checking and reconciliation of all quantities, rates, extensions and additions in the certificate. Each progress payment certificate shall include work executed or reasonably expected to be executed up to the 30th day of the specific month. The Engineer's Representative shall have a period of five (5) calendar days to review the draft certificate in collaboration with the Contractor.

Upon agreement by the Engineer's Representative by not later than the 25th of each month, the certificate shall be submitted by the Contractor in a neat typed form in accordance with the prescribed format, and with the correct spelling, to the Engineer by not later than the 28th of each month (or on the first working day thereafter), together with four additional copies, for certification.

Where dayworks have been instructed by the Engineer, the Contractor shall submit the returns to the Engineer for signature and approval within twenty-four (24) hours of the end of the working day on which the work was executed. Daywork returns shall be submitted on forms following the standard format as per Section C3.5.1 for this purpose. Failure to comply with the terms of this clause ill result in non-payment for such dayworks.

The tax invoice submitted with the certificate shall be dated the 1st of the month following the period certified. All costs for the preparation and submission of progress certificates shall be borne by the Contractor.

C3.5.1.12 Workmanship and Quality Control

Refer to Section C3.4.1 (PS9.)

C.3.5.1.13 Features requiring Special Attention

Refer to Section C3.4.1 (PS10.)

SECTION C3.5: MANAGEMENT

SECTION C3.5.2: HEALTH AND SAFETY SPECIFICATION

Contents List

Section	Description
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7.	Contractor's SHE Representative
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13.	Construction Vehicles and Mobile Plant – Regulation 21
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20.	House Keeping and Construction Sites – Regulation 25
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23.	Structures – Regulation 9
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25.	First Aid
26.	Fire Precautions on Construction Sites – Regulation 27
27.	Construction Welfare Facilities – Regulation 28
28.	Toxic Materials
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30.	Commissioning Safety Precautions
31.	Electrical Installations and Machinery on Construction Sites – Regulation 22..
32.	Registers required on Site

33. Safe Work Procedures required in Health and Safety File
34. Written Training Course Material to be filed in Health and Safety File
35. Training Courses to be presented
36. Equipment on Site
37. Personal Protective Clothing

1 INTERPRETATIONS

Occupational Health and Safety Act, Act 85 of 1993 shall apply to this Contract. The Construction Regulations promulgated on 7 February 2014 and incorporated into the said Act by Government Notice R. 10113, published in Government Gazette 37305 apply to any person involved in construction work. These regulations are hereinafter referred to as "the Construction Regulations" and the said Act as "the Act".

Construction work is defined as:

"Any work in connection with: -

a) the erection, maintenance, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure;
b) the installation, erection, dismantling of or maintenance of a fixed plant where such work includes the risk of a person falling;
c) the construction, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system or any similar civil engineering structure; or
d) the moving of earth, clearing of land, the making of an excavation, piling, or any similar type of work".

2 GENERAL

2.1 The Contractor shall ensure that all employees and visitors are informed, instructed and trained regarding safety conditions on site.

2.2 Proof of induction training to all workers shall be filed in the Health and Safety file on site. All employees shall sign the relevant induction training forms.

2.3 The Contractor shall ensure that all professionals entering the site are informed, instructed and trained regarding safety conditions on site. Proof of Professional site safety induction shall be signed by professionals and filed in the Health and Safety file on site.

2.4 The Contractor shall ensure that all visitors are informed, instructed and trained regarding safety conditions on site. Visitors have to sign the visitors register before entering the site. Hardhats shall be issued to visitors. No visitor shall enter the site without the appropriate safety shoes.

2.5 Should the Contractor at any stage in execution of the Works -

a) fail to implement or maintain his health and safety plan;
b) execute construction work which is not in accordance with his health and safety plan; or act in any way which may pose a threat to the health and safety of persons, the Employer will stop the Contractor AT HIS/HER OWN COSTS from executing construction work.

2.6 The Contractor shall provide proof of this registration and good standing with the Compensation Fund or with a licensed compensation insurer when submitting a tender. Tenders without this will be regarded as non-responsive.

2.7 The Contractor shall, in submitting his tender, demonstrate that he has made provision for the cost of compliance with the specified health and safety requirements, the Act and the Construction Regulations.

2.8 The Contractor shall consistently demonstrate his competence and adequacy of resources to perform the duties imposed on the Contractor in terms of this Specification, the Act and the Construction Regulations.

3 INDEMNITY OF EMPLOYER AND HIS AGENTS

a) The annexures to this Contract Document contain a “Mandatory Form of Authority and Agreement in terms of Section 37(2) of the Occupational Health and Safety Act, No. 85 of 1993" which agreement shall be entered into and duly signed by both the Employer and Contractor prior to commencement with work.

A copy of the signed agreement shall be included in the Contractor’s health and safety plan.

b) Any acceptance, approval, check, certificate, consent, examination, inspection, instruction, notice, observation, proposal, request, test or similar act by either the Employer, any of his agents or the Engineer (including absence of disapproval) shall not relieve the Contractor from any responsibility he has under the Contract, the Act and the Construction Regulations, including responsibility for errors, omissions, discrepancies and non-compliances.

c) A Section 37(2) agreement shall be entered into and duly signed by both the Principal Contractor and Sub Contractor prior to commencement with work by Sub Contractor.

A copy of the signed agreement shall be included in the Principal’s Contractor’s health and safety plan.

d) Any acceptance, approval, check, certificate, consent, examination, inspection, instruction, notice, observation, proposal, request, test or similar act by either the Employer, any of his agents or the Engineer (including absence of disapproval) shall not relieve the Sub Contractor from any responsibility he has under the Contract, the Act and the Construction Regulations, including responsibility for errors, omissions, discrepancies and non-compliances.

4 SCOPE

4.1 The specification as set out in this Portion is known as the Health and Safety Specification for the Construction work to be carried out by the Principal Contractor as per regulations of the Construction Regulations July 2003.

4.2 Information herein addressed might affect the Health and Safety of employee's or persons carrying out the construction work as per this tender document.

4.3 The Contractor shall ensure that it is fully conversant with the requirements of this Specification.

4.4 This Specification is not intended to supersede the Act nor the Construction Regulations.

4.5 Those sections of the Act and the Construction Regulations, which apply to the scope of work to be performed by the Contractor in terms of this Contract, continue to be a legal requirement of the Contractor.

4.6 The principal Contractor will be appointed in writing to be in overall control of the Construction site.

4.7 A Health and Safety Plan must be submitted by the Principal Contractor to the Client or the Client's Agent containing all the relevant documentation as required by this specification and terms of the provisions of this Specification, the Act and the Construction Regulations.

4.8 A Health and Safety Plan must also be submitted by the Sub Contractor to the Principal Contractor containing all the relevant documentation as required by this specification and terms of the provisions of this Specification, the Act and the Construction Regulations

4.9 The H&S plan shall be submitted before commencement of any work on site

4.10 The H&S plan shall contain the following items where applicable:

1. Description of contract
2. Construction site address / Building site address
3. Construction period
4. Name and details of client –telephone, fax, address
5. Name and details of consultants –telephone, fax, address
6. Name and details of principal contractor–telephone, fax, address
7. Name and details of sub-contractors–telephone, fax, address
8. Company's policy towards health & safety
9. Company's policy towards drug and alcohol abuse
10. Company's policy towards disciplinary procedures
11. Company's policy towards environment.
12. Workmen compensation – number and expire date
13. Management and Supervision rules
14. Structure, Supervision of construction work and responsibilities
15. Health and Safety Officers/Representatives
16. Health and Safety Committees\
17. First Aid
18. Medical tests
19. Incident/ Accident reporting procedures
20. Emergency/evacuation procedures
21. Subcontractor agreements and requirements and super positioning
22. Material Safety Data Sheets
23. Transport of workers
24. Proposed PPE
25. Scope of works – describe type
26. Sequence and phases of the work to be performed describe stages involved in project
27. List of all equipment to be used on the specific site – tools, construction vehicles, mobile plant.
28. Company's approach toward hygienic facilities on the construction site (toilets, eating areas, drinking water, showers, refuge removal)
29. Company's approach towards other facilities as required by law (the transport act, the smoking act, PPE)
30. Local labour agreements, requirements, policies
31. Fire extinguishers and fire equipment
32. Oxygen, acetylene and LP gas cylinders
33. Welding, cutting , grinding and heating
34. Signs and symbols to be displayed
35. Lock – out procedures

36. Public safety, hoarding and fencing
37. Risk assessment methods
38. Company's monitoring plan
39. Company's review plan.
40. Identification of risks and hazards
41. Appointments of personnel to be made (Safety reps, Supervisors, First Aiders, Fire equipment inspectors
42. Registers to be completed by appointed employees (Checklists)
43. List of training material to be used for educational purposes of construction workers (Induction, Fire fighting, First Aid, etc.)
44. List of safe work procedures to be explained to workers.
45. Company's Policy on House Keeping
46. Stacking and storage on sites
47. Construction welfare facilities
    i. Explosive power tools
    ii. Ladders
    iii. Welding flame cutting and soldering
    iv. Electrical installations and machinery
    v. Boatswain chairs
    vi. Suspended platforms
    vii. Material hoists/ Builders hoist
    viii. Batch plants
    ix. Water Environments
48. List of plans to be used:
    i. Fall protection plan
    ii. Tunnelling plan
    iii. Pile driving plan
    iv. Steel assembling and placing plan
    v. Emergency/evacuation plan
    vi. Demolition plan
    vii. Scaffold erection procedures plan
    viii. Erection of structural steel plan
    ix. Electrical installations plan.
    x. Excavation plan
    xi. Form work and support work plan
    xii. Material Hoist rules
    xiii. Lifting machines and tackle rules
    xiv. Rules on Construction vehicle and mobile plant procedures
    xv. Rules on mobile and tower cranes
    xvi. Fire precautions on the construction site
    xvii. Rules on Hazardous chemicals on the site, storage and use

xviii. Rules on storage and use of Flammable liquids and substances on site
xix. Rules on compressed gas cylinders
xx. Rules on handtools
xxi. Rules on portable electrical equipment

49. List of Risk Assessments
50. Clearing and Grubbing of the area/site
51. Site establishment including:
52. Office/s
53. Secure/safe storage for materials, plant and equipment
54. Ablutions
55. Sheltered eating area
56. Maintenance workshop
57. Vehicle access to the site
58. Dealing with existing structures
59. Location of existing services
60. Installation and maintenance of temporary construction electrical supply, lighting and equipment
61. Adjacent land uses/surrounding property exposures
62. Boundary and access control/public liability exposures (NB: the Employer is also responsible for the OH&S of non-employees affected by his work activities.)
63. Health risks arising from neighbouring as well as own activities and from the environment e.g. threats by dogs, bees, snakes, lightning etc.
64. Exposure to noise
65. Exposure to vibration
66. Protection against dehydration and heat exhaustion
67. Protection from wet and cold conditions
68. Dealing with HIV/Aids and other diseases
69. Use of portable electrical equipment including
    i. Angle grinder
    ii. Electrical drilling machine
    iii. Skill saw
70. Excavations including
    i. Ground/soil conditions
    ii. Trenching
    iii. Shoring
    iv. Drainage of trench
71. Welding including
    i. Arc welding
    ii. Gas welding
    iii. Flame cutting
    iv. Use of LP gas torches and appliances

72. Loading and offloading of trucks
73. Aggregate/sand and other materials delivery
74. Manual and mechanical handling
75. Lifting and lowering operations
76. Driving and operation of construction vehicles and mobile plant including
    i. Trenching machine
    ii. Excavator
    iii. Bomag roller
    iv. Plate compactor
    v. Front end loader
    vi. Mobile cranes and the ancillary lifting tackle
    vii. Parking of vehicles and mobile plant
    viii. Towing of vehicles and mobile plant
77. Use and storage of flammable liquids and other hazardous substances
78. Layering and bedding
79. Installation of pipes in trenches
80. Pressure testing of pipelines
81. Backfilling of trenches
82. Protection against flooding
83. Gabion work
84. Use of explosives
85. Protection from overhead power lines
86. As discovered by the principal contractor's hazard identification exercise
87. As discovered from any inspections and audits conducted by the client or by the principal contractor or any other contractor on site
88. As discovered from any accident/incident investigation

4.11 The Health and Safety Plan provided for by the Principal Contractor may be adjusted by the Client to suit the requirements. The approved Health and Safety Plan will be implemented on the construction site.

4.12 The Health and Safety Plan of the Principal Contractor shall include al relevant Health and Safety Plans of Contractors (Sub-Contractors). The Contractor shall, throughout execution of the Contract, ensure that all sub-contractors have similar Health and Safety Plans in place which must be available on site.

4.13 The execution of the H&S plan shall be documented in the form of a H&S file which shall contain items as described elsewhere in this specification. A lever arch file shall be used with a clear index and dividers. Numbering of items shall be done clearly with numbers as specified elsewhere.

4.14 The file shall be available at all times and kept on site and made available for inspection by an Inspector, Client, Client Agent or Principal Contractor.

4.15 Provision for costs in respect to Health and Safety in the tender shall be tendered for in the Schedule of Quantities. The Tendered price is fixed. A provisional sum will be included in the schedule of quantities to make provision for an approved H&S Service Provider to assist the contractor in performing the H&S activities required by law.

4.16 The following paragraphs summarize the Health and Safety Activities to be performed by Contractors.

(Terms and definitions in the following paragraphs are explained elsewhere in this specification)

4.17 The following activities shall be strictly performed by the Principal Contractor and Sub Contractors on acceptance of the tender and before commencement of any work on the construction site.

(Terms and definitions in the following paragraphs are explained elsewhere in this specification)

4.18 The contractor will only be allowed to start working once the submitted Health and Safety plan are approved by the client or the client's agent.

4.19 A prior Risk Assessment shall be done on site before the commencement of any work by a competent Risk Assessor.

4.20 The Risk Assessment shall:

a) Address hazards on site and hazards related to the type of work performed, Possible consequences of these hazards,

b) Refer to legislative requirements concerning these hazards on the construction site

c) Calculate the value of the risk associated with the hazard by an approved method taking into consideration the probability of occurrence, the degree of injury, lost time, production costs, influence on the environment and frequency of occurrence.

4.21 The outcome of the Risk Assessment will determine:

a) Protective equipment to be issued,
b) Type of training required,
c) Type and number of Safe Work Procedures to be introduced to workers in the form of Toolbox Talks

4.22 Protective clothing as determined by the Risk Assessment shall be issued and the employees shall sign the issue register to indicate the type and number of equipment received by each employee

4.23 No work shall commence on the construction site prior to induction training of all employees intended to work on site.

4.24 Training shall be done by a competent Health and Safety Induction Trainer. Proof of training in the form of a register signed by the trained employees shall be kept in the H&S file. The contents of the training shall also be displayed in the H&S file.

4.25 Appointments of people/workers related to Health and Safety as required by law and the Risk Assessment shall be done prior to the commencement of any work. Letters of appointment shall be kept in the H&S file for inspection by the Client, Agent or any Inspector.

4.26 All appointed workers shall have a proof of competency attached to the letter of appointment. The Construction Supervisor 6(1) shall have a detailed CV attached to his/her appointment letter.

4.27 Medical Fitness Certificates shall be obtained for the workers/operators as determined by the Risk Assessment.

4.28 During the construction period the Contractor shall ensure that all employees and visitors are informed, instructed and trained regarding safety conditions on site. All employees will carry proof of this induction on their persons while employed on site in the form of identification cards. The type of additional training required on this project will be describe elsewhere.

4.29 Notification of Construction work shall be done to the Department of Labour within 7 days from commencement of the construction work.

4.30 Follow-up Risk Assessments shall be done during the construction period as and when the scope of work changes indicating new introduced hazards.

4.31 Additional appointments shall follow as required by the Risk Assessment.

4.32 Should the Contractor at any stage in execution of the Works

a) fail to implement or maintain his health and safety plan;
b) execute construction work which is not in accordance with his health and safety plan; or
c) act in any way which may pose a threat to the health and safety of persons,

the Employer will stop the Contractor AT HIS/HER OWN COSTS from executing construction work.

4.33 The Employer will take reasonable steps to ensure that the Contractor's Health and Safety plan is implemented and maintained. The steps taken will include periodic audits at intervals once every month.

4.34 Upon completion of the Works, the Contractor shall hand over a consolidated Health and Safety file to the Client.

5 HEALTH AND SAFETY FILE

5.1 The following documentation shall be in the Health and Safety File of the Principal Contractor and Sub Contractors:

A1 Copy of the Occupational Health and Safety Act No 85 of 1993 including the Construction Regulations – February 2014
A2 Proof of registration with Compensation Commissioner (Principal Contractor)
A3 Copy of Notification of Construction work to the Department of Labour
A4 Agreement in terms of section 37(2) of the Occupational Health and Safety Act, No. 85 of 1993. To be signed by client and Principal contractor in presence of witnesses
A5 Health and Safety Specifications provided by the client
A6 Copy of all Drawings – Schematics, Detail Drawings, As-Build Drawings etc.
A7 Health and safety plan describing all activities as mentioned elsewhere.
A8 Company Safety Policy – To be signed by the Chief Executive Officer of the Company.
A9 Organogramme indicating site specific organizational structure with reference to requirements of the construction regulations.

A10 Letters of Appointment

The following appointments are required for the project. Deviations will only be allowed with the approval of the Agent. Appointment of an employee for more than one responsibility will be allowed and shall be approved by the Agent.

Basic Appointments

a) Appointment of Principal Contractor by Client
b) Appointment of Contractors (Sub Contractors) by Principal Contractor (where applicable)
c) Appointment of Construction Work Supervisor (full time employee on site)
d) Appointment of Assistant Construction Work Supervisor (full time employee on site if required)

Appointments of Specialists (Refer to a Specialist Company)

a) Appointment of Risk Assessment Officer
b) Appointment of a SHE Coordinator
c) Appointment of a Health and Safety Induction Trainer

Appointments of full-time employees on site

a) Appointment of a SHE Representative (Competent employee to control/monitor all H&S activities)
b) Appointment of an Accident and Incident Investigator
c) Appointment of the Safety Committee Members (Employees actively involved in H&S)
d) Appointment of an Excavation Inspector.
e) Appointment of Construction Vehicle and Mobile Plant Inspector
f) Appointment of Construction Vehicle and Mobile Plant Operators
g) Appointment of Concrete Mixer Operator (If required)
h) Appointment of Hand Tool Inspector
i) Appointment of a Portable Electrical Equipment Inspector.
j) Appointment of a Ladder Inspector (If ladders are used)
k) Appointment of a Hygiene and Facility Inspector (Ablutions and eating places)
l) Appointment of Fire Equipment Inspector
m) Appointment of Fire Team Members (employees trained in firefighting awareness)
n) Appointment of First Aid Equipment Inspector

o) Appointment of First Aid Team Members (employees trained in first aid awareness)

A11 List of Contractors (Sub-Contractors)
A12 Evacuation plan
A13 The contents of all Training Material used on sited – eg. Accredited and non-accredited training, Toolbox talks and all training records signed by workers.
A14 Risk Assessments - All Risk Assessments done before and during the Construction period
A15 Registers as required
A16 Safe Work Procedures and material safety data sheets
A17 Fall protection plan
A18 Incident recording forms
A19 Medical records
A20 Minutes of safety meetings

5.2 Emergency telephone numbers to be displayed on the back of the file

6 NOTIFICATION OF CONSTRUCTION WORK – REGULATION 3 OF THE CONSTRUCTION REGULATION – FEBRUARY 2014

6.1 The Employer will appoint the Contractor in writing for execution of the Works. The Contractor shall accept its appointment under the terms and Conditions of Contract. The Contractor shall sign and agree to those terms and conditions and shall, before commencing work, notify the Department of Labour of the intended construction work in terms of Regulation 3 of the Construction Regulations. The Contractor shall submit the notification in writing prior to commencement with work. The annexures to this Contract Document contain a "Mandatory notification of construction work in terms of regulation 3 of the construction regulations (2014) of the Occupational Health and Safety Act no 85 of 1993" which shall be filled in by the contractor and forwarded to the Department of Labour. A copy of this notification shall be included in the Contractors Health and Safety file.

6.2 The Principal Contractor must notify the Provincial Director of:

a) Construction work on a form similar to Annexure A in the Construction Regulation 2014 of the Occupational Health and Safety Act and Regulations.

6.3 A copy of the notification form must be available on site for inspection by an Inspector.

6.4 No notification is required from the Sub Contractors.

7 CONTRACTOR'S SHE REPRESENTATIVE

7.1 Before commencing work, the Principal Contractor shall designate a competent Safety, Health and Environmental representative (SHE Rep) who shall be acceptable to the Agent, to represent and act for the Contractor and Sub Contractors.

7.2 It should be noted that the Principal Contractor is held responsible for the activities of the Sub Contractors.

7.3 Failure of Health and Safety measures by the Sub Contractor will revert directly back to the Principal Contractor.

7.4 The Contractor shall inform the Agent in writing of the name and address of the Contractor's SHE Rep and of any subsequent changes in the name and address of the SHE Rep, together with the scope and limitations of the SHE Rep's authority to act for the Contractor. The Contractor's SHE Rep shall make available to the Employer an all-hours telephone number at which the SHE Rep can be contacted at any time in the event of an emergency involving any of the Contractor's employees, or other persons at the Works.

8 SUPERVISION OF CONSTRUCTION WORK – REGULATION 6

8.1 The appointed Project Manager (Reg.16(2)) of the Principal Contractor shall appoint a fulltime employee (Reg 6(1)) in writing as the construction supervisor. An assistant Construction Supervisor (Reg 6(2)) may also be appointed where required.

8.2 The same procedure applies to the Sub Contractors.

9 RISK ASSESSMENT – REGULATION 7

9.1 The Principal Contractor as well as all other Contractors shall appoint a competent person in writing to carry out a risk assessment before any construction work is started. The Risk Assessment shall form part of the Health and Safety Plan.

9.2 The Risk Assessment shall include:

a) Identification of risks and hazards.
b) Possible consequences
c) A documented plan of safe procedures to mitigate, reduce or control the risks and hazards. (SAFE WORK PROCEDURES AND PROTECTIVE CLOTHING)
d) A monitoring plan
e) A review plan

9.3 Copies of the risk assessment shall be available on each site for inspection.

9.4 All employees shall be informed, instructed and trained by an appointed competent person regarding all hazards and work related procedures.

9.5 No employee shall enter the premises without induction training.

9.6 All employees on site shall be in the possession of a certificate of Health and Safety induction training.

9.7 The contents of the induction training shall be in writing and kept in the safety file.

10 LOCAL SERVICES

10.1 Contractor must establish all local services in area of excavations.

10.2 Plan of local services shall be documented in the Health and Safety file.

10.3 Local services include :

a) Telkom,
b) Gas,
c) Water,
d) Electricity Supplies and
e) Other similar services.

11 SAFE WORKING LOADS

11.1 The Contractor shall ensure that -

a) the safe working loads of hoists, load-bearing beams and cranes are prominently displayed at all times.
b) the safe working loads are not exceeded under any circumstances.
c) all lifting gear is marked with a unique identity number and recorded in a register.

12 MACHINE GUARDING

12.1 All power tools and machinery driven by belts, gears, ropes, chains, couplings and similar drives shall be adequately guarded. The Contractor shall prohibit the use of any equipment with a damaged, missing or inadequate guard.

13 CONSTRUCTION VEHICLES AND MOBILE PLANT – REGULATION 21

13.1 The Contractor shall ensure that drivers of motor vehicles are in possession of a driver's licence, valid for the class of vehicle which they are required to drive, and shall produce the licence on request.

13.2 The Contractor shall not permit any driver to be in control of a vehicle at the Works while under the influence of alcohol, drugs or other substance.

13.3 All vehicles of the Contractor shall display a name board bearing the Contractor's name. Hired vehicles shall bear an identifying sticker.

13.4 A register shall be kept of workers operating construction vehicles and mobile plant.

13.5 The register shall contain proof of training of operators to operate construction vehicles and mobile plant, certification of competency and authorization of operators to operate machinery, vehicles or plant.

13.6 Names of operators and their relevant training with date and time stamps together with name of course instructor shall be kept in the Health and Safety File on site.

13.7 Physical and Psychological fitness shall be proved by way of a medical certificate of fitness of the said operators before allowing operators to operate machinery, vehicles or plant.

13.8 The Health and Safety File shall include the written training material offered to operators for the different construction vehicles and mobile plant.

13.9 Each and every driver shall be trained on risks involved and safety procedures.

13.10 All Construction vehicles and mobile plant must be of acceptable design and construction and used according to their design.

13.11 All construction vehicles and mobile plant must be maintained in good working order.

13.12 A register of all vehicles and plant shall be kept on site together with names of operators responsible for each.

13.13 The register shall report all maintenance activities performed on these vehicles and plant as well as signatures certifying the condition of the vehicles as in a good working order.

13.14 All requirements on the vehicles and mobile plant with regard to safety and health shall be inspected and certified.

13.15 These requirements include:

a) Portable fire extinguishers mounted in specified positions on construction vehicles – 9kg dry powder Fire Extinguisher b) Safety belts and harnesses
b) Inspection for leaking fuel or gasses which can cause a fire hazard
c) Safe and suitable means of access
d) Adequate signalling or other control arrangements to guard against the dangers relating to movement of vehicles and plant.

13.16 Attention must be paid to

a) Turn indicators
b) Stop lights x2 – where poor visibility conditions warrant
c) Reverse siren or acoustic device iv)
d) Tail lights
e) Head lights x2 - where poor visibility conditions warrant
f) Rotating amber flashing light with lens heights of at least 200mm and an output of at least 100Watt on roof or other visible position

g) Warning boards mounted at least 1.5m above ground level to be clearly visible
h) Inspections of appropriate structures fitted to protect the operator from falling material or from being crushed should the vehicle or mobile plant overturn.
i) Appropriate seats must be firmly secured and adequate in number on vehicles used to transport employees

13.17 During use of Construction vehicles or mobile plant the following rules shall be adhere to:

13.18 Construction vehicles or mobile plant must be prevented from falling into excavations, water or any other area lower than the working surface. This protection must consist of adequate edge protection eg. guard rails and/or crash barriers

13.19 No person shall be allowed to or require to ride on any Construction Vehicle or Mobile Plant in a position otherwise than a safe place provided for on the construction vehicle or mobile plant as designed for that purpose.

13.20 The construction site must be organized in such a way that as far as is reasonable practical, pedestrians and vehicles can move safely and without risks to health and safety.

13.21 Traffic routes shall be of sufficient size, sufficient in number and in suitable positions to be used safely by construction vehicles, mobile plant and pedestrians.

13.22 Each and every traffic route shall be indicated by suitable signs for reasons of safety and health.

13.23 No tools and/or material shall be transported in the same compartment as the operators/drivers/employees unless the said are secured against movement during transportation.

13.24 All Construction Vehicles and Mobile Plant left unattended at night adjacent to a freeway in normal use or adjacent to construction areas where work is in progress, shall have appropriate lights or reflectors, or barricades equipped with appropriate lights or reflectors, in order to identify the location of vehicles or plant

13.25 Bulldozers, scrapers, loaders and other similar mobile plant are, when being repaired or when not in use, fully lowered or blocked with controls in a neutral position, motors stopped and brakes set.

13.26 Reflective indicators must be provided to workers in the form of reflective yellow jackets or vests as specified and worn by workers working on/or adjacent to public roads

14 SIGNS AND NOTICES

14.1 The use of colour codes, symbolic signs and notices are means of communication whereby information is visually conveyed to people and also provides early warning of dangers.

14.2 Safety signs provide for immediate recognition of danger, information, actions allowed or not allowed and procedures that have to be done.

14.3 There are 5 types of safety signs:

a) Black triangle on yellow background => WARNING
b) Red (round) on white background => PROHIBITORY
c) White on blue background => MANDATORY
d) White on green background => INFORMATION
e) Red (square) on white background => FIRE

14.4 The following signs shall be provided for on the site:

a.	Traffic control signs	ROAD CLOSE DETOUR DIRECTION ARROWS
b.	Warning signs	DANGER - MEN AT WORK
c.	Prohibitory signs	NO ENTRY
d.	Fire	POSITION OF EQUIPMENT ARROWS
e.	First Aid	INFORMATION SIGNS

14.5 All signs shall be new or in good condition and approved by the Engineer.

14.6 All temporary signs shall be mounted on portable supports to facilitate moving.

14.7 Defective or missing items shall be replaced immediately.

14.8 All signs shall be inspected at least twice a day.

14.9 Prohibited area – TR208

14.10 Men at work – TW 336

15 EXCAVATION WORK – REGULATION 11

15.1 Excavation:

15.1.1 Definition: A space made by digging.

15.1.2 An excavation could be a hole or trench of any size and shape.

15.1.3 A Risk Assessment must be done prior to making an excavation.

15.1.4 The following must be taken in consideration when doing the Risk Assessment:

a) Depth of the excavation
b) Length of the excavation
c) Existing services
d) Barricading and demarcation

15.2 Depth of the excavation

a) Should an excavation be more than chest deep (1.5m), it must be adequately shored or braced.

b) Slopes or trenches shall be as flat as possible, 1 x vertical to 2 x horizontal must be considered maximum for dry conditions. In wet conditions either a much lower slope shall be used, or if space is a constraint, shoring and de-watering shall be applied.

c) A competent person shall be appointed to supervise excavation work.

d) Stability evaluation of ground must be done and a certificate shall be issued.

e) A plan for prevention of persons being trap due to collapse shall be provided by Contractor

f) The design of shoring shall be documented by Contractor in the Health and Safety file as provided by the competent designer of shoring.

g) The maximum loading of sides of an excavation must be documented in a usable format

15.3 If adjacent structures and buildings are present and can be affected a design and construction of supporting details shall be represented.

15.4 Provision shall be made for access routes to the excavation. Routes must not be more than 6 meters away from worker.

15.5 Contractor must establish all local services in area of excavations.

15.6 Plan of local services shall be documented in the Health and Safety file.

15.7 Local services include:

a) Telkom, Gas, Water, Electricity Supplies and other similar services. Inspection shall be done on all bracing and shoring on a; -

I. daily basis
II. prior to each shift
III. after every blasting operation
IV. after an unexpected fall of ground
V. after substantial damage to supports - after rain

15.8 An inspection register shall be completed by the Excavation Inspector during each and every inspection.

15.9 Barricading and Demarcation:

a) Excavations shall be fenced at least 1 meter high and as close to the excavation as possible, when accessible by public or other employees, or adjacent to public roads or thoroughfares.

b) Protection around excavations must be in the form of a physical barrier, to prevent persons from falling into the excavation.

c) Excavations must be provided with clearly visible boundary indicators and illuminated at night or where/when visibility is poor.

d) Precautionary measures in terms of confined spaces must be met and employees must be declared fit and not claustrophobic.

e) Explosives regulations must be adhered to if explosives are required to carry out the excavation. Competent persons with blasting certificates must be in charge.

f) Warning signs must be posted next to an excavation in which persons are working or carrying out inspection or tests.

16 BARRICADING AND DEMARCATION

16.1 The construction site shall be barricaded completely to prevent pedestrians and vehicles to enter the construction area.

16.2 Protection around the site must be in the form of a physical barrier and appropriate signage, to prevent public from entering the area.

16.3 It is advised to use 1.2m high Dayglo Mesh (barrier netting) to prevent pedestrians on pavements to enter the construction area.

17 LADDERS

17.1 You are only to use ladders that are undamaged and are of sound construction.

17.2 Ladders must be placed on a register and inspected on a monthly basis by an appointed person.

17.3 Ladders are to be secured during use. If it is necessary to use a ladder before it can be secured, a second person must hold it steady at all times. Place the ladder's feet on a level base. (wooden blocks or bricks are not to be used).

17.4 Ladders are not to be used as scaffolds or work platforms.

17.5 When used as access to trenches and work areas, the ladder must extend one meter above the step off point and be placed at an angle where the base of the ladder is one quarter of the ladder height away from the base of the structure, and must be fitted with nonskid devices.

17.6 Ladders must not be used nearer than 3 metres to any exposed electrical power source and never in substations or on electrical installation work.

17.7 Ladders are not to be used in a horizontal position.

17.8 Maintain 3-point contact by keeping two hands and one foot or two feet and one hand on the ladder at all times.

17.9 Do not carry objects in your hands while on a ladder.

17.10 Ladders must be fitted with non-skid devices at the bottom ends and hooks or similar devices at the upper ends.

17.11 Ladders with damaged stiles, or damaged or missing runs should never be used.

17.12 Ladders must never be fastened together to increase the reach.

17.13 Wooden ladders must never be painted.

18 CONCRETE MIXERS – REGULATION 18

18.1 The Contractor shall ensure that all concrete mixers are operated and supervised by a competent person who has been appointed in writing.

18.2 The Contractor shall ensure that all devices to start and stop the concrete mixers are provided and that these devices are

a) placed in an easily accessible position; and
b) constructed in such a manner to prevent accidental starting

18.3 All dangerous moving parts of a mixer must be placed beyond the reach of persons by means of covers.

18.4 No person shall be permitted to remove or modify any guard or safety component unless authorized to do so by the appointed person

18.5 A Contractor shall ensure that all persons authorized to operate the concrete mixers are fully:

a) aware of all dangers involved in the operation thereof
b) conversant with the precautionary measures to be taken in the interest of health and safety

18.6 No person supervising or operating a concrete mixer shall authorize any other person to operate the plant, unless such a person is competent to operate such machinery.

19 SCAFFOLDING – REGULATION 14

19.1 All scaffolding must be in compliance to SABS 085.

19.2 A competent person shall be appointed in writing to supervise the erection of all scaffolding operations. The Scaffolding erecter shall have the required accredited qualifications for scaffold erecting.

19.3 A competent scaffold inspector shall be appointed in writing to inspect the erected scaffolds and shall not be the same person as the erector.

19.4 An Inspection Register on scaffolding shall be kept in the Health and Safety File.

19.5 A copy of SABS 085 as amended shall be available on site and kept in the Health and Safety File.

20 HOUSE KEEPING AND CONSTRUCTION SITES – REGULATION 25

20.1 The Contractor shall at all time carry out the Works in a manner to avoid the risk of bodily harm to persons or risk of damage to any property. The Contractor shall take all precautions, which are necessary and adequate to eliminate any conditions, which contribute to the risk of injury to persons or damage to property. The Contractor shall continuously inspect all work, materials and equipment to discover and determine any such conditions and shall be solely responsible for the discovery, determination and elimination of such conditions.

20.2 During the period of this Contract, the Contractor shall be responsible for the safe storage of all materials and equipment required for execution of the Contract, and for disposal of all non-usable waste material in an orderly manner.

20.3 All materials, whether stored on the construction site or within the Contractor's signated area, shall be stored neatly and safely to prevent possible injury to any personnel. The material shall be stored to facilitate safe access to, and removal of the material from the storage area.

20.4 Any flammable material, such as paint, diesel fuel and oil, shall be stored in lockable noncombustible structures, which shall be clearly marked to indicate the hazardous nature of the materials stored within. The flammable materials stores shall be located in

safe areas away from hazardous surroundings and adequate and suitable fire-fighting equipment shall be provided within easy reach of the materials stores.

20.5 Loose material need for use shall not accumulate so as to obstruct means of access to and egress from the workplace.

20.6 Scrap and waste shall not be allowed on site and must be removed daily.

20.7 The construction sites adjacent to build up area or public way shall be effectively fenced and controlled with access points.

21 STACKING AND STORAGE ON CONSTRUCTION SITES – REGULATION 26

21.1 A competent person shall be appointed in writing with the duty of supervising all stacking and storage of material on site.

21.2 Adequate storage areas shall be provided which includes demarcated areas.

21.3 All storage areas shall be kept neat and under control.

21.4 Registers and checklist on housekeeping shall be kept on site

22 FALL PROTECTION – REGULATION 8

22.1 A contractor shall cause-

a) the designation of a competent person, responsible for the preparation of a fall protection plan;

b) the fall protection plan contemplated in paragraph (a) to be implemented, amended where and when necessary and maintained as required;

c) steps to be taken in order to ensure the continued adherence to the fall protection plan.

22.2 The fall protection plan contemplated in sub regulation (1), shall include-

a) a risk assessment of all work carried out from an elevated position which shall include the procedures and methods used to address all the risks identified per location;

b) the processes for evaluation of the employees' physical and Psychological fitness necessary to work at elevated heights.

22.3 Safety Harness:

a) The wearing of an approved type of safety harness fitted with a shock absorber and correctly secured to any approved anchorage, is compulsory for personnel working at heights.

b) Safety harnesses must be worn where a leaning bar cannot be installed, where handrails are not available, in instances where there is a risk of injury due to falling, and generally whenever work is undertaken at a height of more than "a person's height".

c) Where roof work is undertaken, harnesses must be attached to a lifeline or other substantial support.

d) The single support waist type safety belts should not be used; therefore, a full parachute type harness of an approved type is required.

e) It is the contractor's responsibility to train his employees on the correct use of harnesses.

f) Safety belts may only be used as a fall restraint and not as a fall protection device.

22.4 Identify Risks:

a) Lanyards must be used to attach tools and equipment used in elevated positions.

b) Scaffolding where possible must be provided.

c) On windy/rain days, special precautions are to be taken especially when working with loose roof sheets.

d) Walking on asbestos roofs is prohibited unless supporting ladders or crawl boards are placed thereupon.

e) Consult your supervisor in that area if in any doubt.

23 STRUCTURES – REGULATION 9

23.1 A contractor shall ensure that-

a) all reasonable practicable steps are taken to prevent the uncontrolled collapse of any new or existing structure or any part thereof, which may become unstable or is in a temporary state of weakness or instability due to the carrying out of construction work:

and

b) no structure or part of a structure is loaded in a manner which would render it unsafe.

23.2 The designer of a structure shall-

a) before the contractor is put out to tender, make available to the client all relevant information about the design of the relevant structure that may affect the pricing of the construction work;

I. inform the contractor in writing of any known or anticipated dangers or hazards relating to the construction work, and make available all relevant information required for the safe execution of the work upon being designed or when the design is subsequently altered;
II. subject to the provisions of paragraph (a) and (b) ensure that the following information is included in a report and made available to the contractor- (iii) a geo-science technical report where appropriate;
III. the loading of the structure is designed to withstand; and
IV. the methods and sequence of construction process;

b) not including anything in the design of the structure necessitating the use of dangerous procedures or materials hazardous to the health and safety of persons, which could be avoided by modifying the design or by substituting materials;

c) take into account the hazards relating to any subsequent maintenance of the relevant structure and should make provision in the design for that work to be performed to minimize the risk;

I. carry out sufficient inspections at appropriate times of the construction work involving the design of the relevant structure in order to ensure compliance with the design and a record of those inspections is to be kept on site;
II. stop any contractor from executing any construction work which is not in accordance with the relevant design;

d) conduct a final inspection of the completed structure prior to its commissioning to render it safe for commissioning and issue a completion certificate to the contractor; and

e) ensure that during commissioning, cognizance is taken of ergonomic design principles in order to minimize ergonomic related hazards in all phases of the life cycle of a structure.

f) A contractor shall ensure that all drawings pertaining to the design of the relevant structure are kept on site and are available on request by an inspector, contractors, client, client's agent or employee.

g) Any owner of a structure shall ensure that inspections of that structure upon completion are carried out periodically by competent persons in order to render the structure safe for continued use: Provided that the inspections are carried out at least once every six months for the first two years and thereafter yearly and records of such inspections are kept and made available to an inspector upon request.

h) Any owner of a structure shall ensure that the structure upon completion is maintained in such a manner that the structure remains safe for continued use and such maintenance records shall be kept and made available to an inspector upon request.

24 FORMWORK & SUPPORT WORK – REGULATION 10

24.1 A competent person shall be appointed in writing to supervise all formwork and support work.

24.2 The name and address of such a person shall be included in the Health and Safety Plan of the Principal Contractor.

24.3 The contractor must ensure that all formwork and support work structures are adequately designed, erected, supported, braced and maintained so that they will be able to support all anticipated loads.

24.4 All drawings pertaining to formwork and support work must be kept on site and available for inspection by an inspector, contractor, client, client's agent or employee.

24.5 All formwork and support work must be inspected and checked for suitability by a competent person under the following conditions:

a) Before use
b) During placement of concrete or any other imposed load
c) After placement of concrete or any other imposed load
d) On a daily basis after placement of concrete until the structure is removed.
e) Ensure that concrete gains sufficient strength before the support work is removed.

24.6 Record must be kept of these inspections.

24.7 Weakened formwork or support work must be immediately reinforced.

24.8 Deck panels must be secured against displacement.

24.9 Persons must be prevented from slipping on support work.

24.10 Persons must not be affected by the use of solvents or any other similar substances.

24.11 Safe access must be provided for all support work.

24.12 Employees involved must be adequately trained and instructed to perform the work in a safe manner.

24.13 Foundations of formwork must be adequate to sustain the applied load.

25 FIRST AID

25.1 Safety Notice Board

The Contractor shall provide a Safety Notice Board where safety notices, site regulations concerning safe working practices and information on the location of the nearest first aid station, can be conspicuously displayed to all staff. The size of the notice board shall be at least 600 mm x 800 mm.

25.2 First Aid Equipment

The Contractor shall provide for its employees a stretcher for emergencies and an approved first aid box. The first aid box shall be checked weekly by a responsible person, who shall be appointed by the Contractor, and a record shall be kept of the contents. Any deficient medical supplies shall be promptly replenished by the Contractor.

25.3 Hazard Notices

The Contractor shall display hazard notices in all areas where hazardous conditions prevail or may occur.

25.4 Reporting of Incidents and/or Injuries

All incidents in respect of damage to Works, property or machinery, or injury to persons, shall be reported by the Contractor's SHE Rep by the quickest means possible.

A mandatory incident report form, containing full details of the incident, shall be completed and submitted to the Site Agent and the Department of Labour within twenty four (24) hours of the occurrence of the incident.

26 FIRE PRECAUTIONS ON CONSTRUCTION SITES – REGULATION 27

26.1 A register shall be kept on all Acetylene and Oxygen cylinders used on the site.

26.2 Condition of components, sub-components and safety components (e.g. Flame back arrestors) shall be listed in the register and signed by the construction supervisor at regular intervals as required with time and date stamp.

26.3 Acetylene, Oxygen and LP Gas cylinders shall be stored in suitable places to minimize the risk of fire.

26.4 Suitable storage to be provided for flammable liquids, e.g. petrol, diesel, paint, thinners.

26.5 Smoking shall be prohibited in the workplace and notices posted accordingly.

26.6 Suitable and sufficient firefighting equipment shall be placed in strategic positions in the work place. (On vehicles and other positions as deemed necessary).

26.7 A register shall be kept on type and number of equipment for each site in the Health and Safety File.

26.8 A competent person shall inspect all firefighting equipment.

26.9 A sufficient number of employees shall be trained in the use of firefighting equipment.

26.10 A register shall be kept in the Health and Safety File on site with names of employees and type of firefighting training completed with date.

26.11 Suitable signs shall be erected in work places indicating escape routes.

26.12 Escape routes shall be kept clear. Evacuation plans shall be in Health and Safety File as part of Induction Training.

26.13 Combustible materials shall not accumulate on site.

27 CONSTRUCTION WELFARE FACILITIES – REGULATION 28

27.1 On each site where existing facilities are not present, at least one sanitary facility shall be erected for every 10 workers, one shower for every 15 workers, a changing facility for each sex and sheltered eating areas.

27.2 Mobile toilets with bucket system shall be installed at the site.

27.3 Cleaning of buckets shall be arranged with the City Council.

27.4 Where applicable chemical toilets shall be provided.

27.5 Eating facilities shall be made available in the form of a shaded net, table and chairs.

27.6 For sites in remote areas, transport shall be made available for workers to and from sites.

28 TOXIC MATERIALS

28.1 The Contractor shall exercise all necessary care in the handling of toxic compounds and shall be able to identify the major chemical components in the event of medical treatment being required.

29 HAZARDOUS CHEMICALS AND MATERIALS

29.1 The Contractor shall provide suitable and adequate protective equipment when working in an area where hazardous chemicals and materials are being used.

29.2 The Contractor shall ensure that its employees have familiarised themselves with the hazardous material data sheets applicable to the specific site as well as the location of fire fighting equipment, safety showers / baths and other washing facilities, prior to commencement of work.

30 COMMISSIONING SAFETY PRECAUTIONS

30.1 The Contractor shall ensure that wherever repairs, adjustments or any other work are undertaken on any plant or machinery, the power supply is switched off, disconnected or the plant / machinery disengaged until the work or repairs have been completed.

31 ELECTRICAL INSTALLATIONS AND MACHINERY ON CONSTRUCTION SITES – REGULATION 22

31.1 Before construction commences or any other related works and during the progress thereof adequate steps must be taken to establish the presence of and guard against any danger to the workers in respect to electrical cables or apparatus.

31.2 In areas where it cannot be established where electrical devices are, the employees must use tools of which the handles are insulated or rubber insulated gloves.

31.3 Any temporary electrical installation set up by the principal contractor or contractor must be inspected at least once a week by a competent person. The inspections shall be recorded in a register and kept in the Health and Safety File.

31.4 When working on or next to live electrical Machinery the Principal Contractor or Contractor must provide insulated stands, trestles and mats.

31.5 When Distribution Boards are removed the incoming power supplies, shall be cut by the client's authorized Electrician. The incomer electricity supply feeder shall be earthed by a suitable earth wire or spike to prevent cable of becoming live during the installation of new Distribution Boards.

31.6 No person shall continue with wiring of premises unless the supply to the premises has been rendered dead and the above effective measures has been taken to ensure that such cables remains dead. When rewiring of premises is done the feeder breakers at the other end of the supply cables shall be locked out and the cable earthed to prevent any injury to workers by Electrical Shock.

31.7 A register shall be kept on site in the Health and Safety File indicating all signatures of competent persons switching electricity supply on or off with time and date stamPHS.

31.8 No person shall use or permit to use a portable electric load operating at a voltage exceeding 50V to earth unless it is connected to a source of electrical energy incorporating an earth leakage protection device.

31.9 A register shall be kept on site in which all daily checks of portable electric tools are performed and signed by the responsible person. Checks shall include condition of plug top, power cord, on-off switch and insulation condition of electric tool. All tools shall be numbered and entered accordingly into the register. Condition of tools as listed in the register shall be inspected and signed by the construction supervisor at regular intervals as required by the nature of the equipment.

32 REGISTERS REQUIRED ON SITE

31.1 PPE - Personal Protective Clothing and Equipment issued

31.2 MACHINERY

a) Daily Checklist - Compaction Machinery – Bowmag
b) Daily Checklist - Compaction Machinery – Plate Compactor
c) Daily Construction Vehicle Pre-ignition Checklist – Tractors
d) Daily Checklist - Compaction Machinery – Tipper
e) Daily Checklist - Compaction Machinery – Excavator
f) Daily Construction Vehicle Pre-ignition Checklist – TLB

g) Daily Checklist - Compaction Machinery – Material Handler
h) Daily Checklist - Compaction Machinery – Water Lorry
i) Daily Checklist - Compaction Machinery – Bowmag
j) Daily Checklist - Compaction Machinery – Mini Excavator
k) Daily Checklist - Compaction Machinery – Bobcat
l) Daily Checklist - Compaction Machinery – Concrete Mixer
m) Operators on Construction Vehicles and Mobile Plant
n) Training and Fitness Register

31.3 EQUIPMENT

a) Ladder Inspection Register
b) Scaffold Inspection Register
c) Safety Harness Inspection Register
d) Gas Cutting and Welding Inspection Register

31.4 TOOLS

a) Monthly Checklist on Hand Tools
b) Monthly Checklist on Portable Electrical Equipment

31.5 HOUSE KEEPING

a) Stacking Inspection Register
b) Excavations Inspection Register
c) Monthly Environmental Checklist and Deviation
d) Monthly Hygiene Facility Inspection Register – Mobile Ablutions and Eating areas

31.6 INCIDENTS

a) Incident Register
    I. (Injury/ occupational disease record book
    II. Recording and investigation of incidents)
b) Motor Vehicle Accident Report

31.7 FIRE

a) Fire Extinguishing Equipment Register
b) Register of Trained Employees in Fire Fighting • Fire Awareness Attendance Training Register

31.8 FIRST AID

a) First Aid Box and Equipment Checklist
b) Register of Trained Employees in Basic First Aid
c) First Aid Awareness Attendance Training Register

31.9 TRAINING

a) Induction Training Attendance Registers
b) Risk Assessment Communication Registers

31.10 PERMITS

a) Lock-out Request Forms (Water and Electricity)
b) Lock-out Permits (Water and Electricity)

31.11 INSPECTIONS

a) SHE Coordinator Inspection Register – Monthly checklist and deviations
b) Minutes of Safety Committee Monthly meetings

33 SAFE WORK PROCEDURES REQUIRED IN HEALTH AND SAFETY FILE

a) Stacking of material
b) Working with angle grinders
c) Excavating of trenches
d) Loading and transport of material
e) Working with cement and concrete mixers
f) Driving company vehicles
g) Approaching Construction Vehicles
h) Maintaining Scaffolding
i) Form work repair guide
j) Roof work
k) Correct use of Fire Extinguishers
l) Engaging and working with Contractors
m) Heat Stress
n) Electrical Safety
o) Maintenance of Ladders
p) Silica
q) Trenches and open excavations

34 WRITTEN TRAINING COURSE MATERIAL TO BE FILED IN HEALTH AND SAFETY FILE

a) Induction Training (Workplace awareness – Site specific)
b) Training of operators on Construction Vehicles and Mobile Plant
c) First Awareness
d) Fire Fighting Awareness
e) Toolbox talks on Hand Tools
f) Toolbox talks on Machine Guarding
g) Toolbox talks on Hand Tool Accidents
h) Toolbox talks on Ten Commandments of Safety
i) Toolbox talks on Fire prevention
j) Toolbox talks on lifting materials by hand
k) Toolbox talks on safe loading
l) HIV Training Unit 1 - The Nature of HIV/Aids
m) HIV Training Unit 2 - Transmission of the HI virus
n) HIV Training Unit 3 - HIV/AIDS preventative measures
o) HIV Training Unit 4 – Voluntary HIV/AIDS counselling and testing
p) HIV Training Unit 5 – Living with HIV/AIDS
q) HIV Training Unit 6 – Treatment options for people with HIV/AIDS
r) HIV Training Unit 7 – The rights and responsibilities for workers in the workplace with regard to HIV/AIDS
s) Toolbox talks on Environmental influences

35 TRAINING COURSES TO BE PRESENTED

PHASE 1

a) Toolbox talks on the functions of the SHE Representative
b) Induction Training (Workplace awareness) - Ten Commandments of Safety
c) Training of the Community on Construction Workplace Hazards
d) HIV Training Unit 1 - The Nature of HIV/Aids
e) Toolbox talks on Environmental Awareness

PHASE 2

a) Training of Operators on Construction Vehicles and Mobile Plant
b) First Aid Awareness
c) Fire Fighting Awareness

d) Toolbox talks on Hand Tools and Hand Tool Accidents
e) Toolbox talks on Machine Guarding
f) Toolbox talks on lifting materials by hand
g) Toolbox talks on Safe Loading
h) Toolbox talks on Safety Signs
i) HIV Training Unit 2 - Transmission of the HI virus
j) HIV Training Unit 3 - HIV/AIDS preventative measures
k) HIV Training Unit 4 – Voluntary HIV/AIDS counselling and testing
l) HIV Training Unit 5 – Living with HIV/AIDS
m) HIV Training Unit 6 – Treatment options for people with HIV/AIDS
n) HIV Training Unit 7 – The rights and responsibilities for workers in the workplace with regard to HIV/AIDS
o) Toolbox talks on Environmental Awareness

36 EQUIPMENT ON SITE

a) First Aid Kit (basic)

b) Fire Extinguishers

37 PERSONAL PROTECTIVE CLOTHING

The Contractor shall provide the necessary personal protective clothing for its employees in hazardous areas, appropriate to the nature of the hazard.

37.1 Hard Hats

All employees of the Contractor shall wear hard hats in areas where appropriate hazard notices are displayed. The Engineer shall have the right to ban certain colours if they are similar to the Employer's identifying colours. Hard hats shall not be painted or otherwise defaced.

37.2 Eye Protection

Suitable eye protection shall be worn in areas where appropriate hazard notices are displayed, or when grinding, chipping, breaking, drilling, arc-welding, cutting with oxyacetylene equipment or similar activities are taking place.

37.3 Hearing Protection

Suitable hearing protection shall be worn in areas where appropriate hazard notices are displayed.

37.4 Foot Wear

All employees of the Contractor shall wear undamaged, laced-up safety boots or safety shoes, suitable for the intended purpose, in prescribed areas where appropriate hazard notices are displayed.

37.5 Gloves

All employees of the Contractor shall wear suitable protective gloves in areas where appropriate hazard notices are displayed, or when handling hot or hazardous materials or chemicals.

37.6 Clothing

All employees of the Contractor shall wear suitable protective clothing when working in proximity of machinery, power tools, hazardous materials or chemicals. Proposed Personal Protective Equipment required on this project:

	TYPE	WHEN TO WEAR
1.	Hard Hats	Always
2.	400mm Shoulder Length PVC Gloves	Working with cement
3.	Plastic Trousers	Working with cement
4.	Safety Goggles	Grinding, Cutting Cement
5.	Gumboots	Working in water
6.	Welding helmet	Welding
7.	Gas welding safety goggles	Gas Welding
8.	Safety shoes	Offloading and positioning of materials
9.	Dust Masks	Grinding
10.	Ear Muff	Grinding
11.	Leather apron	Welding/ gas welding

AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, NO. 85 OF 1993

The Employer and the Contractor hereby agree, in terms of the Provisions of Sections 37(2), 9 and 8(2) of the Occupational Health and Safety, Act No. 85 of 1993, hereinafter referred to as 'the Act', that the Contractor as an employer in its own right and in its capacity as Contractor for the execution of the works, shall have certain obligations and that the following arrangements shall apply between them to ensure compliance by the Contractor with the provisions of the Act, namely:-

i) The Contractor undertakes to acquaint the appropriate officials and the employees of the Contractor with all relevant provisions of the Act, and the regulations promulgated in terms of the Act, and
ii) The Contractor undertakes that all relevant duties, obligations and prohibitions imposed in terms of the Act and regulations will be fully complied with, and
iii) The Contractor hereby accepts sole liability for such due compliance with the relevant duties, obligations and prohibitions imposed by the Act and regulations and expressly absolves the Employer and the Employer's Consulting Engineers from being obliged to comply with any of the aforesaid duties, obligations and prohibitions.
iv) The Contractor shall be obliged to report forthwith to the Employer any investigation, complaint, or criminal charge which may arise as a consequence of the provisions of the Act and regulations pursuant to work performed on behalf of the Employer, and shall, on written demand, provide full details in writing of such investigation, complaint or criminal charge.

SIGNED at ..... on this ..... day of

..... 20.....

For and on behalf of the Contractor:

_____ Print Name: _____

AS WITNESSES:

1. _____ 2. _____

Print Name: _____ Print Name: _____

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

For and on behalf of the Employer:

_____ Print Name: _____

AS WITNESSES:

1. _____ 2. _____

Print Name: _____ Print Name: _____

MANDATORY NOTIFICATION OF CONSTRUCTION WORK
IN TERMS OF REGULATION 3 OF THE CONSTRUCTION REGULATIONS (2014) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, NO. 85 OF 1993

This document is to be forwarded by the Contractor to the Office of the Department of Labour prior to commencement of the Works. The Contractor shall ensure that all Sub-Contractors accountable to him forward similar documents to the mentioned Authority prior to commencement with the Works.

A. Particulars of Contractor

Name:
.....

Postal Address :
.....

Compensation Fund Registration No.
.....

B. Particulars of Contractor's MD/ CEO/Managing Member of cc

Name:
.....

ID No.
.....

Postal Address:
.....

Tel No. ..... Cell phone No. .....

C. Particulars of Contractor's designated Construction Safety Officer appointed in terms of Clause 6(1) as the Construction Supervisor, with the duty of supervising health and safety at the Works:

Name:
.....

ID No.
.....

Postal Address:

.....

Tel No. ..... Cell phone No. .....

D. Particulars of Contractor's sub-ordinate supervisors at the Works, appointed in terms of Clause 6 (2):

Name	ID No.	Postal Address	Tel No.	Cell phone no.

E. Physical address of the Works (Construction Site)

.....
.

.....
.

Co-ordinates (if available) Latitude (S)
.....

Longitude (E)
.....

F. Nature of the construction work:

.....
.

.....
.

G. Expected commencement date: …….

H. Expected completion date: ……

I. Estimated maximum number of persons on the construction site.
……..

J. Planned number of Sub-Contractors on the construction site accountable to Principal Contractor:

.....

Name(s) of Sub-Contractors.

.....
.

.....
.

.....
.

K. Particulars of Employer (client)

Name: ……

Postal Address:
.....

.....
.

Name of Employer's designated Representative / Agent.

.....
.

Tel No. ..... Cell phone No. .....

L. Particulars of Design Engineer

Name: ……

Postal Address:
.....

Tel No. ..... Cell phone No. .....

Signed at ..... on this ..... day of ……..…. 20.....

INFORMATION TO BE SUPPLIED BY THE TENDERER

This following forms shall be completed by the Tenderer.

A. Particulars of WCF

Compensation Fund Registration No. .....

Expiring Date

.....

B. Particulars of Contractor's designated Construction Safety Officer appointed in terms of Clause 6(1) as the Construction Supervisor, with the duty of supervising health and safety at the Works:

Name:

.....

ID No.

.....

Postal Address:

.....

Tel No. ..... Cell phone No. .....

C. Particulars of Contractor's Health and Safety Representatives:

Name: ……Qualifications……..

Name: ……Qualifications……..

Name: ……Qualifications……..

D. Particulars of First Aider

Name:

.....

ID No.

.....

Valid First Aid Certificate: Yes……

No……..

E. Particulars of Fire Fighter

Name:

.....

ID No.

.....

Valid Fire Training Certificate: Yes……..

No……..

F. Training Records of Construction Vehicle Operators

Name: ……Qualifications……..

Name: ……Qualifications……..

Name: ……Qualifications……..

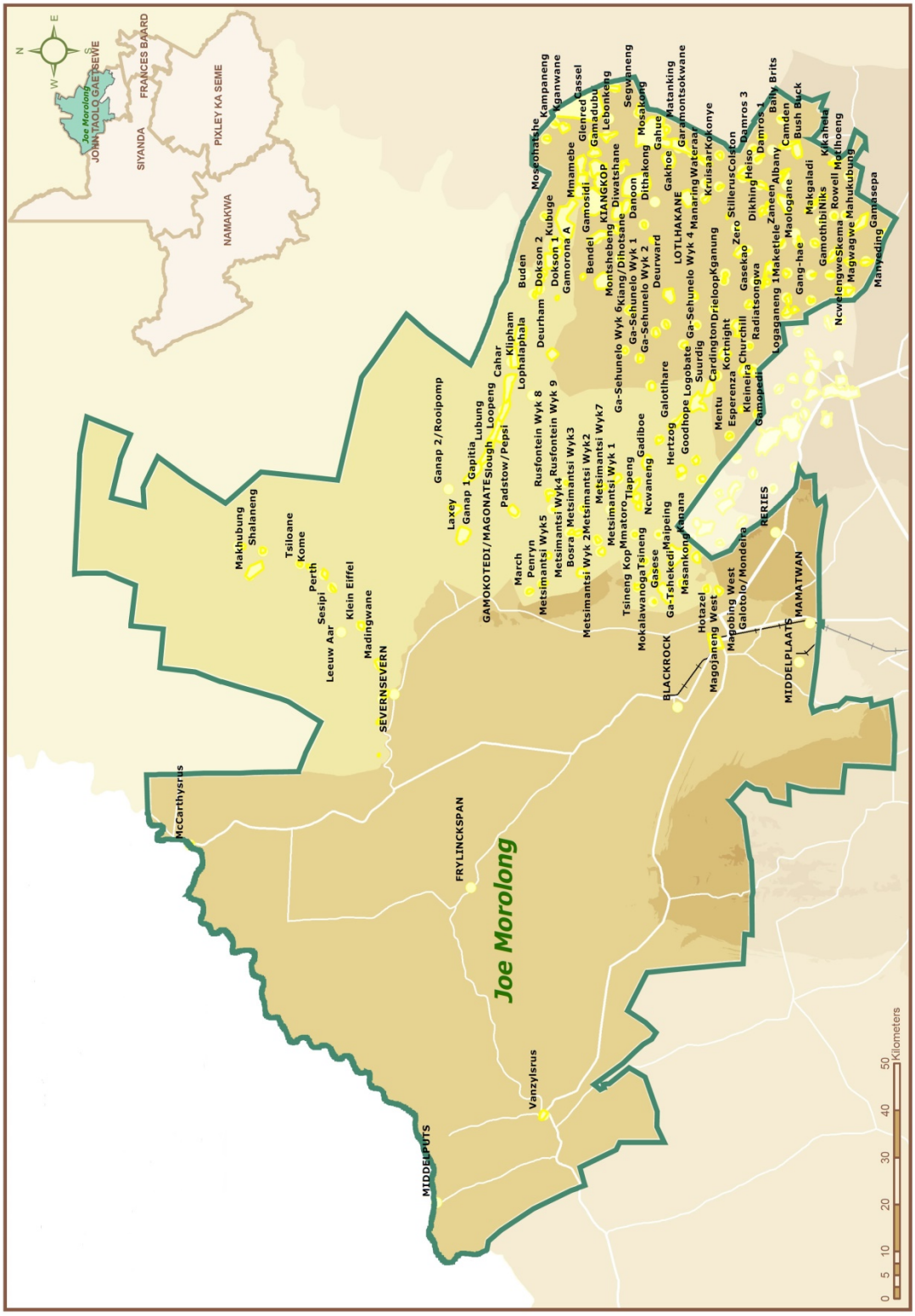
G. Incident Statistics:

Incidents during last 12 months	Date	Degree of Injury	Production days lost	Costs involved.

1				
2				
3				
4				
5				
6				
7				

PART C4: SITE INFORMATION

The Provision of Borehole Refurbishment Services will take place at different locations throughout the municipal area over the next three (3) years.



JOE MOROLONG LOCAL MUNICIPALITY

BID NO : B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

PORTION 2: THE CONTRACT

PART C5
MBD FORMS

SECTION C5.1 : DECLARATION OF PROCUREMENT ABOVE R10 MILLION (ALL APPLICABLE TAXES INCLUDED) (MBD5)

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

1. Are you by law required to prepare annual financial statements for auditing? *YES / NO
* Delete if not applicable

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

……

2 Do you have any outstanding undisputed commitments for municipal services towards any municipality for more than three months or any other service provider in respect of which payment is overdue for more than 30 days? *YES / NO
* Delete if not applicable

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

2.2 If yes, provide particulars.

……

……

……

3 Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract? *YES / NO
* Delete if not applicable

3.1.1 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
* Delete if not applicable

4.1 If yes, furnish particulars

……

……

……

CERTIFICATION

I, THE UNDERSIGNED (NAME)

FULL NAME

CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM TRUE AND CORRECT.

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

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

SECTION C5.2 : DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS (MBD6.2)

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

Before completing this declaration, bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2022, the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 (Edition 1) and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)].

1. General Conditions

1.1. Preferential Procurement Regulations, 2022 make provision for the promotion of local production and content.

1.2. Regulation 8.(2) prescribes that in the case of designated sectors, organs of state must advertise such tenders with the specific bidding condition that only locally produced or manufactured goods, with a stipulated minimum threshold for local production and content will be considered.

1.3. Where necessary, for tenders referred to in paragraph 1.2 above, a two stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.

1.4. A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.

1.5. The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:

LC = [1 - x / y] * 100

Where
x is the imported content in Rand
y is the bid price in Rand excluding value added tax (VAT)

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

The SABS approved technical specification number SATS 1286:2011 is accessible at no cost on:

http://www.thdti.gov.za/industrial development/ip.jsp

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

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

Description of services, works or goods	Stipulated minimum threshold
	%
	%
	%
	%
	%
	%
	%
	%
	%
	%
	%
	%

3. Does any portion of the goods or services offered have any imported content?
(***Tick applicable box***)

YES		NO	

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

The relevant rates of exchange information is accessible on www.reservebank.co.za

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

Currency	**Rates of exchange**
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

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

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

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

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

IN RESPECT OF BID NO: B239-2024

ISSUED BY: #EntityNameUC#

NB

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

2 Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on http://www.thdti.gov.za/industrial development/ip.jsp. Bidders should first complete Declaration D. After completing Declaration D, bidders should complete Declaration E and then consolidate the information on Declaration C. **Declaration C should be submitted with the bid documentation at the closing date and time of the bid in order to substantiate the declaration made in paragraph (c) below.** Declarations D and E should be kept by the bidders for verification purposes for a period of at least 5 years. The successful bidder is required to continuously update Declarations C, D and E with the actual values for the duration of the contract.

I, the undersigned,

FULL NAMES

do hereby declare, in my capacity as:

CAPACITY

of

NAME OF BIDDER ENTITY

, the following:

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

(b) I have satisfied myself that:

(i) the goods/services/works to be delivered in terms of the above-specified bid comply

with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286:2011; and

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

Bid price, excluding VAT (y)	R
Imported content (x), as calculated in terms of SATS 1286:2011	R
Stipulated minimum threshold for local content (paragraph 2 above)	
Local content %, as calculated in terms of SATS 1286:2011	

If the bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above.
The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E.

(d) I accept that the Procurement Authority / Institution has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011.

(e) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Institution imposing any or all of the remedies as provided for in the Preferential Procurement Regulations, 2022 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

SIGNATURE: _____ **DATE:** _____

WITNESS No. 1 _____ **DATE:** _____

WITNESS No. 2 _____ **DATE:** _____

SECTION C5.3 : CERTIFICATE OF INDEPENDENT BID DETERMINATION (MBD9)

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.

2 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.

3 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 BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

B239-2024 : Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

in response to the invitation for the bid made by:

JOE MOROLONG LOCAL MUNICIPALITY

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.

JOE MOROLONG LOCAL MUNICIPALITY

BID NO : B239-2024

Panel of Contractors for the Borehole Refurbishment Services (3 Years Period)

PORTION 2: THE CONTRACT

PART C6
Supply Chain Management Policy

JOE MOROLONG LOCAL MUNICIPALITY

SUPPLY CHAIN POLICY 2024/25 FY

JOE MOROLONG LOCAL MUNICIPALITY

SUPPLY CHAIN POLICY

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

MUNICIPAL SUPPLY CHAIN MANAGEMENT POLICY

LOCAL GOVERNMENT: MUNICIPAL FINANCE MANAGEMENT ACT, 2003 Date of adoption: *……. council meeting*

Council resolves in terms of section 111 of the Local Government Municipal Finance Management Act (No. 56 of 2003), to adopt the following proposal as the Supply Chain Management Policy of the Joe Morolong Local Municipality.

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DEFINITIONS

1. In this Policy, unless the context otherwise indicates, a word or expression to which a meaning has been assigned in the Act has the same meaning as in the Act, and –

"Municipality" means the Joe Morolong Local Municipality

"Municipal entity" has the meaning assigned to it by Section 1 of the Municipal systems Act, 2000.

"other applicable legislation" means any other legislation applicable to municipal supply chain management, including -

[a] the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000);

(b) the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003); and

[c] the Construction Industry Development Board Act, 2000 (Act No.38 of 2000);

"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 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;

"**Sole Provider**"-means a provider of specialized or exclusive goods/services who has a sole distribution / patent /manufacturing rights and copy rights.
"senior manager" means a director appointed in terms of section 56 of the Municipal Systems Act, 2000 or an acting director appointed by the Accounting Officer.
"The Act" means the Local Government: Municipal Finance Management Act, 2003 (Act No. 56 of 2003);
"**all applicable taxes**" includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;
"THE REGULATIONS" means the Local Government: Municipal Finance Management Act, 2003, Municipal Supply Chain Management Regulations published by Government Notice 10684 of 2017;
B-BBEE – means broad based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
B-BBEE STATUS LEVEL OF CONTRIBUTOR – means the B-BBEE status of an entity in terms of a code of good practice on black economic empowerment issued in terms of section 9(1) of the Broad Based Black Economic Empowerment Act; "Black People"**; has the meaning assigned to it in section 1 of the Broad-Based Black** Economic Empowerment Act;
BLACK DESIGNATED GROUPS – has the meaning assigned to it in the codes of good practice issued in terms of section 9(1) of the Broad Based Black Economic Empowerment Act;
BROAD BASED BLACK ECONOMIC EMPOWERMENT ACT – means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003)
CO-OPERATIVE – means a co-operative registered in terms of section 7 of the Co-operatives ACT, 2005 (Act No. 14 of 2005);
DESIGNATED GROUP means –
(a) black designated groups;
(b) black people;
(c) women;
(d) people with disabilities, or
(e) small enterprises, as defined in section 1 of the National Small Enterprise Act, (Act No. 102 of 1996);
"DESIGNATED SECTOR" – means a sector, sub-sector or industry or product designated in terms of regulation 8(1) (a)
EME means and exempted of the micro enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
"FUNCTIONALITY" – means the ability of a tenderer to provide goods or services in accordance with specifications as set out in the tender documents;
MILITARY VETERAN – has the meaning assigned to it in section 1 of the Military Veterans Act, 2011 (Act No. 18 of 2011);
NATIONAL TREASURY has the meaning assigned to it in section 1 of the Public Finance Management Act, 1999 (Act No. 1 of 1999);

PEOPLE WITH DISABILITIES - has the meaning assigned to it in section 1 of the Employment Equity Act, 1998 (Act No. 55 of 1998);
PRICE – includes all applicable taxes less all unconditional discounts,
"PROOF OF B-BBEE STATUS LEVEL OF CONTRIBUTOR "– means –
(a) the B-BBEE status level certificate issued by an authorised body or person:
(b) a sworn affidavit as prescribed by the B-BBEE Codes of Good Practice, or
(c) any other requirement prescribed in terms of the Broad-Based Black Economic Empowerment Act;
QSE – means a qualifying small business enterprise in terms of code of good practice on black economic empowerment issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
RURAL AREA - means
(a) a sparsely populated area in which people farm or depend on natural resources, including villages and small towns that are dispersed through the area; or
(b) an area including a large settlement which depends on migratory labour and remittances and government social grants for survival, and may have a traditional land tenure system.
STIPULATED MINIMUM THRESHOLD – means the minimum threshold stipulated in terms of regulation 8 (1) (b);
TOWNSHIP – means an urban living area that any time from the late 19th century until 27 April 1994, was reserved for black people, including areas developed for historically disadvantaged individuals post 27 April 1994;
TREASURY – has the meaning assigned to it in section 1 of the Public Finance Management Act, 1999 (Act No. 1 of 1999); and
YOUTH – has the meaning assigned to it in section 1 of the National Youth Development Agency Act, 2008 (Act No. 54 of 2008)
"**accredited"** means goods / services that are officially recognized, are generally accepted
or having a guaranteed quality.
"competitive bid" means a bid in terms of a competitive bidding process;
"competitive bidding process" means a competitive bidding process referred to in paragraph 12 (1) (d) of this Policy;
"Accounting officer" means the Accounting Officer referred to in section 60 of the Municipal Finance Management Act, No. 56 of 2003, in relation to a municipal entity, means the official referred to in section 93, and includes a person acting as the accounting officer.
"Accredited Agent' means a provider who is authorized to deliver certain goods / services and can be trading in a specific area; however, an accredited agent is not a sole provider.
"emergency procurement" emergency cases are cases where immediate action is necessary in order to avoid dangerous or risky situation (life threatening) or misery such as floods or fires.
"exceptional / urgent cases" exceptional cases are cases where early delivery is of critical importance and the invitation of competitive bids is either impossible or impractical.

However, a lack of proper planning should not be constituted as an urgent case subject to the approval of the Accounting Officer. The nature of the urgency and the details of the justifiable procurement must be recorded and the AO to approve.

"final award", in relation to bids or quotations submitted for a contract, means bids or quotations submitted for a contract, means the final decision on which-bid or quote to accept;

"formal written price quotation" means quotations referred to in paragraph 12 (1) (c) of this Policy;

"Fruitless and wasteful expenditure"- is defined **in section 1 of the MFMA as follows:** expenditure made in vain and would have been avoided had reasonable care been exercised;

"Irregular expenditure"- as contemplated in MFMA section 32 and refers to the;
-Municipal Finance Management Act, Act56 of 2003, and its regulations
-Municipal Systems Act, Act 32 of 2000, and its regulations
-Public Office-Bearers Act, Act20 of 1998, and its regulations; and
-The municipality's supply chain management policy, and any by-laws giving effect to that policy.

"long term contract" means a contract with a duration period exceeding one year;

"list of accredited prospective providers" means the list of accredited prospective providers which the municipality must keep in terms of paragraph 14 of this policy;

"Central Supplier Database (CSD)"- is a single database to serve as the source of all supplier information for all spheres of government. The purpose of centralising government's supplier database is to reduce duplication of effort and cost for both supplier and government while enabling electronic procurement processes.

e-Tender Publication Portal - facilitates all government institutions to publish their tenders, corrigendum and award notices on a single platform. This portal gives FREE access to public sector tender opportunities in South Africa.

"Transversal contract" means a contract arranged for more than one dept/mun or for more than one level of government e.g. National and Provincial Government.

"Treasury guidelines" means any guidelines on supply chain management issued by the Minister in terms of section 168 of the Act;

"Unauthorized expenditure" - means any expenditure incurred by a municipality otherwise than in accordance with section 15 or 11 [3] and includes-

[a] overspending of the total amount appropriated in the municipality's approved budget;

[b] overspending of the total amount appropriated for a vote in the approved budget;

[c] expenditure from a vote unrelated to the department or functional area covered by the vote;

[d] expenditure of money appropriated for a specific purpose, otherwise than for that specific purpose;

[e] spending of an allocation referred to in paragraph [b], [c] or [d] of the definition of "allocation" otherwise than in accordance with any conditions of the allocation; or
[f] a grant by the municipality otherwise than in accordance with the MFMA.

CHAPTER 1
IMPLEMENTATION OF SUPPLY CHAIN MANAGEMENT POLICY

Supply chain management policy

2. (1) All officials and other role players in the supply chain management system of the municipality **must** implement this Policy in a way that

(a) gives effect to -
  (i) section 217 of the Constitution; and
  (ii) Part 1 of Chapter 11 and other applicable provisions of the Act;
(b) is fair, equitable, transparent, competitive and cost effective;
(c) complies with -
  (i) the Regulations; and
  (ii) any minimum norms and standards that may be prescribed in terms of section 168 of the Act;
(d) is consistent with other applicable legislation;

- Broad Based Black Economic Empowerment Act [B-BBEEA];
-Corruption Act, 1998 – anti-corruption measures and practices;
- Competition Law and Regulations;
- Promotion of Administrative Justice Act, 2000;
- National Archives of South Africa Act, 1996;
- National Small Business Act;
- Construction Industry Development Board Act, 2000 [Act no 38 of 2000].
- Preferential Procurement Policy Framework Act

(e) does not undermine the objective for uniformity in supply chain management systems between organs of state in all spheres; and
(f) is consistent with national economic policy concerning the promotion of investments and doing business with the public sector.

(2) The municipal entity must, in addition to complying with subparagraph (1), apply this Policy, to the extent determined by the parent municipality, in a way that and

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

that is consistent with the supply chain management policy of the municipality.

(3) This Policy applies when the municipality-

(a) procures goods or services;

(b) disposes goods no longer needed;

(c) selects contractors to provide assistance in the provision of municipal services otherwise than in circumstances where Chapter 8 of the Municipal Systems Act applies; or

(d) selects external mechanisms referred to in section 80 (1) (b) of the Municipal Systems Act for the provision of municipal services in circumstances contemplated in section 83 of that *Act.*

(4) This Policy, except were provided otherwise, does not apply in respect of the procurement of goods and services contemplated in section 110(2) of the Act, including

(a) water from the Department of Water Affairs or a public entity, another municipality or a municipal entity; and

(b) electricity from Eskom or another public entity, another municipality or a municipal entity.

Amendment of the supply chain management policy

3. (1) The accounting officer must -

(a) at least annually review the implementation of this Policy; and

(b) when the accounting officer considers it necessary, submit proposals for the amendment of this Policy to the council.

(2) If the accounting officer submits proposed amendments to the council that differs from the model policy issued by the National Treasury, the accounting officer must -

(a) ensure that such proposed amendments comply with the Regulations; and

(b) report any deviation from the model policy to the National Treasury and the relevant provincial treasury.

(3) When amending this supply chain management policy, the need for uniformity in supply chain practices, procedures and forms between organs of state in all spheres, particularly to promote accessibility of supply chain management systems for small businesses must be taken into account.

Delegation of supply chain management powers and duties

4. (1) The council hereby delegates all powers and duties to the accounting officer which are necessary to enable the accounting officer-

(a) to discharge the supply chain management responsibilities conferred on accounting officers in terms of -

(i) Chapter 8 or 10 of the Act; and
(ii) this Policy;

(b) to maximise administrative and operational efficiency in the implementation of this Policy;

(c) to enforce reasonable cost-effective measures for the prevention of fraud, corruption, favouritism and unfair and irregular practices in the implementation of this Policy; and

(d) to comply with his or her responsibilities in terms of section 115 and other applicable provisions of the Act.

(2) Sections 79 and 106 of the Act apply to the sub delegation of powers and duties delegated to an accounting officer in terms of subparagraph (1).

(3) The accounting officer may not sub delegate any supply chain management powers or duties to a person who is not an official of the municipality or to a committee which is not exclusively composed of officials of the municipality.

(4) This paragraph may not be read as permitting an official to whom the power to make final awards has been delegated, to make a final award in a competitive bidding process otherwise than through the committee system provided for in paragraph 26 of this Policy.

Sub delegations

5. (1) The accounting officer may in terms of section 79 or 106 of the Act sub delegate any supply chain management powers and duties, including those delegated to the accounting officer in terms of this Policy, but any such sub delegation must be consistent with subparagraph (2) of this paragraph and paragraph 4 of this Policy.

(2) The power to make a final award -

(a) above R 10 million (VAT included) may not be sub delegated by the accounting officer;

(b) above R2 million (VAT included), but not exceeding R10 million (VAT included), may be sub delegated but only to -

(i) The Chief Financial Officer;
(ii) A senior manager;(Director)
(iii) a bid adjudication committee comprises of:
Chief Financial Officer
Director technical services

Director economic development, planning and tourism
Director Community Services

(c) not exceeding R2 million (VAT included) may be sub delegated but only to -
(i) the chief financial officer;
(ii) a senior manager;
(iii) a manager -directly accountable to the chief financial officer or a senior manager; or -
(iv) a bid adjudication committee comprises of:
Chief Financial Officer
Director technical services
Director economic development, planning and tourism
Director community services
Head of Supply Chain

(3) An official or bid adjudication committee to which the power to make final awards has been sub delegated in accordance with subparagraph (2) must within five days of the end of each month submit to the official referred to in subparagraph (4) a written report containing particulars of each final award made by such official or committee during that month, including-
(a) the amount of the award;
(b) the name of the person to whom the award was made; and
(c) the reason why the award was made to that person.

(4) A written report referred to in subparagraph (3) must be submitted
(a) to the accounting officer, in the case of an award by -
(i) the chief financial officer;
(ii) a senior manager; or
(iii) a bid adjudication committee of which the chief financial officer or a senior manager is a member; or
(b) to the chief financial officer or the senior manager responsible for the relevant bid; in the case of an award by-
(i). a manager referred to in subparagraph (2)(c)(iii); or·
(ii) a bid adjudication committee of which the chief financial officer or a senior manager is not a member.

(5) Subparagraphs (3) and (4) of this policy do not apply to procurements out of petty cash.

(6) This paragraph may not be interpreted as permitting an official to whom the power to make final awards has been sub delegated, to make a final award in a competitive bidding process otherwise than through the committee system provided for in paragraph 26 of this Policy.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

(7) No supply chain management decision-making powers may be delegated to an advisor or consultant.

Oversight role of council

6 (1) The council reserves its right to maintain oversight over the implementation of this Policy.

(2) For the purposes of such oversight the accounting officer must -

(a) (i) within 30 days of the end of each financial year, submit a report on the implementation of this Policy and the supply chain management policy to the council of the municipality.

(ii) whenever there are serious and material problems in the implementation of this Policy, immediately submit a report to the council, who must then submit the report to the accounting officer of the municipality for submission to the council

(3) The accounting officer must, within 10 days of the end of each quarter, submit a report on the implementation of the supply chain management policy to the mayor.

(4) The reports must be made public in accordance with section 21A of the Municipal Systems Act.

(5) No councillor may be a member of bid committee or any other committee, evaluating or approving quotations or bids nor attending any meeting of such committees as an observer in terms of section 117 of the MFMA.

Supply chain management unit

7. (1) A supply chain management unit is hereby established to implement this, Policy.

(2) The supply chain management unit operates under the direct supervision of the chief financial officer or an official to whom this duty has been delegated in terms of section 82 of the Act.

Training of supply chain management officials

8. (1) The training of officials involved in implementing this Policy should be in accordance with any Treasury guidelines on supply chain management training.

CHAPTER 2

SUPPLY CHAIN MANAGEMENT SYSTEM

11. Format of supply chain management systems

(1) This Policy provides systems for -
- (i) demand management;
- (ii) acquisition management;
- (iii) logistics management;
- (iv) disposal management;
- (v) risk management; and
- (vi) performance management.

Part 1: *Demand management*

System of demand management

10 (1) The accounting officer must establish and implement an appropriate demand management system in order to ensure that the resources required by the municipality support its operational commitments and its strategic goals outlined in the Integrated Development Plan

(2) The demand management system must -

(a) include timely planning and management processes to ensure that all goods and services required by the municipality are quantified, budgeted for and timely and effectively delivered at the right locations and at the critical delivery dates, and are of the appropriate quality and quantity at a fair cost;

(b) take into account any benefits of economies of scale that may be derived in the case of acquisitions of a repetitive nature; and

(c) provide for the compilation of the required specifications to ensure that its needs are met.

(d) To undertake appropriate industry analysis and research to ensure that innovations and technological benefits are maximized.

(e) The municipality must compile a Procurement Plan containing all planned procurement for the financial year in respect of the procurement of goods, services and infrastructure projects which exceed R300 000 [all applicable taxes included]

per case as described in the Supply Chain Management Guide for Accounting Officers. The procurement plan must be finalized on the 1 July every year. The relevant information should preferably be furnished in the format contained in the MFMA Circular 62 (Annexure A and B).

(3) Framework for Infrastructure Procurement

The framework for infrastructure procurement outlines the minimum infrastructure procurement policy requirements for municipal planning and implementation.
The strategic direction set in the Integrated Development Plan (IDP) informs the framework for infrastructure procurement. For example, procurement strategies must be aligned to the municipality's developmental and internal transformation needs, as specified in the IDP.

3.1 Minimum Requirement for Infrastructure Procurement

a) Infrastructure procurement must be undertaken in accordance with all applicable Infrastructure Procurement related legislation and this Framework.
b) Infrastructure procurement must be implemented in accordance with the institutional Supply Chain Management System, which promotes differentiated procurement for infrastructure.
c) Infrastructure procurement must be implemented in accordance with the procurement gates prescribed in clause 3.1.2 below.
d) The Accounting Officer must ensure that a budget is available for the duration of the project, in line with MFMA provisions for capital and operating budgets.
e) The Accounting Officer must ensure that cash flow management processes are in place to meet payment obligations within the time periods specified in the contract.
f) Procurement gates provided in 6.3 below must be used, as appropriate, to:
(i) Authorise commencement of activities that lead to the next control gate;
(ii) Confirm conformity with requirements; and/or
(iii) Provide information
g) The authorisation to proceed to the next procurement gate must be given by a delegated person or body. The delegated person or body must be able to apply relevant built environment knowledge and skill to achieve the intended results required at the relevant procurement gate. The level of detail contained in the documentation on which a decision to proceed to the next procurement gate is made, must be sufficient to enable an informed decision.
h) The Accounting Officer must develop and implement effective and efficient emergency procurement procedures, including relevant approval delegation, in compliance with relevant legislation.
i) The Accounting Officer must develop and implement an effective and efficient infrastructure disposal policy in line with the Municipal Asset Transfer

Regulations. The institution may consider disposal strategies aligned to their internal disposal policy, prior to proceeding with the procurement strategy.

j) The Accounting Officer must keep records of Procurement Gate Approvals, in a manual or electronic format, with the following minimum requirements:
   (i) Procurement gate;
   (ii) Delegated person/s or body;
   (iii) Date on which the approval request was received;
   (iv) Date on which the approval was actioned; and
   (v) Signature of the delegated person or body.

k) All assets must be recorded in the municipal asset register as required by the GRAP standards.

3.1.1 Infrastructure Procurement Gates (PG1)

a) Initiate a procurement process;

b) **Minimum Requirement for PG 1**:

(i) Establish and clarify the procurement need, aligned to the municipality's development and transformation priorities specified in the IDP.

(ii) Determine a suitable title for the procurement, to be applied as the project description.

(iii) Prepare the broad scope of work for the procurement.

(iv) Perform market analysis.

(v) Estimate the financial value of proposed procurement and contract for budgetary purposes, based on the broad scope of work.

(vi) Confirm the budget.

(vii) Compliance with section 33 of the MFMA with respect to community and stakeholder consultation.

c) **PG 1 is complete when a designated person or body makes the decision to proceed/not to proceed, with the procurement of the infrastructure.**

3.1.2 Procurement Gate 2 for PG 2:

a) Approve procurement strategy to be adopted.

b) **Minimum Requirement for PG 2:**

1. Develop a procurement strategy aligned to the institutional procurement strategy:
   (i) Establish contracting and pricing strategy comprising of an appropriate allocation of responsibilities and risks; and the methodology for contractor payments.
   (ii) Identify service required for works.
   (iii) Decide on contracting strategy.
   (iv) Decide on pricing strategy.
   (v) Decide on form of contract.
   (vi) Establish opportunities for promoting preferential procurement in compliance with legislative provisions and the Construction Sector Code.

c) **PG 2 is complete when a delegated person or body approves the procurement strategy that is to be adopted.**

3.1.3 Procurement Gate 3 (PG 3)

a) Approve procurement documents.

b) **Minimum requirements for PG 3:**

1) Prepare procurement documents that are compatible with:

(i) Approved procurement strategies.

(ii) Project management design documentation.

c) **PG 3 is complete when the Bid Specification Committee approves the procurement document.**

3.1.4 Procurement Gate 4 (PG 4)

a) Confirm that cash flow processes are in place to meet projected contractual obligations.

b) Minimum requirement for PG 4

1) Confirm that cash flow processes are in place to meet contractual obligations.

2) Establish control measures for settlement of payments within the time period specified in the contract.

c) **PG 4 is complete when a delegated person or body confirms in writing that cash flow processes are in place; and control measures are established for the procurement to take place.**

Part 2: *Acquisition management*

System of acquisition management

11. (1) The accounting officer must implement the system of acquisition management set out in this Part in order to ensure -

(a) that goods and services are procured by the municipality in accordance with authorised processes only;

(b) that expenditure on goods and services is incurred in terms of an approved budget in terms of section 15 of the Act;

(c) that the threshold values for the different procurement processes are complied with; ·

(d) that bid documentation, evaluation and adjudication criteria, and general conditions of a contract, are as per National and Provincial prescripts.

(e) that the preference point system used in accordance with the Preferential Procurement Regulations 2022.

(f) that any Treasury guidelines on acquisition management are properly taken into account.

(g) Verification of bids in excess of R10 million

Prior to advertisement:

Verification by the CFO

The senior manager responsible for a vote must submit to the CFO:

-proof that budgetary provision exists for the procurement of the goods/services and / or infrastructure projects;

- any ancillary budgetary implications related to the bid;
- any multi -year budgetary implications;

Prior to the award of a bid

Contracts above the value of R 10 million [all applicable taxes included] may only be awarded to the preferred bidder after the CFO has verified in writing that budgetary provision exists for the acquisition of the goods, infrastructure projects and /or services and that it is consistent with the Integrated Development Plan.

(h) Publication of awards in respect of advertised competitive bids [above the threshold value of R 300 00].

The following information on the successful bids must be placed on the municipal website:

-Contract numbers and description of goods, services or infrastructure projects;
- Names of the successful bidders and the B-BBEE level of contribution claimed;
- Brand names and dates for completion of contracts.

(i) Functionality

Adhere to the revised guidelines when functionality is included as a criterion in the evaluation of bids [National Treasury note issued in September 2010].

(i)Clear indication must be given in bid documents if bids will be evaluated on functionality.

(ii) Evaluation criteria must be objective.

(iii) The weight of each criterion, applicable values, and the minimum qualifying score [for each bid on its own merit] must be indicated in the bid documents.

(iv) Bidders failing to achieve the qualifying score for functionality must be disqualified.

(v) Bidders achieving the minimum qualifying score must be evaluated further in terms of points for price and B-BBEE status level contribution

(vi) Must be determined separately for each tender; and

May not be so-

- low that it may jeopardise the quality of the required goods and services; or
- high that it is unreasonably restrictive.

(vii) Points scored for functionality must be rounded off to the nearest two decimal places.

(2) When procuring goods or services contemplated in section 110(2) of the Act must make public the fact that it procures such goods and services otherwise than through its supply chain management system, including -

(a) the kind of goods or services; and

(b) the name of the supplier.

11.(3) Framework for Infrastructure Procurement

The framework for infrastructure procurement outlines the minimum infrastructure procurement policy requirements for municipal planning and implementation. The strategic direction set in the Integrated Development Plan (IDP) informs the framework for infrastructure procurement. For example, procurement strategies must be aligned to the municipality's developmental and internal transformation needs, as specified in the IDP.

11.(3) (1) Procurement Gate 5 (PG 5)

a) Solicit tender offers.

b) **Minimum requirements for PG 5**

(I)Invite contractors to submit tender offers.

(ii) Receive tender offers.

(iii) Record tender offers.

(iv) Safeguard tender offers.

c) **PG 5 is complete when tender offers received are recorded and safeguarded by a delegated person from the SCM unit.**

11.(3) (2) Procurement Gate 6 (PG 6)

a) Evaluate tender offers premised on undertakings and parameters established in procurement documents.

b) **Minimum Requirement for PG 6**:

(i) Determine whether tender offers are complete.

(ii) Determine whether tender offers are responsive.

(iii) Evaluate tender submissions.

(iv) Review minimum compliance requirements for each tender.

(v) Perform a risk analysis.

(vi) Prepare a report on tender offers received, and on their achievement of minimum compliance.

c) **PG 6 is complete when the chairperson of the Bid Evaluation Committee approves the BEC report.**

11.(3)(3) Procurement Gate 7 (PG 7)

a) Award the contract.

b) **Minimum Requirement for PG 7:**

(i)Bid adjudication committee review of the BEC evaluation report.
(ii) Bid Adjudication Committee makes an award.
(iii) Accounting Officer Approval of the tender process.
(iv) Notify successful tenderer and unsuccessful tenderers of the outcome.
(v) Sign contract document.
(vi) Formally accept tender offer.

c) **PG 7 is complete when the Accounting Officer, or the Bid Adjudication Committee where delegated, confirms that the tenderer has provided evidence of complying with all requirements stated in the tender data and formally accepts the tender offer in writing, and issues the contractor with a signed copy of the contract.**

Range of procurement processes

12. (1) A supply chain management policy must, subject to regulation **11(2),** provide for the procurement of goods and services by way of –

(a) petty cash purchases, up to a transaction value of **R2000** (VAT included);

(c) formal written price quotations for procurement of a transaction value over—

(i) R2000 up to R300 000 (VAT included)

(d) a competitive bidding process for—

(i) procurement above a transaction value of R300 000 (VAT included)

(2) A supply chain management policy may allow the accounting officer in writing –

(a) to lower, but not to increase, the different threshold values specified in sub regulation (1); or

(b)to direct that –
(ii) formal written price quotations be obtained for any specific procurement of a transaction value lower than **R10** 000; or

(iii) a competitive bidding process be followed for any specific procurement of a transaction value lower than the competitive bidding thresholds specified in sub regulation (1)(c)(i) to (iii).

(c) formal written price quotations for procurements of a transaction value over **R2** 000 **up to** R300 000 (VAT included); and a competitive bidding process for-

(d)(i) procurements above a transaction value of **R300** 000 (VAT included);
(3)(i) Goods or services may not be deliberately be split into parts or items of a lesser value merely to avoid complying with the requirements of the policy.
(ii) When determining transaction values, a requirement for goods or services consisting of different parts to items must as far as possible be treated and dealt with single transaction.

General preconditions for consideration of written quotations or bids

13. A written quotation or bid may not be considered unless the provider who submitted the quotation or bid -

(a) has furnished that provider's -

(i) full name;

(ii) identification number or company or other registration number; and

(iii) tax reference number and VAT registration number, if any;

(iv) registered on Central Supplier Database (CSD) with a tax compliant status;

(v) check in respect of the recommended bidder whether municipal rates and taxes and municipal service charges are not in arrears for more than three [3] months; or if the bidder lives in the rural area, he or she should get proof of residence from the chief of the village of the area

(vi) requirements for construction and engineering related bids should be awarded according to CIDB regulations;

(vii) The CIDB Act requires that all projects need to be registered with the CIDB;

(viii) Before an award is done to a contractor, the contractor's CIDB grading must be confirmed with the CIDB website;

(ix) The CIDB grading designation is as follows:

Grading designation	Less than or equal to
1	R 500 000
2	R 1000 000
3	R 3 000 000
4	R 6 000 000
5	R 10 000 000
6	R 20 000 000
7	R 60 000 000
8	R 200 000 000
9	No Limit

(b) has authorised the municipality to obtain a tax clearance from the South African Revenue Services that the provider's tax matters are in order; and [the tax compliant status be verified on the Central Supplier Database (CSD)] and

(c) has indicated -

(i) whether he or she is in the service of the state, or has been in the service of the state in the previous twelve months;

(ii) if the provider is not a natural person, whether any of its directors, managers, principal shareholders or- stakeholder is in the service of the state, or has- been in the service of the state in the previous twelve months; or

(iii) whether a spouse, child or parent of the provider or of a director, manager,

shareholder or stakeholder referred to in subparagraph (ii) is in the service of the state, or has been in the service of the state in the previous twelve months.

Lists of accredited prospective providers

18.(1) A supply chain management policy must –instruct the accounting officer

(i) to keep a list of accredited prospective providers of goods and services that must be used for the procurement requirements of the municipality or municipal entity through formal written price quotations;

(ii) at least once a year through newspapers commonly circulating locally, the website of the municipality or municipal entity and any other appropriate ways, to invite prospective providers of goods or services to apply for evaluation and listing as accredited prospective providers;

(b) specify the listing criteria for accredited prospective providers; and

(c) disallow the listing of any prospective provider whose name appears on the National Treasury's database as a person prohibited from doing business with the public sector.

2. The list must be updated at least quarterly to include any additional prospective providers and any new commodities or types of services. Prospective providers must be allowed to submit applications for listing at any time.

3. The list must be compiled per commodity and per type of service.

Petty cash purchases

15. The conditions for the procurement of goods by means of petty cash purchases referred to in paragraph 12 (1) (a) of this Policy, are as follows -
(a) council determine the terms on which a manager may delegate responsibility for petty cash to an official reporting to the manager;
(b) council determine the maximum number of petty cash purchases or the maximum amounts per month for each manager;
(c) council determine any types of expenditure from petty cash purchases that are excluded, where this is considered necessary; and
(d) a monthly reconciliation report from each manager must be provided to the chief financial officer, including -
(i) the total amount of petty cash purchases for that month; and

(ii) receipts and appropriate documents for each purchase.

Formal written price quotations -

17. (1) The conditions for the procurement of goods or services through formal written price quotations, are as follows:

(a) quotations must be obtained in writing from at least three different providers whose names are listed on Central Supplier Database

(b) if it is not possible to obtain at least three quotations, the reasons must be recorded and approved by the chief financial officer or an official designated by the chief financial officer, and

(c) the accounting officer must record the names of the potential providers and their written quotations.

(2) A designated official referred to in subparagraph (1) (c) must within three days of the end of each month report to the chief financial officer on any approvals given during that month by that official in terms of that subparagraph.

Procedures for procuring goods or services through formal written price quotations

18. A supply chain management policy must determine the procedure for the procurement of goods or services through formal written formal written price quotations, and must stipulate—

(a) that all requirements in excess of R30 000 **(VAT** included) that are to be procured by means of formal written price quotations must, in addition to the requirements of regulation 17, be advertised for at least seven days on the website and an official notice board of the municipality or municipal entity;

(b) that when using the list of accredited prospective providers, the accounting officer must promote ongoing competition amongst providers, including by inviting providers to submit quotations on a rotation basis;

(c)that the accounting officer must take all reasonable steps to ensure that the procurement of goods and services through formal written price quotations is not abused and

(d) that the accounting officer or chief financial officer must on a monthly basis be notified in writing of all formal written price quotations accepted by an official acting in terms of a sub delegation;

(e) requirements for proper record keeping.

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Competitive bids

19. A supply chain management policy must specify—
1. (a) that goods or services above a transaction value of—

(i) R300 000 (VAT included), in the case of a local municipality; may be procured by the municipality or municipal entity only through a competitive bidding process, subject to regulation 11(2); and
(b) that no requirement for goods or services above an estimated transaction value of—
(i) R300 000 (VAT included), in the case of a local municipality;
may deliberately be split into parts or items of lesser value merely for the sake of procuring the goods or services otherwise than through a competitive bidding process.

5. The 80/20-point system is applicable from R2 000 [all taxes included] up to R50 million [all taxes included]
6. The 90/10-point system is applicable to bids invited exceeding R 50 million [all taxes included]
4. The specification committee will make proposals if functionality points need to be used and the evaluation committee will approve a variation in the point system for a specific bid.
5. For construction procurements the CIDB Act and Regulations are to be used for quotations/bids.

Process for competitive bidding

20. The procedures for the following stages of a competitive bidding process are as follows:
(a) Compilation of bidding documentation as detailed in paragraph 21;
(b) Public invitation of bids as detailed in paragraph 22;
(c) Site meetings or briefing sessions as detailed in paragraph 22;
(d) Handling of bids submitted in response to public invitation as detailed in paragraph 23;
(e) Evaluation of bids as detailed in paragraph 28;
(f) Award of contracts as detailed in paragraph 29;
(g) Administration of contracts
(i) After approval of a bid, the accounting officer and the bidder must enter into a written agreement.

(k) Evaluation of bids that scored equal points
In the event that two or more bids have scored equal total, the successful bid must be the one that scored the highest points for specific goals.

If two or more bids have equal points, including equal preference points for specific goals, the successful bid must be the one scoring the highest points for functionality if functionality is part of the evaluation process.
In the event that two or more bids are equal in all respects, the award must be decided by drawing lots.
(l) Cancellation and re-invitation of bids

(i) Addition of sub-regulation related to cancellation of tender due to material Irregularities.

(ii) Also, in addition of a provision that an organ of state may cancel a tender for the second time, only with the approval of the relevant treasury.

(m) Awarding of contracts

A contract must be awarded to the bidder who scored the highest total number of points in terms of the specific goals._In exceptional circumstances a contract may, on reasonable and justifiable grounds be awarded to a bidder that did not score the highest number of points. The reasons for such a decision must be approved and recorded for audit purposes and must be defendable in a court of law.
(n) Sale and letting of assets
In instances where assets are sold or leased, by means of a bidding process, the bid must be awarded to the bidder with the highest price

(o) Proper record keeping

(i) Original / legal copies of written contracts agreements should be kept in a secure place for reference purposes.

Bid documentation for competitive bids

21. The criteria to which bid documentation for a competitive bidding process must comply, must-

(a) take into account -

(i) the general conditions of contract and any special conditions of contract, if specified;

(ii) any Treasury guidelines on bid documentation; and

(iii) the requirements of the Construction Industry Development Board, in the case of a bid relating to construction, upgrading or refurbishment of buildings or infrastructure;

(b) include the specific goals to be used, goals as contemplated in the Preferential Procurement Regulations and evaluation and adjudication criteria, including any criteria required by other applicable legislation;

(c) compel bidders to declare any conflict of interest they may have in the transaction for which the bid is submitted;

(d) if the value of the transaction is expected to exceed R 10 million (VAT included), require bidders to furnish-

(i) if the bidder is required by law to prepare annual financial statements for auditing, their audited annual financial statements-

(aa) for the past three years; or

(bb) since their establishment if established during the past three years;

(ii) a certificate signed by the bidder certifying 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 90 days;

(iii) particulars of any contracts awarded to the bidder 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;

(iv) a statement indicating whether any portion of the goods or services are expected to be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality is expected to be transferred out of the Republic; and

(e) stipulate that disputes must be settled by means of mutual consultation, mediation (with or without legal representation), or, when unsuccessful, in a South African court of law.

(f) The Accounting Officer reserves the right to stipulate such a dispute to be settled utilizing a court of law preferably within the municipal boundaries or as close as possible to the municipal boundaries

Public invitation for competitive bids

22. (1) The procedure for the invitation of competitive bids, is as follows:

(a) Any invitation to prospective providers to submit bids must be by means of a public advertisement in newspapers commonly circulating locally, the website of the municipality or any other appropriate ways which include for;

(i) GOODS AND SERVICES:

Advertisement of Bids and the Publication of notices in respect of Awards, Cancelled Bids, Verification and Extension of existing contracts on the e-Tender Publication Portal and Government Tender Bulletin; and

(ii) WORKS AND INFRASTRUCTURE:

Advertisement of Bids and the Publication of notices in respect of Awards, and cancellation of bids on the CIDB i-Tender.

(b) the information contained in a public advertisement, must include-

(i) the closure date for the submission of bids, which may not be less than 30 days in the case of transactions over R 10 million (VAT included), or which are of a long-term nature, or 14 days in any other case, from the date on which the advertisement is placed in a newspaper, subject to subparagraph (2) of this policy;

(ii) a statement that bids may only be submitted on the bid documentation provided by the municipality or the bid document uploaded on the e-tender

portal; and

(iii) date, time and venue of any proposed site meetings or briefing sessions;

(2) The accounting officer may determine a closure date for the submission of bids on the grounds of urgency or emergency or any exceptional case where it is impractical or impossible to follow the official procurement process.

(3) Bids submitted must be sealed.

(4) Where bids are requested in electronic format, such bids must be supplemented by sealed hard copies.

Procedure for handling, opening and recording of bids

23. The procedures for the handling, opening and recording of bids, are as follows:

(a) Bids-

(i) must be opened only in public;

(ii) must be opened at the same time and as soon as possible after the period for the submission of bids has expired; and

(iii) received after the closing time should not be considered and returned unopened immediately.

(b) Any bidder or member of the public has the right to request that the names of the bidders who submitted bids in time must be read out and, if practical, also each bidder's total bidding price;

(c) No information, except the provisions in subparagraph (b), relating to the bid should be disclosed to bidders or other persons until the successful bidder is notified of the award; and

(d) The accounting officer must-

(i) record in a register all bids received in time;

(ii) make the register available for public inspection; and

(iii) publish the entries in the register and the bid results on the website.

Negotiations with preferred bidders

24. (1) The accounting officer may negotiate the final terms of a contract with bidders identified through a competitive bidding process as preferred bidders, provided that such negotiation -

(a) does not allow any preferred bidder a second or unfair opportunity;

(b) is not to the detriment of any other bidder; and

(c) does not lead to a higher price than the bid as submitted.
(d) upon approval to negotiate, the AO/AA must appoint a cross functional negotiation team, with one member appointed to be team leader.
(e) the negotiation team leader must ensure that all members of the negotiating team are clear on the negotiation strategy and desired outcomes.

(2) Minutes of such negotiations must be kept form record purposes.

Two-stage bidding process

25. (1) A two-stage bidding process is allowed for -
(a) large complex projects;
(b) projects where it may be undesirable to prepare complete detailed technical specifications; or
(c) long term projects with a duration period exceeding three years.

(2) In the first stage technical proposals on conceptual design or performance specifications should be invited, subject to technical as well as commercial clarifications and adjustments.

(3) In the second stage final technical proposals and priced bids should be invited.

Committee system for competitive bids

26. (1) A committee system for competitive bids is hereby established, consisting of the following committees for each procurement or cluster of procurements as the accounting officer may determine:
(a) a bid specification committee;
(b) a bid evaluation committee; and
(c) a bid adjudication committee;

(2) The accounting officer appoints the members of each committee, taking into account section 117 of the Act; and

(3) A neutral or independent observer, appointed by the accounting officer, must attend or oversee a committee when this is appropriate for ensuring fairness and promoting transparency.

(4) The committee system must be consistent with -
(a) paragraph 27, 28 and 29 of this Policy; and
(b) any other applicable legislation.

(5) The accounting officer may apply the committee system to formal written price quotations.

Bid specification committees

27. (1) A bid specification committee must compile the specifications for each procurement of goods or services by the municipality.

(2) Specifications -

(a) must be drafted in an unbiased manner to allow all potential suppliers to offer their goods or services;

(b) must take account of any accepted standards such as those issued by Standards South Africa, the International Standards Organisation, or an authority accredited or recognised by the South African National Accreditation System with which the equipment or material or workmanship should comply;

(c) must, where possible, be described in terms of performance required rather than in terms of descriptive characteristics for design;

(d) may not create trade barriers in contract requirements in the forms of specifications, plans, drawings, designs, testing and test methods, packaging, marking or labelling of conformity certification;

(e) may not make reference to any particular trade mark, name, patent, design, type, specific origin or producer unless there is no other sufficiently precise or intelligible way of describing the characteristics of the work, in which case such reference must be accompanied by the word "equivalent";

(f) must indicate each specific goal for which points may be awarded in terms of the points system set out in the Preferential Procurement Regulations 2001; and

(g) must be approved by the accounting officer prior to publication of the invitation for bids in terms of paragraph 22 of this Policy.

(3) A bid specification committee must be composed of one or more officials of the municipality preferably the manager responsible for the function involved, and may, when appropriate, include external specialist advisors.

(4) No person, advisor or corporate entity involved with the bid specification committee, or director of such a corporate entity, may bid for any resulting contracts.

Bid evaluation committees

28. (1) A bid evaluation committee must-

(a) evaluate bids in accordance with -
(i) the specifications for a specific procurement; and
(ii) for each specific goals set out in terms of paragraph 27(2)(f).
(b) evaluate each bidder's ability to execute the contract;
(c) check in respect of the recommended bidder whether municipal rates and taxes and municipal service charges are not in arrears, and;

(d) submit to the adjudication committee a report and recommendations regarding the award of the bid or any other related matter.

(2) A bid evaluation committee must as far as possible be composed of-
(a) officials from departments requiring the goods or services; and
(b) at least one supply chain management practitioner of the municipality.

Bid adjudication committees

29. (1) A bid adjudication committee must -
(a) consider the report and recommendations of the bid evaluation committee; and
(b) either-
(i) depending on its delegations, make a final award or a recommendation to the accounting officer to make the final award; or
(ii) make another recommendation to the accounting officer how to proceed with the relevant procurement.

(2) A bid adjudication committee must consist of at least four senior_managers of the municipality, which must include -
(i) the chief financial officer or, if the chief financial officer is not available, another manager in the budget and treasury office reporting directly to the chief financial officer and designated by the chief financial officer; and
(ii) at least one senior supply chain management practitioner who is an official of the municipality; and
(iii) a technical expert in the relevant field who is an official, and who requests the goods /services must be co-opted any way. Outside technical experts can also be co-opted, they must leave the meeting after advice has been given. Only standing committee members can be involved in final deliberation and recommendations or final approval.

(d) Where the Bid Adjudication Committee is of the view that the tenderer is charging prices higher than the fair market price, the Bid Adjudication Committee

may request for the AO/AA to subject the tender to price negotiations with the tenderers scoring the highest points (from first highest to third highest) before award is made.

(3) The accounting officer must appoint the chairperson of the committee. If the chairperson is absent from a meeting, the members of the committee who are present must elect one of them to preside at the meeting.

(4) Neither a member of a bid evaluation committee, nor an advisor or person assisting the evaluation committee, may be a member of a bid adjudication committee.

(5) (a) If the bid adjudication committee decides to award a bid other than the one recommended by the bid evaluation committee, the bid adjudication committee must prior to awarding the bid -

(i) check in respect of the preferred bidder whether that bidder's municipal rates and taxes and municipal service charges are not in arrears, and;

(ii) notify the accounting officer.

(b) The accounting officer may-

(i) after due consideration of the reasons for the deviation, ratify or reject the decision of the bid adjudication committee referred to in paragraph (a); and

(ii) if the decision of the bid adjudication committee is rejected, refer the decision of the adjudication committee back to that committee for reconsideration.

(6) The accounting officer may at any stage of a bidding process, refer any recommendation made by the evaluation committee or the adjudication committee back to that committee for reconsideration of the recommendation.

(7) The accounting officer must comply with section 114 of the Act within 10 working days; If a bid other than the one recommended in the normal course of implementing this policy is approved, the accounting officer must, in writing and within 10 working days, notify the auditor general and the national and provincial treasuries of the reasons for deviating from such recommendation.

(8) For the purposes of continuity and not to delay meetings the Accounting Officer may also appoint any official to temporarily replace members that are absent from meetings due to illness, leave, etc. The Accounting Officer may also decide

whether or not such an official will have the same powers as committee members.

Procurement of banking services

30. (1) A contract for banking services-
(a) must be procured through competitive bids;
(b) must be consistent with section 7 or 85 of the Act; and
(c) may not be for a period of more than five years at a time.

(2) The process for procuring a contract for banking services must commence at least nine months before the end of an existing contract.

(3) The closure date for the submission of bids may not be less than 60 days from the date on which the advertisement is placed in a newspaper in terms of paragraph 22(1). Bids must be restricted to banks registered in terms of the Banks Act, 1990 (Act No. 94 of 1990):

Procurement of IT related goods or services

31. (1) The accounting officer may request the State Information Technology Agency (SITA) to assist with the acquisition of IT related goods or services through a competitive bidding process.

(2) Both parties must enter into a written agreement to regulate the services rendered by, and the payments to be made to, SITA.

(3) The accounting officer must notify SITA together with a motivation of the IT needs if

(a) the transaction value of IT related goods or services required in any financial year will exceed R50 million (VAT included); or·

(b) the transaction value of a contract to be procured whether for one or more years exceeds R50 million (VAT included).

(4) If SITA comments on the submission and the municipality disagrees with such comments, the comments and the reasons for rejecting or not following such comments must be submitted to the council, the National Treasury, the relevant provincial treasury and the Auditor General.

Procurement of goods and services under contracts secured by other organs of state

32. (1) The accounting officer may procure goods or services under a contract secured by another organ of state, but only if -

(a) the contract has been secured by that other organ of state by means of a competitive bidding process applicable to that organ of state;

(b) there is no reason to believe that such contract was not validly procured;

(c) there are demonstrable discounts or benefits to do so; and

(d) that other organ of state and the provider have consented to such procurement in writing.

(2) Subparagraphs (1)(c) and (d) do not apply if-

(a) a municipal entity procures goods or services through a contract secured by its parent municipality; or

(b) a municipality procures goods or services through a contract secured by a municipal entity of which it is the parent municipality.

(3) The municipality will implement this procurement method using the guidelines provided in the Instruction Note 25/08/2020 and its implementation guide.

Procurement of goods necessitating special safety arrangements

33. (1) The acquisition and storage of goods in bulk (other than water), which necessitate special safety arrangements, including gasses and fuel, should be avoided where ever possible.

(2) Where the storage of goods in- bulk is justified, such justification must be based on sound reasons, including the total cost of ownership, cost advantages and environmental impact and must be approved by the accounting officer.

Proudly SA Campaign

34. The municipality supports the Proudly SA Campaign to the extent that, all things being equal, preference is given to procuring local goods and services from:

- Firstly - suppliers and businesses within the municipality or district;
- Secondly - suppliers and businesses within the relevant province;
- Thirdly - suppliers and businesses within the Republic.

35. Appointment of consultants

1. A supply chain management policy may allow the accounting officer to procure consulting services provided that any Treasury guidelines in respect of consulting services are taken into account when such procurement is made.

2. A contract for the provision of consultancy services to a municipality or municipal entity must be procured through competitive bids if—

(a) the value of the contract exceeds—

(i) R300 000 (VAT included) the period of the contract exceeds one year.

3. In addition to any requirements prescribed by these Regulations for competitive bids, bidders must furnish the municipality or municipal entity with particulars of -

(a) all consultancy services provided to an organ of state in the last five years; and

(b) any similar consultancy services provided to an organ of state in the last five years.

4. The accounting officer must ensure that copyright in any document produced, and the patent rights or ownership in any plant, machinery, thing, system or process designed or devised, by a consultant in the course of the consultancy service is vested in the municipality.

Deviation from, and ratification of minor breaches of, procurement processes

36. (1) The accounting officer may -

(a) dispense with the official procurement processes established by this Policy and to procure any required goods or services through any convenient process, which may include direct negotiations, but only -

(i) in an emergency;

(ii) if such goods or services are produced or available from a single provider only;

(iii) for the acquisition of special works of art or historical objects where specifications are difficult to compile;

(iv) acquisition of animals for zoos and/or nature and game reserves; or

(v) in any other exceptional case where it is impractical or impossible to follow the official procurement processes; and

(b) ratify any minor breaches of the procurement processes by an official or committee acting in terms of delegated powers or duties which are purely of a technical nature.

(2) The accounting officer must record the reasons for any deviations in terms of subparagraphs (1)(a) and (b) of this policy and report them to the next meeting of the council and include as a note to the annual financial statements.

(3) Subparagraph (2) does not apply to the procurement of goods and services contemplated in paragraph 11 (2) of this policy.

(4) Management of expansion or variation of orders against the original contract

(i) Contracts may be expanded or varied by not more than 20% for construction related goods, services and /or infrastructure projects and 15% for all other goods and/or services of the original value of the contract. Furthermore, anything beyond the above-mentioned thresholds must be reported to council. Any expansion or variation in excess of these thresholds must be dealt with in terms of the provisions of Section 116 (3) of the MFMA which will be regarded as an amendment of the contract.

(ii) The contents of this paragraph are not applicable to transversal contracts, facilitated by the relevant treasuries on behalf of municipalities and specific term contracts. The latter refers to orders placed as and when commodities are required and at the time of awarding contracts, the required quantities were unknown.

Unsolicited bids

37. (1) In accordance with section 113 of the Act there is no obligation to consider unsolicited bids received outside a normal bidding process.

(2) The accounting officer may decide in terms of section 113(2) of the Act to consider an unsolicited bid, only if-

(a) the product or service offered in terms of the bid is a demonstrably or proven unique innovative concept;
(b) the product or service will be exceptionally beneficial to, or have exceptional cost advantages;
(c) the person who made the bid is the sole provider of the product or service; and
(d) the reasons for not going through the normal bidding processes are found to be sound by the accounting officer.

(3) If the accounting officer decides to consider an unsolicited bid that complies with subparagraph (2) of this policy, the decision must be made public in accordance with section 21A of the Municipal Systems Act, together with -
(a) its reasons as to why the bid should not be open to other competitors;
(b) an explanation of the potential benefits if the unsolicited bid were accepted; and
(c) an invitation to the public or other potential suppliers to submit their comments within 30 days of the notice.

(4) The accounting officer must submit all written comments received pursuant to subparagraph (3), including any responses from the unsolicited bidder, to the National Treasury and the relevant provincial treasury for comment.

(5) The adjudication committee must consider the unsolicited bid and may award the bid or make a recommendation to the accounting officer, depending on its delegations.

(6) A meeting of the adjudication committee to consider an unsolicited bid must be open to the public.

(7) When considering the matter, the adjudication committee must take into account -

(a) any comments submitted by the public; and
(b) any written comments and recommendations of the National Treasury or the relevant provincial treasury.

(8) If any recommendations of the National Treasury or Provincial Treasury are rejected or not followed, the accounting officer must submit to the Auditor General, the relevant provincial treasury and the National Treasury the reasons for rejecting or not following those recommendations.

(9) Such submission must be made within seven days after the decision on the award of the unsolicited bid is taken, but no contract committing the municipality to the bid may be entered into or signed within 30 days of the submission.

Combating of abuse of supply chain management system

38. (1) The accounting officer must-

(a) take all reasonable steps to prevent abuse of the supply chain management system;
(b) investigate any allegations against an official or other role player of fraud, corruption, favouritism, unfair or irregular practices or failure to comply with this Policy, and when justified -
(i) take appropriate steps against such official or other role player; or
(ii) report any alleged criminal conduct to the South African Police Service;
(c) check the National Treasury's database prior to awarding any contract to ensure that no recommended bidder, or any of its directors, is listed as a

person prohibited from doing business with the public sector;

(d) reject any bid from a bidder-

(i) if any municipal rates and taxes or municipal service charges owed by that bidder or any of its directors to the municipality or to any other municipality, are in arrears for more than three months; or

(ii) who during the last five years has failed to perform satisfactorily on a previous contract with the municipality or any other organ of state after written notice was given to that bidder that performance was unsatisfactory;

(e) reject a recommendation for the award of a contract if the recommended bidder, or any of its directors, has committed a corrupt or fraudulent act in competing for the particular contract;

(f) cancel a contract awarded to a person if -

(i) the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract; or

(ii) an official or other role player committed any corrupt or fraudulent act during the bidding process or the execution of the contract that benefited that person; and

(g) reject the bid of any bidder if that bidder or any of its directors -

(i) has abused the supply chain management system of the municipality or has committed any improper conduct in relation to such system;

(ii) has been convicted for fraud or corruption during the past five years;

(iii) has wilfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or

(iv) has 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).

(2) The accounting officer must inform the National Treasury and relevant provincial treasury in writing of any actions taken in terms of subparagraphs (1)(b)(ii), (e) or (f) of this policy.

(3) The accounting officer [who may delegate the task to the CFO] must, as part of complying with section 62[1][d] of the MFMA set up and maintain a register of Unauthorised, Irregular, Fruitless and Wasteful Expenditures. The aim with the register is also to serve as a tool for recording all unauthorised, irregular, fruitless and wasteful expenditures and for tracking progress in dealing with the consequences flowing from such expenditures until all the issues that gave rise to the expenditures are properly resolved in accordance with the legal framework. Please also consult National Treasury MFMA Circular 68 dated 10 May 2013 in this regard.

(4) REMEDIES

The regulation has been enhanced to include sub-regulations related to:

i) Giving tenderer an opportunity to make a submission;

ii) Informing the relevant treasury in writing of any actions taken against the tenderer;

iii) The responsibilities of the treasury after receiving documents from the organ of state concerned.

Part 3: *Logistics, Disposal, Risk and Performance Management*

Logistics management

39. The accounting officer must establish and implement an effective system of logistics management, which must include -

(a) the monitoring of spending patterns on types or classes of goods and services incorporating, where practical, the coding of items to ensure that each item has a unique number;

(b) the setting of inventory levels that includes minimum and maximum levels and lead times wherever goods are placed in stock;

(c) the placing of manual or electronic orders for all acquisitions other than those from petty cash;

(d) before payment is approved, certification by the responsible officer that the goods and services are received or rendered on time and is in accordance with the order, the general· conditions of contract and specifications where applicable and that the price charged is as quoted in terms of a contract;

(e) appropriate standards of internal control and warehouse management to ensure that goods placed in stores are secure and only used for the purpose for which they were purchased;

(f) regular checking to ensure that all assets including official vehicles are properly managed, appropriately maintained and only used for official purposes; and

(g) monitoring and review of the supply vendor performance to ensure compliance with specifications and contract conditions for particular goods or services.

(h) the maintenance and administration of term contracts is co-managed with acquisition management for general goods / services.

Disposal management

40.(1) The criteria for the disposal or letting of assets, including unserviceable, redundant or obsolete assets, subject to sections 14 and 90 of the Act, are to be determined by council.

(2) Assets may be disposed of by -

(a) (i) transferring the asset to another organ of state in terms of a provision of the Act enabling the transfer of assets;
(ii) transferring the asset to another organ of state at market related value or, when appropriate, free of charge;
(iii) selling the asset; or

(b) The accounting officer must stipulate that -
(i) immovable property is sold only at market related prices except when the public interest or the plight of the poor demands otherwise;
(ii) movable assets are sold either by way of written price quotations, a competitive bidding process, auction or at market related prices, whichever is the most advantageous;
(iii) in the case of free disposal of computer equipment, the provincial department of education must first be approached to indicate withing 30 days whether any of the local schools are interested in the equipment; and
(iv) in the case of disposal of firearms, the National Conventional Arms Control Committee has approved any sale or donation of firearms to any person or institution within or outside the Republic;

(c) provide that -
(i) immovable property is let at market related rates except when the public interest or the plight of the poor demands otherwise;
(ii) all fees, charges, rates, tariffs, scales of fees or other charges relating to the letting of immovable property are annually reviewed;

(d) where assets are traded in for other assets, the highest possible trade-in price is negotiated.

Risk management

41. (1) The criteria for the identification, consideration and avoidance of potential risks in the supply chain management system, are to be determined by council

(2) Risk management must include -
(a) the identification of risks on a case-by-case basis;
(b) the allocation of risks to the party best suited to manage such risks;
(c) acceptance of the cost of the risk where the cost of transferring the risk is

greater than that of retaining it;

(d) the management of risks in a pro-active manner and the provision of adequate cover for residual risks; and

(e) the assignment of relative risks to the contracting parties through clear and unambiguous contract documentation.

Performance management

42. The accounting officer must establish and implement an internal monitoring system in order to determine, on the basis of a retrospective analysis, whether the authorised supply chain management processes were followed and whether the objectives of this Policy were achieved.:

(a) Measure performance in terms of achievement of Joe Morolong Local Municipality goals;
(b) Measure compliance with norms and standards;
(c) Determine savings generated;
(d) Determine cost variance per item to indicate the premium paid for promoting preferential objectives;
(e) Identify any breach of contract;
(f) Determine cost efficiency of the acquisition process;
(g) Determine whether SCM objectives are consistent with governments broader policy focus;
(h) Determine whether the principles of co-operative governance as expounded in the constitution are observed;
(i) Evaluate whether the reduction of regional economic disparities is promoted;
(j) Establish any non-compliance with contractual conditions and requirements.

Part 4: Other matters

Prohibition on awards to persons whose tax matters are not in order

43. (1) No award above R 15 000 [all taxes included], may be made in terms of this Policy to a person whose tax matters have not been declared by the South African Revenue Service to be in order.

(2) Before making an award to a person the accounting officer must first check with SARS whether that person's tax matters are in order.

(3) If SARS does not respond within 7 days such person's tax matters may for purposes of subparagraph (1) be presumed to be in order.

Prohibition on awards to persons in the service of the state

44. Irrespective of the procurement process followed, no award may be made to a person in terms of this Policy -

(a) who is in the service of the state;

(b) if that person is not a natural person, of which any director, manager, principal shareholder or stakeholder is a person in the service of the state;

or

(c) a person who is an advisor or consultant contracted with the municipality.

Awards to close family members of persons in the service of the state

45. The accounting officer must ensure that the notes to the annual financial statements disclose particulars of any award of more than R2000 to a person who is a spouse, child or parent of a person in the service of the state, or has been in the service of the state in the previous twelve months, including -

(a) the name of that person;
(b) the capacity in which that person is in the service of the state; and
(c) the amount of the award.

Ethical standards

46.(1) A code of ethical standards as set out in subparagraph (2) *is* hereby established for officials and other role players in the supply chain management system of the municipality in order to promote -

(a) mutual trust and respect; and

(b) an environment where business can be conducted with integrity and in a fair and reasonable manner.

Note:

It is recommended that the municipality or municipal entity adopt the 'National Treasury's code of conduct for supply chain management practitioners and other role players involved in supply chain management'. When adopted, such code of conduct becomes binding on all officials and other role players involved in the implementation of the supply chain management policy of the municipality or municipal entity. A copy of the National Treasury code of conduct is available on the website ***www.treasury.gov.za/mfma*** *located under "legislation". This code of conduct must be adopted by council or board of directors to become binding.*

(2) An official or other role player involved in the implementation of this Policy -

(a) must treat all providers and potential providers equitably;
(b) may not use his or her position for private gain or to improperly benefit another person;
(c) may not accept any reward, gift, favour, hospitality or other benefit directly'" or indirectly, including to any close family member, partner or associate of that person, of a value more than R350;
(d) notwithstanding subparagraph (2) (c), must declare to the accounting

officer details of any reward, gift, favour, hospitality or other benefit promised, offered or granted to that person or to any close family member, partner or associate of that person;

(e) must declare to the accounting officer details of any private or business interest which that person, or any close family member, partner or associate, may have in any proposed procurement or disposal process of, or in any award of a contract by, the municipality;

(f) must immediately withdraw from participating in any manner whatsoever in a procurement or disposal process or in the award of a contract in which that person, or any close family member, partner or associate, has any private or business interest;

(g) must be scrupulous in his or her use of property belonging to municipality**;**

(h) must assist the accounting officer in combating fraud, corruption, favouritism and unfair and irregular practices in the supply chain management system; and

(i) must report to the accounting officer any alleged irregular conduct in the supply chain management system which that person may become aware of, including -

(i) any alleged fraud, corruption, favouritism or unfair conduct;
(ii) any alleged contravention of paragraph 47(1) of this Policy; or
(iii) any alleged breach of this code of ethical standards.

(3) Declarations in terms of subparagraphs (2)(d) and (e) -

(a) must be recorded in a register which the accounting officer must keep for this purpose;

(b) by the accounting officer must be made to the council of the municipality who must ensure that such declarations are recorded in the register.

(4) The National Treasury's code of conduct must also be taken into account by supply chain management practitioners and other role players involved in supply chain management.

(5) A breach of the code of ethics must be dealt with as follows -

(a) in the case of an employee, in terms of the disciplinary procedures of the municipality *envisaged* in section 67(1)(h) of the Municipal Systems Act;

(b) in the case a role player who is not an employee, through other appropriate means in recognition of the severity of the breach.

(c) In all cases, financial misconduct must be dealt with in terms of chapter 15 of the Act.

Inducements, rewards, gifts and favours to municipalities, officials and other role players

47.(1) No person who is a provider or prospective provider of goods or services, or a recipient or prospective recipient of goods disposed or to be disposed of may either directly or through a representative or intermediary promise, offer or grant -

(a) any inducement or reward to the municipality for or in connection with the award-of a contract; or

(b) any reward, gift, favour or hospitality to -

(i) any official; or

(ii) any other role player involved in the implementation of this Policy.

(2) The accounting officer must promptly report any alleged contravention of subparagraph (1) to the National Treasury for considering whether the offending person, and any representative or intermediary through which such person is alleged to have acted, should be listed in the National Treasury's database of persons prohibited from doing business with the public sector.

(3) Subparagraph (1) does not apply to gifts less than R350 in value.

Sponsorships

48. The accounting officer must promptly disclose to the National Treasury and the relevant provincial treasury any sponsorship promised, offered or granted, whether directly or through a representative or intermediary, by any person who is -

(a) a provider or prospective provider of goods or services; or

(b) a recipient or prospective recipient of goods disposed or to be disposed.

Objections and complaints

49. Persons aggrieved by decisions or actions taken in the implementation of this supply chain management system, may lodge within 14 days of the decision or action, a written objection or complaint against the decision or action.

Resolution of disputes, objections, complaints and queries

50. (1) The accounting officer must appoint an independent and impartial person, not directly involved in the supply chain management processes -

(a) to assist in the resolution of disputes between the municipality and other persons regarding

(i) any decisions or actions taken in the implementation of the supply chain management system; or

(ii) any matter arising from a contract awarded in the course of the supply chain management system; or

(b) to deal with objections, complaints or queries regarding any such decisions

or actions or any matters arising from such contract.

(2) The accounting officer, or another official designated by the accounting officer, is responsible for assisting the appointed person to perform his or her functions effectively.

(3) The person appointed must ~
(a) strive to resolve promptly all disputes, objections, complaints or queries received; and
(b) submit monthly reports to the accounting officer on all disputes, objections, complaints or queries received, attended to or resolved.

(4) A dispute, objection, complaint or query may be referred to the relevant provincial treasury if -
(a) the dispute, objection, complaint or query is not resolved within 60 days;
or
(b) no response is forthcoming within 60 days.

(5) If the provincial treasury does not or cannot resolve the matter, the dispute, objection, complaint or query may be referred to the National Treasury for resolution.

(6) This paragraph must not be read as affecting a person's rights to approach a court at any time.

Contracts providing for compensation based on turnover-

53. If a service provider acts on behalf of municipality to provide any service or act as a collector of fees, service charges or taxes and the compensation payable to the service provider is fixed as an agreed percentage of turnover for the service or the amount collected, the contract between the service provider and the municipality must stipulate -
(a) a cap on the compensation payable to the service provider; and
(b) that such compensation must be performance based.

Procurement Control measures under Covid

54 (1) During the national state of disaster accounting officers must consider the impact any supply chain disruptions may have on finance management operations and develop control measures to address such.

(2) When accounting officers consider invoking provisions in contracts related to "force majeure" for suppliers, legal advice must be sought on a case-by-case basis and accounting officers must guard against the risk of possible fruitless and wasteful expenditure due to payments made for services not rendered or goods not supplied.

(3) Internal controls within the supply chain management (SCM) environment must be reviewed in terms of administrative controls and delegations to ensure required authorisations are done by relevant officials.

(4) Internal control measures must be established to consider and approve any COVID-19 related procurement in the municipality or municipal entity. Prior to generating an order in relation to COVID-19 related procurement, the document must be referred to any other relevant function within the municipality or municipal entity to conduct checks to prevent any possible irregular expenditure.

(5) Emergency requirements may be addressed through the emergency procurement provisions as stipulated in SCM Regulations and MFMA Circulars — Preventing and Combatting Abuse in the SCM System and reiterated further in the National Treasury Circulars.

(6) MFMA Circulars on Preventing and Combating Abuse in the Supply Chain Management System states that accounting officers must only deviate from inviting competitive bids in cases of emergency and sole supplier status. These deviations do not require the approval of the relevant treasuries. It is understood that emergency procurement may occur when there is a serious and unexpected situation that poses an immediate risk to health, life, property or environment which calls on a municipality or municipal entity to action and there is insufficient time to invite competitive bids.

(7) The emergency procurement provisions provide for accounting officers to procure the required goods or services by other means, such as price quotations or negotiations, in terms of SCM Regulations. The reasons must be recorded and approved by the accounting officer or his/her delegate.

(8) Section 114 of the MFMA and council policies require accounting officers to report within 10 working days to the relevant treasury and the Auditor-General all cases where goods and services were procured from bidders other than the one recommended. The report must include the description of the goods or services, the name/s of the supplier/s, the amount/s involved and the reasons for dispensing with the prescribed competitive bidding process.

(9) The principles of fairness, equity, transparency, competitiveness and cost-effectiveness must be maintained. Emergency procurement must be limited to

goods, services and works that addresses the programme of preventing the spread of the COVID-19 virus.

CIRCULARS AND GUIDELINES

EFFECTIVE YEAR	DESCRIPTION	CIRCULAR NO
2017-18:		
18 July 2016	E-Tender Portal	83
Updated November 2016	Cost Containment Measures	82
18 March 2016	Central Supplier Database	81
26 Oct 2015	Model SCM Policy for infrastructure Procurement and Delivery Management	77
13 May 2014	Systems of Delegations	73
22 May 2013	SCM on Local Production and Content	69
10 May 2013	Unauthorised, Irregular, Fruitless and Wasteful Expenditure	68
20 Aug 2012	SCM Enhancing Compliance and Accountability	62
03 Sep 2010	Supply Chain Management – Amended Guidelines on Functionality for Evaluation of Bids	53
30 July 2010	Supply Chain Management – Prohibition of Restrictive Practices	52
17 March 2008	Supply Chain Management – Checking the prohibition status of recommended bidders	46
25 May 2007	Suppy Chain Management – Restriction of Suppliers	43
20 Oct 2006	Supply Chain Management Implementation	40

	Checklist	
28 June 2006	**Supply Chain Management Issues**	**34**
27 March 2006	**Supply Chain Management Issues**	**33**
31 Jan 2006	**Supply Chain Management Issues**	**29**
03 Oct 2005	**Supply Chain Management Guide and Bid Documents**	**25**
20 April 2005	**Supply Chain Management Training**	**16**
25 Aug 2005	**Model Policy Supply Chain Management**	**22**

GUIDELINES

1.	**Supply Chain Management: A Guide for Accounting Officers of Municipalities and Municipal Entities**

Commencement

54. This Policy takes effect on 01st July 2024.