

O. R. TAMBO DISTRICT MUNICIPALITY



O.R. TAMBO
DISTRICT MUNICIPALITY

CONTRACT NO.: ORTDM SCMU 01–24/25

DESCRIPTION: ARTHUR HOMES WATER SUPPLY

WATER SERVICES INFRASTRUCTURE GRANT (WSIG)

July 2024

NAME OF TENDERER:

TENDER AMOUNT:

CSD SUPPLIER NUMBER:

CLOSING DATE & TIME: 02 AUGUST 2024 @ 12H00

Prepared for:

The Municipal Manager
O. R. Tambo District Municipality
Private Bag X6043
MTHATHA
5099

Tel. No. (047) 501 6400

Prepared by:

Infrastructure Water and Sanitation Services
O. R. Tambo District Municipality
Private Bag C6043
MTHATHA
5099

Tel. No. (047) 501 6425

PLEASE CHECK

x / √

1. That you have read all the pages of the tender document.
2. That you have completed ALL the forms required to be completed
in NON-ERASEABLE INK.
3. That your arithmetic calculation in the pricing schedule is correct.
4. That you have attached ALL necessary documentation relating to the
Composition of the tendering entity, i.e.
 - (a) Company registration documents naming the shareholders and
Directors / members of the company, close corporation etc.
 - (b) Joint venture agreement, if tendering entity is a joint venture.
5. That the **COMPLETE** tender document is submitted.
6. That the **FORM OF OFFER** is completed in full and signed.
7. That ALL returnable documents are submitted.
8. That ALL returnable schedules are completed and signed.
9. Ensure that your tender is submitted by **12H00PM** on the closing date of the tender.

O. R. TAMBO DISTRICT MUNICIPALITY

CONTRACT NO.: ORTDM SCMU 01-24/25

ARTHUR HOMES WATER SUPPLY

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TENDERS ARE HEREBY INVITED FOR:**CONTRACT NO.: ORTDM SCMU 01-24/25:****ARTHUR HOMES WATER SUPPLY**

To ensure that your Tender is not exposed to invalidation, documents are to be completed in accordance with the conditions and Tender rules contained in the Tender documents. Supporting documents must be sealed and externally endorsed **CONTRACT NO.: ORTDM SCMU 01-24/25: ARTHUR HOMES WATER SUPPLY** and be submitted in the open tender box, Ground Floor, O. R. Tambo District Municipality, Nelson Mandela Drive, Myezo Park, Mthatha, Eastern Cape, not later than 12H00pm on the 02 AUGUST 2024.

The lowest or any Bid will not necessarily be accepted and the O. R. Tambo District Municipality reserves the right not to consider any tender not suitably endorsed or comprehensively completed as well as the right to accept a Tender in whole or part. Tenders will be adjudicated in accordance with the Supply Chain Management Policy of the O. R. Tambo District Municipality.

The following documents must be completed, signed (where applicable) and submitted as a complete set:

Document		Colour of pages
Number	Heading	
T1.1	Tender Notice and Invitation to Tender	White
T1.2	Tender Data	Pink
T2.1	List of Returnable Documents	Yellow
T2.2	Returnable Documents for tender evaluation purposes	Yellow
C1.1	Form of Offer and Acceptance	White
C1.2	Contract Data	White
C1.3	Operational Health & Safety Specification	White
C1.4	ORTDM Supply Chain Management Policy	White
C2.1	Pricing Instructions	Yellow
C2.2	Activity Schedule	Yellow
C3	Scope of Works	Blue
C4	Site Information	Green
C5	Additional Relevant Documents	White

T.1.1 TENDER NOTICE AND INVITATION TO TENDER

Tenders are hereby invited from suitably qualified and experienced contractors who are registered with CIDB for the Municipal Infrastructure Grant under the O. R. Tambo District Municipality.

Project Number	Name and Description	CIDB Grading	Briefing session
ORTDM SCMU 01-24/25	ARTHUR HOMES WATER SUPPLY	5 CE or higher	Ingquza Hill Local Municipality: Lusikisiki Municipal Offices, then site

A compulsory clarification meeting with representatives of the client will take place at **10H00** on **16 July 2024** at Ingquza Hill Local Municipality: Lusikisiki Municipal Offices, then site.

THE MUNICIPALITY WILL NOT REPEAT ANY MATTERS ALREADY COVERED IN THE COMPULSORY BRIEFING MEETING TO THE BIDDERS WHO ARRIVE MORE THAN 10 MINUTES LATE TO THE MEETING, NOR WILL IT ALLOW SUCH BIDDERS TO COMPLETE THE ATTENDANCE REGISTER. ANY BID RECEIVED FROM A BIDDER WHO DID NOT ATTEND THE BRIEFING MEETING AND SIGN THE ATTENDANCE REGISTER WILL NOT BE CONSIDERED.

Bid documents should be downloaded on the e-Tender website (www.etenders.gov.za) alternatively on the O. R. Tambo website (www.ortambo.gov.za) at no cost.

Bids must be completed in black ink, enclosed in a sealed envelope and clearly marked with the “**Project number, project name and description**”, deposited in the Open Tender Box, Ground Floor, O. R. Tambo District Municipality Building, Nelson Mandela Drive, Myezo Park, Mthatha, Eastern Cape, not later than **12H00pm** on Friday 02 August 2024.

It must be expressly understood that the Municipality does not accept responsibility for ensuring that bid submissions sent by courier or post, or delivered in any other way, are deposited in the Tender Box. It is therefore preferable for the bidder to ensure that its bid submission is placed in the Tender Box by its own staff or representative(s).

Tender submissions will be opened in public at 12H00pm on Friday 02 August 2024. The Municipality reserves the right not to accept the lowest priced tender or any tender at all, or to accept the whole or part of any tender.

RETURNABLE DOCUMENTS TO BE SUBMITTED WITH BID:

- Copy of business registration documents, as issued by CIPC.
- Certified copy of identity documents of directors/ shareholders/ partners / members, as the case may be.
- Original Valid Tax Clearance Certificate or a Confirmation of Tax Validity with the pin issued by SARS.

NB: CERTIFICATION OF DOCUMENTS MUST NOT BE MORE THAN SIX (6) MONTHS FROM DATE CERTIFIED BY COMMISSIONER OF OATHS.

THE BID WILL BE REJECTED IF THE BIDDER FAILS TO:

- Complete fully the bid document or to provide the information requested, or to sign the bid at the appropriate spaces provided or next to errors.
- Fill and properly sign the form of offer.
- Attach proof of registration with CSD.
- Proof of Registration with CIDB
- Attach audited annual financial statements of the bidding entity (for projects in excess of R10 million);
- Attach unaudited annual financial statements for close corporations and companies if the public interest score is below 350 in line with the companies act of 2008;
- Proof of latest municipal rates and taxes statement of the bidder indicating that rates and taxes are not in arrears for more than 3 months.
- Proof of latest municipal rates and taxes statement of each company director indicating that rates and taxes are not in arrears

for more than 3 months.

- Proof of latest municipal water and sanitation charges statement of the bidder indicating that rates and taxes are not in arrears for more than 3 months for bidders who reside in the O. R. Tambo District Municipality area.
- Proof of latest municipal water and sanitation charges statement of each company director indicating that rates and taxes are not in arrears for more than 3 months for bidders who reside in the O. R. Tambo District Municipality area.
- Confirmation of address from a ward councillor where the bidder and company directors operate and reside in a peri-urban area where no rates and taxes and service charges are not billed.
- A copy of a valid lease agreement where the bidder does not own the property they are operating from.
- Attach joint Venture Agreement or Consortium Agreement signed and initialled on each page (if applicable).
- **NOTE:** Joint Ventures and Consortiums will only be considered provided they submit consolidated company registration documents and **on award** will be required to submit a joint venture or consortium bank account and a joint venture or consortium SARS Tax PIN.

EVALUATION OF BIDS IN TERMS OF THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK REGULATIONS, 2022:

Bids will be evaluated in three stages, namely:

- Stage 1 – Mandatory Requirements
- Stage 2 – Minimum Conditions of tender
- Stage 3 – Price and Specific Goals

Item	Weight
Stage 2 of Minimum Conditions of tender	100
• Company Experience with respect to similar projects	60
• Qualifications and Experience of key staff assigned to the contract	40
Stage 3 of Evaluation- Price and Specific Goals	100
• Specific Goal Points	20
• Price	80

CONDITIONS OF THE TENDER WITH REGARDS TO SUB-CONTRACTING

ITS IS THE CONDITION OF THIS TENDER THAT SUCCESSFUL TENDERER MUST SUBCONTRACT A MINIMUM OF 10% OF THE VALUE OF THE CONTRACT TO THE DESIGNATED GROUPS AS INDICATED IN THE TENDER DOCUMENT

Tenders may only be submitted on tender documentation issued. No late, faxed, e-mailed, or other form of tender will be accepted.

Technical enquiries: Mr. N. Noto, telephone number 047 501 6425 or email: nkosiyabon@ortambodm.gov.za.

All Supply Chain Management enquiries may be directed to Mr. S. Hopa, telephone number 047 5016449 or Email: sakhiwoh@ortambodm.org.za during office hours: Monday to Friday 08H00-13H00 and 13H30-16H30.

Tenders will be evaluated in terms of the Supply Chain Management policy of the O. R. Tambo District Municipality. The lowest tender will not necessarily be accepted and the Municipality reserves right to accept the whole or part of any tender or not to consider any tender not suitably endorsed. An 80/20-point System shall apply where 80 points is allocated for price and 20 points allocated for Specific Goal Points as follows:

The specific goals allocated points in terms of this tender	Number of points Allocated on 80/20 system
The promotion of enterprises located in a specific region (O.R Tambo District): The Tenderer and Directors are based in the ORTDM region and pay their municipal rates and taxes	05
Promotion of 51% Black-owned enterprises	05
Promotion of 100% Women-owned enterprises	05
Promotion of 100% Youth-owned enterprises	05

Tenderers must submit copies of all supporting documents necessary to prove conformance with Specific Goal criteria listed above in order to be eligible for Specific Goal points.

Mr P. B. Mase
Municipal Manager

T1.2 TENDER DATA

The Standard Conditions of Tender are those contained in the Construction Industry Development Board (CIDB) *Standard for Uniformity in Engineering and Construction Works Contracts (August 2019)* as published in Board Notice 423 of 2019, in Government Gazette No. 42622, on 08 August 2019. (Refer to www.cidb.org.za and/or www.gpwonline.co.za).

The Standard Conditions of Tender Procurement make several references to the Tender Data for details that apply specifically to the Tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the standard conditions of Tender. Each item of data given below is cross- referenced to the clause in the Standard Conditions of Tender to which it mainly applies.

Please note that the word “Client” is used in this document and referred to as “Employer” in the Standard Conditions of Tender document.

Clause Number	
F.1	General
F.1.1	The Client is: O. R. Tambo District Municipality Private Bag X6043 Mthatha, 5099
F.1.2	The Tender documents issued by the Client comprise: Tender T1.1 Tender Notice and invitation to tender T1.2 Tender Data T2.1 List of Returnable Documents T2.2 Returnable Documents for tender evaluation purposes T2.3 Returnable Documents to be incorporated into the contract
	Contract Part 1 : Agreements and Contract data C1.1 Forms of Offer and Acceptance C1.2 Contract Data C1.3 Occupational health and safety specification C1.4 O. R. Tambo District Municipality's Health and Safety Specification Part 2 : Pricing Data C2.1 Pricing Instructions C2.2 Bill of Quantities Part 3 : Scope of Works C3.1 Description of the Works C3.2 Engineering C3.3 Procurement C3.4 Construction C3.5 Management C3.6 Annexures (Specification) Part 4: Site Information C4 Site information Part 5: Additional Relevant Documents Tender Drawings: Book of Drawing issued Separately

F1.3	Interpretation The tender data and additional requirements contained in the tender schedules that are included in the returnable documents are deemed to be part of these tender conditions.	
F.1.4	Communication: Communication with all stakeholders shall be through the O. R. Tambo Municipality's Engineering Services Manager. 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 Employer is O. R. Tambo District Municipality Private Bag x6043 Mthatha, 5099 Tel: (047) 501 6425 Email: nkosiyaon@ortambodm.gov.za Contact person: Mr. N. Noto	The Employer's Agent is: S Zoko Consulting CC 19 Valley Rd, Margate, 4275 (039) 317 4534 Email: info@szcon.co.za Contact Person : Mr. S. Zoko
F.1.5	The employer's right to accept or reject any tender offer	
F.1.5.1	Reject or accept 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 a cancellation and rejection, but will give written reasons for such action upon written request to do so.	
F.1.6	Procurement procedures	
F.1.6.1	A contract will, subject to F.3.13, be concluded with the tenderer who in terms of F.3.11 is the highest ranked or the tenderer scoring the highest number of tender evaluation points, as relevant, based on the tender submissions that are received at the closing time for tenders.	
F.2	Tenderer's obligations	
F.2.1.1	Eligibility Only those tenders who are registered with CIDB and have in their employ management and supervisory staff satisfying the requirement of the scope of work for labour intensive competencies for supervisory and management staff are eligible to submit tenders.	
F.2.1.2	CIDB Grading The required CIDB grading for this project is 5 CE or Higher.	
F.2.2	Cost of tendering Accept that the Employer will not compensate the tenderers 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 satisfy requirements.	
F.2.3	Check documents Check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission.	
F.2.4	Confidentiality and copyright Treat as confidential all matters arising in connection with the tender. Use and copy the documents issued by the employer only for the purpose of preparing and submitting a tender offer in response to the invitation.	
F.2.5	Reference documents Obtain, as necessary for submitting a tender offer, copies of the latest versions of standards, specifications, conditions of contract and other publications, which are not attached but which are incorporated into the tender documents by reference.	

F.2.6	Acknowledge Addenda Acknowledge receipt of addenda to the tender documents, which the employer may issue, and if necessary apply for an extension of the closing time stated in the tender data, in order to take the addenda into account.	
F.2.7	The arrangements for a compulsory clarification meeting are:	
	Date: 16 July 2024 Starting time: 10h00	Location: Ingquza Hill Local Municipality, Lusikisiki Municipal Offices, then proceed to site
F.2.8	Seek clarification Request clarification of the tender documents, if necessary, by notifying the employer at least five working days before the closing time stated in the tender data.	
F.2.10	Pricing the tender	
F.2.10.1	Include in the rates, prices, and the tendered total of the prices (if any) all duties, taxes (except Value Added Tax (VAT), and other levies payable by the successful tenderer, such duties, taxes and levies being those applicable 14 days before the closing time stated in the tender data.	
F.2.10.2	Show VAT payable by the employer separately as an addition to the tendered total of the prices.	
F.2.10.3	Provide rates and prices that are fixed for the duration of the Contract, and not subject to adjustment except as provided for in the conditions of contract identified in the Contract data.	
F.2.10.4	State the rates and prices in South African Rand.	
F.2.11	Alterations to documents Not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the tenderer. All signatories to the tender offer shall initial all such alterations. Erasures and the use of masking fluid are prohibited.	
F.2.12	Alternative tender offers <i>Delete the contents of Clause F.2.12 and replace with the following:</i> "No alternative offers will be accepted. This includes offering fixed rates in lieu of Contract Price Adjustment and/or changes to the 'as-scheduled' allowance for Contingencies and escalation."	
F.2.13.5	The Client's address for delivery of Tender offers and identification details to be shown on each Tender offer package are:	
	Location of Tender box: Tender Box, Ground Floor, O. R. Tambo District Municipality Building, Nelson Mandela Drive, Myezo Park, Mthatha, Eastern Cape.	
	Physical address: O. R. Tambo House, Nelson Mandela Drive, Mthatha	
F.2.14	Information and data to be completed in all respects Accept that tender offers, which do not provide all the data or information requested completely and in the form required, may be regarded by the employer as non-responsive.	
F.2.15	Closing time The closing times for submission of Tenders are 12H00pm Friday 02 August 2024.	
F.2.15	Telephonic, telegraphic, telex, facsimile or e-mailed Bid offers will not be accepted.	
F.2.16	Tender offer validity The Tender offer validity period is 90 Days as stated in the tender data.	
F.2.17	Clarification of tender offer after submission The tenderer shall 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.	

F.2.18	<p>Provide other material</p> <p>The tenderer shall, when requested by the Employer to do so, 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.</p>
F.2.20	<p>Submit securities, bonds, policies</p> <p>Submit to the employer before formation of the contract, certificates of insurance required in terms of the conditions of contract identified in the contract data.</p>
F.2.23	<p>The tenderer is required to submit with his tender:</p> <p>(1) a valid Tax Verification Pin issued by the South African Revenue Services; and (2) Certified copy of the original of all the Companies / CC Registration documents. (3) Joint Venture Agreement where applicable in CIDB format (signed and initialed on each page). (4) Proof of registration with CIDB (5) Certified copies of the original green bar-coded ID copies of Members of the companies.</p>
F.3	The employer's undertakings
F.3.1	Respond to requests from the tenderer
F.3.1.1	Respond to a request for clarification received up to five working days before the tender closing time stated in the Tender Data and notify all tenderers who drew procurement documents.
F.3.2	<p>Issue Addenda</p> <p>If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date that tender documents are available until seven days before the tender closing time stated in the Tender Data. If, as a result a tenderer applies for an extension to the closing time stated in the Tender Data, the Employer may grant such extension and, shall then notify all tenderers who drew documents.</p>
F.3.4	Opening of tender submissions
F.3.4.1	The employer shall open valid tender submissions in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data. Tender submissions for which acceptable reasons for withdrawal have been submitted will not be opened.
F.3.4.2	Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened and, where applicable, the total of his prices, preferences claimed and time for completion for the main tender Offer only.
F.3.4.3	The Client shall not be obliged to make available the record outlined in F.3.4.2 to any tenderer who fail to attend the tender opening.
F.3.6	<p>Non-disclosure</p> <p>The client shall 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.</p>
F.3.7	<p>Grounds for rejection and disqualification</p> <p>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.</p>
F3.9	Arithmetical errors, omissions and discrepancies
F.3.9.1	Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount in words shall govern.

F.3.9.2	<p>Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with F.3.11 for:</p> <p>a) the gross misplacement of the decimal point in any unit rate;</p> <p>b) omissions made in completing the pricing schedule or bills of quantities; or</p> <p>c) arithmetic errors in:</p> <p>i) line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or</p> <p>ii) The summation of the prices.</p>
F.3.9.3	<p>Notify the tenderer of all errors or omissions that are identified in the tender offer and invite the tenderer to either confirm the tender offer as tendered or accept the corrected total of prices.</p>
F.3.9.4	<p>Where the tenderer elects to confirm the tender offer as tendered, correct the errors as follows:</p> <p>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.</p> <p>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.</p>
F.3.10	<p>Clarification of a tender offer</p> <p>Obtain clarification from a tenderer on any matter that could give rise to ambiguity in a contract arising from the tender offer.</p>
F3.11	<p>Evaluation of tender offers</p> <p><i>Replace the contents of the entire sub-clause with the following:</i></p> <p>The procedure for evaluation of responsive tender offers will be Method 2 of table F.1 of SANS 294: 2004. Financial offer & Preferences. The bid will be awarded to the bidder who has scored the highest points for price and preferences combined BUT the prerequisite will be to obtain at least 60 points for quality (functionality), which will be explained in Stage 1 below.</p> <p>Nevertheless, O. R. Tambo District Municipality retains the right to accept any bid.</p> <p>B. First stage in evaluation: Compliance with Bid Rules and other Requirements</p> <p>The bids will be checked to ensure that they comply with the bid rules and all other requirements of the project document. In particular, the following documentation must be completed and/or included within the bid.</p> <ul style="list-style-type: none"> • The form of Offer and Acceptance • Audited financial statements for any tender price over R10million • Certified company registration documents and ID of members • Form C: Compulsory Enterprise Questionnaire • Form D: Certificate of Authority for Signature • Form E: Amendments, Qualifications and Alternatives • Form H: Certificate of Good Standing • Form I: Relevant experience • Form J: Details of key staff and CVs • Form M: Preference Points Claim Form in Terms of the Preferential Procurement Regulations 2017 <p>Note:</p> <ul style="list-style-type: none"> • All information supporting the above forms such as Curricula Vitae of staff who will work on the project and their functions, details of ownership, relevant experience etc. • Addenda issued during the bid period, if any. • The pricing schedule <p>Failure to supply the required information will compromise the bid.</p>

Next Stage in Evaluation: Quality / Functionality; Price & Preference (Specific Goals). The next state in the evaluation process will consist of two stages, as follows:

STAGE 2: FUNCTIONALITY/QUALITY EVALUATION

ITEM	WEIGHT
Minimum conditions of tender (see detailed criteria below)	100
• Experience with respect to similar projects	60
• Qualifications and Experience of key staff assigned to the contract	40

Only bidders who score **70 points or more** on stage 1 will be evaluated further and therefore eligible for award.

The maximum score of minimum conditions of tender shall be **100**, distributed as follows:

Minimum conditions of tender		
	Minimum conditions of tender	Maximum tender evaluation points provided
B1.1	Experience on similar projects	60
	Experience on similar projects: Proven experience in the construction of Water Supply pipelines, concrete reservoirs etc. or Waterborne Sewer pipelines contracts. Copies of Certificate of Completion MUST be submitted with the bid. No points will be awarded where Certificates of Completion have not been submitted with the Bid. If the value of completed project is not reflected on the certificate, provide contractor's appointment or letter from the client with values.	60
	The Contractor has successfully completed at least Three (3) projects that satisfies the sub-criteria and provided evidence whose total sum of a value of at least R 20 Million .	60
	The Contractor has successfully completed at least Two (2) projects that satisfies the sub-criteria and provided evidence whose total sum of a value of at least R 16 Million .	40
	The Contractor has successfully completed at least One (1) projects that satisfies the sub-criteria and provided evidence whose total sum of a value of at least R8 Million .	20
	Contractor failed to provide evidence of experience	0
B1.2	Qualifications and Experience of key personnel (NB no key personnel member may be assigned more than one duty on the Contract, i.e., different personnel must be assigned for each of the following key positions) Contracts Manager = Minimum ND Civil Engineering/ NQF level 6, Site Agent = Minimum N6 Civil Engineering and Concrete Foreman = Minimum Grade 12/N3 Civil Engineering/ building. Bidders must submit CV's/Resume and contactable references.	40
	Contracts Manager, Site Agent, Foreman	
	Favourable previous experience in the Civil Engineering field with a minimum of 5 years; Contracts Manager = 20 points, 3-4 years = 15 points & 1-2 years = 10 points.	20
	Favourable previous experience in the Civil Engineering field with a minimum of 5 years; Site Agent = 12 points, 3-4 years = 8 points & 1-2 years = 6 points.	12

	Favourable previous experience on construction sites in the role of Main or Assistant Concrete Foreman on contracts involving in-situ reinforced concrete structures such as reservoirs or other reinforced concrete water retaining structures with a minimum of 5 years; Concrete Foreman = 8 points, 3-4 years = 6 points & 1-2 years = 4 points.	8
	Contractor failed to provide evidence of qualification and experience.	0

STAGE 3: EVALUATION FOR PRICE AND PREFERENCE (80/20)

The procedure for Stage 2 of evaluation of responsive tenders is **Method 2**

a) PRICE 80

b) SPECIFIC GOAL POINTS CONTRIBUTION: 20

a) Points Awarded for Price (Ps)

A total of 80 points will be awarded to the Tenderer with the lowest balanced price.

The other tenders will be awarded points on the ratio to benchmark price as follows

$$P_s = 80 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right)$$

Where

P_s = Points scored for price of bid under consideration

P_t = Rand value of bid under consideration

P_{min} = Rand value of lowest acceptable bid

b) Points awarded for Specific Goals Contribution

In terms of Regulation 5 (2) and 6 (2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the Specific Goal Points contribution in accordance with the table below:

The specific goals allocated points in terms of this tender	Number of points Allocated on 80/20 system
The promotion of enterprises located in a specific region (O.R Tambo District): The Tenderer and Directors are based in the ORTDM region and pay their municipal rates and taxes	05
Promotion of 51% Black-owned enterprises	05
Promotion of 100% Women-owned enterprises	05
Promotion of 100% Youth-owned enterprises	05

Tenderers must submit copies of all supporting documents necessary to prove conformance with Specific Goal criteria listed above in order to be eligible for Specific Goal points. The total calculated points will be rounded to the second decimal place.

F.3.13	Acceptance of tender offer
F3.13.1	<p>Accept the tender offer, if in the opinion of the employer, it does not present any unacceptable commercial risk and only if the tenderer:</p> <p>a) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement,</p> <p>b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract,</p> <p>c) has the legal capacity to enter into the contract,</p> <p>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,</p>
	<p>e) complies with the legal requirements, if any, stated in the tender data, and</p> <p>f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest.</p>
F3.13.2	<p>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. Providing the form of offer and acceptance does not contain any qualifying statements, it will constitute the formation of a contract between the employer and the successful tenderer as described in the form of offer and acceptance.</p>
F.3.14	<p>Notice to unsuccessful tenderers</p> <p>After the successful tenderer has acknowledged the employer's notice of acceptance, after written request, the employer will notify the tenderers that their tender offers have not been accepted on the O. R. Tambo District Municipality's website: www.ortambodm.gov.za, by listing the successful tender.</p>
F.3.15	<p>Prepare Contract documents</p> <p>If necessary, revise documents that shall form part of the Contract and that were issued by the employer as part of the tender documents to take account of:</p> <p>a) addenda issued during the tender period,</p> <p>b) inclusion of some of the returnable documents,</p> <p>c) other revisions agreed between the employer and the successful tenderer, and</p> <p>d) The schedule of deviations attached to the form of offer and acceptance, if any.</p>
F.3.16	<p>Issue final contract</p> <p>Prepare and issue the final draft of the contract to the successful tenderer for acceptance as soon as possible after the date of the employer's signing of the form of offer and acceptance (including the schedule of deviations, if any).</p>

T2.1 LIST OF RETURNABLE DOCUMENTS

The Tenderer must complete the following returnable documents:

T2.2 Returnable Documents required for Tender evaluation purposes		
1	Form 2.2.1	General Information of the Tenderer
2	Form 2.2.2	Authority for Signatory
3	Form 2.2.3	Schedule of Previous Experience
4	Form 2.2.4	Schedule of Current Projects
5	Form 2.2.5	Declaration of good standing regarding tax
6	Form 2.2.6	Certificate of Attendance at Site Meeting
7	Form 2.2.7	Certificate of Attendance at Site Meeting
8	Form 2.2.8	Proposed Key Personnel
9	Form 2.2.9	Schedule of Proposed Sub-Contractors
10	Form 2.2.10	Financial References
11	Form 2.2.11	Municipal Bidding Documents (MBD forms)

T2.3 Returnable Documents that will be incorporated into the contract		
1	Form 2.3.1	Record of Addenda to Tender Documents
2	Form 2.3.2	Procurement Form

T2.2 RETURNABLE DOCUMENTS

RETURNABLE DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES

Form 2.2.1	General Information of Tenderer
Form 2.2.2	Authority of Signatory
Form 2.2.3	Schedule of Previous Experience
Form 2.2.4	Schedule of Current Projects
Form 2.2.5	Declaration of good standing regarding tax
Form 2.2.6	Registration on the Central Supplier Database
Form 2.2.7	Certificate of Attendance at Site Meeting
Form 2.2.8	Proposed Key Personnel
Form 2.2.9	Schedule of Proposed Sub-Contractors
Form 2.2.10	Financial References
Form 2.2.11	Municipal Bidding Documents (MBDs)

FORM 2.2.1**GENERAL INFORMATION OF TENDERER**

1. **Name of Tenderer:**

2. **Contact details**

Address :

Tel no :

Fax no :

Cell no :

E-mail address:

3. **Legal entity: Mark with an X.**

Sole proprietor	
Partnership	
Close corporation	
Company (Pty) Ltd	
Joint venture	

In the case of a Joint venture, provide details on joint venture members:

Joint venture member	Type of entity (as defined above)

4. **Income tax reference number:**

(in case of a joint venture, provide for all joint venture members)

5. **Municipal services area where the enterprise is registered:**

(in case of a joint venture, provide for all joint venture members)

6. **Company / close corporation Registration Number:**

(in case of a joint venture, provide for all joint venture members)

7. **VAT Registration number:**

(in case of a joint venture, provide for all joint venture members)

8. **CIDB registration number:**

(in case of a joint venture, provide for all joint venture members)

ATTACH THE FOLLOWING DOCUMENTS HERETO

1. For Closed Corporations
Certified copies of CK1 or CK2 as applicable (Founding Statement)
2. For Companies
Certified copies of Shareholders register
3. ID copies
Certified ID Copies for members
4. CIDB registration
Proof of registration with CIDB
5. CSD registration
Proof of registration with Central Supplier Database
6. For Joint Venture Agreements
Copy of the Joint Venture Agreement between all the parties, as well as the certified documents in (1), and or (2) and (4) and (4) of each Joint Venture member.
7. Copy of the latest municipal service account where enterprise is registered
8. Director's / Shareholder's Municipal Rates
9. Specific Goal Points Contribution
10. Central Supplier Database Summary Report

FORM 2.2.2 AUTHORITY OF SIGNATORY

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

A Company	B Partnership	C Joint Venture	D Sole Proprietor	E Close Corporation

A. Certificate for Company

I,....., chairperson of the board of directors of
....., hereby confirm that by resolution of the board (copy
attached) taken on.....202..., Mr/Mrs.....
acting in the capacity of....., was authorized to sign all documents in connection with this
tender and any contract resulting from it on behalf of the company.

As witness

1.....
Chairman
2.....
Date

B. Certificate of Partnership

We, the undersigned, being the key partners in the business trading as
hereby authorize Mr/Mrs....., acting in the capacity
of.....to sign all documents in connection with the tender for
Contract.....and any contract resulting from it on our
behalf.

NAME	ADDRESS	SIGNATURE	DATE

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

C. Certificate for Joint Venture

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

Mr/Mrs....., authorized signatory of the company,
acting in the capacity of lead partner, to sign all documents in connection with the tender offer forContract
.....and any other contract resulting from it on our behalf.

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

NAME OF FIRM	ADDRESS	DULY AUTHORISED SIGNATORY
Lead partner CIDB registration no		Signature :..... Name :..... Designation :.....
 CIDB registration no		Signature :..... Name :..... Designation :.....
 CIDB registration no		Signature :..... Name :..... Designation :.....
 CIDB registration no		Signature :..... Name :..... Designation :.....

A copy of the Joint Venture Agreement showing clearly the percentage contribution of each partner
to the Joint Venture shall be appended to this Schedule.

D. Certificate for Sole Proprietor

I, _____, hereby confirm that I am the sole owner of the

business trading as_____

As Witness:

1. _____
Signature: Sole owner

2. _____
Date

E. Certificate for Close Corporation

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

_____hereby

authorize

Mr/Mrs_____

...

Acting in the capacity of_____, to sign all documents in connection with
the tender

for Contract_____and any contract resulting from it
on our behalf.

NAME	ADDRESS	SIGNATURE	DATE

NOTE: This certificate is to be complete and signed by all the key members upon whom rests the
direction of the affairs ofthe Close Corporation as a whole

**ATTACH HERETO THE DULY SIGNED AND DATED
ORIGINAL OR CERTIFIED COPY OF AUTHORITY OF
SIGNATORY ON COMPANY LETTERHEAD**

FORM 2.2.3 SCHEDULE OF PREVIOUS EXPERIENCE
--

Provide the following information on relevant previous experience (indicate specifically projects of similar or larger size and/or which is similar with regard to type of work).

[illegible]

Name of Tenderer:

Date:

Signature:

Full name of signatory:

FORM 2.2.4

Provide the following information on current relevant projects. **This information is material to the award of the Contract.**

[illegible]

Name of Tenderer:

Date:

Signature:

Full name of signatory:

FORM 2.2.5 DECLARATION OF GOOD STANDING REGARDING TAX**SOUTH AFRICAN REVENUE SERVICES**

Tender No:

Closing Date:

DECLARATION OF GOOD STANDING REGARDING TAX**PARTICULARS**

1. Name of Taxpayer/Tenderer:

2. Trade Name:

3. Identification Number: (If applicable)

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

4. Company / Close Corporation registration number:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

5. Income Tax reference number:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

6. VAT registration number: (If applicable)

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

7. PAYE employer's registration number: (If applicable)

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

8. Monetary value of Bid:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

DECLARATION

I, the undersigned, the above taxpayer/Bidder, hereby declare that my Income Tax, Pay-As-You-Earn (PAYE) and Value-Added-Tax (VAT) obligations of the above-mentioned taxpayer, which include the rendition of returns and payment of the relevant taxes:

(i) Have been satisfied in terms of the relevant Acts; or

(ii) That suitable arrangements have been made with the Receiver of Revenue,.....to satisfy them.*

.....
SIGNATURE.....
CAPACITY.....
DATE

PLEASE NOTE:* The declaration (ii) cannot be made unless formal arrangements have been made with the Receiver of Revenue with regard to any outstanding revenue/outstanding tax returns.

ATTACH SARS TAX COMPLIANCE PIN:

FORM 2.2.6	REGISTRATION ON THE CENTRAL SUPPLIER DATABASE
-------------------	--

Attach proof of registration with the Central Supplier Database. **This information is material to the award of the Contract.**

**ATTACH CERTIFIED PROOF OF REGISTRATION ON THE NATIONAL
CENTRAL SUPPLIER DATABASE**

FORM 2.2.7	CERTIFICATE OF ATTENDANCE AT SITE MEETING
-------------------	--

This is to certify that I,(Name)

duly authorized Competent representative of(Tenderer)

Address:

Date:

Visited the site on (date) in the presence of(Engineer)

I have made myself familiar with the sites and all the local conditions likely to influence the work and the cost thereof.

I further certify that I am Competent enough and satisfied with the description of the work and explanations given by the said Engineer above and that I understand perfectly the work to be done, as specified and implied, in the execution of this contract.

REPRESENTATIVE OF TENDERER

REPRESENTATIVE OF EMPLOYER

FORM 2.2.8 PROPOSED KEY PERSONNEL

The Tenderer shall list below the key personnel (including first nominee and the second choice alternate), whom he proposes to employ on the project should his Tender be accepted, both at his headquarters and on the Site, to direct and for the execution of the work, together with their CV depicting their experience, positions held, their nationalities and certified qualifications.

No	Name	Qualification	Designation	YEARS WITH CURRENT COMPANY

Name of Tenderer:

Date:

Signature:

Full name of signatory:

FORM 2.2.9**SCHEDULE OF PROPOSED SUB-CONTRACTORS**

NAME OF SUB-CONTRACTOR	FULL DESCRIPTION OF WORK TO BE PERFORMED BY SUB- CONTRACTORS

NB: It is NOT a Condition of Contract that a minimum of 30% of the construction work shall be subcontracted to QSEs and EMEs as contemplated in the 'The Broad-Based Black Economic Empowerment Act (No. 53 of 2003) as amended by B-BBEE Act 46 of 2013 (The Act)'. The Contractor shall take all reasonable and practical measures to support, mentor, train, upskill and supervise such subcontractors as envisaged in the Strategic Objectives of the Amended Construction Sector Code.

Acceptance of this tender shall not be construed as approval of all or any of the listed subcontractors. Should any of the subcontractors not be approved subsequent to acceptance of the tender, this shall in no way invalidate this tender, and the tendered unit rates for the various items of work shall remain final and binding, even in the event of a subcontractor not listed above being approved by the Engineer.

Name of Tenderer:

Date:

Signature:

Full name of signatory:

FORM 2.2.10 FINANCIAL REFERENCES

FINANCIAL STATEMENTS

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

DETAILS OF TENDERERS BANKING INFORMATION

I/We hereby authorize the Client/Engineer to approach all or any of the following banks for the purposes of obtaining a financial reference:

BANK NAME:									
ACCOUNT NAME: (e.g., ABC Civil Construction cc)									
ACCOUNT TYPE: (e.g., Savings, Cheque etc.)									
ACCOUNT NO:									
ADDRESS OF BANK:									
CONTACT PERSON:									
TEL. NO. OF BANK / CONTACT:									
How long has this account been in existence:	<table border="1"> <tr> <td>0-6 months</td> <td></td> </tr> <tr> <td>7-12 months</td> <td></td> </tr> <tr> <td>13-24 months</td> <td></td> </tr> <tr> <td>More than 24 months</td> <td></td> </tr> </table> <p>(Tick which is appropriate)</p>	0-6 months		7-12 months		13-24 months		More than 24 months	
0-6 months									
7-12 months									
13-24 months									
More than 24 months									

Name of Tenderer:

Date:

Signature:

Full name of signatory:

ATTACH AUDITED
FINANCIAL STATEMENTS

FORM 2.2.11 MUNICIPAL BIDDING DOCUMENTS (MBD)**MBD 1****PART A INVITATION TO BID**

BID NUMBER:	ORTDM SCMU 01-24/25	CLOSING DATE:	02 AUGUST 2024	CLOSING TIME:	12H00
DESCRIPTION:	ARTHUR HOMES WATER SUPPLY				

BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT:

TENDER BOX, GROUND FLOOR, O. R. TAMBO DISTRICT MUNICIPALITY BUILDING

NELSON MANDELA DRIVE

MYEZO PARK

MTHATHA

EASTERN CAPE

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:	<input type="checkbox"/>		CSD No:	
STATEMENT OF RATES AND TAXES OF THE BIDDER	Yes <input type="checkbox"/> No <input type="checkbox"/>	STATEMENT OF RATES AND TAXES OF THE COMPANY		Yes <input type="checkbox"/>	No <input type="checkbox"/>
[STATEMENT OF RATES AND TAXES OF THE BIDDER AND OF THE COMPANY/ LEASE AGREEMENT FOR LEASED PROPERTY MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS]					
ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	Yes <input type="checkbox"/> No <input type="checkbox"/>	ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?		Yes <input type="checkbox"/> No <input type="checkbox"/>	[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	SCM DEPARTMENT		CONTACT PERSON	Mr. N. Noto	
CONTACT PERSON	Mr. Sakhiwo Hopa		TELEPHONE NUMBER	047 501 6425	
TELEPHONE NUMBER	047 501 6449		FACSIMILE NUMBER	N/A	
E-MAIL ADDRESS	sakhiwoh@ortambodm.gov.za		E-MAIL ADDRESS	nkosiyabon@ortambodm.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 BEACCEPTED FOR CONSIDERATION.
1.2.	ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED–(NOT TO BE RE-TYPED).
1.3.	THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017, 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)? <input type="checkbox"/> YES <input type="checkbox"/> NO
3.2.	DOES THE ENTITY HAVE A BRANCH IN THE RSA? <input type="checkbox"/> YES <input type="checkbox"/> NO
3.3.	DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA? <input type="checkbox"/> YES <input type="checkbox"/> NO
3.4.	DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA? <input type="checkbox"/> YES <input type="checkbox"/> NO
3.5.	IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION? <input type="checkbox"/> YES <input type="checkbox"/> NO
IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOTREGISTER 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:

MBD 4

DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state¹.
2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorized 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.

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

3.2 Identity Number:

3.3 Position occupied in the Company (director, trustee, shareholder²):

.....

3.4 Company Registration Number:

3.5 Tax Reference Number:

3.6 VAT Registration Number:

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

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

3.8.1 If yes, furnish particulars.....

.....

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.

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

.....

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

Full name	Identity number	State employee number

.....
Signature

.....
Date

.....
Capacity

.....
Name of Bidder

MBD 5

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

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

NO.	QUESTION	ANSWER (TICK WHICH RESPONSE IS APPLICABLE)	
		YES	NO
1.	Are you by law required to prepare annual financial statements?		
1.1	If yes, submit audited annual financial statements for the past three years or since the date of establishment if established during the last 3 years.		

NO.	QUESTION	ANSWER (TICK WHICH RESPONSE IS APPLICABLE)	
		YES	NO
2.	Do you have any outstanding undisputed commitments for municipal services towards any municipality for more than 3 months or any other service provider in respect of which payment is overdue for more than 30 days?		
2.1	If no, this serves to certify that the bidder has no undisputed commitments for municipal services towards any municipality for more than 3 months or other service provider in respect of which payment is overdue for more than 30 days.		
2.2	If yes, provide details:		

NO.	QUESTION	ANSWER (TICK WHICH RESPONSE IS APPLICABLE)	
		YES	NO
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?		
3.1	If yes, provide details:		

NO.	QUESTION	ANSWER (TICK WHICH RESPONSE IS APPLICABLE)	
		YES	NO
4.	Will any portion of the goods or services 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 outside of the Republic?		
4.1	If yes, provide details:		

CERTIFICATION

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

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

.....

Signature

.....

Date

.....

Position

.....

Name of Bidder

MBD 6.1**PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022**

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

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

1. GENERAL CONDITIONS

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

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

1.2 To be completed by the organ of state

- a) The applicable preference point system for this tender is the 80/20 preference points system.
- b) The highest acceptable tender will be used to determine the accurate system once tenders are received.
- c) The maximum points for this tender are allocated as follows:

	POINT S
PRICE	80
SPECIFIC GOAL POINTS	20
Total Points For Price and Specific Goal Points	100

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

2. DEFINITIONS

- (a) **“tender”** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;
- (b) **“price”** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;
- (c) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
- (d) **“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 points is allocated for price on the following basis:

$$P_s = 80 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right)$$

Where

P_s = Points scored for price of tender under consideration
 P_t = Price of tender under consideration
 P_{min} = Price of lowest 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:

The specific goals allocated points in terms of this tender	Number of points Allocated on 80/20 system	Number of points claimed by Tenderer (To be completed by the Tenderer)
The promotion of enterprises located in a specific region (O. R. Tambo District): The Tenderer and Directors are based in the ORTDM region and pay their municipal rates and taxes	05	
Promotion of 51% Black-owned enterprises	05	
Promotion of 100% Women-owned enterprises	05	
Promotion of 100% Youth-owned enterprises	05	

The following documents shall be submitted to prove compliance with the above Specific Goals where claimed:

- Copy of business registration documents, as issued by CIPC.
- Certified copy of identity documents of directors/ shareholders/ partners / members, as the case may be.
- Original Valid Tax Clearance Certificate or a Confirmation of Tax Validity with the pin issued by SARS.
- Proof of latest municipal rates and taxes statement **of the bidder** indicating that rates and taxes are not in arrears for more than 3 months.
- Proof of latest municipal rates and taxes statement of each **company director** indicating that rates and taxes are not in arrears for more than 3 months.
- Proof of latest municipal water and sanitation charges statement **of the bidder** indicating that rates and taxes are not in arrears for more than 3 months for bidders who reside in the O. R. Tambo District Municipality area.

- Proof of latest municipal water and sanitation charges statement of each **company director** indicating that rates and taxes are not in arrears for more than 3 months for bidders who reside in the O. R. Tambo District Municipality area.
- Confirmation of address from a ward councillor where the bidder and company directors operate and reside in a peri-urban area where no rates and taxes and service charges are not billed.
- A copy of a valid lease agreement where the bidder does not own the property they are operating from

5. DECLARATION WITH REGARD TO COMPANY/FIRM

5.1. Name of company/firm.....

5.2. Company registration number:

5.3. TYPE OF COMPANY/ FIRM

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

[TICK APPLICABLE BOX]

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

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

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

MBD 8

DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

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

Item	Question	Yes	No
4.1	Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons 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/Authority of the institution that imposed the restriction after the <i>audi alteram partem</i> rule was applied). The Database of Restricted Suppliers now resides on the National Treasury's website (www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.3.1	If so, furnish particulars:		
Item	Question	Yes	No
4.4	Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

4.4.1	If so, furnish particulars:		
4.5	Was any contract between the bidder and the municipality / municipal entity or anyother organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.7.1	If so, furnish particulars:		

CERTIFICATION

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

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

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

MBD 9

CERTIFICATE OF INDEPENDENT BID DETERMINATION

- 1 This Municipal Bidding Document (MBD) must form part of all bids¹ 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 *per se* prohibition meaning that it cannot be justified under any grounds.
- 3 Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
 - a. take all reasonable steps to prevent such abuse;
 - b. reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
 - c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
- 4 This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
- 5 In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

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

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

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid: **PROJECT NO.: ORTDM SCMU 01-24/25: ARTHUR HOMES WATER SUPPLY**

in response to the invitation for the bid made by: **O. R. TAMBO DISTRICT 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 consortium³ 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.

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.

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

T2.3 RETURNABLE DOCUMENTS

RETURNABLE DOCUMENTS THAT WILL BE INCORPORATED INTO THE CONTRACT

Form 2.3.1 Record of Addenda to Tender Documents

Form 2.3.2 Procurement Form

FORM 2.3.1 RECORD OF ADDENDA TO TENDER DOCUMENTS

(Addenda received from Engineer for amendments on Tender Documentation)

	Date	Title or Details
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Name of Tenderer:

Date:

Signature:

Full name of signatory:

FORM 2.3.2 PROCUREMENT FORM

Acceptable Tenders will be evaluated using a system that awards points on the basis of Tender price and the meeting of specific goals.

DEFINITIONS

“Acceptable Tender” means any Tender which, in all respects, complies with the conditions of Tender and specifications as set out in the Tender document, including conditions as specified in the Preferential Procurement Policy Framework Act (Act 5 of 2000) and the Supply Chain Management of Council.

“Council” refers to the O. R. TAMBO DISTRICT Municipality.

“Equity ownership” refers to the percentage ownership and control, exercised by individuals within an enterprise and they are involved in the day to day running of the Company.

“HDI equity ownership” refers to the percentage of an enterprise, which is owned by individuals, or in the case of a company, the percentage shares that are owned by individuals meeting the requirements of the definition of a HDI.

“Historically disadvantaged individuals (HDIs)” means all South African citizens –

- (i) Who had no franchise in national elections prior to the introduction of the 1983 and 1993 constitutions (Referred to as Previously Disadvantaged Individuals (PDIs) in this document)
- (ii) Women
- (iii) Disabled persons.

“SMME’s” (small, medium and micro enterprises) refers to separate and distinct business entities, including co-operative enterprises and NGOs, managed by one owner or more, as defined in the National Small Business (Act 102 of 1996). Refer to the attached addendum for a definition of SMME’s for different economic sectors.

Tenders are adjudicated in terms of NDM Procurement Policy, and the following framework is provided as a guideline in this regard.

1. Technical adjudication and General Criteria

- Tenders will be adjudicated in terms of inter alia:
- Compliance with Tender conditions
- Technical specifications

If the Tender does not comply with the Tender conditions, the Tender will be rejected. If technical specifications are not met, the Tender may also be rejected.

With regard to the above, certain actions or errors are unacceptable, and warrants **REJECTION OF THE TENDER**, for example:

- A Tax Verification Pin. (**Only valid tax verification pin** must be attached to the Tender document).
- Pages to be completed, removed from the Tender document, and have therefore not been submitted.
- Failure to complete the schedule of quantities as required
- Scratching out without initialing next to the amended rates or information.
- Writing over / painting out rates / the use of tippex or any erasable ink, eg. Pencil.
- Failure to attend compulsory site inspections
- The Tender has not been properly signed by a party having the authority to do so, according to the **Form 2.2.2 – “Authority for Signatory”**
- No authority for signatory submitted.
- Form of Offer not completed.
- Particulars required in respect of the Tender have not been provided – non-compliance of Tender requirements and/or specifications.
- The Tenderer’s attempts to influence, or has in fact influenced the evaluation and/or awarding of the contract.
- The Tender has been submitted after the relevant closing date and time
- Each page of the Contract portion of this Tender document (Part C1 – C4) must be initialed by the authorised person in order for the document to constitute a proper Contract between the Employer (ORTDM) and the undersigned.
- If any municipal rates and taxes or municipal service charges owed by that Tenderer or any of its directors to the municipality, or to any other municipality or municipal entity, are in arrears for more than three months.
- If any Tenderer 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 Tenderer that performance was unsatisfactory.

2. Size of enterprise and current workload

Evaluation of the Tenderer’s position in terms of:

- Previous and expected current annual turnover
- Current contractual obligations
- Capacity to execute the contract

3. Staffing profile

Evaluation of the Tenderer’s position in terms of:

- Staff available for this contract being Tendered for
- Qualifications and experience of key staff to be utilised on this contract

4. Financial ability to execute the contract:

Evaluation of the Tenderer's financial ability to execute the contract. Emphasis will be placed on the following:

- Contact the Tender's bank manager to assess the Tenderer's financial ability to execute the contract and the Tenderer hereby grants his consent for this purpose.

5. Good standing with SA Revenue Services

- Determine whether an original tax pin an original valid tax clearance certificate has been submitted.
- The Tenderer must affix a Tax Verification Pin to page T2.2.9 of the Tender document.

6. Penalties

The O. R. Tambo District Municipality will if upon investigation it is found that a preference in terms of the Contract has been obtained on a fraudulent basis, or any specified goals are not attained in the performance of the contract, on discretion of the Municipal Manager, one or more of the following penalties will be imposed:

- Cancel the contract and recover all losses or damages incurred or sustained from the Tenderer.
- Impose a financial penalty of twice the theoretical financial preference associated with the claim, which was made in the Tender.
- Restrict the suppliers, its shareholders and directors on obtaining any business from the O. R. Tambo District Municipality for a period of 5 years.

DECLARATION

I/We the undersigned, who warrants that he/she is duly authorized to do so on behalf of the firm, certifies that the items mentioned in part of the foregoing procurement form and returnable documents qualifies/qualify for the preference(s) shown and acknowledge(s) that:

The information furnished is true and correct.

The contractor may be required to furnish documentary proof to the satisfaction of the O. R. Tambo District Municipality that the claims are correct.

If the claims are found to be inflated, the O. R. Tambo District Municipality may, in addition to any other remedy it may have, recover from the contractor all cost, losses or damages incurred or sustained by the O. R. Tambo District Municipality as a result of the award of the Contract and/or cancel the contract and claim any damages which the O. R. Tambo District Municipality may suffer by having to make less favourable arrangements after such cancellation.

Signature of Tenderer

Signed at _____ on _____ day of _____ 202_____

For the tenderer

WITNESSES:

1. _____

2. _____

C1 AGREEMENTS AND CONTRACT DATA

- C1.1 Form of Offer and Acceptance
- C1.2 Contract Data
- C1.3 Special Conditions
- C1.4 Occupational Health and Safety Agreement
- C1.5 Supply Chain Management Policy

FORM C1.1 FORM OF OFFER AND ACCEPTANCE

OFFER

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract in respect of the following works: **PROJECT NO.: ORTDM SCMU 01-24/25: ARTHUR HOMES WATER SUPPLY**

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

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

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

.....

.....

..... Rand (in words); R..... ..(in figures).

This Offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document to the Tenderer before the end of the period of validity stated in the Tender Data, whereupon the Tenderer becomes the party named as the Contractor in the Conditions of Contract identified in the Contract Data.

Signature(s) _____

Name(s) _____

Capacity _____

For the tenderer _____
(Name and address of organization)

Name & Signature
Of Witness

Name

Date

ACCEPTANCE

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

The terms of the contract are contained in:

Part 1 Agreements and Contract Data (which includes this Agreement)

Part 2 Pricing Data

Part 3 Scope of Work

Part 4 Site information

Part 5 Additional Relevant Documentation

Part 6 Contract Drawings

and drawings and documents or parts thereof, which may be incorporated by reference into Parts 1 to 6 above.

Deviations from and amendments to the documents listed in the Tender Data, including the proposed key personnel and any addenda thereto listed in the Tender Schedules as well as any changes to the terms of the Offer agreed by the Tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Agreement. No amendments to or deviations from said documents are valid unless contained in this Schedule, which must be duly signed by the authorized representative(s) of both parties.

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

Name(s) _____

Capacity _____

For the tenderer _____
(Name and address of organization)

Name & Signature
Of Witness

Name

Date

SCHEDULE OF DEVIATIONS

Notes:

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

1	Subject _____
	Details _____
2	Subject _____
	Details _____
3	Subject _____
	Details _____
4	Subject _____
	Details _____
5	Subject _____
	Details _____
6	Subject _____
	Details _____

By the duly authorized representatives signing this Schedule of Deviations, the Employer and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, as well as any confirmation, clarification or change to the terms of the Offer agreed by the Tenderer and the Employer during this process of Offer and Acceptance. It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the Tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this Agreement.

FOR THE TENDERER:

Signatures (s) _____

Name(s) _____

Capacity _____

(Name and address of Organisation)

Name & Signature

Of Witness _____ Date _____

FOR THE EMPLOYER

Signatures (s) _____

Name(s) _____

Capacity _____

(Name and address of Organisation)

FORM C1.2 CONTRACT DATA

PART C1.2 DATA PROVIDED BY THE EMPLOYER

Notes to Tenderer:

1. The Tenderer is not required to complete this data in full.
2. Please read both the General Conditions of Contract for Construction Works, Third Edition, 2015.(GCC 2015) and the relevant parts of its Guidance Notes to understand the implications of this Data which the tenderer is required to complete.
3. Copies of these conditions of contract may be obtained from the South African Institution of Civil Engineering www.saice.org.za
4. The number of the clause which requires the data is shown in the left-hand column for each statement; however, other clauses may also use the same data
5. Each item of data given below is cross-referenced to the clause in the General Conditions of Contract for Construction Works to which it mainly applies.
6. The General Conditions of Contract for Construction Works make several references to the Contract Data for specific data, which together with these conditions collectively describe the risks, liabilities, and obligations of the contracting parties and the procedures for the administration of the Contract. The Contract Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the general conditions of contract.
7. The General Conditions of Contract shall be read in conjunction with the variations, amendments and additions set out in the Contract Data below. Each item of data given below is cross-referenced to the clause in the General Conditions of Contract to which it mainly applies
8. The following contract specific data are applicable to this Contract:

Clause	Statement	Data
	The <i>conditions of contract</i> are	The General Conditions of Contract for Construction Works, Third Edition, 2015. (GCC 2015)
1		General
1.1.1.13	<i>Defects Liability Period</i> is	12 months after the Practical Completion Date
1.1.1.14	<i>Due Completion Date</i> is	As tendered (not to exceed 21 weeks) from the access date (as described in clause 5.4.1)
1.1.1.15	The <i>Employer</i> is	O. R. Tambo District Municipality
1.1.1.16	The <i>Employer's Agent</i>	To which this <i>Contract</i> relates shall be the delegated individual specified in writing by the Employer within seven days of the commencement date.
1.1.1.17	The <i>Employer's Agent Representative</i>	To which this <i>Contract</i> relates shall be the delegated individual specified in writing by the Employer's Agent within seven (7) days of the commencement date.
1.1.1.26	The <i>Pricing Strategy</i> is	<i>A re-measurement contract</i>
1.1.1.29	The <i>Site</i> is	Arthur Homes Water Supply. Refer to Part C3.1, Clause PS2.1
1.1.1.30	The <i>Site Information</i> is	Specified in Part C4 : Site Information of this document
1.1.1.33	The <i>Works</i> are	Specified in Part C3: Employer's Works Information of this document

1.2.1	The <i>Employer's</i> delivery address is	
	Physical Address	O. R. Tambo House Nelson Mandela Drive Mthatha 5100
	Postal Address	Private Bag X 6043 Mthatha 5100
	Email Address	Shall be specified by the <i>Employer</i> within Fourteen days of the commencement date.
1.2.1	The <i>Employer's</i> Agent's delivery address	Consultant: S Zoko Consulting CC 19 Valley Rd Margate 4275 Telephone: (039) 317 4534 E-mail: info@szcon.co.za
1.3.2	The law of the contract is the law of	the Republic of South Africa that applies to agreements executed and wholly performed within the Republic of South Africa
1.3.3	The <i>language of this Contract</i> is	English
3		Employer's Agent
3.2.3	The <i>Employer's Agent</i> shall first consult and obtain specific approval all the <i>Employer Agent's</i> actions as contemplated in Clause 6.4.1	from the <i>delegated Consultant, S Zoko Consulting CC</i> prior to executing any of its functions or duties, with respect to following clauses: <ol style="list-style-type: none"> 1. all the <i>Employer Agent's</i> actions as contemplated in Clause 3.3.1 2. all the <i>Employer Agent's</i> actions as contemplated in Clause 3.3.4 3. all the <i>Employer Agent's</i> actions as contemplated in Clause 5.11.1 4. all the <i>Employer Agent's</i> actions as contemplated in Clause 5.12.4 5. all the <i>Employer Agent's</i> actions as contemplated in Clause 6.4.1 6. all the <i>Employer Agent's</i> actions as contemplated in Clause 6.6.3 7. <i>Employer Agent's</i> actions as contemplated in Clause 10.1.5 8. all the <i>Employer Agent's</i> actions as contemplated in Clause 10.2.3
3.2.4	The <i>Employer's Agent</i> for Health and Safety	To which this Contract relates shall be the delegated individual specified in writing by the <i>Employer's Agent</i> within seven days of the commencement date.
3.2.4	The <i>Employer's Agent</i> for Social Facilitation	To which this Contract relates shall be the delegated individual specified in writing by the <i>Employer's Agent</i> within seven days of the commencement date.
5		Time and Related Matters
5.1.1	The special non-working days set out in the <i>Contract</i> are	the following: <ol style="list-style-type: none"> 1. South African Public Holidays, and 2. Annual builders' holiday traditionally starts on or around 15 December and ends in the second week of January.

5.3.1	The <i>Engineer's Agent</i> shall issue an <i>instruction</i> to the Contractor to commence with the Work	On approval of the following documentation: <ol style="list-style-type: none"> 1. Health and Safety Plan 2. OHS Agreement 3. Department of Labour (DoL) notification of Construction work 4. Initial Programme 5. Letter of Good Standing 6. Performance Guarantee 7. Insurance for the Works 8. Contractor's Key Personnel Which will be within 07 days after the approval of the Documentation required from the Contractor
5.3.2	The Contractor is to submit the documentation stipulated in clause 5.3.1	Within 07 days of the Commencement Date
5.4.1	Access to and possession to the Site	is granted on the date of the site handover meeting which should occur no later than Seven (07) days after Employer's Agent's instruction to commence carrying out the Works referred to in Clause 5.3.1.
5.8.1	The non-working days set out in the <i>Contract</i> are The special non-working days set out in the <i>Contract</i> are	Weekends the following: <ol style="list-style-type: none"> 1. all South African gazetted public holidays, and 2. Annual builders' holiday traditionally starts on or around 15 December and ends in the second week of January. The year-endbuilders' holiday does not exceed 15 workingdays in duration
5.12.2.2	Extension of time for practical completion due to abnormal climatic conditions.	Add the following to the end of Clause 5.12.2.2 : "Extension of time resulting from abnormal weather will be calculated as per the provisions stated in C3.1: Project Specifications Clause PS 6.9."
5.13.1	The penalty for delay or late completion is	If the Contractor fails by the Due Completion Date to complete the Works, or any specific portion thereof that is identified in the Scope of Works to the extent which entitles him in terms of Clause 5.14.2 to receive a Certificate of Practical Completion for the Works, then the Contractor shall be liable to the Employer for the sum(s) stated below as (a) penalty/ies for every day which shall elapse between the Due Completion Date for the Works or the specific portion of the Works and the actual Date of Practical Completion of the Works or of the specific portion. The penalty for delay shall be R5 000 or 0.02% of the Contract Value (excluding VAT) per day; whichever is the higher value. "
6		Payment and related matters
6.2.1	The performance guarantee for liability of the <i>Contractor</i> for claims made against the <i>Contractor</i> arising out of the <i>Contractor's</i> failure to deliver the requested <i>Works</i> per the standards, practices, methods and procedures conforming to applicable laws and exercising that degree of skill, care, diligence, prudence and foresight thatwould reasonably and ordinarily be expected from a skilled and experienced person engaged in a similar type ofundertaking under similar circumstance is	10% of the Contract Price

6.2.2	The security of ten percent retention of the value of the Works	<i>Shall be deducted from the Contractor's first three payment certificates in equal increments as per the SCM Policy.</i>
6.8.2	Contract Price Adjustment Factor	is not applicable for this contract
6.10.1.5	The advance payment percentage limit for plant and materials delivered to <i>Site</i> but not yet built into the <i>Permanent Works</i> is	80% of the value of the materials.
6.10.1.5	The advance payment percentage limit for plant and materials not yet supplied to Site	is not applicable for this contract
6.10.3	The percentage retention is	10% of the value of the Works
6.10.3	The limit of retention money is	5% of the value of the Contract Price (Including VAT)
8		Risks and related matters
8.6.1.1.2	The value of plant and materials supplied by the Employer to be included in the insurance sum is	NIL
8.6.1.3	The minimum limit of indemnity for insurance in respect of loss of or property damage (except for the <i>Works</i> , Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the <i>Contractor</i>) caused by activity in connection with this <i>Contract</i> for any one event is:	R5,000,000
8.6.1.5	a) The minimum limit of indemnity for insurance in respect of loss of or damage to the Works, Plant and Materials	The replacement cost thereof.
	b) The minimum limit of indemnity for insurance in respect of the death of or bodily injury to employees of the <i>Contractor</i> arising out of and in the course of their employment in connection with this <i>Contract</i> for any one event is	As prescribed by the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 and the <i>Contractor's</i> common-law liability for people falling outside the scope of the Act with a limit of indemnity of not less than R1 000 000 (One Million South African Rand).
10		Claims and disputes
10.5.3	The Adjudication Board shall consist of	one (1) member
10.7.1	The determination of disputes shall be by arbitration	
10.7.2	The arbitration procedure is	the latest edition of Rules for the Conduct of Arbitrations published by the Association of Arbitrators (Southern Africa) or its successor body.
	The place where arbitration is to be held is	Mthatha
	The person who shall choose an arbitrator	the Chairman of the Association of Arbitrators (www.arbitrators.co.za) or its successor body.

PART C1.2.3 DATA PROVIDED BY THE CONTRACTOR

Notes to Tenderer:

9. The Tenderer is required to complete this data in full.
10. Please read both the General Conditions of Contract for Construction Works, Third Edition, 2015. (GCC 2015) and the relevant parts of its Guidance Notes to understand the implications of this Data which the tenderer is required to complete.
11. The number of the clause which requires the data is shown in the left-hand column for each statement; however, other clauses may also use the same data

CLAUSE	STATEMENT	DATA
	The <i>conditions of contract</i> are	The General Conditions of Contract for Construction Works, Third Edition, 2015. (GCC 2015)
1		General
1.1.1.9	The Contractor is	_____
1.2.1	The Contractor's delivery address is	_____
	Physical Address	_____ _____ _____
	Postal Address	_____ _____ _____
	Email Address	_____ _____
4		Contractor's General Obligations
4.4.2	The Contractor must Sub-Contract any parts of the Contract.	To which this Contract relates shall be the minimum of 10% of the Value of the Works that must be Sub-Contracted to a Local SMME or the Designated Groups as agreed during the Procurement of the Sub-Contractors.
4.10.2	Contractor shall provide monthly reports outlining compliance with	Site progress and Employer's CPG and EPWP objectives at intervals specified in Part C3: Employer's Works Information of this document.
4.11.1	Contractor's Competent Employees are:	_____
	Title	Construction Manager
	Name	_____
	Qualifications	_____
	Tel No	_____
	Email	_____

	Title	Site Agent
	Name	
	Qualifications	
	Tel No	
	Email	
	Title	Concrete Foreman
	Name	
	Qualifications	
	Tel No	
	Email	
	Title	Safety Officer
	Name	
	Qualifications	
	Tel No	
	Email	
	SACPMP Registration Number	
4.12.2	Contractor's Superintendence:	The Contractor's Site Agent, Site Foreman and Safety Officer MUST be on site at all times when work is being performed. No work may be performed without these persons being on site.
Should the Contractor decide to use other Personnel rather than the one's listed above, must do it in writing, and the proposed Personnel must have the same or very similar Qualifications and experience		
Security		
6.2.1	The security to be provided by the Contractor shall be one of the following:	
	Type of security	Select (Tick)
	1. Cash Deposit of 10% of the Contract Sum plus retention of 5% of the value of Works	
	2. Fixed Performance Guarantee of 10% of the Contract Sum plus retention of 5% of the value of Works	
	A Note.	
	The Performance Guarantee shall be of an Insurance Company listed on the Johannesburg Stock Exchange or owned by such a company, a Registered South African Bank or a recognized government sponsored, provincial or national development agency	

Part C1.4 Special Conditions of Contract

Notes to Tenderer:

1. Particular Conditions of the Contract defines conditions that are specific to a Project.
2. The Particular Conditions of the Contract are used for addition/ omission and change of General Conditions of the Contract.
3. The number of the clause which requires the data is shown in the left-hand column for each statement; however, other clauses may also use the same data

Clause	Statement	Data
		Amendment of GCC 2015 Clauses
	<i>Employer's SCM Policy</i>	
	<i>Insertion of additional clause</i>	<p>The parties agree that this contract shall be subject to the Employer's Supply Chain Management Policy ('SCM Policy') that was applicable on the date the bid was advertised.</p> <p>Abuse of the supply chain management system is no permitted and may result in cancellation of the contract, restriction of the supplier, and/or the exercise by the Employer of any other rights and remedies available to it as described in the SCM Policy</p>
	<i>Ambiguity and discrepancy</i>	
	Insertion of additional wording:	<p>All parts of the Contract should be read together and that their original purpose is to be mutually explanatory. However, if there is a discrepancy between the information provided, the order of priority of contract documents is as stated below:</p> <ol style="list-style-type: none"> 1. the Contract Agreement 2. the Letter of Acceptance (this is the formal acceptance of the contractor's tender and usually presents the point in time when Contractual Parties enter the Contract), 3. the Contract Data, 4. the Particular Conditions of the Contract 5. the General Conditions of the Contract, 6. the Specification, 7. the Drawings, and 8. the Schedules and any other document forming part of the Contract <p>In the event of a discrepancy or ambiguity, the document of higher priority takes precedence.</p>
	<i>Assignment</i>	
	Delete wording and replace with the following:	<p>The Employer will, at all times, be entitled to cede its rights and/or delegate its obligations under this Contract and/or assign this Contract to any financier and/or nominee of any financier of the Employer for purposes of the programme. Any cession and/or delegation and/or assignment by the Employer to any such financier or nominee of any financier is expressly permitted. The Contractor shall, if requested thereto by the Employer and/or any such financier, sign a separate authority giving effect to the aforementioned in such form as the Employer and/or any financier of the Employer may reasonably require.</p>

	<p>The Employer will, at all times, be entitled to cede its rights and/or delegate its obligations under this Contract and/or assign this Contract to any financier and/or nominee of any financier of the Employer for purposes of the programme. Any cession and/or delegation and/or assignment by the Employer to any such financier or nominee of any financier is expressly permitted. The Contractor shall, if requested thereto by the Employer and/or any such financier, sign a separate authority giving effect to the aforementioned in such form as the Employer and/or any financier of the Employer may reasonably require</p>
	<p>The Contractor shall not be entitled to cede any of its rights and/or delegate any of its obligations under this <i>Contract</i> to any person without the prior written consent of the <i>Employer</i>.</p>
<i>Access to and possession of Site</i>	
Insertion of additional wording:	<p>The Employer allows access to, possession and use of each part of the Site to the <i>Contractor</i> which is necessary for the work included in this contract. The <i>Employer</i> shall grant access and use of the Site no later than seven days after <i>Employer's Agent's</i> instruction to commence with the Works.</p> <p>If the <i>Employer</i> does not give the <i>Contractor</i> access to, possession and use of the Site within seven days of the <i>Employer's Agent's</i> instruction to commence with the Works, access to, possession and use of the Site shall be as the date when <i>Employer's Agent</i> instructed the <i>Contractor</i> to commence with the Works.</p>
<i>Some reasons for extension of time</i>	
Insertion of additional wording:	<p>No extension of time will be granted in respect of any delays attributed to normal climatic conditions. Normal climatic conditions shall be deemed to include normal rainfall and associated wet conditions and materials, strong winds and extremes of temperature. However, in the event that delays to critical activities exceed the number of working dates listed below for each month, then abnormal climatic conditions shall be deemed to exist, and an extension of time may be claimed in accordance with the provisions of clause 5.12</p> <p>The number of days quoted C3.1 Clause PS6.9 shall be regarded as fair estimate of the delays to be anticipated and allowed for under normal climatic conditions where inclement weather prevents or disrupts critical work</p> <p>Claims for delays for abnormal climatic conditions shall be accompanied by substantiating facts and evidence, which shall be submitted timeously as each day or half-day is experienced.</p> <p>It shall be noted that where the critical path is not affected, no extension of time for abnormal climatic conditions or for any other reason will be considered.</p>

Termination by the Employer

Insertion of additional wording

- 9.2.1.3.9 Has substantially broken a health or safety regulation.
- 9.2.1.3.10 Failure to obtain access to Site due to non-compliant documentation as stated in clause 5.3.1
- 9.2.1.3.11 Has failed to provide or update the required insurances within the prescribed time
- 9.2.1.4 Where the *Works* are no longer required
- 9.2.1.5 Where the funding for the *Works* is no longer available
- 9.2.1.6 An event occurs that stops the Contractor from completing the works by the date shown on the Accepted Programme and is forecast to delay Completion by more than 13 weeks
- 9.2.1.7 The Service Provider becomes insolvent or liquidated
- 9.2.1.8 If as a result of Force Majeure, the Service provider is unable to perform part or the whole service for a period of thirty 30 days.

Right of Retention

The *Contractor* hereby waive and abandons any and all lien and/or any other right of retention that the *Contractor* now has or in future may have, in terms of the Contract, the common law or otherwise, in respect of the works, the Site or any property belonging to the *Employer* and shall under no circumstances be entitled to withhold delivery of the same to the *Employer*. The *Contractor* warrants that all Subcontractors shall, mutatis mutandis, waive and abandon any such Subcontractor's lien or any other right of retention, in favour of the *Employer*.

Joint Ventures

Suppose the *Contractor* constitutes a joint venture, consortium, or other unincorporated groupings of two or more persons or organisations. In that case, these persons or organisations are deemed to be jointly and severally liable to the *Employer* for the performance of this *Contract*.

Unless already notified to the *Employer*, the persons or organisations notify the *Employer's* Agent within two weeks of the date of acceptance of the Contract of the key person who has the authority to bind the *Contractor* on their behalf.

The *Contractor* does not alter the composition of the joint venture, consortium, or other unincorporated groupings of two or more persons without the consent of the *Employer* having been given to the *Contractor* in writing.

Nothing in this Contract shall be deemed to create any joint venture, partnership or principal-agent relationship between the Parties and neither Party shall hold itself out in its advertising or otherwise in any manner which would indicate or imply such relationship with the other Party according to this Contract

The dissolution of the *Joint Venture* shall be deemed as a separation and that constitutes the Contract to be Terminated.

Illegal or Corrupt Practices

Any offer, payment, consideration, or benefit of any kind made by the *Contractor*, which constitutes or could be construed either directly or indirectly as an illegal or corrupt practice, an inducement or reward for the award or in the execution of this *Contract* constitutes grounds for terminating the *Contractor's* obligation to Provide the Works or taking any other action as appropriate against the *Contractor* (including civil or criminal action).

The *Employer* may terminate the *Contractor's* obligation to provide the Works if the *Contractor* (or any member of the *Contractor* where the *Contractor* constitutes a joint venture, consortium or other unincorporated groupings of two or more persons or organisations), or a director of any such entity, is found guilty by a competent court, administrative or regulatory body of participating in illegal or corrupt practices.

SCC4.3	Such practices include, but are not limited to, the making of offers, payments, considerations, or benefits of any kind or otherwise, whether in connection with any procurement process or contract with the <i>Employer</i> or other people or organisations and including in circumstances where the <i>Contractor</i> or any such member is removed from the approved vendor database of the <i>Employer</i> as a consequence of such practice.
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Confidentiality

The *Contractor* does not disclose or make any information arising from or in connection with this *Contract* available to Others. This undertaking does not, however, apply to information which at the time of disclosure or thereafter, without default on the part of the *Contractor*, enters the public domain or to information which was already in possession of the *Contractor* at the time of disclosure (evidenced by written records in existence at that time). Should the *Contractor* disclose information to Others in terms of clause 25.1, the *Contractor* ensures that the provisions of this clause are complied with by the recipient.

Any information communicated by the *Employer* to the *Contractor* in connection with the Contract and any secret and/or confidential information of the *Employer* otherwise acquired by the *Contractor* shall be regarded by the *Contractor* as strictly confidential and shall not, without the prior written consent of the *Employer* in each instance, be published or disclosed to any other party or be used for any purpose whatsoever other than to execute the Works.

If the *Contractor* is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise in writing by the *Employer's Agent*.

Suppose the *Contractor* is, at any time, required by law to disclose any such information which is required to be kept confidential. In that case, the *Contractor*, to the extent permitted by law before disclosure, notifies the *Employer* so that an appropriate protective order and/or any other action can be taken if possible, before any disclosure. If such protective order is not, or cannot, be obtained, then the *Contractor* may only disclose that portion of the information which it is required to be disclosed by law and uses reasonable efforts to obtain assurances that confidential treatment shall be afforded to the information so disclosed.

The taking of images (whether photographs, video footage or otherwise) of the works or any portion thereof, in the course of Providing the Works and after Completion, requires the prior written consent of the *Employer's Agent*. All rights in and to all such images vests exclusively in the *Employer*.

The *Contractor* ensures that all his subcontractors abide by the undertakings in this clause.

Existing Services and Housekeeping

The Site may be in continuous operation and, accordingly, the *Contractor* shall assume that existing services and access ways shall be in continuous use and fully operational at all times.

The *Contractor* shall be held responsible for repair or making good of existing installations that may be required due to any act or omission of whatever nature by the *Contractor* and for any costs to the *Employer* which may arise, due to the *Contractor* preventing in any manner whatever the normal operation and use of such services and access ways.

In the execution of the Works, the *Contractor* shall keep the Site reasonably free from all unnecessary obstructions and shall store or dispose of any *Contractor's* Equipment and surplus materials and without delay clear away and remove from the Site any wreckage, rubbish or temporary works no longer required.

The *Contractor* must use and/or attend to all areas of the Site which are used by it or under its control from time to time in a safe, professional and responsible manner.

The *Contractor* shall be responsible for all areas of the Site which are used by it or under its control from the time the area in question is made available to the *Contractor* until the time the *Employer* requires the Site to be returned to it or otherwise when the *Contractor* demobilises from the area of the Site in question and returns to the *Employer* all of the *Employer's* property.

The *Contractor* must ensure that all such areas of the Site are kept at all times in a safe, clean and hygienic condition and in good working order and repair and the *Contractor* shall promptly repair, at its cost, any damage to the Site which is attributable to the *Contractor* or its employees or sub-contractors, failing which the *Employer* shall be entitled to repair the Site and recover the cost of such repairs from the *Contractor*.

Any damages suffered by the *Employer* as aforesaid shall be paid by the *Contractor* within ten business days or shall be set off against any amounts owing to the *Contractor* by the *Employer*.

Any damages suffered by the *Community or Resident* as aforesaid shall be paid by the *Contractor* within ten business days or shall be set off against any amounts owing to the *Contractor* by the *Employer*.

The *Contractor* shall not unnecessarily interfere with the operations of the *Employer* or Others at the *Site*. The *Employer* has the right to refuse access to the *Site* to any of the *Contractor's* employees, representatives and/or subcontractors whom it suspects of being a health and safety or other risk.

The *Contractor* shall not have any lien or right of retention in respect of the *Site*, the *works* and/or any other property belonging to the *Employer*.

Indemnity against *Contractor's* Design

The *Contractor* indemnifies and keeps indemnified the *Employer* against any losses and costs, including legal costs between attorney and client, and all other expenses whatsoever that the *Employer* may incur as a result of any action, proceeding or claim made against the *Employer* arising from the use of a design constituting an infringement of patent rights, design registration, registered trademarks or other exclusive rights in respect thereof. This indemnity does not apply to any infringement which is solely due to the *Contractor* having followed in its entirety instructions stipulated by the *Employer*.

The *Employer* shall give the *Contractor* prompt notice of any such action, proceeding, claim or threat instituted or made against it or both of them. Promptly after the giving of such notice the

Parties are to consult together about the subject of the notice and the *Employer* may at its option decide to a) permit the *Contractor* at the *Contractor's* own expense to conduct any litigation that may ensue and all negotiations for a settlement of such litigation or claim with the proviso that the *Contractor* keeps the *Employer* informed of all steps that are taken and of the outcome; or b) conduct any litigation that may ensue and all negotiations for a settlement, in which event the *Employer* shall act in consultation with the *Contractor* and shall keep the *Contractor* informed of all aspects that are taken and of the outcome.

The *Contractor* hereby cedes and agrees to cede all intellectual property, excluding intellectual property in respect of which the *Contractor* can demonstrate proprietorship prior to the date of signature hereof, but including intellectual property specifically developed by the *Contractor* on behalf of the *Employer* under instruction and payment by the *Employer* and including all current and future technical information relating to the works; technical concepts; know-how; specifications; data; formulae; computer programs; design; patent and / or applications in respect thereof; copyrighted works; memoranda; scripts; reports; manuals; diagrams; drawings; including engineering drawings; prototypes; drafts in performing the works, whether completed or not and whether accepted, amended or rejected, and the like relating to the works, whether patented or not, and includes all intellectual property relating to the works developed by or on behalf of the *Employer*, to the *Employer*, its successors, assigns or legal representatives locally and / or internationally, together with the right to apply for Letters Patent in respect thereof.

It is further agreed that the *Employer* may apply in its name and its own cost for Letters Patent in respect of such inventions and registration of such designs locally and/or internationally.

The *Contractor* hereby agrees that when requested, he shall without any charges to the *Employer*, but at the latter's expense, sign all papers, take all rightful oaths, and do all acts which may be necessary, desirable or convenient for securing and maintaining patents relating to the works and/or the patent applications in any and all countries and for vesting titled thereto in the *Employer*, its successors, assign or legal representatives and the *Contractor* confirms and agrees that he shall assist the *Employer* to ensure that total and complete cession and transfer of all right, title and interest in the intellectual property takes place.

Time

The *Contractor* acknowledges that time is of the essence to the performance of its obligations in terms of this Contract.

Discovery/Reproduction of Documentation

The *Contractor* hereby authorises the *Employer* to reproduce all documentation made available by the *Contractor* to the *Employer* in connection with this *Contract*. In so far as the *Contractor* has any copyright protection in the items that are so reproduced by the *Employer*, the *Contractor* hereby grants a right and license to the *Employer* to reproduce the same for the purposes specified in this *Contract*. The *Contractor* keeps the *Employer* informed of any threats or claims made against it in respect of infringement of patent or other exclusive rights by virtue of the provision of the works.

Damages

The *Employer* shall be entitled, in its sole discretion, to claim and recover from the *Contractor* damages *in lieu of* any penalty agreed upon in terms of this *Contract*.

Accrual

Unless otherwise provided *herein*, rights which accrue to a Party in terms of this *Contract* shall survive its termination.

Commitments and Undertakings

Neither Party shall be bound by any express, tacit or implied term, representation, warranty, promise nor the like not recorded *herein*. This *Contract* supersedes and replaces all prior commitments, undertakings or representations, whether oral or written, between the Parties in respect of the subject matter hereof.

Validity and Enforceability of Contract

If any provision of this *Contract* is found to be invalid, unlawful or unenforceable, that provision shall be severable from the remaining provisions of this *Contract*, which shall continue to be valid and enforceable.

Strategic Socio-Economic Objectives

in terms of which the *Contractor* gives unconditional warranties and undertakings committing itself to the promotion of the strategic socio-economic objectives stipulated herein, including, but not limited to, warranties and undertakings to the effect that the BEE information disclosed to the *Employer* in the bid response to the Tender Invitation

pursuant to which it was appointed, as supplemented subsequently in writing, is accurate and complete and that it shall maintain at least those levels of BEE for the duration of the contract;

it shall only subcontract aspects of the Works to Subcontractors with which it has concluded Subcontracts and actively take steps towards achieving the *Employer's* CPG requirements for the empowerment of Subcontractor/s

it shall ensure that the execution of the *Works* and the expenditure of the project costs results in the achievement of the general socio-economic and empowerment objectives

it shall keep detailed records of –

its equity ownership and control and, where applicable, that of its duly appointed Subcontractors and/or suppliers.

- a) its total spends on targeted enterprises used to fulfil its obligations in terms of the *contract*.
- b) any transformation programmes and/or initiatives relating to skills development and transfer, employment equity and enterprise development of the Subcontractors and Target Individuals; and
- c) any public benefits and/or job opportunities created according to the fulfilment of its obligations in terms of the *contract* and provide monthly reports outlining compliance with such objectives to the *Employer*;

Contractor Obligations

in terms of which the *Contractor* unconditionally warrants and undertakes that, in its performance of its obligations under the *Contract*, it shall, at all times, -

owe a duty of care to the ORTDM and comply with the reasonable directions issued to it by the

Employer, Employer's Agent and/or Employer's Agent Representative;

not do anything that constitutes, or is reasonably likely to constitute, a corrupt act or that is otherwise intended or is likely to harm the reputation of the ORTDM, the *Contract*; and

Undertake the *Works* in accordance with the standards, practices, methods and procedures conforming to applicable law, and exercising that degree of skill, care, diligence, prudence and foresight that would reasonably and ordinarily be expected from a skilled and experienced person engaged in a similar type of undertaking under similar circumstances.

FORM OF GUARANTEE**PERFORMANCE GUARANTEE**

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

GUARANTOR DETAILS AND DEFINITIONS

“Guarantor” means:

Physical address:

“Employer” means: **O. R. TAMBO DISTRICT MUNICIPALITY**

“Contractor” means:

“Employer’s Agent” means: **S ZOKO CONSULTING CC**

“Works” means: **ARTHUR HOMES WATER SUPPLY**

“Site” means: The Site as defined by clause 1.1.1.29 of the General Conditions of Contract, 2015.

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

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

Amount in words:

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

Amount in words:

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

“Expiry Date” means: (*Give date which should not be earlier than the anticipated date of issue of the Certificate of Completion*) or any other later date set by the Contractor and/or Employer provided such instruction is received prior to the Expiry Date as indicated here.

CONTRACT DETAILS

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

1. VARIABLE PERFORMANCE GUARANTEE

- 1.1 Where a Variable Performance Guarantee has been selected, the Guarantor’s liability shall be limited during the following periods to diminishing amounts of the Guaranteed Sum as follows :

- 1.1.1 From and including the date of signing the Performance Guarantee up to and including the date of the interim payment certificate certifying, for the first time, more than 50% of the Contract Sum:

R

(Amount in words)

- 1.1.2 From the day following the date of the said interim payment certificate up to and including the Expiry Date, or the date of issue by the Employer’s Agent of the Certificate of Completion of the Works, whichever occurs first:

R

(Amount in words)

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

on which the Certificate of Completion of the Works has been issued.

2. FIXED PERFORMANCE GUARANTEE

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

3. CONDITIONS APPLICABLE TO VARIABLE AND FIXED PERFORMANCE GUARANTEES

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

is called up in terms of 3.3; or

- 2.3.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 3.3; and
- 2.3.3 the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.
- 2.4 It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 3.2 and 3.3 shall not exceed the Guarantor's maximum liability in terms of 1.1 or 2.1.
- 2.5 Where the Guarantor has made payment in terms of 3.3, the Employer shall upon the date of issue of the Final Payment Certificate submit 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.
- 2.6 Payment by the Guarantor in terms of 3.2 or 3.3 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
- 2.7 Payment by the Guarantor in terms of 3.3 will only be made against the return of the original Performance Guarantee by the Employer.
- 2.8 The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may consider fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.
- 2.9 The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
- 2.10 This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 1.1.2 or 2.2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.
- 2.11 This Performance Guarantee, with the required demand notices in terms of 3.2 or 3.3, shall be regarded as a liquid document for the purposes of obtaining a court order.
- 2.12 Where this Performance Guarantee is issued in the Republic of South Africa, the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

SIGNED AT:

**GUARANTOR
(1)**

SIGNATURE

DATE

CAPACITY

**GUARANTOR
(2)**

SIGNATURE

DATE

CAPACITY

**WITNESS
(1)**

SIGNATURE

**WITNESS
(2)**

SIGNATURE

FORM C1.3 SPECIAL CONDITION

Payment for the labor-intensive component of the works

Payment for works identified in the Scope of Work as being labor-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 from his obligation either in contract or in delict.

Applicable labour laws

The Ministerial Determination, Special Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice N° R63 of 25 January 2002, as reproduced below, shall apply to works described in the scope of work as being labour intensive and which are undertaken by unskilled or semi-skilled workers.

1 Introduction

1.1 This document contains the standard terms and conditions for workers employed in elementary occupations on a Special Public Works Programme (SPWP). These terms and conditions do NOT apply to persons employed in the supervision and management of a SPWP.

1.2 In this document –

- (a) "**Department**" means any department of the State, implementing agent or contractor;
- (b) "**Employer**" means any department, implementing agency or contractor that hires workers to work in elementary occupations on a SPWP;
- (c) "**Worker**" means any person working in an elementary occupation on a SPWP;
- (d) "**Elementary** occupation" means any occupation involving unskilled or semi-skilled work;
- (e) "**Management**" means any person employed by a department or implementing agency to administer or execute an SPWP;
- (f) "**Task**" means a fixed quantity of work;
- (g) "**task-based work**" means work in which a worker is paid a fixed rate for performing a task;
- (h) "**task-rated worker**" means a worker paid on the basis of the number of tasks completed;
- (i) "**time-rated worker**" means a worker paid on the basis of the length of time worked.
- (j) "**Task rate or daily rate**" = *As per Government Gazette*

2 Terms of Work

- 2.1 Workers on a SPWP are employed on a temporary basis.
- 2.2 A worker may NOT be employed for longer than 24 months in any five-year cycle on a SPWP.
- 2.3 Employment on a SPWP does not qualify as employment as a contributor for the purposes of the Unemployment Insurance Act 30 of 1966.

3 Normal Hours of Work

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

4 Meal Breaks

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

5 Special Conditions for Security Guards

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

6 Daily Rest Period

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

7 Weekly Rest Period

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

8 Work on Sundays and Public Holidays

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

9 Sick Leave

- 9.1 Only workers who work four or more days per week have the right to claim sick-pay in terms of this clause.
- 9.2 A worker who is unable to work on account of illness or injury is entitled to claim one day's paid sick leave for every full month that the worker has worked in terms of a contract.

- 9.3 A worker may accumulate a maximum of twelve days' sick leave in a year.
- 9.4 Accumulated sick-leave may not be transferred from one contract to another contract.
- 9.5 An employer must pay a task-rated worker the worker's daily task rate for a day's sick leave.
- 9.6 An employer must pay a time-rated worker the worker's daily rate of pay for a day's sick leave.
- 9.7 An employer must pay a worker sick pay on the worker's usual payday.
- 9.8 Before paying sick-pay, an employer may require a worker to produce a certificate stating that the worker was unable to work on account of sickness or injury if the worker is –
 - (a) Absent from work for more than two consecutive days; or
 - (b) Absent from work on more than two occasions in any eight-week period.
- 9.9 A medical certificate must be issued and signed by a medical practitioner, a qualified nurse or a clinic staff member authorized to issue medical certificates indicating the duration and reason for incapacity.
- 9.10 A worker is not entitled to paid sick-leave for a work-related injury or occupational disease for which the worker can claim compensation under the Compensation for Occupational Injuries and Diseases Act.

10 Maternity Leave

- 10.1 A worker may take up to four consecutive months' unpaid maternity leave.
- 10.2 A worker is not entitled to any payment or employment-related benefits during maternity leave.
- 10.3 A worker must give her employer reasonable notice of when she will start maternity leave and when she will return to work.
- 10.4 A worker is not required to take the full period of maternity leave. However, a worker may not work for four weeks before the expected date of birth of her child or for six weeks after the birth of her child, unless a medical practitioner, midwife, or qualified nurse certifies that she is fit to do so.
- 10.5 A worker may begin maternity leave –
 - (a) four weeks before the expected date of birth; or
 - (b) On an earlier date –
 - (i) If a medical practitioner, midwife or certified nurse certifies that it is necessary for the health of the worker or that of her unborn child; or
 - (ii) if agreed to between employer and worker; or
 - (c) on a later date, if a medical practitioner, midwife or certified nurse has certified that the worker is able to continue to work without endangering her health.
- 10.6 A worker who has a miscarriage during the third trimester of pregnancy or bears a stillborn child may take maternity leave for up to six weeks after the miscarriage or stillbirth.
- 10.7 A worker who returns to work after maternity leave has the right to start a new cycle of twenty-four months employment, unless the SPWP on which she was employed has ended.

11 Family responsibility leave

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

12 Statement of Conditions

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

13 Keeping Records

- 13.1 Every employer must keep a written record of at least the following –
- (a) The worker's name and position;
 - (b) In the case of a task-rated worker, the number of tasks completed by the worker;
 - (c) In the case of a time-rated worker, the time worked by the worker;
 - (d) Payments made to each worker.
- 13.2 The employer must keep this record for a period of at least three years after the completion of the SPWP.

14 Payment

- 14.1 An employer must pay all wages at least monthly in cash or by cheque or into a bank account.
- 14.2 A task-rated worker will only be paid for tasks that have been completed.
- 14.3 An employer must pay a task-rated worker within five weeks of the work being completed and the work having been approved by the manager or the contractor having submitted an invoice to the employer.
- 14.4 A time-rated worker will be paid at the end of each month.
- 14.5 Payment must be made in cash, by cheque or by direct deposit into a bank account designated by the worker.
- 14.6 Payment in cash or by cheque must take place –
- (a) At the workplace or at a place agreed to by the worker;
 - (b) during the worker's working hours or within fifteen minutes of the start or finish of work;
 - (c) In a sealed envelope which becomes the property of the worker.
- 14.7 An employer must give a worker the following information in writing –

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

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

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

15 Deductions

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

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

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

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

- (a) Repay any payment except an overpayment previously made by the employer by mistake;
- (b) State that the worker received a greater amount of money than the employer actually paid to the worker; or
- (c) Pay the employer or any other person for having been employed.

16 Health and Safety

16.1 Employers must take all reasonable steps to ensure that the working environment is healthy and safe.

16.2 A worker must –

- (a) Work in a way that does not endanger his/her health and safety or that of any other person;
- (b) Obey any health and safety instruction;
- (c) Obey all health and safety rules of the SPWP;
- (d) Use any personal protective equipment or clothing issued by the employer;
- (e) Report any accident, near-miss incident, or dangerous behaviour by another person to their employer or manager.

17 Compensation for Injuries and Diseases

17.1 It is the responsibility of the employers (other than a contractor) to arrange for all persons employed on a SPWP to be covered in terms of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993.

17.2 A worker must report any work-related injury or occupational disease to their employer or manager.

17.3 The employer must report the accident or disease to the Compensation Commissioner.

17.4 An employer must pay a worker who is unable to work because of an injury caused by an accident at work 75% of their earnings for up to three months. The employer will be refunded this amount by the Compensation Commissioner. This does NOT apply to injuries caused by accidents outside the workplace such as road accidents or accidents at home.

18 Termination

- 18.1 The employer may terminate the employment of a worker for good cause after following a fair procedure.
- 18.2 A worker will not receive severance pay on termination.
- 18.3 A worker is not required to give notice to terminate employment. However, a worker who wishes to resign should advise the employer in advance to allow the employer to find a replacement.
- 18.4 A worker who is absent for more than three consecutive days without informing the employer of an intention to return to work will have terminated the contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.
- 18.5 A worker who does not attend required training events, without good reason, will have terminated the contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.

19 Certificate of Service

- 19.1 On termination of employment, a worker is entitled to a certificate stating –
 - (a) The worker's full name;
 - (b) The name and address of the employer;
 - (c) The SPWP on which the worker worked;
 - (d) The work performed by the worker;
 - (e) Any training received by the worker as part of the SPWP;
 - (f) The period for which the worker worked on the SPWP;
 - (g) Any other information agreed on by the employer and worker

MONTHLY REPORTING

The successful bidder will be expected to assist with monthly reporting. These will include progress reports, labour reports, etc, submitted to the Project Manager on the dates to be stipulated.

FORM C1.4 HEALTH AND SAFETY AGREEMENT

HEALTH AND SAFETY SPECIFICATION
THE OCCUPATIONAL HEALTH AND SAFETY ACT 1993
CONSTRUCTION REGULATIONS 2003

SECTION 1

1. INTRODUCTION

This document was construed in order to comply with the provisions of the **OCCUPATIONAL HEALTH AND SAFETY ACT NO 85 OF 1993, CONSTRUCTION REGULATIONS 2014 and COVID-19 Occupational Health and Safety Measures in Workplace 2020.**

Definitions of words are those described in the Act and the Construction Regulations of 2003.

This document formulates the specification of the O. R. Tambo District Municipality in terms of the above act and forms part of the constitution of the organisation.

This document forms part of the employment contract of all employees and is as such accepted in writing by each employee. It also forms part of the agreement between the O. R. Tambo District Municipality and all service providers.

No clause in this document shall be amended in any contract document construed by agents, designers or anyone else except so ordered or sanctioned by the O. R. Tambo District Municipality in writing.

SCHEDULE

1.1 Definitions

1. In these Policy any word or expression to which a meaning has been assigned in the Act shall have the meaning so assigned and, unless the context otherwise indicates□

“Agent” means any person who acts as a representative for a client in the managing the overall construction work.

“angle of repose” means the steepest angle of a surface at which a mass of loose or fragmented material will remain stationary in a pile on a surface, rather than sliding or crumbling away;

“Batch plant” means machinery, appliances or other similar devices that are assembled in such a manner so as to be able to mix materials in bulk for the purposes of using the mixed product for construction work;

“Client” means O. R. Tambo District Municipality;

“Competent person” in relation to construction work, means any person having the knowledge, training and experience specific to the work or task being performed: Provided that where appropriate qualifications and training are registered in terms of the provisions of the South African Qualifications Authority Act, 1995 (Act No. 58 of 1995), these qualifications and training shall be deemed to be the required qualifications and training;

“Construction work” means 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 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;

“Construction vehicle” means a vehicle used for means of conveyance for transporting persons or material or

both such persons and material, as the case may be, both on and off the construction site for the purposes of performing construction work;

“Contractor” mean an employer, as defined in section 1 of the Act, who performs construction work and includes principal contractors;

“Design” in relation to any structure includes drawings, calculations, design details and specifications;

“Designer” means any person who □

- (a) prepares a design;
- (b) checks and approves a design;
- (c) arranges for any person at work under his control (including an employee of his, where he is the employer) to prepare a design, as well as;
- (d) Architects and engineers contributing to, or having overall responsibility for the design;
- (e) Build services engineers designing details for fixed plant;
- (f) Surveyors specifying articles or drawing up specifications;
- (g) Contractors carrying out design work as part of a design and build project;
- (h) Temporary works engineer designing formwork and false work; and
- (i) Interior designers, shop-fitters and landscape architects.

“ergonomics” means the application of scientific information concerning humans to the design of objects, systems and the environment for human use in order to optimise human well-being and overall system performance;

“Excavation work” means the making of any man-made cavity, trench, pit or depression formed by cutting, digging or scooping;

“explosive powered tool” means a tool that is activated by an explosive charge and that is used for driving bolts, nails and similar objects for the purpose of providing fixing;

“fall prevention equipment” means equipment used to prevent persons from falling from an elevated position, including personal equipment, body harness, body belts, lanyards, lifelines or physical equipment, guardrails, screens, barricades, anchorages or similar equipment;

“fall arrest equipment” means equipment used to arrest the person in a fall from an elevated position, including personal equipment, body harness, lanyards, deceleration devices, lifelines or similar equipment, but excludes body belts;

“fall protection plan” means a documented plan, of all risks relating to working from an elevated position, considering the nature of work undertaken, and setting out the procedures and methods to be applied in order to eliminate the risk;

“Hazard identification” means the identification and documenting of existing or expected hazards to the health and safety of persons, which are normally associated with the type of construction work being executed or to be executed;

“Health and safety file” means a file, or other record in permanent form, containing the information required as contemplated in these regulations;

“Health and safety plan” means a documented plan which addresses hazards identified and includes safe work procedures to mitigate, reduce or control the hazards identified;

“Health and safety specification” means a documented specification of all health and safety requirements pertaining to the associated works on a construction site, so as to ensure the health and safety of persons;

“Material hoist” means a hoist used to lower or raise material and equipment, and includes cantilevered platform hoists, mobile hoists, friction drive hoists, scaffold hoists, rack and pinion hoists and combination hoists;

“Medical certificate of fitness” means a certificate valid for one year issued by an occupational health practitioner, issued in terms of these regulations, whom shall be registered with the Health Professions Council of South Africa;

“Method statement” means a written document detailing the key activities to be performed in order to reduce as reasonably as practicable the hazards identified in any risk assessment;

“Mobile plant” means machinery, appliances or other similar devices that is able to move independently, for the purpose of performing construction work on the construction site;

“National Building Regulations” means the National Building Regulations made under section 17(1) of the National Building Regulations and Building Standards Act, 1977 (Act No.103 of 1977), and published under Government Notice No. R.1081 of 10 June 1988, as amended;

“Person day” means one individual carrying out construction work on a construction site for one normal working shift;

“Principal contractor” means an employer, as defined in section 1 of the Act who performs construction work and is appointed by the client to be in overall control and management of a part of or the whole of a construction site;

“Professional engineer or professional certificated engineer” means any person holding registration as either a Professional Engineer or Professional Certificated Engineer under the Engineering Profession Act, 2000 (Act No. 46 of 2000);

“Professional technologist” means any person holding registration as a Professional Technologist under the Engineering Profession Act, 2000 (Act No. 46 of 2000);

“Provincial director” means the provincial director as defined in regulation 1 of the General Administrative Regulations under the Act;

“risk assessment” means a programme to determine any risk associated with any hazard at a construction site, in order to identify the steps needed to be taken to remove, reduce or control such hazard;

“Roof apex height” means the dimensional height in metres measured from the lowest ground level abutting any part of a building to the highest point of the roof;

“SABS 085” means the South African Bureau of Standards’ Code of Practice entitled “The Design, Erection, Use and Inspection of Access Scaffolding”;

“SABS 0400” means the South African Bureau of Standards, Code of Practice for the application of the National Building Regulations;

“SABS EN 1808” means the South African Bureau of Standards’ Standard Specification entitled: “Safety requirements on suspended access equipment – Design calculations, stability criteria, construction-tests”;

“SABS 1903” means the South African Bureau of Standards’ Standard Front-end Specification entitled: “Safety requirements on suspended access equipment – Design calculations, stability criteria, construction-tests”;

“Scaffold” means any temporary elevated platform and supporting structure used for providing access to and supporting workmen or materials or both;

“shoring” means a structure such as a hydraulic, mechanical or timber/steel shoring system that

supports the sides of an excavation and which is intended to prevent the cave-in or the collapse of the sides of an excavation, and “shoring system” has a corresponding meaning;

“Structure” means□

- (a) any building, steel or reinforced concrete structure (not being a building), railway line or siding, bridge, waterworks, reservoir, pipe or pipeline, cable, sewer, sewage works, fixed vessels, road, drainage works, earthworks, dam, wall, mast, tower, tower crane, batching plants, pylon, surface and underground tanks, earth retaining structure or any structure designed to preserve or alter any natural feature, and any other similar structure;
- (b) any formwork, false work, scaffold or other structure designed or used to provide support or means of access during construction work; or
- (c) any fixed plant in respect of work which includes the installation, commissioning, decommissioning or dismantling and where any such work involves a risk of a person falling two metres or more;

“Suspended platform” means a working platform suspended from supports by means of one or more separate ropes from each support;

“The Act” means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993);

“Tunnelling” means the construction of any tunnel beneath the natural surface of the earth for a purpose other than the searching for or winning of a mineral

HEALTH AND SAFETY SPECIFICATION

**THE OCCUPATIONAL HEALTH AND SAFETY ACT 1993
CONSTRUCTION REGULATIONS 2003**

SECTION 2: DESIGNERS

1. All wording shall have the meaning as defined by the H&S Regulations 2003.
2. This specification is in terms of the H&S act 1993 and the regulations of 2003.
3. All work performed and procedures followed by designers shall be done according to the H&S regulations of 2003.
4. The client is aware of the fact that the appointment of a designer does not implicate that the designer becomes the agent of the client for the particular project. The appointment of an agent is done separately in writing and should be accepted by the designer as such.
5. The client is ultimately responsible for all safety issues regarding the project for which a designer is appointed and cannot contract out of his obligations in terms of the law.
6. The client shall not employ a designer should he have reasonable doubts that the designer is not able to execute work in a safe manner.
7. All designers shall have adequate insurance cover to indemnify the client for their acts and omissions in terms of professional conduct the H&S act in particular to indemnify the client against penalties imposed for acts or omissions. The client is aware of the fact that additional insurance over and above PI insurance is necessary to have himself indemnified by the designers for acts and omissions in terms of the H&S regulations. The professional indemnity insurance has a "negligent acts and omissions" wording only and therefore additional insurance is necessary to cover the client against penalties imposed in terms of the regulations.
8. Designers shall not accept work from the client if they are not capable of executing such work professionally and if such work cannot be executed in a safe manner, according to the provisions of the H&S regulations.
9. Designers shall execute all designs in terms of the relevant SABS and other acceptable codes and procedures and shall place great emphasis on safety issues including the maintenance procedures after inaugurations of such systems or projects.
10. Ergonomic parameters shall have high priority in all designs.

HEALTH AND SAFETY SPECIFICATION**THE OCCUPATIONAL HEALTH AND SAFETY ACT 1993
CONSTRUCTION REGULATIONS 2003****SECTION 3: PRINCIPAL CONTRACTORS (P C)**

1. All work by the P C shall be done in compliance with the provisions of the H&S regulations.
2. The Employer recognizes the right of each employee to work safely in a healthy environment under decent human conditions. Each employee has the right to return home safely and healthy to his home and family after each day's work.
3. Work shall not be done at the expense of human safety or health.
4. Work shall be executed under humane conditions, especially with reference to hours and H&S issues in mind.
5. The P C shall appoint a fulltime H&S Manager should he have more than 50 employees on site.
6. The PC shall conduct monthly safety meetings on site. All foremen, gang leaders and other employees shall participate and all incidents with relation to unsafe practices shall be discussed. Minutes of such meetings shall be kept in the H&S file.
7. Foremen and gang leaders shall, under the supervision of the H&S manager, conduct meetings with all staff and people under their direct supervision on a frequent basis. Minutes of such meetings shall be kept in the H&S file.
8. New personnel (temporary or full-time employees) shall attend safety induction courses under the supervision of the H&S manager.
9. The P C shall install and maintain a box in which proposals for improvement of H&S procedures could be placed. All such proposals shall be considered, recorded and placed in the H&S file.
10. An adequate first aid facility shall be placed maintained on site and shall be adequately indicated by means of signs. All personnel shall be made aware of its existence and only trained first aid assistants shall be authorized to treat injuries.
11. The P C shall see that work is only executed by people trained for the particular task.
12. All safety equipment shall be SABS approved and under no circumstance shall any safety equipment be non-certified homemade equipment. Specifications and order details shall be kept in the H&S file.
13. Workers and personnel shall be attending safety courses on a regular basis and all information regarding such training shall be kept in the H&S file.
14. All employees shall be trained in safe working procedures and shall be trained on safety consciousness in particular. Employees in position of leadership shall be trained through accredited training processes in H&S matters.
15. The contractor shall prepare and maintain a safety plan for the particular project and shall train his personnel to work according to such plan.
16. Personnel and workers will be made aware of any natural hazards existing on site. They will also be made aware of items defined by the designer in his risk assessment.
17. No horseplay between employees will be tolerated on site. Neither will aggressive or threatening behaviour by anybody be allowed.
18. Workers shall wear appropriate protective clothing for the applicable task which shall include special safety equipment like protective eyewear, gloves, boots, ear protection, etc. Workers shall be issued with these items and copy of such issuing shall be kept in the H&S file.
19. Workers shall not be allowed to wear loose clothes and footwear.

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20. Workers shall have the opportunity and right to prescribed rest, eating and toilet breaks.
 21. Workers on nightshift shall be protected against inclement weather and shall have access to adequate food and drinks.
 22. In cases where work is executed in remote or in security restricted areas, the P C will make provision for food to be supplied to his employees.
 23. Potable water shall be made available free of charge to all workers on site.
 24. Adequate toilet and washing facilities shall be made available to workers.
 25. In the event of chemicals being present or used on site, the P C will allow for adequate shower facilities on site. All chemicals shall be stored according to specification and shall be clearly identified and marked in prescribed containers.
 26. Workers under instruction to execute inherently unsafe procedures shall report such incidences to the H&S manager, designer of client immediately.
 27. Unauthorised or unlawful instructions from foremen, gang leaders or colleagues shall be reported by the H&S manager immediately.
 28. The P C shall stop his contractors if they work unsafely.
 29. All specialist work shall be executed by registered artisans only.
 30. Workers shall not be required to lift equipment or material heavier than 25kg or carry a load of more than 50 kg for more than 10 metres.
 31. Workers shall not be exposed to conditions of heat where the temperature is above 40° Celsius and the humidity more than 75%. Likewise will personnel not be exposed to temperatures lower than –5° Celsius? Should the designer and the P C decide that the work is urgent; workers will be issued with proper protective clothing.
 32. All workers shall have access to a shaded eating and resting place on site.
 33. Workers executing tasks in rivers, trenches and other natural or artificial water ways shall be made aware of the hazard of flash floods and special precautions shall be made by the P C to implement an effective flood warning system.
 34. Workers executing tasks in manholes for sewer or stormwater systems, shall be made aware of the existence of hazardous gasses in closed areas and shall be issued with gas masks in any event, even after tests conducted by the H&S manager has proven that no gasses are existent. Only specialists shall work in gas filled chambers.
 35. Personnel executing work during rainy weather or under other wet conditions shall be equipped with proper gumboots and proper rain suits.
 36. No personnel will be allowed to work in water unless gumboots are worn. Should the water be deeper than 300mm watertight suits shall be worn.
 37. All ladders shall be fixed against scaffolding or other permanent structures.
 38. Welding on site shall only be done by trained personnel behind adequate eye protecting shields and all welders shall wear proper protective gear.
 39. Personnel operating grinders, saws or any other hand tools of similar description shall be equipped with the necessary eyewear and ear protection.
 40. All personnel working under potentially dusty conditions shall wear nose and mouth filters.
 41. Workers operating rock drilling equipment shall wear ear, nose and eye protection.
 42. All scaffolding will comply with the H&S regulations.

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43. Blasting will be done by specialists under the regulations of the Explosives Act.
44. Workers shall wear protective clothing when exposed to chemicals like cement, lime, detergents, tar, fumes, etc. Should work be executed in the presence of such material, adequate protective clothing and equipment shall be issued after permission is granted by the H&S manager.
45. Workers will not be allowed to make open fires on any part of the site unless it is made in designated areas approved by the H&S manager.
46. Fuel storage will only be allowed on certified areas on site.
47. Workers and other personnel will be trained for fire procedures and will practise such fire drill on a regular basis.
48. Assembly areas for emergency evacuations will be indicated by adequate signage.
49. The P C will have an attendance register for the purposes of identifying people before, during and after potential hazardous situations.
50. All transport supplied by the P C shall be on road worthy vehicles only and all transport shall be conducted in terms of the transport act.
51. Drivers of vehicles shall be responsible for the roadworthiness of vehicles and will report any dysfunctional vehicles to the P C.
52. All drivers will be responsible to handle vehicles in such a way to comply with the transport act.
53. Passengers of vehicles shall report any unsafe conduct to the P C immediately. Such report shall be forwarded to the H&S manager and shall be investigated. Copy of such procedure shall be entered into the H&S file.
54. Only trained personnel shall be permitted and required to operate construction machinery. All such machinery shall be maintained in a safe working condition.
55. All vehicles operating on site shall have audible warning signals if driven backwards.
56. No vehicle shall be kept on site if it is leaking oil or other substances.
57. No vehicle or equipment shall be operated on site if it produces noise above 90 decibel measured within a distance of 10,0 m from the unit.
58. Equipment producing serious dusty conditions shall only be operated under the supervision of the P C and the H&S manager with the necessary protection to workers.
59. All excavations on site shall be adequately protected and not only indicated.
60. Exploratory excavation to reveal services shall be done in a specific way.
- All areas to be explored shall first be inspected by the landowner or local authority.
 - Position of services identified shall then be verified by opening by hand, not by machine.
 - Particular care shall be taken not to damage these services.
 - Electrical services are inherently dangerous and shall be opened by skilled people only.
 - These excavations shall not be left open without supervision. If necessary the excavation shall be backfilled temporarily with approved material until the specified modifications to the services can be made.
61. Access to excavations shall only be by means of ladders or stairs with handrails.

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62. All refuse, unsafe material, potential hazardous material and rubbish shall be placed in designated areas to be removed on a regular basis.
63. Rainwater shall be contained in trenches or pipes in such a way that it will not cause contamination of material in these refuse areas.
64. All electrical sources or cables or overhead power lines should be regarded as live at all times and all workers on site shall be made aware of its existence during H&S meetings and as many times as necessary.
65. Adequate signage shall be used on site to indicate
- Non smoking areas on site
 - Safety exits / Emergency exits from buildings under construction
 - Stairs (temporary and permanent works)
 - Toilets

 - Fire fighting equipment
 - Workmen busy with equipment overhead
 - Fire assembly points
 - Fire escapes
 - Areas where members of the public are not allowed.
 - First aid room
66. All visitors to the site shall be granted permission to the site only upon application through a predetermined procedure and records of these visitors shall be kept in the H&S file. Visitors shall attend safety induction training before entering the site. Areas out of bounds to all visitors shall be indicated clearly by means of adequate signs.
67. Work performed in public servitudes like the construction of streets or roads shall be done according to the specifications of the local or national authority and adequate signage shall be implemented.
68. People complaining about their health or people displaying symptoms of illness or disease, shall be allowed to go to the first aid facility or to visit a doctor or a clinic. Permission shall not be withheld unreasonably. In remote areas the P C is required to have reasonable ways of transporting people to a doctor or clinic whether the person is ill or injured on site.
69. Personnel must be informed about the location of the nearest doctor or clinic for casualty purposes and the P C shall provide such transport for injured workers and injured members of the public (within the limits of the site) free of charge.
70. A principal contractor who intends to carry out any construction work shall ☐
- (a) before carrying out that work, notify the provincial director in writing of the construction work if it includes ☐
- (i) The demolition of a structure exceeding a height of 3 metres; or
 - (ii) The use of explosives to perform construction work; or
 - (iii) The dismantling of fixed plant at a height greater than 3m.
- (b) before carrying out that work, notify the provincial director in writing when the construction work ☐
- (i) Exceeds 30 days or will involve more than 300 person days of construction work; and
 - (ii) Includes excavation work deeper than 1m; or
 - (iii) Includes working at a height greater than 3 metres above ground or a landing.
- (2) The notification to the provincial director must be done on the form similar to Annexure A to this Policy.
- (3) A principal contractor shall ensure that a copy of the completed form is kept on site for inspection by an inspector, client, client's agent or employee.

O. R. TAMBO DISTRICT MUNICIPALITY**HEALTH AND SAFETY SPECIFICATION
THE OCCUPATIONAL HEALTH AND SAFETY ACT 1993
CONSTRUCTION REGULATIONS 2003****SECTION 4: CLIENT**

- (1) A client shall be responsible for the following in order to ensure compliance with the provisions of the Act:
- (a) to prepare a documented health and safety specification for the construction work, and provide any principal contractor who is making a bid or appointed to perform construction work for the client with the same;
 - (b) To promptly provide the principal contractor and his or her agent with any information which might affect the health and safety of any person at work carrying out construction work;
 - (c) To appoint each principal contractor in writing for the project or part thereof on a construction site;
 - (d) To take reasonable steps to ensure that each principal contractor's health and safety plan is implemented and maintained on the construction site: Provided that the steps taken, shall include periodic audits at intervals mutually agreed upon between the client and principal contractor, but at least once every month;
 - (e) to stop any contractor from executing construction work which is not in accordance with the principal contractor's health and safety plan for the site or which poses to be a threat to the health and safety of persons;
 - (f) to ensure that where changes are brought about, sufficient health and safety information and appropriate resources are made available to the principal contractor to execute the work safely;
 - (g) to ensure that every principal contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer prior to work commencing on site; and
 - (h) To ensure that potential principal contractors submitting tenders, have made provision for the cost of health and safety measures during the construction process.
- (2) A client shall discuss and negotiate with the principal contractor the contents of the health and safety plan and thereafter finally approve the health and safety plan for implementation.
- (3) A client shall ensure that a copy of the principal contractor's health and safety plan is available on request to an employee, inspector or contractor.
- (4) (4) O. R. Tambo District Municipality shall not appoint a principal contractor to perform construction work, unless O. R. Tambo District Municipality is reasonably satisfied that the principal contractor that he or she intends to appoint has the necessary competencies and resources to carry out the work safely.
- (5) A client may appoint an agent in writing to act as his or her representative and where such an appointment is made, the responsibilities as are imposed by these regulations upon a client, shall as far as reasonably practicable apply to the person so appointed.
- (6) No client shall appoint any person as his agent, unless the client is reasonably satisfied that the person he or she intends to appoint has the necessary competencies and resources to perform the duties imposed on a client by these regulations.

ANNEXURE A

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993
Regulation 3 of the Construction Regulations, 2003

NOTIFICATION OF CONSTRUCTION WORK

1.(a) Name and postal address of principal contractor:

(b) Name and tel. no of principal contractor's contact person:

2. Principal contractor's compensation registration number:

3.(a) Name and postal address of client:

(b) Name and tel. no. of client's contact person or agent:

4.(a) Name and postal address of designer(s) for the project:

(b) Name and tel. no. of designer(s) contact person:

5. Name and telephone number of principal contractor's construction supervisor on site appointed in terms of regulation 6.(1).

6. Name/s of principal contractor's sub-ordinate supervisors on site appointed in terms of regulation 6.(2).

7. Exact physical address of the construction site or site office:

8. Nature of the construction work:

9. Expected commencement date:

10. Expected completion date:

11. Estimated maximum number of persons on the construction site.

12. Planned number of contractors on the construction site accountable to principal contractor:

13. Name(s) of contractors already chosen.

Principal Contractor

Date

Client

Date

- ☐ **THIS DOCUMENT IS TO BE FORWARDED TO THE OFFICE OF THE DEPARTMENT OF LABOUR PRIOR TO COMMENCEMENT OF WORK ON SITE.**
- ☐ **ALL PRINCIPAL CONTRACTORS THAT QUALIFY TO NOTIFY MUST DO SO EVEN IF ANOTHER PRINCIPAL CONTRACTOR ON THE SAME SITE HAD DONE SO PRIOR TO THE COMMENCEMENT OF WORK.**

GUIDELINES FOR CONTRACT ADMINISTRATION



O. R. TAMBO DISTRICT MUNICIPALITY

GUIDELINES FOR CONTRACT ADMINISTRATION

IN TERMS OF THE CONSTRUCTION REGULATIONS 2003 HEALTH & SAFETY ACT 1993

SECTION 1 AND 2

1. PURPOSE OF THIS DOCUMENT

This document describes the procedures to be followed in the execution of Engineering Projects for O. R. Tambo District Municipality.

The role of all parties to the development project is described.

The document is in terms of the Construction Regulation 2003 of the Health and Safety Act 1993.

2. BACKGROUND

The Minister of Labour has on 18 July 2003 under section 43 of the Occupational Health and Safety Act 1993 (Act No. 85 of 1993) published new regulations in the Government Gazette 7721, Vol. 456. They have immediate effect and are applicable to the Construction Environment.

These regulations inter alia identify the different role players and their responsibilities, particularly the role of the client, the contractor and that of the designer.

The Construction Regulations endeavour to ensure that:

- i) Hazards or potential hazards to a healthy working environment are identified.
- ii) These hazards or potential hazards are removed or minimised.
- iii) Employers and Workers are made aware of the value of safe working procedures and train themselves to work safely in potential hazardous environments or under potentially unsafe conditions.

**GUIDELINES FOR CONTRACT ADMINISTRATION
IN TERMS OF THE CONSTRUCTION REGULATIONS 2003
HEALTH & SAFETY ACT 1993
SECTION 3**

3. THE CLIENT

In terms of the law the client is ultimately responsible for all acts and omissions as far as health and safety is concerned on site. It should be noted that the client will be held legally responsible for every trespass of the regulations, not the designer or the contractor. The law makes provision for fines to be levied and unless the client has been indemnified by the designer or the contractor, such fines will have to be paid by the client.

Clients cannot contract out of their statutory obligations except where the law allows for it. Therefore, any liability imposed upon them for statutory non-compliance, cannot be passed on to designers (consultants) or contractors.

In particular the client's responsibilities are defined as follows:

- | | | |
|-----|---|----------------|
| .1 | To prepare a health and safety (H&S) specification for the work. This should cover the spectrum of activities handled by the client as part of his normal duties. | Clause 4(1)(a) |
| .2 | To provide a risk assessment to the principal contractor. | Clause 4(1)(b) |
| .3 | To appoint the principal contractor in writing. | Clause 4(1)(c) |
| .4 | To ensure that the H&S plan is implemented. | Clause 4(1)(d) |
| .5 | To stop any contractor executing work in an unsafe manner. | Clause 4(1)(e) |
| .6 | To provide additional H&S information to the contractor should changes be made to the work? | Clause 4(1)(f) |
| .7 | To ensure that the principal contractor is registered and in good standing with the workmen's compensation fund. | Clause 4(1)(h) |
| .8 | To make sure tenderers have made provision in their offers for H&S measures. | Clause 4(1)(h) |
| .9 | To discuss and approve the H&S plan with the principal contractor. | Clause 4(2) |
| .10 | To keep a copy of the H&S plan of the principal contractor. | Clause 4(3) |
| .11 | To <u>not</u> employ a contractor unless the client is reasonably satisfied that the principal contractor who is earmarked for an appointment has the necessary skills, competencies and resources to carry out the work safely. | Clause 4(4) |
| .12 | The client can appoint an agent to handle his duties. The client can obviously also delegate some of his duties but this does not make the person responsible for such particular responsibilities as agent.

The client should make sure whether such responsibilities are not already part of the designer in terms of the regulations clause 9(2). | Clause 4(5) |
| .13 | The client shall only appoint someone as his agent if he is reasonably satisfied that such person can handle such responsibilities. | Clause 4(6) |

GUIDELINES FOR CONTRACT ADMINISTRATION
IN TERMS OF THE CONSTRUCTION REGULATIONS 2003
HEALTH & SAFETY ACT 1993

SECTION 4

4. THE DESIGNER

The regulations do not use names like engineer, architect, etc. Instead the term designer has been introduced. The responsibilities of the designer are given in a sub-paragraph under the obligations of the Principal Contractor.

4.1	The regulations has a comprehensive definition of the designer and this includes:	Definitions "designer"
a)	A person preparing a design.	Definitions "structure"
b)	A person checking a design.	
c)	A firm preparing a design.	
d)	An architect or engineer contributing to or having responsibility for a design.	
e)	A building services engineer designing details of fixed plant (scaffolding or cranes).	
f)	A surveyor specifying articles or drawing up specification (Quantity Surveyor).	
g)	A contractor in design & build contract.	
h)	A contractor designing temporary work.	
i)	A interior designer, shop fitter and landscape architect.	
	The regulation also talks of "an engineer designing a structure". "Structure" is a wide concept and is given in paragraph 3.2.5.1(a) underneath.	
4.2	The designer does not automatically through an appointment become the agent of the client in terms of the regulations unless he is appointed in writing to that effect and he accepts such appointment in writing.	Clause 4(5)
4.3	The SAACE model agreement between the client and Engineer has a different meaning of the word "agent". According to the model agreement of SAACE the Engineer acts as the "agent" of the client in a conventional contractual context. "Agent" in terms of the Health & Safety regulations has a totally different meaning.	
4.4	It can be derived from the regulations that the client can appoint a designer to perform certain tasks of the client on his behalf. This still does not mean that these designers become his agent in terms of clause 4(5).	Clause 4(5)
4.5	The regulations are fairly quiet regarding the functions and responsibilities of the designer except when designing of a structure. It is again assumed that the client will identify certain functions to be done by the designer on his behalf.	

<p>4.5.1 "Structure" in terms of the regulations means:</p> <p>(a)</p> <ul style="list-style-type: none"> • any building • steel or reinforced concrete structure • railway line • railway siding • bridge • waterworks • reservoir • pipe or pipeline • cable • sewer • sewage works • fixed vessels • road • drainage works • earthworks • dam • wall • mast • tower • tower crane • batching plants • pylon • surface and underground tanks • earth retaining structure <p>or any structure designed to preserve or alter any natural feature and any other similar structure.</p> <p>(b) Any formwork, false work, scaffold or other structure designed or used to provide support or access during construction (structural engineering sector).</p> <p>(c) Fixed plant to prevent people from falling 2 meters or more.</p>	<p>Definitions</p>
<p>4.5.2 The designer is in fact regarded as a person delivering designs only and unless his role is defined by the client, his role is quite limited.</p>	<p>Clause 9(2)</p>
<p>4.5.3 The designer should inform the client and the principal contractor about anticipated dangers relating to the construction work. <u>This is in fact a Risk Assessment.</u></p>	<p>Clause 9(2)(b)</p>
<p>4.5.4 The designer (in the structural engineering context) shall further furnish to the contractor in writing:</p> <p>i) A geo-technical report.</p> <p>ii) The loading of the structure.</p> <p>iii) The method and sequence of the construction process.</p> <p>iv) He should exclude inherently dangerous methods of construction in his design.</p> <p>v) The maintenance of the structure shall be through safe procedures.</p> <p>vi) He should carry out inspections.</p> <p>vii) And stop the contractor from executing work dangerously.</p>	<p>Clause 9(2)</p>
<p>viii) A final inspection is necessary to ensure safety of the structure.</p> <p>ix) Great emphasis should be given to the ergonomic design of the structure.</p> <p>x) The engineer should also give input in the design of temporary work e.g. scaffolding.</p>	<p>Clause 10(c)</p>

**GUIDELINES FOR CONTRACT ADMINISTRATION
IN TERMS OF THE CONSTRUCTION REGULATIONS 2003
HEALTH & SAFETY ACT 1993**

SECTION 5

5. THE PRINCIPAL CONTRACTOR (P C) AND CONTRACTOR

The responsibilities of these parties are comprehensively stipulated in the regulations.

5.1	In general it can be seen that the responsibilities of the PC (Principal Contractor) towards his contractors is Mutatis Mutandis to the responsibilities of the Client towards the PC.	
5.2	The PC is responsible for the collecting of these contractors' safety plans and to hold them to it.	Clause 5(1) and (2)
i)	He should also stop his contractors should they work unsafely.	Clause 5(3)(d)
ii)	He should appoint safety officers should the size of the work warrant it.	Clause 6(6)
iii)	He should cause a risk assessment to be executed by a competent person.	Clause 7(1)
iv)	Visitors to his site should undergo induction pertaining to H&S issues.	Clause 7(8)
v)	He shall see to his employees induction and H&S training.	Clause 7(7)
vi)	The employees of the PC and his contractors shall wear visible proof of their induction training.	Clause 7(9)(a)
5.3	The regulations also covers the detail of:	
	• Fall protection	Clause 8
	• Structures (under this heading the responsibilities of the designer of a structure is found)	Clause 9
	• Formwork and support work	Clause 10
	• Excavation work	Clause 11
	• Demolition work	Clause 12
	• Tunnelling	Clause 13
	• Scaffolding	Clause 14
	• Suspended platforms	Clause 15
	• Boatswain's chairs	Clause 16
	• Material hoists	Clause 17
	• Batch plants	Clause 18
	• Explosive powered tools	Clause 19
	• Cranes	Clause 20
	• Construction vehicles and mobile plant	Clause 21
	• Electrical installation and machinery on construction sites	
	• Use and storage of flammable liquids on construction sites	
	• Water environment	Clause 22
	• Housekeeping on construction sites	Clause 23
	• Stacking and storage on construction sites	Clause 24
	• Fire precautions on construction sites	Clause 25
	• Construction welfare facilities	Clause 26
		Clause 27

**GUIDELINES FOR CONTRACT ADMINISTRATION
IN TERMS OF THE CONSTRUCTION REGULATIONS 2003
HEALTH & SAFETY ACT 1993**

SECTION 6

6. APPOINTMENT OF THE DESIGNER

Clause 4(5)

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|--|---|
| <p>6.1 The client appoints the consultant or designer as agent only for the particular project and also for the duration of the project.</p> <p>6.2 It is further important to distinguish between “agent” in terms of the SAACE model agreement between client and engineer and “agent” in terms of the H&S regulations.</p> <p>6.3 The responsibilities and duties of a designer in the H&S context are <u>those that are dictated by law and/or those respectively given to him by the client</u>, except when he is a structural engineer and designs a “structure” in which case clause 9(2) applies automatically.</p> <p>6.4 The client should only add to the responsibilities of the designer those which is not automatically in his hand in terms of clause 9(1) of the regulations.</p> <p>6.5 The following duties are not regarded as normal work of the designer of a “structure” and will therefore require an additional appointment.</p> | <p>.1 To ensure the H&S plan of the PC is implemented on site. Clause 4(1)(d)</p> <p>.2 To ensure that changes to the design are also incorporated in the H&S plan. Clause 4(1)(e)</p> <p>.3 To ensure that the principal contractor is registered and in good standing with the workmens' compensation fund. Clause 4(1)(f)</p> <p>.4 To see that the contractor registers the site as a construction site at the Department of Labour. Clause 4(1)(g)</p> <p>.5 To discuss with the contractor the H&S plan and then recommend to the client the approval thereof. Clause 4(2)</p> <p>.6 To keep a copy of the H&S plan of the contractor in his possession and see that a copy is forwarded to the client. Clause 4(4)</p> <p>.7 Control the following on site:</p> <p style="padding-left: 20px;">a) To see that the principal contractor keeps the H&S file up to date and that it is given to the client upon completion of the contract. Clause 5(7)</p> <p style="padding-left: 20px;">b) To see that the principal contractor keeps a data base of all contractors involved with the project. Clause 5(9)</p> <p style="padding-left: 20px;">c) To see that the principal contractor appoints one or more construction supervisors.</p> <p style="padding-left: 20px;">d) To see that this person is dedicated to the particular project only. Clause 6(4)</p> <p style="padding-left: 20px;">e) To receive from the contractor his risk assessment and keep a copy of that for his and the clients records. Clause 7(1)</p> |
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**GUIDELINES FOR CONTRACT ADMINISTRATION
IN TERMS OF THE CONSTRUCTION REGULATIONS 2003
HEALTH & SAFETY ACT 1993**

SECTION 7

7. THE ROLE OF THE CLIENT

7.1	The client shall still prepare the H&S specification in terms of clause 4(1)(a) for its global activities. The H&S specification for the particular project is assigned to the designer.	Clause 4(1)(a)
7.2	The client shall approve of the H&S plan of the contractor, but on the recommendation of the consultant/ designer.	Clause 4(2)
7.3	The client employs the Principal Contractor.	Clause 4(1)(c)
7.4	The client can appoint an agent in which case all the responsibilities of the agent in the regulations are transferred to the agent.	Clause 4(5)
7.5	The client should only appoint an agent should he have made reasonably sure that the agent can handle the responsibility.	Clause 4(6)
7.6	The client shall not appoint a contractor if he is not reasonably sure that the contractor can execute such work in a safe manner.	Clause 4(4)

**GUIDELINES FOR CONTRACT ADMINISTRATION
IN TERMS OF THE CONSTRUCTION REGULATIONS 2003
HEALTH & SAFETY ACT 1993**

SECTION 8

8. THE ROLE OF THE PRINCIPAL CONTRACTOR

The principal contractor should execute the following duties:

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|-----|--|--------------|
| .1 | Provide a health and safety plan. | 5(1) |
| .2 | See that his contractors comply with the regulations. | 5(2) |
| .3 | He should discuss the particular H&S plan. | 5(5) |
| .4 | He should have his H&S plan available. | 5(6) |
| .5 | He should have an H&S file available on site and hand it over to the client upon completion. | 5(7) |
| .6 | He should not employ contractors who are not capable. | 5(10) |
| .7 | He should have full time supervision on site. | 6(1) to 6(8) |
| .8 | He should produce a risk assessment of the work. | 7(1) |
| .9 | He should train his employees. | 7(4) |
| .10 | He should introduce induction training on site. | 7(7)/ 7(8) |
| .11 | All physical aspects of the regulations as in terms of the regulations. | |

GUIDELINES FOR CONTRACT ADMINISTRATION
IN TERMS OF THE CONSTRUCTION REGULATIONS 2003
HEALTH & SAFETY ACT 1993

SECTION 9

9. THE PROCEDURE

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|-----|---|---------------------|
| 9.1 | The Client decides to execute work and appoints a designer to administer the work. | |
| 9.2 | The scope of works and the exact duties of the designer are identified and given to him in writing.

The designer should affect insurance by which the client is indemnified (by the designer) for acts and omissions of the designer. This type of insurance does not form part of the normal PI insurance provided by the designer.

The designer prepares a contract document and ensures that this document states clearly the following: | |
| .1 | A risk assessment of the project and the H&S specification of the client. | |
| .2 | All relevant information to enable the pricing of the contract. | 9(2)(a) |
| .3 | Items in the bill to enable the tenderer to price for the risk including insurance indemnifying the client. The document should state whether a full time safety officer is required on site. | 9(2)(b) |
| .4 | (i) Geotechnical information
(ii) Loading of the structure – in other words all relevant technical data taking the definition of “structure” into account.
(iii) The method and sequence of the process. This should identify the priorities of the client. | 9(2)(c)(i) to (iii) |
| .5 | Inherently dangerous procedures should be avoided in the design. | 9(2)(d) |
| .6 | The maintenance of the structure should be considered also so that this aspect would be safe and ergonomic too. | 9(2)(e) |
| 9.3 | The tenderers then respond by each giving a H&S plan based on the risk assessment of the designer. | |
| 9.4 | The client then chooses the contractor according to his procurement policy (taking into account his ability to do the work safely) and appoints him in writing via the designer. | |
| 9.5 | The chosen principal contractor then affects a detailed risk assessment and a risk management plan, based on the H&S specification. | |

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| 9.7 | Once on site the principal contractor should register the site by means of the prescribed form and have it approved by the client/designer. |
| 9.8 | He should open and then maintain his H&S file through the duration of the contract. |
| 9.9 | He should then further adhere to the provisions of the H&S regulations. |
| 9.10 | He should hand over the H&S file (recommend to do that with the designer's as-built drawings). |
| 9.11 | The designer should stop the work if he has reason to belief that the contractor is executing work in an unsafe manner. |
| 9.12 | Likewise should the principal contractor stop the work of his contractor(s) should he have reason to belief that such contractor is not working safely. |

O. R. TAMBO DISTRICT MUNICIPALITY
GUIDELINES FOR CONTRACT ADMINISTRATION
IN TERMS OF THE CONSTRUCTION REGULATIONS 2003
HEALTH & SAFETY ACT 1993

SECTION 10

10. CONTRACT DOCUMENTATION

The contract documentation needs to emphasize the following points in order to comply with the Health and Safety Act 1993 and the Construction Regulations 2003.

A. In the Specification section

1. Health and Safety Specification

The Client shall issue the Designer with his Health and Safety specification and it shall be included as such in the document.

Should the Designer be of the opinion that variations and additions be made to the specification, due to the nature of the particular project, he shall forward the proposed variation or addition to the NDM who will authorize this in writing.

2. Risk Assessment

This can form part of the contract specifications.

It is necessary to identify to the contractor:

- i) The situation on site as it is with all the potential hazards and dangers involved.
- ii) The nature of the work and the situations that the average contractor would encounter during the execution of the work. The nature of the work and the expected risks should be described in particular as well as the method and the sequence of the work.
- iii) The basic safety precautions that he should take.
- iv) The Safety and Health specification of the client.
- v) To allow sufficient items in the bill of quantities for the tenderer to price for the specified H&S precautions.

3. Insurance

The contractor shall affect insurance indemnifying the client against penalties levied upon the client due to the acts or omissions of the contractor in failing to comply with the provisions of the H&S regulations 2003.

The contractor shall prove to the Engineer that such insurance has been affected and maintained during the construction.

B. The Tender Rules

The tender rules shall contain a clause requiring the contractor to submit a H&S plan based on the risk assessment given in the contract document. It should also state that the client is bound by law not to appoint a contractor should he be reasonably sure that the contractor would not be able to execute the work safely should he be appointed.

The following example is recommended.

Compliance with the Regulations of the H&S Act 2003

Tenderers are required to study the published risk assessment and provide Annexure Y his Health and Safety Plan. Generic document will be disregarded. Such H&S plan should give details regarding the tenderers intention of dealing with the risks.

Failure to submit such H&S plan will result in disqualification of the tender.

Tenderers are informed that the client is bound by law not to accept a tender should he be reasonable sure that the tenderer will not be able to execute the work safely.

O. R. TAMBO DISTRICT MUNICIPALITY

GUIDELINES FOR CONTRACT ADMINISTRATION

IN TERMS OF THE CONSTRUCTION REGULATIONS 2003

HEALTH & SAFETY ACT 1993

SECTION 11**11. CONCLUSION**

The Construction Regulations 2003 was long overdue in the South African Civil Engineering Construction Industry. Role players will now be forced to implement them and an awareness of safe working environments will be cultivated.

Clients might initially detect a contemptuous attitude particularly from contractors and even designers or consultants. This should not deter clients since acts and omissions from these parties will bring clients in confrontation with the law.

Contract cost will certainly escalate due to the additional specifications but this should be weighed against the value of human lives improved and saved.

The construction industry, particularly the Civil Engineering Sector, will have to accept and embrace these regulations and then seriously look at its productivity to curb the cost of the implementation process.

1.0 SCOPE

This part of the specification has the objective to assist principal contractors entering into contracts with The Employer that they comply with the Occupational Health and Safety (OH&S) Act, No 85 of 1993. Compliance with this document does not absolve the principal contractor from complying with minimum legal requirements, and the principal contractor remains responsible for the health and safety of his employees and those of his Mandataries. Principal and other contractors should therefore insist that this part of the specification form part of any contract that he may have with other contractors and/or suppliers.

This section covers the development of a health and safety specification that addresses all aspects of occupational health and safety as affected by this contract. It provides the requirements that the principal contractors and other contractors shall comply with in order to reduce the risks associated with this contract that may lead to incidents causing injury and/or ill health.

2.0 GENERAL OCCUPATIONAL HEALTH AND SAFETY PROVISIONS**2.1 Hazard Identification and Risk Assessment (Construction Regulation 7)****2.1.1 Risk Assessments**

Paragraph 4 contains a generic list of risk assessment headings that have been identified by The Employer as possibly applicable to this contract. It is, by no means, exhaustive and is offered as assistance to contractors intending to bid.

2.1.2 Development of Risk Assessment

Every principal contractor performing construction work shall, before the commencement of any construction work or work associated with the aforesaid construction work and during such work, cause a risk assessment to be performed by a competent person, appointed in writing, and the risk assessment shall form part of the OH&S plan and be implemented and maintained as contemplated in Construction Regulation 5(1).

The risk assessment shall include at least:

- the identification of the risks and hazards to which persons may be exposed
- the analysis and evaluation of the risks and hazards identifies
- a documented plan of safe work procedures to mitigate, reduce or control the risks and hazards that have been identified.
- a monitoring plan and
- a review plan

Based on the risk assessment, the principal contractor shall develop set site-specific OH&S rules that shall be applied to regulate the OH&S aspects of the construction. The risk assessment, together with the site-specific OH&S rules shall be submitted to The Employer before construction on site commences.

Despite the risk assessment listed in paragraph 4, the principal contractor shall conduct a baseline risk assessment and the aforesaid listed risk assessment shall be incorporated into the baseline risk assessment. The baseline assessment shall further include the standard working procedures and the applicable method statements based on the risk assessments.

All variations to the scope of work shall similarly be subjected to a risk assessment process.

2.1.3 Review of Risk Assessment

The principal contractor shall review the hazard identification, risk assessments and standard working procedures at each production planning and progress report meetings as the contract work develops and progresses and each time changes are made to the designs, plans and construction methods and processes. The principal contractor shall provide The Employer, other contractors and all other concerned parties with copies of any changes, alterations or amendments as contemplated in paragraph 2.1.3.

2.2 Legal Requirements

A principal contractor shall, as minimum, comply with:

The Occupational Health and Safety Act and Regulations (Act 85 of 1993), an up to date copy of which shall be available on site at all times.

The Compensation or Occupational Injuries and Diseases Act (Act 130 of 1993), an up to date copy of which shall be available on site at all times.

Where work is being carried out on a "mine", the contractor shall comply with the Mines Health and Safety Act and Regulations (Act 29 of 1960) and any other OH&S requirements that the mine may specify. An up-to-date copy of the Mine's Health and Safety Act and Regulations shall be available on site at all times.

2.3 Structure and Responsibilities

It is a requirement that the principal contractor, when he appoints contractors (Sub-contractors) in terms of Construction Regulations 5(3), 5(5), 5(10), and 5(12) includes in his agreement with such contractors the following:

- OH&S Act (85 of 1993), Section 37(2) agreement: "Agreement with Mandatory"
- OH&S Act (85 of 1993), Section 16(2) appointee/s as detailed in his / her/ their respective appointment forms.

2.2.3 Further (Specific) Supervision Responsibilities for OH & S

The contractor shall appoint designated competent employees and/or other competent persons as required by the Act and Regulations. Below is a generic list of identified appointments and may be used to select the appropriate

appointments for this contract. The contractor shall note it is a generic list only and is intended for use as a guideline.

Ref. Section/ Regulation in OHS Act	
Batch Plant Supervisor	(Construction Regulation 6(1)
Construction Vehicles/ Mobile Plant/ Machinery Supervisor	(Construction Regulation 21) Demolition
Supervisor	(Construction Regulation 12)
Drivers/Operators of Construction Vehicles/ Plant	(Construction Regulation 21)
Electrical Installation and Appliances Inspector	(Construction Regulation 22)
Emergency/Security/Fire Control	(Construction Regulation 27)
Excavation Supervisor	(Construction Regulation 11)
Explosive powered Tool Supervisor	(Construction Regulation 19)
Fall Protection Supervisor	(Construction Regulation 8)
First Aider	(Construction Regulation 3)
Fire Equipment Inspector	(Construction Regulation 27)
Formwork & Support work Supervisor	(Construction Regulation 10)
Hazardous Chemical Substances Supervisor	(HCS Regulations)
Incident Investigator	(General Admin Regulation 29)
Ladder Inspector	(General Safety Regulation 13A)
Lifting Equipment Inspector	(Construction Regulation 20)
Material Hoist Inspector	(Construction Regulation 17)
OH&S Committee	(OH&S Section 19)
OH&S Officer	(Construction Regulation 6(6)
OH&S Representatives	(OHS Act Section 17)
Person Responsible for Machinery	(General Machinery Regulation 2)
Scaffolding Supervisor	(Construction Regulation 14)
Stacking & Storage Supervisor	(Construction Regulation 26)
Structures Supervisor	(Construction Regulation 9)
Suspended Platform Supervisor	(Construction Regulation 15)
Tunneling under Pressure Supervisor	(Construction Regulation 13)
Vessel under Pressure Supervisor	(Vessel under Pressure Regulations)
Working on/next to Water Supervisor	(Construction Regulation 24)
Welding Supervisor	(General Safety Regulation 9)

In addition, The Employer requires that a Traffic Safety Officer be appointed (see COLTO Section 1500). The above appointments shall be in writing and the responsibilities clearly stated together with the period for which the appointment is made. This information shall be communicated and agreed with the appointees. Notice of appointments shall be submitted to The Employer. All changes shall also be communicated to the Employer.

The principal contractor or shall, furthermore, provide The Employer with an organogram of all contractors that he/she has appointed or intends to appoint and keep this list updated and prominently displayed on site.

Where necessary, or when instructed by an inspector of the Department of Labour, the principal contractor shall appoint a component safety officer.

2.3.3 Designation of OH&S Representatives (Section 17 of the OH&S Act)

Where the principal contractor employs more than 20 persons (including the employees of other contractors (sub-contractors) he has to appoint one OH&S representatives for every 5 employees or part thereof. General Administrative Regulation 6 requires that the appointment or election and subsequent designation of the OH&S representatives be conducted in consultation with employee representatives or employees. (Section 17 of the Act and General Administrative Regulation 6 & 7). OH&S representatives shall be designated in writing and the designation shall include the area of responsibility of the person and term of the designation.

2.3.4 Duties and Functions of the OH&S representatives (Section 18 of the OH&S Act)

The principal contractor shall ensure that the designated OH&S representatives conduct continuous monitoring and regular inspections of their respective areas of responsibility using a checklist and report thereon to the principal contractor. OH&S representatives shall be included in accident or incident investigations. OH&S representatives shall attend all OH&S committee meetings.

2.3.5 Appointment: of OH&S Committee (Section 19 and 20 of the OH&S Act)

The principal contractor shall establish an OH&S committee, which shall meet as specified in the Regulations.

2.4 Administrative Controls and the Occupational Health & Safety File

2.4.1 The OH&S File (Construction Regulation 5(7))

As required by the Construction Regulation 5(7), the principal contractor and other contractors shall each keep an OH&S file on site. The following list is not exhaustive and shall only be used as a guide:

- Notification of construction work (Construction Regulation 3)
- Latest copy of OH&S Act (General Administrative Regulation 4)
- Proof of registration and good standing with COID Insurer (Construction Regulation 4(g))
- OH&S plan agreed with the client including the underpinning risk assessment/s and method statements (Construction Regulation 5(1))
- Copies of OH&S committee and other relevant minutes
- Designs/Drawings (Construction Regulation 5(8))
- A list of contractors (sub-contractors) including copies of the agreements between the parties and the type of work being done by each contractor (Construction Regulation 9)
- Appointment/designation forms as per paragraphs 2.1.1 and 2.1.2
- Registered as follows:
 - Accident/incident register (Annexure 1 of the General Administrative Regulations)
 - OH&S representatives' inspection register
 - Asbestos demolition and stripping register
 - Batch plant inspections
 - Construction vehicles and mobile plant inspections by controller
 - Daily inspection of vehicles, plant and other equipment by the operator/driver/user
 - Demolition inspection register
 - Designer's inspection of structures record
 - Electrical installations, equipment and appliances including portable electrical tools)
 - Excavations inspector
 - Explosive powered tool inspection, maintenance, issue and returns register (incl. Cartridges and nails)
 - Fall protection inspection register
 - First aid box contents
 - Fine equipment inspection and maintenance
 - Formwork and support work inspections
 - Hazardous chemical substances record
 - Ladder inspections
 - Lifting equipment register
 - Materials hoist inspection register
 - Machinery safety inspection register (incl. Machine guards, lock-outs etc.)
 - Scaffolding inspections
 - Stacking and storage inspection
 - Inspection of structures
 - Inspection of suspended platforms
 - Inspection of tunnelling operations
 - Inspection of vessels under pressure
 - Welding equipment inspections
 - Inspection of work conducted near water
 - All other applicable records including traffic safety officer reports.

The Employer will conduct an audit on the OH&S file of the principal constructor from time-to time.

2.5 Notification of Construction Work (Construction Regulation 3)

The principal constructor shall, where the contract meets the requirements laid down in Construction work and use the form (Annexure A in the Construction Regulations) for the purpose. A copy shall be kept on the OH&S file and a copy shall be forwarded to The Employer for record keeping purposes.

2.6 Training and Competence

The contents of all training required by the Act and Regulations shall be included in the principal contractor's OH&S plan. The principal contractor shall be responsible for ensuring that all relevant training is undertaken.

Only accredited service providers shall be used for OH&S training. The principal contractor shall ensure that his and other contractor's personnel appointed are competent and that all training required to do the work safely and without risk to health, has been completed before work commences. The principal contractor shall ensure that follow-up and refresher training is conducted as the contract progresses and the work situation changes. Records of all training must be kept on the OH&D file for auditing purposes.

2.7 Consultations, Communication and Liaison

OH&S liaison between the client, the principal contractor, the other contractors, the designer and other concerned parties will be through the OH&S committee as contemplated in paragraph 2.3.5. In addition to the above, communication may be directly to the client or his appointed agent, verbally or in writing, as and when the need arises.

Consultation with the workforce on OH&S matters will be through their supervisions, OH&S representatives and the OH&S committee. The principal contractor shall be responsible for the dissemination of all relevant OH&S information to the other contractors e.g. design changes agreed with the client and the designer, instructions by the client and/or his/her agent, exchange of information between contractors, the reporting of hazardous/dangerous conditions/situations etc. The principal contractor's most senior manager on site shall be required to attend all OH&S meetings.

2.8 Checking Reporting and Corrective Actions**2.8.1 Monthly Audit by Client (Construction Regulation 4(1) (d))**

The Employer will conduct monthly audits to comply with Construction Regulation 4(1)(d) to ensure that the principal contractor has implemented and is maintaining the agreed and approved OH&S plan.

2.8.2 Other Audits and Inspections by The Employer

The Employer reserves the right to conduct other hoc audits and inspections as deemed necessary. This will include site safety walks.

2.8.3 Contractor's Audits and Inspections

The principal contractor is to conduct his own monthly internal audits to verify compliances with his own OH&S management system as well as this specification.

2.8.4 Inspections by OH&S Representatives and other Appointees

OH&S representatives shall conduct weekly inspections of their areas of responsibility and report thereon to their foreman or supervisor whilst other appointees shall conduct inspections and report thereon as specified in their appointments e.g. vehicle and machinery drivers, operators and users must conduct daily inspections before start-up.

2.8.5 Recording and Review of Inspection Results

All the results of the above mentioned inspections shall be in writing at OH&S committee meetings, endorsed by the chairman of the meeting and placed on the OH&S File.

2.9 Accidents and Incident Investigation (General Administrative Regulation 9)

The principal contractor shall be responsible for the investigation of all accidents/incidents where employees and non-employees were injured to the extent that he/she/they had to be referred for medical treatment by a doctor, hospital or clinic. The results of the

investigations shall be entered into an accident/incident register listed in paragraph 2.4.1

The principal contractor shall be responsible for the investigation of all minor and non-injury incidents as described in Section 24 (1) (b) & (c) of the Act and keeping a record of the results of such investigations including the steps taken to prevent similar accidents in future.

2.10 Reporting

The principal contractor shall provide the Employer with copies of all statutory reports required in terms of the Act within 7 days of the incident occurring.

3.0 OPERATIONAL CONTROL

3.1 Operational Procedures

Each construction activity shall be assessed by the principal contractor so as to identify operational procedures that will mitigate against the occurrence of an incident during the execution of each activity. This specification requires the principal contractor:

- to be conversant with Regulations 8 to 29 (inclusive)
- to comply with their provisions
- to include them in his OH&S plan where relevant

3.2 Emergency Procedure

Simultaneous with the identification of operational procedures (per paragraph 3.1 above), the principal contractor shall similarly identify and formulate emergency procedures in the event an incident does occur. The emergency procedures thus identified shall also be included in the principal contractor's OH&S plan.

3.3 Personal & Other Protective Equipment (Section 8/ 15/ 23 of the OH&S Act)

The contractor shall identify the hazards in the workplace and deal with them. He must either remove them or, where impracticable, take steps to protect workers and make it possible for them to work safely and without risk to health under the hazardous conditions.

Personal protective equipment (PPE) should, however, be the last resort and there should always first be an attempt to apply engineering and other solutions to mitigating hazardous situations before the issuing of PPE is considered.

Where it is not possible to create an absolutely safe and healthy workplace the contractor shall inform employees regarding this and issue, free of charge, suitable equipment to protect them from any hazards being present and that allows them to work safely and without risk to health in the hazardous environment.

It is a further requirement that the contractor maintain the said equipment, that he instructs and trains the employees in the use of the equipment and ensures that the prescribed equipment is used by the employee/s.

Employees do not have the right to refuse to use/wear the equipment prescribed by the employer and, if it is impossible for an employee to use or wear prescribed protective equipment through health or any other reason, the employee cannot be allowed to continue working under the hazardous condition/s for which the equipment was prescribed but an alternative solution has to be found that may include relocating or discharging the employee.

The principal contractor shall include in his OH&S plan the PPE he intends issuing to his employees for use during construction and the sanctions he intends to apply in cases of non-conformance by his employees. Conformance to the wearing of PPE shall be discussed at the weekly inspection meetings.

3.4 Other Regulations

Wherever in the Construction Regulations or this specification there is reference to other regulations (e.g. Construction Regulation 22: Electrical and Machinery on Construction Sites) the principal contractor shall be conversant with and shall comply with these regulations.

3.5 Public Health and Safety (Section 9 of the OH&S Act)

The principal contractor shall be responsible for ensuring that non-employees affected by the construction work are aware of the dangers likely to arise from said construction work as well as the precautionary measures to be observed to avoid or minimize those dangers. This includes:

- Non-employees entering the site for whatever reason
- The surrounding community
- Passers by to the site

4.0 PROJECT/S SPECIFIC REQUIREMENTS

4.1 List of Risk Assessments

- Clearing and Grubbing of the areas/site
- Site establishment including:
 - Offices
 - Secure/safe storage for materials and equipment
 - Ablutions
 - Sheltered eating area
 - Maintenance workshop
 - Vehicle access to the site
- Dealing with existing structures
- Location of existing services
- Installation and maintenance of temporary construction electrical supply, lightning and equipment
- Adjacent land uses/surrounding property exposures
- Boundary and access control/public liability exposures (NB: the employer is also responsible for the OH&S of the non-employees affected by his/her work activities)
- Health risks arising from neighbouring as well as own activities and from the environment e.g. threats by dogs, bees, snakes and lightning etc.
- Exposure to noise
- Exposure to vibration
- Protection against dehydration and heat exhaustion
- Protection from wet and cold conditions
- Dealing with HIV/AIDS and other diseases
- Use of portable electrical equipment including
 - Angle grinder
 - Electrical drilling machine
 - Still saw
- Excavation including
 - Ground/soil conditions
 - Trenching
 - Shoring
 - Drainage of trench
- Welding including
 - Arc welding
 - Gas welding
 - Flame cutting
 - Flame cutting
 - Use of LP gas torches and appliances
- Loading and offloading of truck
- Aggregate/sand and other materials delivery
- Manual and mechanical handling
- Lifting and powering operators
- Driving and operation of construction vehicles and mobile plant including.

- Trenching machine
- Use and storage of flammable liquids and other hazardous substances
- Layering and bedding
- Installation of pipes in pipelines
- Backfilling trenches
- Protection against flooding
- Gabion work
- Use of explosive
- Protection from overhead power lines
- As discovered by the principal contractor's hazard identification exercise
- As discovered from any inspection and audits conducted by the client or by the principal contractor or any other contractor on site
- As discovered from any accident/incident investigation

FORM C1.5**SUPPLY CHAIN MANAGEMENT POLICY**

Please refer to O. R. Tambo District Municipality's Procurement Policy.

C2	PRICING DATA
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- C2.1 Pricing Instructions
- C2.2 Bill of Quantities

FORM C2.1 PRICING INSTRUCTIONS

1. Measurement and payment for Bill A (Preliminary & General) & Bill B (Civil Works) shall be in accordance with the relevant provisions of Clause 8 of each of the SANS 1200 Specifications for Civil Engineering Construction referred to in the Scope of Work.
2. Measurement and payment for Bill C (Building Works) & Bill D (Electrical Installation Works) shall be in accordance with the relevant Particular Specifications for building works and electrical installation work respectively.
3. The units of measurement described in the Bill of Quantities are metric units. Abbreviations used in the Bill of Quantities are as follows:

%	=	percent	m ² .pass	=	square metre-pass
h	=	hour	m ³	=	cubic metre
ha	=	hectare	m ³ .km	=	cubic metre-kilometre
kg	=	kilogram	MN	=	meganewton
kl	=	kilolitre	MN.m	=	meganewton-metre
km	=	kilometre	MPa	=	megapascal
km-pass	=	kilometre-pass	No.	=	number
kPa	=	kilopascal	Prov sum	=	Provisional sum
kW	=	kilowatt	P C sum	=	Prime Cost sum
l	=	litre	sum	=	lump sum
m	=	metre	t	=	ton (1 000 kg)
mm	=	millimetre	W/day	=	Work day
m ²	=	square metre			

4. Unless otherwise stated, items are measured net in accordance with the drawings with no allowance for waste.
5. The prices and rates to be inserted in the Bill of Quantities are to be the full inclusive prices for the work described under the items. Such prices and rates shall cover all costs and expenses that may be required in accordance with the provisions of the Scope of Work, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the Contract Data, as well as overhead charges and profit. These prices shall be used as a basis for assessment of payment for additional work that may have to be carried out.
6. It will be assumed that prices included in the Bill of Quantities are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders. (Refer to www.sabs.co.za or www.iso.org for information on standards).
7. Where the Scope of Work requires detailed drawings and designs or other information to be provided, all costs associated therewith are deemed to have been provided for and included in the unit rates and sum amount tendered for such items.
8. An item against which no price is entered will be considered to be covered by the other prices or rates in the Bill of Quantities. A single lump sum will apply should a number of items be grouped together for pricing purposes.
9. The quantities set out in the Bill of Quantities are approximate and do not necessarily represent the actual amount of work to be done. The quantities of work accepted and certified for payment will be used for determining payments due and not the quantities given in the Bills of Quantities.
10. Reasonable compensation will be received where no pay item appears in respect of work required in the Bills of Quantities in terms of the Contract and which is not covered in any other pay item.
11. The short descriptions of the items of payment given in the Bill of Quantities are only for the purposes of identifying the items. More details regarding the extent of the work entailed under each item appear in the Scope of Work.

12. Descriptions in the Bill of Quantities are abbreviated and comply generally with those in the SANS 1200 Standardised Specifications.
13. If there is a discrepancy in description of items between the Bill of Quantities and the Drawings, the Bill of Quantities Description shall be used.

FORM C2.2

BILL OF QUANTITIES

PRELIMINARY & GENERAL

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
						R	c
1		PRELIMINARY AND GENERAL					
	8.3	Scheduled Fixed-Charge and Value-Related Items					
1.1	8.3.1	Contractual Requirements	Sum	1.0			
		Provision for the site facilities:					
1.2	8.3.2.1	a) Facilities for the Engineer	Sum	1.0			
1.3	8.3.2.2	b) Facilities for the Contractor	Sum	1.0			
1.4	8.3.3	General responsibilities and other fixed charge obligations	Sum	1.0			
1.5	8.3.4	Removal of site establishment on completion	Sum	1.0			
1.6		Contract name board, see Std Dwg	No.	2.0			
1.7		Compliance with the OHS Act regulations	Sum	1.0			
1.8		Compliance with the COVID19	Sum	1.0			
1.9		Allowance for Health and Safety Officer	Sum	1.0			
1.1	8.4	SCHEDULED TIME-RELATED ITEMS					
1.1.1	8.4.1	Contractual requirements	Sum	1.0			
	8.4.2	Occupation and maintenance of the site facilities					
1.1.2	8.4.2.1	a) Facilities required by the Engineer	Sum	1.0			
1.1.3	8.4.2.2	b) Facilities required by the Contractor	Sum	1.0			
1.1.4		General responsibilities and other time related obligations	Sum	1.0			
1.1.5		Compliance with the COVID19	Sum	1.0			
1.2		SUMS STATED PROVISIONALLY BY THE ENGINEER					
1.2.1	PSA3	Employment of CLO for the duration of the Contract (R7 500,00 pm plus R500 pm cellphone allowance)	Prov. Sum	1.0	64,000.00	64,000	00
1.2.2		Contractor's mark up on the above	%	64,000.00			
1.2.3		Allow for Civil Engineering trainee (R9 500,00 pm plus R500 pm cellphone allowance)	Prov. Sum	1.0	80,000.00	80,000	00
1.2.4		Contractors mark up on Item 1.2.3 above	%	80,000.00			
1.2.5		Allow for Airtime to the Engineers site Personnel for the duration of the Contract (R 500,00 pm)	Prov. Sum	1.0	3,000.00	3,000	00
1.2.6		Contractor's mark up on Item 1.2.5 above	%	3,000.00			
1.2.7		Allowance for provision of the As-Built Survey for the Project	Prov. Sum	1.0	50,000.00	50,000	00
Total Carried Forward							

C2.2

[illegible]

PIPE TRENCHES

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
						R	c
3	SANS 1200 D & 200 DB	PIPE TRENCHES					
3.1		SITE CLEARANCE					
3.1.1	8.3.1(a)	Clear vegetation and trees of girth up to 1 m	m	2,000.0			
3.1.2	8.3.1(b)	Clear trees of girth over 1 m and up to 2 m	No.	15.0			
3.1.3	8.3.1(c)	Remove topsoil to depth of 150mm over 600mm wide strip.	m ²	1,200.0			
3.2		EXCAVATION					
	8.3.2(a)	Excavate in all materials for trenches backfill, compact, and dispose of surplus/unsuitable material, for pipes: 100 mm diam. for total trench depth:					
3.2.1		Exceeding 0,0 m but not exceeding 1,0 m	m	50.0			
3.2.2		Exceeding 1,0 m but not exceeding 2,0 m	m	1,500.0			
	8.3.2(b)	Extra-over items 3.2.1 to 3.2.2 incl. for (prov):					
3.2.3		Intermediate excavation	m ³	20.0			
3.2.4		Hard rock excavation	m ³	150.0			
3.2.5	8.3.2(c)	Excavate and dispose of unsuitable material from trench bottom (Provisional)	m ³	100.0			
		EXCAVATION. ANCILLARIES Make up deficiency in backfill material (Provisional)					
3.2.6	8.3.3.1(a)	from other necessary excavations on site	m ³	400.0			
3.2.7	8.3.3.1(b)	by importation from designated borrow pits	m ³	400.0			
3.2.8	8.3.3.3	Compaction in road reserves	m ³	100.0			
	8.3.3.4	Overhaul					
3.2.9		Limited overhaul (provisional)	m ³	200.0			
3.2.10		Long overhaul (provisional)	m ³ .km	1,000.0			
	8.3.4(b)	Temporary works: Control water inflow					
3.2.11		Provide equipment	Sum				
3.2.12		Operate and maintain	Days	40.0			
3.2.13		Remove equipment	Sum				
3.3		EXISTING SERVICES					
	8.3.5(a)	Services that intersect a trench					
3.3.1		Cables	No.	5.0			
Total Carried Forward							

PIPE TRENCHES

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
						R	c
Brought Forward							
3.3.2	8.3.5(b)	House water connections	No.	5.0			
3.3.3		Water mains up to 300 mm diam.	No.	5.0			
3.3.4		Stormwater pipes up to 600 mm	No.	5.0			
		Services that adjoin a trench					
3.3.5		Cables	m	20.0			
3.3.6		Water mains up to 300 mm diam.	m	300.0			
3.4	8.3.6	FINISHINGS					
		Reinstate road surfaces					
3.4.1		a) Complete with all courses except surfacing	m²	50.0			
3.4.2		b) Gravel surfaced	m²	30.0			
3.4.3		c) Asphalt ... mm thick on roadway	m²	15.0			
3.5		SANS 1200 LG	SECTION: PIPE JACKING AT ROAD (R61) CROSSING				
	8.2.1	Jacking establishment					
3.5.1		a) Fixed charges	Sum	1.0			
3.5.2		b) Time-related charges for jacking operations	Sum	1.0			
3.5.3	8.2.10	Standing time for pipe jacking gang complete with equipment (where approved)	hours	20.0			
	8.2.6	Supply and install by the pipe jacking method, SC Type, designation 100D concrete sleeve pipes including all excavation of spoil displaced and depositing of spoil at thrust pit top					
3.5.4		a) 375mm dia.	m	20.0			
3.5.5	8.2.7	Extra-over Item 3.5.4 for (a) lengths greater than 85 m	m	5.0			
3.5.6	8.2.8	(b) excavation in rock using pneumatic tools or other techniques, where blasting not permitted	m³	10.0			
Total Carried Forward To Summary							

[illegible]

MEDIUM PRESSURE PIPELINES

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
						R	c
5	SANS 1200 L	MEDIUM PRESSURE PIPELINES					
	8.2.1	Supply, bed, lay, disinfect, join and test potable water pipelines. All works inclusive in the rate, except where specific items are provided. All activities in accordance with project specifications.:					
		HDPE Pipes					
5.1		50mm dia. Class 12,5	m	36.0			
5.2		63mm dia. Class 12,5	m	1,200.0			
5.3		63mm dia. Class 16	m	624.0			
5.1	SANS 1200 L	PIPE FITTINGS AND SPECIALS					
	8.2.2 PSL 8.2.4 PSL 8.2.5	Supplying, Laying and Bedding of Specials complete with Couplings as follows: -					
	8.2.4 PSL 8.2.6	Supply, lay, joint and bed including cutting pipes where required for the following:					
		HDPE Pipe Bends (Class 10)					
5.1.1		50mm dia. x 45° bends.	No.	10.0			
5.1.2		50mm dia. x 90° bends.	No.	10.0			
5.1.3		63mm dia. X 11.25° bends.	No.	10.0			
5.1.4		63mm dia. x 22.5° bends.	No.	10.0			
5.1.5		63mm dia. x 45° bends.	No.	10.0			
5.1.6		63mm dia. x 90° bends.	No.	10.0			
		Flanged Reducers					
5.1.7		63mm HPDe x 50mm HPDe	No.	10.0			
5.2		VALVES					
	8.2.3	Extra-over 5.1.1 to 5.1.6 for the supplying, fixing and Bedding of Valves as indicated below:					
	PSL 3.13.2	Supply and install the following flanged Resilient seal Gate valves, PN 16 with non-rising spindle, Clockwise closing, 10 T-bar extension handle for cap top cast iron gate valve, including all gaskets, bolts, nuts and washers: Rate to include chambers as per the provided standard drawing					
5.2.1		50mm	No.	5.0			
Total Carried Forward							

[illegible]

C2.2

RESERVOIR AND PACKAGE TREATMENT PLANT

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
						R	c
7		RESERVOIR AND PACKAGE TREATMENT PLANT					
7.1		225KL PRESTRESSED STEEL RESERVIOR					
7.1.1	8.2.3 S13A PGY	Supply and install 225kl Galaxy reservoir complete. Rate to include for all excavations, concrete bases, inlet and outlet pipes, overflow pipe, gate valves, ball valve, disinfection, associated chambers, thrust blocks, etc.	Prov. Sum	1.0	650,000.00	650,000	00
7.1.2		Contractor's mark-up on Item 7.1.1 above	%	650,000.00			
7.2		PACKAGE WATER TREATMENT PLANT					
7.2.1		The system will consist of the following four processes: 1) A pre-filtration system to remove the small amount of iron, manganese, and turbidity in the water and to disinfect the water. 2) An activated carbon filter to remove any residual chlorine prior to the softener and RO plant. 3) The reverse osmosis system to remove the dissolved solids (primarily nitrate) from the water. 4) A calcium carbonate bed to re-stabilize the RO water. 12 m refurbished container in which to house the system. 1 x 14 m x 4 m concrete base on which to place the 12 m container. Application for electricity in the treatment plant. 20m perimeter concrete palisade fencing with single gate access, and all related valves, sensors, gauges, interconnecting pipework, lightning protection, and related appurtenances required for the production borehole. Construction of pumphouse and equipping with KSB pump and connection of rising main.	Prov. Sum	1	2,200,000.00	2,200,000	00
7.2.2		Percentage mark-up on Item 7.2.1 (State % and extend as an amount)	%	2,200,000			
7.3		EARTH DAMS WITH RECOVERY PUMP					
7.3.1		Supply and install filter backwash water and softener regeneration water recovery system, brine recovery RO system with 90% efficiency, lining and equipping of the spray dams	Prov Sum	1.0	550,000.00	550,000	00
7.3.2		Percentage mark-up on Item 7.3.1 (State % and extend as an amount)	%	550,000.0			
7.4	SANS 1200 GA	SECTION: CONCRETE PLINTH FOR PACKAGE TREATMENT PLANT					
7.5	8.2	FORMWORK					
7.5.1	8.2.2	Smooth	m ²	36.0			
7.6	8.1.2	REINFORCEMENT					
Total Carried Forward							

[illegible]

PUMP HOUSE (SMALL WORKS):

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
						R	c
8		PUMP HOUSE (SMALL WORKS):					
8.1		Construct pump house complete. Rate to include all excavations, concrete, reinforcement, brickwork, louvres, doors,	Sum	1.0			
		ANCILLARIES & PRECAST ELEMENTS					
8.1.1		Pipeline markers as per detail drawing	No.	50.0			
8.1.2		Valve markers as per detail drawing	No.	50.0			
8.2		PERIMETER FENCING AND GATE					
8.2.1		a) Supply and install standard 20/24 Mpa concrete palisade, 24m high with 600mm posts longer than fence height, concrete footing 450mm x 450mm x 600mm. Rate to also include excavations and ancillaries.	m	100.0			
8.2.2		b) Supply and install 3m long x 1.8m high hot galvanized steel gate.	No.	1.0			
8.3	GA	THRUST BLOCKS					
8.3.1		25 Mpa mass concrete on trust blocks and on areas as may be directed by the Engineer	m ³	20.0			
8.4		MECHANICAL AND ELECTRICAL EQUIPMENT					
		Submission of workshop drawings:					
8.4.1		a) Mechanical pipework drawings	No.	1.0			
8.4.2		b) Electrical MCC layout and single line diagram	No.	1.0			
		Supply and installation of submersible pump set complete with wet end, submersible motor, pump motor and signal cables, to suit the following duty and characteristics:					
8.4.3		a) Nominal duty point @ BEP 1,3l/s @30m	No.	1.0			
		Supply and installation of self-priming pump, 4kw-400v-4pole motor complete with wet end, belt drive, coupling guard, air-release valve and base plate to suit the following duty and characteristics:					
8.4.4		a) Nominal duty point @ BEP 1,3l/s @ 130m	No.	1.0			
		Electrical and Instrumentation (including plant, labour, factory testing and commissioning)					
8.4.5		1) Motor Control Centre (MCC), outdoor, 3CR12 material	No.	1.0			
8.5		ESKOM SUPPLY					
8.5.1		a) 50 Kw	Prov Sum	1.0	100,000.00	100,000	00
Total Carried Forward							

CONTRACT NO.: ORTDM SCMU 01-24/25
Arthur Homes Water Supply

PUMP HOUSE (SMALL WORKS):

SUMMARY OF SECTIONS		
SECTION	DESCRIPTION	AMOUNT (RAND)
1	PRELIMINARY AND GENERAL
2	SECTION: EARTHWORKS (SMALL WORKS)
3	PIPE TRENCHES
4	GABIONS AND PITCHING
5	MEDIUM PRESSURE PIPELINES
6	BEDDING
7	RESERVOIR AND PACKAGE TREATMENT PLANT
8	PUMP HOUSE (SMALL WORKS):
	SUBTOTAL
1	ADD 10% CONTINGENCIES
	SUBTOTAL
2	ADD 15% VAT
Total Carried Forward To Summary Of Schedules	

ARTHUR HOMES WATER SUPPLY SUMMARY OF BILL OF QUANTITIES			
PART	SECTION	DESCRIPTION	AMOUNT R
1	1	PRELIMINARY AND GENERAL	R
2	2	SECTION: EARTHWORKS (SMALL WORKS)	R
3	3	PIPE TRENCHES	R
4	4	GABIONS AND PITCHING	R
5	5	MEDIUM PRESSURE PIPELINES	R
6	6	BEDDING	R
7	7	RESERVOIR AND PACKAGE TREATMENT PLANT	R
8	8	PUMP HOUSE (SMALL WORKS):	R

NETT TOTAL OF TENDER

R.....

ALLOWANCE FOR CONTINGENCIES (10% of Nett Total above) R.....
(to be spent as the Engineer may direct and to be deducted in whole
or in part if not required) (**Note: Do not change %**).

TOTAL INCLUDING CONTINGENCIES

R.....

ALLOWANCE FOR VAT 15%

R.....

GROSS TOTAL CARRIED TO PART C1.1 FORM OF OFFER & ACCEPTANCE

R.....

TIME FOR COMPLETION OF CONTRACT (not to exceed 36 weeks) weeks

Declaration

(In respect of completeness of Tender)

O. R. TAMBO DISTRICT MUNICIPALITY
NELSON MANDELA DRIVE
MYEZO PARK
MTHATHA

I/we, the undersigned, do hereby declare that these are the properly priced Bill of Quantities forming Part C2 of this Contract Document in consecutive order upon which my/our tender for the **CONTRACT: ORTDM SCMU 01-24/25 – ARTHUR HOMES WATER SUPPLY** has been based.

SIGNED BY/ON BEHALF OF TENDERER

<div></div>	<div></div>	<div></div>
NAME	SIGNATURE	DATE
<div></div>		
COMPANY STAMP		

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PART C3: SCOPE OF WORK

All definitions, interpretations and general provisions for the General Conditions of Contract for Construction Work, Third Edition (2015) are applicable.

C 3.1 DESCRIPTIONS OF WORKS

C3.1.1 Client's Objective

The Clients objective is to supply water to the community of Arthur Homes and surrounding areas. The contractor shall use reasonable resources. These resources include local labour, sub-contractors, and plant hire. The specification of the material should be specified by the engineer.

It is a specific goal of this project that the labour component where possible be maximised where it is economically feasible, and that the use of this labour goes hand in hand with on the job training of the labour force. The project is thus process and product orientated, and it is expected that the contractor will pursue these goals in the execution of the project.

C3.1.2 Overview of the Works

The Works entails the construction of a water supply at Arthur Homes of Ingquza Local Municipality within the jurisdiction of the OR Tambo District Municipality. This includes the construction and equipment of pump stations, storage reservoirs, rising and bulk mains, associated reticulation network.

C3.1.3 Extent of the Works

The work to be carried out by the Tenderer under this Contract comprises mainly of the following:

ITEM	TASKS
Civil Works	
<ul style="list-style-type: none">Water Source	Equipping of borehole Installation of package treatment plant Construction of pumphouse Supply and install booster pump
<ul style="list-style-type: none">Water Mains	Excavation of pipeline trenches Construction of approximately 2km of 63mm diameter HDPE pipe Pipe laying, testing and connection Installation of valves and associated manhole chamber
<ul style="list-style-type: none">Reservoirs	Installation of 225kl prestressed steel reservoir complete Supply and installation of all pipework requirements and connection of reservoirs to the water mains

C3.1.4 Construction program

It is specifically brought to the notice of the Contractor that time is critical on this project, and the construction period will

be a major factor in the award of the tender.

C3.1.5 Change in works

The ORTDM may, from time to time by order in writing without in any way vitiating the Contract or giving to the Contractor any claim for additional payment, require the Contractor to proceed with the execution of the works in such order as in his opinion may be necessary, and may alter the order of or suspend any part of the Works at such time and times as he may deem desirable and the Contractor shall not, after receiving such written order, proceed with work ordered to be suspended until he shall receive a written order to do so from the ORTDM. Where the work must of necessity be carried out in conjunction with work of other Contractors, or with that of the Employer, it shall be coordinated and arranged in such a manner as to interfere as little as possible with the progress of such other work so as to offer every reasonable facility to other Contractors or to employees of the Employer.

C3.1.6 Temporary Works

The Contractor will be responsible for all Temporary works necessary to undertake this project. The areas where temporary works are anticipated but not limited to are benching along the pipeline route and stream diversions. All areas where temporary works are undertaken are to be rehabilitated to their natural state on completion of the project.

C3.2 ENGINEERING

C3.2.1 Works Designed By (Per Design Stage)

The Employer is responsible for concept, feasibility, basic engineering, and layout, for the full scope of works (civil and structural) to tender stage of the project.

The design responsibility for the Works is as per Clause 4.2 of SANS 1921-1 and GCC 4.1.1. Where conflict arises, the Contractor shall refer the matter to the Employer's Agent for resolution. The Design Responsibilities are as follows:

Design Process	Design Process
Concept, feasibility, and overall process	Employer Responsible
Basic engineering and detail layout to tender stage for full scope of works	Employer/ Employer's Agent Responsible
Final design to approved for construction stage for civil works, structural works	Employer/ Employer's Agent Responsible
Temporary works	Contractor Responsible
Preparation of as-built drawings	Contractor Responsible

C3.2.2 Contractors Designs

The Contractor will be responsible for the design of all temporary works and all construction methods, all shoring and lateral support that may be required. The Contractor will also be responsible for the preparation of method statements before commencing with construction.

The Contractor is also responsible for the preparation of record drawings.

C3.2.3 Drawings

The work shall be carried out in accordance with the latest available revision of the drawings to be issued by the Employers Agent for construction. At commencement of contract, the Employers Agent shall deliver to the Contractor three sets copies of the construction drawings and any instructions required for the commencement of the works.

From time to time thereafter during the progress of the works, the Employers Agent may issue further drawings or revisions for construction purposes as may be necessary for adequate construction and completion of the works and defects correction.

The Contractor will be required to mark up one complete set of prints of the construction drawings with as-built information and submit these to the Employer's Agent at the end of construction, prior to issue of the Certificate of Practical Completion.

C3.3 PROCUREMENT

C3.3.1 Evaluation of Tender Offers

Tenders will be evaluated using Method 2: Financial Offer and Special Goals, where 80 points are awarded for the Financial Offer and 20 points are awarded for Special Goals claimed.

C3.3.2 Community Liaison Officer

The project Steering Committee will direct where labour must be drawn from as a priority before drawing labour under their guidance from a wider area.

To assist in the appropriate communication etc., the contractor shall employ two Community Liaison Officers (CLO's). The CLO's will be posts appointed by the O. R. Tambo District Municipality. The CLO's may also be utilized on other duties by the contractor.

The employment information shall be reported monthly in an appropriate electronic format and shall be a requirement for the progress payment certificate to be processed.

Terms of Reference of the CLO

The Community Liaison Officer (CLO) will be responsible to the Project Steering Committee (PSC) and the appointed contractor. The selection and appointments of the CLO will be done by Employer. The CLO should be the person with a good standing and respect in the local community and would be selected according to the set criteria by the interviewing panel consisting of Local and District Municipality, ISD Consultant, PSC, Ward Councillor and selected local leadership.

The CLO is appointed for the period of physical construction, plus a period of 14 days prior to this period. The period will include times where small team works are busy in the area. The period will end when no further work is required.

The contractor will provide office space and stationery for the CLO to carry out his/her duties. Remuneration for the CLO will be R 5500 wages plus R 500 cellphone allowance per month for the period of employment. Allowance for this will be deemed to have been made in the tendered rates.

The CLO will liaise with the following people in performing these activities: -

Contractor:

- Organize and assist the contractor in explaining to all workers the labour-based construction model.
- Ensure labourers understand their task and the principles behind task work.
- Ensure labourers are informed of their condition of temporal employment.
- Attend all weekly meetings and briefing for work procedures.
- Keep written record of interviews and community liaison which should be summarized and included in the monthly progress reports.
- Collect monthly welfare reports and submit to social facilitators.
- Ensure that contractor's workers are paid what is due to them and in time.
- Assist in the recruitment of labour
- Promote and maintain sound relations with community stakeholders and other role players.
- Screen the supplied labour by the community through Sub-Project Steering Committees to ensure compliance with the agreed upon recruitment policy and the government's labour employment targets.
- Inform local labour about their conditions of temporary employment, to ensure their timeous availability and inform them timeously when they would be relieved, where the rotation of labour is applicable.
- Keep the labour register of labour and manage records of project local labourers and be able to provide reports on employment statistics.
- Consult on all decisions regarding local problems and any matters of importance that, in any way will be of relevance to the Contract.
- To be on site on a daily basis.
- To register concerns/perceptions and raise them in the Sub-PSC meetings.
- Attend site and Sub-PSC meetings to present bi-monthly report on the local community labour involvement and site matters.
- Identify possible labour dispute and any disciplinary matter and advise the site agent/foreman and assist in the resolution, where necessary must call for the assistance of the Social Consultant for the resolution of the conflicts.
- Assist the contractor in preparing records of project employees. Assist the contractor in making task measurements and the records thereof.

-
- Monitor the production of individual task workers and arrange replacement of those workers who fail to produce a reasonable task output.
 - Attend disciplinary proceedings to ensure that hearings are fair and reasonable.
 - Communicate daily with the contractor to determine additional labour requirements with regard to numbers and skills and pass this to the Sub-PSC.
 - Attend weekly meetings with the contractor and make a written report, as required by the contractor which shall be a prerequisite to being paid.

Social Facilitators:

- Assist in convening of workshops.
- Disseminate information to PSC members.
- Articulate implementing agency policies to PSC members.
- Communicate labour requirements.
- Attend induction training programmes for workers and induct labourers.
- Submit monthly welfare reports to the social facilitators PSC.
- Communicate labour and skills requirements to the PSC.
- Assist in the recruitment and engagement of work force.
- Verify labour records and ensure all engaged qualify as per the Contract requirements.
- Investigate and report all labour dispute matters to the PSC, advise site agent on resolution.

C3.3.3 Conditions of Employment/Remuneration of Local Labour

The net workers daily wages/worker task rate is ***As per Government Gazette***. Allowance for this will be deemed to have been made in the tendered rates.

C3.4 CONSTRUCTION

C3.4.1 Works Specification

PORTION A

APPLICABLE SANS STANDARDS

The latest edition as at date of tender of the following Standardized Specifications for Civil Engineering Construction as published by the South African Bureau of Standards shall apply.

1200	
1200 A	- General
1200 AB	- Engineer's Office
1200 C	- Site Clearance
1200 D	- Earthworks
1200 DA	- Earthworks (Small Works)
1200 DB	- Earthworks (Pipe Trenches)
1200 DK	- Gabions and Pitching
1200 G	- Concrete
1200 GA	- Concrete (Small Works)
1200 L	- Medium Pressure Pipelines
1200 LB	- Bedding (Pipes)

Variations and additions to the following SANS 1200 Standardized Specifications are given in Portion 2 of the Project Specifications.

1200 A	- General
1200 AB	- Engineer's Office
1200 C	- Site Clearance
1200 D	- Earthworks
1200 DA	- Earthworks (Small Works)
1200 DB	- Earthworks (Pipe Trenches)
1200 DK	- Gabions and Pitching
1200 G	- Concrete
1200 GA	- Concrete (Small Works)
1200 L	- Medium Pressure Pipelines
1200 LB	- Bedding (Pipes)

PORTION B

In addition, the following Particular Specifications that are bound into this document shall apply:

PA	- Environmental Specification
PB	- Labour Intensive Methods
PC	- Building Works

C3.4.2 Existing Services

C3.4.2.1 Known Services

Other than all above ground services, including manholes etc, which are designated as known services, there are no other known services to exist.

C3.4.2.2 Interruption of Local Activities

Where construction, or associated activities, are to interrupt any of the local activities, e.g. breaking through stock fences, trenching through lands, interrupting treatment process, etc., the Contractor is to notify the responsible authority and the Employers Agent at least 14 days before the occurrence of such an event and are to abide by any conditions prescribed by such an authority or the Employers Agent.

C3.4.2.3 Protection of Existing Works

The Contractor shall take all the necessary steps to ascertain the location of existing services before commencing any section of the Works and shall exercise the greatest care when working in the vicinity of such services. No more than three weeks and no less than one week before commencing his operations in any particular area, the Contractor shall request from the Employers Agent the latest available drawings showing the location of services already installed.

The Contractor shall take all necessary steps to protect any existing works whatsoever against damage which may arise as a result of his operations on Site. The Contractor shall bear the cost of location; protection and repair of damage to any service, the possible existence of which could reasonable have been ascertained by him in good time.

Where the Contractor is responsible for the cost of repairs carried out by a Service Authority, the Contractor will be billed directly by the Service Authority concerned.

C3.4.2.4 Access to Properties

The Contractor shall organize the work in such a manner as to cause the least possible inconvenience to the public and to the property owners adjacent to or affected by the work included in the Contract.

C3.4.3 Courtesy

In all dealings with the public the Contractor shall bear in mind their right to enjoy the use of the roads and services and access to their properties and that the Employer desires to interfere as little as possible with these rights.

At all points of contact with the public the Contractor and his staff are requested to handle discussions and disputes with deliberate courtesy and understanding. To assist the Contractor in his dealings with the public, use should be made by him of the Community Liaison Officers (CLO's) on site. On occasions where the Contractor liaises directly with the public, the CLO should be informed of the outcome to be able to maintain a coherent picture of developments in the area.

C3.4.4 Drawings and Specifications to be Provided

As provided for in the General Conditions of Contract, the Contractor shall be entitled to receive free of charge, the following:

- a) Three (3) paper copies of each drawing; and
- b) Two (2) copies of the signed Contract Document.

C3.4.5 Certificates of Payment

The statement to be submitted by the Contractor in terms of the General Conditions of Contract shall be prepared in accordance with the standard payment certificate prescribed by the Employers Agent and shall consist of at least three sets of A4-size copies or electronic as agreed.

All costs resulting from the preparation and submission of the statements shall be borne by the Contractor. See also PS3.9.

C3.4.6 Construction in Limited Areas

In certain cases, working space may be limited. The method of construction in these restricted areas will depend largely on the Contractor's plant and methods. However, the Contractor must note that measurement and payment will be according to the specified cross-sections and dimensions irrespective of the method used to achieve these cross-sections and dimensions, and that the rates and prices tendered shall be deemed to include full compensation for any difficulty encountered while working in limited areas and narrow widths, and that no extra payment will be made, nor will any claim for payment due to these difficulties be considered.

C3.4.7 Extension of Time Arising from Abnormal Rainfall

Extension of time in terms of clause 5.12 of the general conditions of contract in respect of abnormal rainfall shall be determined in terms of method (i) below. The extension is not automatic and a claim in accordance with clause 10.1 needs to be submitted.

The extension of time that will be considered for a given calendar month shall not exceed the number of calendar days in that month less the average number of days in that month on which a rainfall of Y mm or more per day has been recorded, as derived from existing rainfall records.

Method (i) (Rainfall formula)

The formula below shall be used to calculate separately the delay for each calendar month of part thereof. It shall be calculated each month during the period referred to in the general conditions of contract as the time for completion of the works (including any extension thereof that may be been granted), or until the issue date of the certificate of practical completion, whichever is the shorter period. The delay calculated for a given month shall be used to determine the interim extension of time granted for that month. At the end of the applicable period referred to above, the aggregate of the monthly delays will be taken into account for the final determination of the total extension of time for the contract:

$$V = (Nw - Nn) + \left\{ \frac{(Rw - Rn)}{X} \right\}$$

If any value of V is negative and its absolute value exceeds Nn, the V shall be taken as equal to minus Nn.

The delay for a part of a month shall be calculated by submitting pro rata values for the variables in the equation.

The symbols shall have the following meanings:

V	=	Delay due to rain 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 Y mm or more per day has been recorded.
Rw	=	Actual rainfall in mm for the calendar month under consideration.
Nn	=	Average number of days in the relevant calendar month (as derived from existing rainfall records provided in the project specifications) on which a rainfall of Y mm or more per day has been recorded.
Rn	=	Average rainfall in mm for the calendar month, as derived from the rainfall records supplied in the project specifications.
X	=	20, unless otherwise provided in the project specifications.
Y	=	10, unless otherwise provided in the project specifications.

The total delay that will be taken into account for the determination of the total extension of time for the contract shall be the algebraic sum of the monthly totals for the period under consideration. But if the grand total is negative, the time for completion shall not be reduced on account of abnormal rainfall. The total extension of time for any calendar month shall not exceed (Nc = Nn) calendar days, where Nc = number of calendar days in the month under consideration.

The factor (Nw - Nn) shall be considered to represent a fair allowance for variations from the average number of days during which rainfall equals or exceeds Y mm per day.

The factor (Rw - Rn) ÷ X shall be considered to represent a fair allowance for variations from the average for the number of days during which rainfall does not equal or exceed Y mm per day, but when wet conditions prevent or disrupt work.

This formula does not take into account any flood damage, which could cause further or concurrent delays and which should be treated separately in so far as extension of time is concerned.

Accurate rain gaugings shall be taken at a suitable point on the site daily at 08:00 unless otherwise agreed to by the engineer, and the contractor shall, at his own expense, take all necessary precautions to ensure that the rain gauges cannot be interfered with by unauthorised persons.

Information regarding existing rainfall records, if available from a suitable rainfall station near the site, will be supplied in the project specifications, together with calculations of rain delays for previous years in accordance with the above formula. The average of these delays will be regarded as normal rain delays which the contractor shall accommodate in his programme, and for which no extension of time will be considered.

Rainfall data for the project is:

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Nn (Days)	9.3	6.0	7.4	4.9	3.6	1.3	1.6	3.0	4.8	6.9	7.7	10.3

Rn (mm)	112.2	100.5	111.8	52.5	36.4	65.7	53.5	27.4	68.4	54.2	129.0	101.7
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The method for calculation of extension of time resulting from abnormal rainfall is as detailed in Volume 1 – Part C1.2: Contract Data – Contract Specific Data – Clause 5.12.2.2.

C3.4.8 Excavation and Backfill

Owing to labour intensive methods the excavation and backfill of trenches are scheduled separately as per PSD – Labour Intensive Methods and the excavation methods are varied for trench excavation.

C3.4.9 Accommodation of Traffic

The Contractor shall ensure the safe and expeditious passage of traffic at all times and shall provide all necessary temporary road traffic signs, barricades, flagmen, etc. to safeguard the traveling public. Any detours or by-passes constructed by the Contractor shall be adequately signposted, as per the South African Road Traffic Signs Manual, and maintained to provide safe and easy passage of traffic.

C3.4.10 Access Road

Access roads required by the Contractor for construction purposes are not scheduled separately and the Tenderer must make provision for these roads under other scheduled rates and items.

C3.4.11 Site Facilities Available

C3.4.11.1 Water Supply

The contractor will have to make his own arrangements for the provision of potable water for human consumption and other uses, as well as water for construction purposes. The Contractor will enter into a consumer agreement with the local municipality, should they obtain water from them.

C3.4.11.2 Sewage Disposal

The Contractor shall make his own arrangements for the provision of chemical toilets and other sanitary and water disposal facilities for his or his Subcontractor's staff.

C3.4.11.3 Power Supply

The contractor will have to make his own arrangement for a temporary power supply to his camp, if so required, with Eskom.

C3.4.11.4 Camp Sites

The Contractor will have to make his own means for the establishment of a camp site.

C3.4.11.5 Telephone Facilities

The contractor will have to make his own arrangements with the relevant authority.

C3.4.11.6 Rain Facilities

Rail facilities are available at Pietermaritzburg, Durban and Port Shepstone.

C3.4.11.7 Housing

No housing is available for the Contractors' employees, and the Contractor shall make his own arrangements to house his permanent employees and to transport them to the site of the Works.

C3.4.11.8 Crushed Stone

Crushed stone for concrete will have to be obtained from a commercial quarry operating from Kokstad or similar.

C3.4.11.9 Sand for Concrete

Must be obtained from commercial sources.

C3.4.12 Site Facilities Required

C3.4.12.1 Engineer's Office

Offices are required as per specification.

C3.4.12.2 Engineer's Laboratory

None required as the Engineer will use a commercial laboratory for check testing to be reimbursed through the Contract. The Engineer will be given access to all test results from the Contractor's laboratory.

C3.4.12.3 Engineer's Survey Equipment

A complete set of survey equipment is required as is specified.

C3.4.12.4 Contractor's Laboratory Required

None required as the Contractor may use a commercial laboratory for check testing at their cost.

C3.4.13 Permits and Wayleaves

- a) Consents of the PSJ Local Municipality to be obtained.
- b) Application will be made with Eskom for power supply for the plant.
- c) An environmental authorization for the project to be pursued by the Employers Agent.

C3.5 MANAGEMENT

C3.5.1 Programming

The Contractor shall submit to the Engineer a detailed construction program within 14 days of the written instruction to commence work. The program shall be prepared on the basis that the works will be completed over a period not exceeding 30 weeks. The program shall be supported by a bar chart and or critical path network and shall also reflect the projected cash flows.

The Contract period shall include all Saturdays, Sundays, non-working days (public holidays), special non-working days, as well as an allowance for anticipated inclement weather (as per Clause 5.12.2.2: Extension of Time) during normal working hours.

Should the Contractor wish to work outside normal working hours (as defined in the Contract Data) for any reason, he shall first seek permission to do so from the Employer's Agent. Attending to emergency situations or making-safe the Works are exempt from requiring prior approval, but notification shall still be sent to the Employer's Agent.

The program shall be agreed between the Employer and the Contractor prior to the implementation of the construction works.

The Contractor shall review his progress each month and should progress lag behind the latest accepted program, by more than 2 weeks, he shall submit a revised program and method statement of how he proposes to make up the lost time. If, in the opinion of the Employer's Agent, such revised program will not make up the lost time, the Employer's Agent shall have the right to request the Contractor to reorganize his work in a manner which will ensure an acceptable program. Claims for additional payment to meet any costs incurred due to such reorganization will not be accepted.

If during the contract, the execution of the work deviates in any manner from the program, the Contractor shall, on instruction by the Employer's Agent, within one week of such instruction submit a revised program.

Hard copy and electronic program updates in MS Project shall be submitted 3 days prior to the monthly site meeting.

The program shall distinguish between the various work packages.

Each work package will show the various main activities

C3.5.2 Sequence of the Works

A preliminary programme is required for submission during the tender stage. This will, amongst others, give a sequence of the Works as envisaged by the tenderer.

C3.5.3 Method Statements

Attention is drawn to the method statements required in terms of the Environmental Management Plan.

Other method statements may be required.

C3.5.4 Site Records

Site records will be required. The nature and extent will be agreed with the Engineer.

C3.5.5 Quality Control Plan

The Contractor will be required to submit a Quality Control Plan and Procedures for approval by the Employer or his agent.

The Employer or his agent will carry out inspections from time to time on all items fabricated off-site.

To avoid delays the Contractor shall give the Engineer/Employer prompt notice of such inspections. Such notice shall not be less than 48 hours.

Approval by the Employer at any stage of fabrication is merely an authorization for the Contractor to proceed with the next stage of fabrication/installation and does not in any way relieve the Contractor of his contractual responsibilities.

The Engineer/Clients representative shall inspect production of materials in off-site factories and appropriate access shall be arranged by the Contractor.

C3.5.6 Resident Engineer

The Engineer will appoint a Resident Engineer to monitor site activities, quality control and progress of construction works. A provisional sum allowance is included in the Preliminary and General section of the Schedule of Quantities for the payment of the Resident Engineer by the Contractor, upon issuing of a monthly invoice by the Resident Engineer.

C3.5.7 Occupational Health and Safety Act 1993 (OHSA)

The client will appoint an Agent to perform the client's duties in respect of the regulations and payment to be facilitated through the contract. A provisional sum allowance is included in the Preliminary and General section of the Schedule of Quantities for the payment of the client's agent. Agent shall be facilitated by the Contractor, under a monthly statement from the Agent.

The tenderer shall refer to the particular specification – Health and Safety.

The tenderer must allow, in the item provided under preliminary and general, for all costs relating to health in specification not covered in any of the rates tendered in the schedule of quantities.

C3.5.8 Environmental Specifications

The client will appoint an Environmental Control Officer (ECO) to monitor compliance of construction with issued Environmental Management Plan. This is not to be confused with the Contractor's own Environmental Officer. A provisional sum allowance is included in the Preliminary and General section of the Schedule of Quantities for the payment of the ECO by the Contractor, upon issuing of a monthly invoice by the ECO.

The environmental specifications are contained in a particular specification.

The tenderer must allow, in the item provided under preliminary and general, for all costs relating to environmental compliance in specification not covered in any of the rates tendered in the schedule of quantities.

PORTION 2A: VARIATIONS TO THE STANDARDISED SPECIFICATIONS

PSA GENERAL

PSA 1 SCOPE

Replace Sub-clause 1.1 with the following:

“1.1 This specification covers requirements, principles and responsibilities of a general nature which are normally applicable to all civil engineering contracts as well as the requirements for the Contractor’s establishment on Site.”

PSA 2 INTERPRETATIONS

PSA 2.3 Definitions

General: -

Add the following definitions:

“General Conditions: The General Conditions of Contract specified for use with this Contract and the Special Conditions of Contract are applicable.”

“Specified: As specified in the Standardized Specifications, the Drawings, or the Project Specifications. Specifications shall have the corresponding meaning as provided for in applicable sub-clauses or the General Conditions of Contract.”

The term “Engineer” shall be replaced by “Employer’s Agent.”

The Employer’s Agent shall be S Zoko Consulting CC.

GCC: General Conditions of Contract (2015)

The terms “plant” and “construction equipment” shall be defined as contained in the GCC:2015. Hence, the term “plant” as contained in the SANS 1200 suite is replaced by “construction equipment”.

PSA 3 MATERIALS

PSA 3.1 Quality

Add the following: -

“All manufactured materials supplied shall be new materials unless the contrary is specified. All materials specified in accordance with SANS Specifications shall bear the SANS mark, “or as specified herein.”

“No used or recycled material may be used in the Works unless expressly authorized by the Employer’s Agent.

Samples of concrete aggregates and pipe bedding material are to be delivered to an approved laboratory.

The Contractor shall submit in good time, before any construction commences, to the Employer’s Agent on site, samples of all materials intended to be incorporated into the works. The samples shall be accompanied by results of tests undertaken by an approved independent laboratory on the samples in question on behalf of the Contractor and at his cost, before consideration by the Employer’s Agent

The Employer’s Agent, during construction, will take independent samples from stockpiles of proposed construction materials on site and from the completed works. Approval will not be granted for samples delivered by the Contractor directly to the Employer’s Agent’s office. The Contractor shall be responsible for the cost of all failures on test samples and control testing.

Every precaution shall be taken to keep cement dry and prevent access of moisture to it from the time it leaves the place of manufacture until it is required for use on the Site. Cement is to be used on a first in/first out basis. Bags of cement which show any degree of hydration and setting shall be removed from the site of the Works and replaced at the Contractor’s own expense. Any cement older than six weeks is to be removed from site.

Irrespective of any approval granted by the Employer’s Agent or the Employer, the Contractor shall be deemed responsible for quality of all materials used for construction and their specified performance.”

Add the following Sub-Clause:

PSA 3.3 Ordering of Materials

The quantities set out in the Schedule of Quantities have been determined from calculations based on data available at the time and should therefore be considered to be only approximate quantities. The liability shall rest entirely and solely with the Contractor to determine, before ordering, the required types and quantities of the various materials required for the completion of the Works in accordance with the Specifications and the Drawings issued to the Contractor for Construction purposes.

Any reliance placed by the Contractor on the estimated quantities stated in the Schedule of Quantities issued for tendering purposes, or measurements made by the Contractor from the drawings issued for tendering purposes, shall be entirely at the Contractor's risk and the Employer accepts no liability whatsoever in respect of materials ordered by the Contractor on the basis of Tender Documents."

PSA 4 PLANT

PSA 4.2 Contractor's offices, Stores and Services

Add the following before the first paragraph:-

"The Contractor's construction camp shall be fenced off and shall contain all offices, stores, workshops, testing laboratories, toilet facilities, etc. The camp shall always be kept in a neat and tidy condition.

No personnel will be allowed to reside on the Site. The Contractor shall be responsible for the security of his construction camp and of the construction site, at his own cost. Only night-watchman may be on the Site after hours."

The camp site shall be rehabilitated in accordance with the EMP.

PSA 5 CONSTRUCTION

Add the following:

PSA 5.9 Monthly Certificate Forms

The Contractor shall be responsible for submitting the interim monthly statement to the Engineer in an approved format for the duration of the Contract. Such statements shall be printed in an approved format on acceptable quality A4 size sheets and submitted electronically.

PSA 5.10 Record Drawing Information

As the Works are progressing, the Contractor shall mark on a special set of drawings, all as-built details and submit them to the Engineer's Representative for approval on a monthly basis. No extra payment shall be made for preparation of these as-built plans.

The Certificate of Completion shall only be issued once all the as-built information has been received and verified by the Engineer.

PSA 7 TESTING

PSA 7.1 Principles

Add the following to this clause:

Every completed layer of fill shall be subject to check testing by the Contractor. Once the Contractor is satisfied with the standard of the constructed layer, the Engineer will be requested to perform acceptance testing for the particular section. When giving notice, the Contractor shall provide the Engineer with the results of the check testing indicating that the work is to specification. The Engineer shall be given 48 hours noticed of when testing or inspections are required.

The Engineer may from time to time carry out his own check tests on the work performed by the Contractor. Should such check tests show that the Contractor's control testing is such that the quality of the Contractor's work could be called into question, then the Engineer may order further check tests to be carried out on work already completed. All costs associated with such check

tests shall be for the Contractor's account, as also the costs of any other check test whose results do not comply with the specification.

Failure by the Contractor to notify the Engineer or to provide the required information or, where specified, to perform the required test, will be grounds to exempt the Employer from payment for the associated work and for all subsequent work which would be affected by the failure of the Work to be tested.

Nothing contained in this clause will relieve the Contractor of any responsibilities under the specification or in any way limit the tests, which the Engineer may call for or perform in terms of the specification.

Where the Engineer is called to witness certain control tests, and the results of such tests do not comply with the specifications, then the Client reserves the right to recover costs for the Engineer's attendance at the unsuccessful test by the Contractor.

PSA 7.1.1 Checking

Amend this Sub-Clause as follows:

"The Contractor shall carry out sufficient checks to satisfy himself that the materials used and the workmanship (i.e., the quality of construction, adherence to tolerances and, when applicable, the strength attained) comply consistently with the specified requirements and the results of those checks shall, if so ordered, be made available to the Engineer.

Nothing contained in this Sub-Clause will relieve the Contractor of his responsibilities under the Contract or in any way limit the inspections and/or tests that the Engineer may call for or perform in terms of the Specification.

The Contractor shall make due allowance for testing procedures in his construction programme.

PSA 7.2 Approved Laboratories

Add the following to this clause:

Acceptance testing shall be done by a laboratory selected by the Engineer. The Engineer requires twenty-four hours' notice from the Contractor in order to perform the relevant acceptance test.

The Contractor shall make due allowance for testing procedures in the construction programme.

The procedure for payment of the Engineer's acceptance testing will be as follows:

PSA 8 MEASUREMENT AND PAYMENT

PSA 8.2.2 Time-related Items

Reword the third and fourth lines to read:

"incremental amounts (calculated by the division of the remainder of the tendered sum by the number of remaining months of the duration of construction as assessed by the Engineer) will be"

PSA 8.3.2.1 Facilities for the Engineer

Delete the following from this Clause:

b) Telephone

Add the following to this Clause:

b) Meeting room

d) Covered Parking Bays (2 No.)

e) All other specified facilities (including Wi-Fi internet connection, printer, laptop, photocopier and camera)

PSA 8.3.2.2 Facilities for the Contractor

Add the following to this Clause:

"The Tendered rate shall cover the site establishment for all temporary facilities required to undertake the work, as per PSA 4.2. The cost Security to the site will be deemed as inclusive in the rates, and will not be measured separately."

PSA 8.3.4 Removal of Site Establishment

Add the following to this Clause:

"The Tendered rate shall cover the cost of site removal of all temporary facilities required to undertake the work, as per PSA 4.2."

PSA 8.4.1 Contractual Requirements

Add the following to this clause:

The Contractor shall tender rates in the Schedule of Quantities to cover his time-related establishment costs. The amount tendered and paid shall be full compensation to the Contractor for:

- i) The maintenance of his whole organization as established for this Contract.
- ii) The maintenance of all insurances, indemnities and guarantees required in terms of the Conditions of Contract or Tender where applicable.
- iii) Compliance with all general conditions and requirements which are not specifically measured elsewhere for payment in these Contract Documents.

Payment of the lump sum shall be made monthly in compliance with the method laid down in Sub-clause 8.2.2 of SANS 1200:A.

The Contractor will not be paid Time-Related Preliminary and General Charges for any Special Non-Working Days, which shall be deemed to have been allowed for in his rates.

PSA 8.4.2.1 Facilities for the Engineer

Delete the following from this Clause:

- b) Telephone

Add the following to this Clause:

- b) Meeting room
- e) Survey equipment
- f) Covered Parking Bays (2 No.)
- g) Air time and data for cell phones for site staff at R1000 per month for each cell phone
- h) All other specified facilities (including access to WIFI internet connection and photocopier)
- i) Laptops, printers, and cameras (a separate Provisional Sum item is included for the purchase of these items)

PSA 8.4.2.2 Facilities for the Contractor

Add the following to this clause:

Facilities for the Contractor shall include all the costs of providing water for construction other than the water required for water tightness testing of water retaining structures. Water for such tests will be measured according to PSG 8.15 Water tightness test.

The Contractor shall apply to the relevant Water Service Provider for a water connection. All costs attached thereto shall be to the Contractor's account.

PSA 8.5 Sums stated provisionally by Engineer

Replace the second last sentence of Sub-clause 8.5 to read:

"The percentage rate for (b) (2) above shall cover the Contractor's overheads, charges and profit on the work covered by the sums provisionally stated for (b)(1) above. Payment will be made on the basis of the sums actually paid for such work, exclusive of VAT."

PSA 8.6 Prime Cost Items

Replace the second last sentence of Sub-clause 8.6 to read:

"The percentage rate for (b) shall cover the Contractor's overheads, charges for taking delivery and profit on the supply of materials or goods covered by the sums stated in (a) above. Payment will be made on the basis of the sums actually paid for such materials or goods, exclusive of VAT."

PSA 8.7 Daywork

Add the following to this clause:

The rates submitted by the Tenderer in the relevant schedule of the Contract shall be applicable.

If a work item exists in the main tender the Engineer may decide to use it instead of resorting to Dayworks.

Provisional items for Daywork are scheduled as follows:

- a) Labour at hourly rates for skilled, semi-skilled and unskilled labourers.
- b) Material as a Provisional Sum and an additional percentage allowance on the net cost which is deemed to cover the Contractor's own overhead costs and profit.
- c) The Contractor's own plant as a Provisional Sum and an additional percentage allowance on the net cost which is deemed to cover the Contractor's own overhead costs and profit.

Tendered unit rates or unit rates that are agreed in terms of Sub-clause 6.5.1.3 of the General Conditions of Contract for the Contractor's own plant used for Daywork shall cover the full cost of the use of such plant and shall, in addition, cover the cost of plant operators, consumable stores, fuel and maintenance.

The Contractor will be paid the actual net cost of plant hired by him for Daywork and in addition will be paid the tendered percentage allowance on the net cost of such hire, which allowance will be deemed to cover the Contractor's own overhead costs and profit.

PSA 8.8 Temporary Works

Add the following to this clause:

No separate payment will be made for the cost of constructing and maintaining the temporary access roads, the removal of the roads and the reinstatement of the areas, on completion. The sums tendered in items 1.1.17 and 1.1.20 of the Schedule of Quantities shall include all such costs.

Add the following clauses:

PSA 8.9	Survey
Control and Setting out of Works	Unit: sum

Before commencement of work, the Contractor is to liaise with the Employer's Agent to establish exactly the status of all survey pegs. If any pegs are missing, he shall immediately inform the Employer's Agent in writing.

On completion of the Contract the pegs that have been unavoidably disturbed will be replaced by the Employer. Pegs which have, in the opinion of the Employer's Agent, been disturbed due to the negligence of the Contractor will be replaced by a registered Land Surveyor at the Contractor's cost.

PSA 8.8.2 Accommodation of Traffic

No separate item shall be allowed for in the Schedule of Quantities for the accommodation of the contractor's traffic. The Contractor's movement of construction activities is mainly between the site camp and the construction site which does not cross any municipal roads. In the event that the Contractor need to cross any municipal roads, he will ensure that he takes all necessary precautions for safety which will be deemed included in his rates.

Add the following clauses:

PSA 8.11 Miscellaneous items

An item which, is included in the payment clause column of the Schedule of Quantities, referring to this clause will be measured under the unit scheduled.

The sum or rate for such item shall cover the cost of all materials, labour and plant required to execute and complete the work as specified, described in the Schedule of Quantities or shown on the drawing(s).

PSA 8.12 Compliance with the OHS Act and Regulations

The tendered sums shall include full compensation to the Contractor for compliance with all the requirements of the Occupational Health and Safety Act, 1993, and the latest Construction Regulations, the Client's Health and Safety requirements. The Health and Safety Officer/s, accommodation, transport, communication implements, consultations, meetings and any other thing necessary for the completion of the aspect, at all times for the full duration of the Contract. The successful tenderer shall provide the Engineer with a complete breakdown of the tendered sums.

The time related sums will be paid to the Contractor, in equal monthly amounts, subject to proper compliance as accepted by the Engineer.

PSA 8.13 Compliance with the Environmental Management Plan and all relevant Environmental Authorisation Requirements

The tendered sums shall include full compensation to the Contractor for compliance with all the requirements of the Environmental Management Plan and all relevant Environmental Authorisation Requirements), for the full duration of the Contract. The successful tenderer shall provide the Engineer with a complete breakdown of the tendered sums.

The time related sums will be paid to the Contractor, in equal monthly amounts, subject to proper compliance as accepted by the Engineer.

PSA 8.14 Community Liaison Officer (CLO)

A provisional sum is included to allow for the salary of a person working full time as the Community Liaison Officer for the duration of the construction on this Contract. The Contractor shall ensure that the salary and other paid expenses to which the Community Liaison Officer is entitled are paid timeously in accordance with the payment dates of his own staff. For details of the duties of the CLO refer to PS 4.

A separate item for overheads, charges and profit on the above item is applicable.

PSAB ENGINEER'S OFFICE

PSAB 3 MATERIALS

PSAB 3.1 Nameboards

Replace the contents with the following: -

"The Contractor shall supply and erect, at approved site, one nameboards that shall comply as regards size, painting, decorating and detail, with the issued Nameboard drawing."

PSAB 3.2 Office Building

Two offices are required for the sole use of the Engineer's Representative(s) as per Clause 3.2 of SANS 1200 AB and shall be provided with a 1kW heater and an Air conditioner. A toilet shall be supplied as per SANS 1200 AB for the sole use of the Engineer's staff. Two carports with IBR roof and shade cloth sides are required.

An additional office to be used for meetings by the Employer, Contractor(s) and the Engineer is required to specification PS8.1, 4.5m x 10m and fitted with a conference table and 20 chairs and a 1,5m x 2m serving table.

Add the following:

PSAB 3.3 Engineer's Equipment

The contractor shall provide the following equipment on the site from the commencement to the completion of the works; for the exclusive use of the Engineer's Representative: -

- a) 1 Engineer's levels and level staffs
- b) 2 Tape of length 50m
- c) 1 Measuring Wheel
- d) 1 Compact extension ladder (5 meters)
- e) 1 Site Notebook to specification:
 - 15.6" display
 - Intel Pentium Dual Core Processor 2.0 GHz
 - 2MB RAM
 - 500 GB HDD
 - DVD writer
 - Carry Case
 - 1 Year Warranty
 - Software:
 - Windows operating system Windows 7
 - Microsoft Office Standard 2007
 - Adobe Acrobat (latest edition)
 - PDF Writer Software
 - Antivirus Software
- f) 1 A4 printers
- g) 1 Microsoft Projects
- h) 1 Microsoft PowerPoint
- i) 1 Multimedia projector and screen
- j) 1 Fax/copy/scan machine (Average 20k pages per month)
- k) 1 Digital camera
- l) 1 E-mail modems including data contract package of 1GB per month (4G)
- m) 1 UPS machines
- n) 1 500GB external hard drive 3.5 inch
- o) 2 Rotating vehicle beacons
- r) Small fridge, kettle, microwave oven, crockery/cutlery for 24 persons.

The contractor shall keep the equipment continuously maintained, in operating order and insured against any loss, damage or breakage and he shall indemnify the Engineer and the Employer against any claims in this regard. Upon completion of the whole of the Works, ownership of the above equipment shall pass to the Employer.

The contractor shall also provide two (2) labourers to the Engineer's Representative to be used as survey assistants whenever required.

PSC SITE CLEARANCE (SANS 1200C)

PSC 3 MATERIALS

PSC 3.1 Disposal of Material**Add the following:**

Unless otherwise ordered by the Employer's Agent, the Contractor shall dispose of material resulting from clearing and demolition operations at a site to be determined by the Contractor. Such a site shall have the approval of the Employer's Agent, the Local Authority and the Environmental Control Officer.

PSD EARTHWORKS (SANS 1200D)

PSD 3 MATERIALS

PSD 3.1.2 Classes of Excavation

Replace Sub-clauses 3.1.2 (a), (b) and (c) with the following:

All material encountered in any excavations for any purpose including restricted excavations will be classified as follows:

Excavation in all materials,

Extra-over excavation in all materials for excavation in hard rock by one of three means: blasting, excavator- mounted hydraulic breaker and splitting using expansive chemical grouts. The method to be employed for excavation in hard rock shall be as agreed with the Employer's Agent on Site.

Other earthworks

Non-plastic sandy material from excavations shall be used in the following order:

As selected granular material for pipe bedding.

As blanket and backfill to pipe trenches.

As backfill to structures.

As spoil stockpiled in selected areas indicated by the Employer's Agent.

The Contractor shall employ selective methods of excavation in order to preserve uncontaminated topsoil and material suitable for backfill, embankments, pipe bedding and selected granular material.

PSD 5 CONSTRUCTION

PSD 5.1.1.2 Safeguarding of Excavations Replace

Clause 5.1.1.2 (b) with the following:

Deep vertical faces of excavations could collapse during construction causing injury or death; hence the Contractor must either:-

- provide a shoring system, designed by the Contractor and signed off by a suitably qualified Professional Engineer, OR
- reduce the slope of excavations to the safe angle as determined by a suitably qualified Professional Geotechnical Engineer employed by the Contractor.

PSD 5.1.3 Stormwater and GroundwaterAdd

the following to this Clause:

The Contractor shall provide, operate and maintain sufficient pumping equipment, pipes and other equipment on site as may be necessary to dispose of stormwater and groundwater for the proper execution of the Works.

PSD 5.1.4.1 Dust nuisance

Add the following to this Clause:

The Contractor is responsible for dust control and is liable for all claims that may result from dust nuisance on all parts of the site and surrounding areas at all times, from the date of handing over of the Site, to the completion date of the Contract.

The Contractor shall plan the Works accordingly and shall use sufficient water or other methods to keep the level of dust to a minimum. This shall be done in consultation with the Employer's Agent and to the Employer's Agent's approval. The Contractor must make allowance for the above in the rates tendered for excavation.

PSD 5.1.4.3 Excavated Material not to Endanger or InterfereAdd

the following to this Clause:

All surplus material and unsuitable material not required for backfilling shall be disposed of at suitable sites to be located by the Contractor. All such sites shall require the approval of the Employer's Agent, the Local Authority, the Environmental Control Officer and local community. No additional payment will be made for the transportation of such material.

Dumping shall proceed in an orderly manner with coarse material placed at the bottom and covered with finer material, where possible. Upon completion of dumping, the material shall be shaped to provide free-draining surfaces and shall be finished off to the satisfaction of the Employer's Agent.

PSD 5.2.2.1. (c) Excavation for General Earthworks and for StructuresAdd

the following to this Clause:

The Contractor shall excavate to the net outlines of the structures plus an allowance for work space. Vertical concrete walls shall not be cast against excavated surfaces, except in the case of concrete encasement to pipes and footings for brick walls.

PSD 5.2.2.1. (e) Excavation for General Earthworks and for StructuresAdd

the following to this Clause:

The Contractor shall inform the Employer's Agent, in writing, at least 14 days before commencing any work which will result in a change in the topography of the site, whether such work is for the permanent works or for temporary works which the Contractor intends to execute for his own convenience. Thereupon, before commencing the work, the Contractor shall take cross-sections of the original ground profiles or another approved method to determine the ground profiles of the entire area to be worked. In addition, all rock and/or foundation levels shall be recorded as the work proceeds.

The information so obtained shall be permanently recorded on a drawing or drawings which shall each be signed by both the Contractor and the Employer's Agent. The Contractor shall then provide the Employer's Agent with a reproducible copy of each drawing to serve as a permanent record both for the purpose of determining the quantities of excavation and earthworks carried out in the construction of the permanent works and the extent to which temporary works shall be removed or temporary excavations shall be refilled upon completion of the Works.

Where the Contractor excavates to dimensions in excess of those shown on the drawings or ordered by the Employer's Agent or if the material in the bottom of an excavation is loosened before concrete has been cast, or if there is any over-excavation, or any loose or disturbed soil, it shall be removed and the over-excavation shall be replaced by mass concrete of prescribed mix Grade 15/20 mm.

Where blinding, mass or structural concrete is to be cast or where precast elements are to be placed on surfaces established by restricted excavation, the Contractor shall, in the case of rock surfaces, over excavate to 100 mm below the bottom of the structure and use mass concrete Grade 15/20 mm to bring the level to the bottom of the blinding. Excavations to final level, ready to receive a blinding layer or concrete footing, shall be completed not less than 24 hours before such layer or footing is cast. The Contractor shall arrange for the inspection by the Employer's Agent of all surfaces immediately before casting concrete.

PSD 5.2.3.1 Embankments

Add the following to this Clause:

The areas over which earth fills are to be constructed shall, after site clearance and removal of 150mm topsoil, be ripped to a depth of 150 mm and compacted to 90% of Mod AASHTO density. Should the topsoil layer be in excess of 150mm the Contractor is to notify the Employer's Agent in writing and request a directive as to how to proceed.

The Contractor shall plan his operations and particularly his cut and fill operations in such a manner that all cut material may be used to the best advantage of the Employer. This would mean that no material shall be unnecessarily spoiled.

The Contractor shall therefore not spoil any materials without the Employer's Agent's approval and without satisfying the Employer's Agent that this is necessary and that the most economical method of constructing the works is proposed.

Where filling is required on ground slopes greater than 1:10 the Contractor shall submit proposals for benching for approval by the Employer's Agent.

Fill in shall be compacted to the densities specified in Sub-clause 5.2.3.1.

PSD 5.2.3.2 (a) General BackfillingAdd

the following to this Clause:

Backfill measured under the various items in the Schedule of Quantities shall be compacted to a density as stipulated in the scheduled item.

Material for backfilling around structures must be selected so that no clay, boulders or rock is used for backfilling within 300 mm of the structure.

PSD 5.2.4.2 Topsoiling

Add the following to this Clause:

Topsoil shall not be stockpiled higher than 2,0 m. Care shall be exercised to prevent the compaction of topsoil in any way especially by vehicles travelling over such material.

Topsoil shall be placed as directed in Sub-clause 5.2.4.2 on the faces of cut slopes and embankments and other flatter areas, as shown on the drawings or ordered by the Employer's Agent, to a nominal thickness of 100 mm after light compaction. The cut and embankment surface shall be raked or lightly scarified before laying of the topsoil to assist with adhesion between the surfaces.

PSD 7 TESTING

PSD 7.2 Taking and Testing of Samples

Replace this Clause with the following:

The Contractor shall carry out sufficient process control checks (one test per five cubic metres of backfill) on the compaction of all backfill layers before calling the Employer's Agent to inspect the work completed. The costs of testing shall be deemed to be included in the rates for backfilling.

PSD 8 MEASUREMENT AND PAYMENT

PSD 8.1 Basic Principles Add

the following Sub-clauses:

PSD 8.1.4 Backfilling of Over-Excavation

Backfilling over-excavation with concrete as specified in PSD 5.2.2.1(e), will not be measured for payment unless the over-excavation is ordered by the Employer's Agent to remove unsuitable material, in which case the additional excavation will be measured and paid as excavation in all materials and the concrete will be measured by volume, all to the additional dimensions ordered by the Employer's Agent.

PSD 8.2 Computation of QuantitiesAdd

the following to Clause 8.2.1:

The volume of excavated material will be measured from the net outline of the structures and the average depth of excavation unless otherwise approved by the Employer's Agent.

PSD 8.3 Scheduled Items PSD 8.3.2

Bulk Excavation PSD 8.3.2(b) Extra-

over for

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

No extra-over payment will be made for excavation in material classified in terms of Sub-clause 3.1.2, as amended, as intermediate excavation. The tendered rate for excavation in all materials shall include for the cost of such excavation. Refer to PSD 3.1.2.

Extra-over item will be made for:

- a) Material classified as "hard rock". Refer to PSD 3.1.2.

PSD 8.3.3 Restricted Excavation PSD

8.3.3 (b) Extra-over for

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

No extra-over payment will be made for excavation in material classified in terms of Sub-clause 3.1.2, as amended, as intermediate excavation. The tendered rate for excavation in all materials shall include for the cost of such excavation. Refer to PSD 3.1.2

Extra-over item will be made for:

- a) Material classified as “hard rock”. Refer to PSD 3.1.2

Extra-over payment will be made for hard rock excavation provided the surface levels of the hard rock have been recorded on drawings signed by the Employer’s Agent before it is excavated.

PSD 8.3.6 Overhaul

Replace the contents of this Clause with the following:

All movement of cut to fill material shall be regarded as freehaul. In addition, all movement of topsoil, overburden soil or any other material within the boundary of the site and less than 5 km from the site boundary shall be regarded as freehaul.
Overhaul will only be paid for disposal of topsoil, overburden, spoil or any other material where the transportation is beyond 5 km of the boundary of the site.

PSD 8.3.10 Topsoiling

Add the following to this Sub-clause:

The topsoiling will be measured by surface area covered.

The rate for topsoiling shall cover the cost of loading, hauling, spreading to a lightly compacted thickness of 100 mm and making suitable provision to avoid the topsoil slipping down the slopes of embankments and cut-slopes, all to the approval of the Employer’s Agent.

Add the following Clause:

PSD 8.3.14..... Shoring Unit: m²
Trenches must be safeguarded as per clause PSD 5.1.1.2.

The area of shoring measured for payment will be the actual area of excavation side shored, calculated from the perimeter of structure plus adequate working space and the height of shoring actually used. (The maximum additional working space for shoring measurement will be 1.5 m). The rate shall cover all the cost of the design, supply, placing, maintenance and removal of the shoring system and other support measures together with any cost that results from the inconvenience of working in the supported excavation and the cost of any risks inherent in the operation.

PSDB EARTHWORKS (PIPE TRENCHES) (SANS 1200DB)

PSDB 3 MATERIALS

PSDB 3.3 Selected Granular Material

(for bedding material (padding) for steel pipes see PSLB 3.3)

PSDB 3.4 Selected Fill Material

Not required. All material up to the underside of backfill shall be measured as selected granular. (for bedding material (padding) for steel pipes see PSLB 3.3)

PSDB 3.5(a) Backfill Material

In the third line delete "150 mm" and substitute "100 mm".

PSDB 3.5(b) Backfill Material

In the second line delete "PI not exceeding 12" and substitute "PI not exceeding 6".

PSDB 3.5(c) Cement Stabilised BackfillAdd

the following new Sub-Clause:

Where scheduled, or directed by the Engineer, backfill shall be stabilised with 8% cement by mass. The backfill material shall have a plasticity index not exceeding 10 and all material must pass through a sieve of aperture size not exceeding that specified in SABS 1200 LB, Sub-Clause 3.2, as amended.

The dry materials shall first be mixed in a concrete mixer thereafter sufficient water is to be added to produce the stiffest consistency available for placing and compacting with vibrators.

PSDB 5 CONSTRUCTION

PSDB 8 MEASUREMENT AND PAYMENT

PSDB 8.3.2 Excavation

Add the following sub-items to Sub-Clause 8.3.2.(b):

Hand excavation and backfill where ordered by the Engineer Unit : m³

Backfill stabilised with 8 % cement where directed by the Engineer Unit : m³

Boulder excavation Class A..... Unit : m³

Boulder excavation Class B..... Unit : m³

The tendered rates for (4) above shall include full compensation for selecting, mixing, backfilling and compacting of the stabilised material to 90% of modified AASHTO density.

Measurement of Extra Over for (5) and (6) above will not apply to any length of trench **in soft material more than 2m long**. Surplus boulder material from trench excavation shall where applicable, be disposed of to the designated spoil areas situated within the freehaul distance from the source of such material except where shown otherwise on the drawings.

PSDB 8.3.3.1 Deficiency in Backfill Materials

Payment for imported, graded stone laid under pipelines in accordance with PSDB 5.5 shall be paid for under either Sub-Clause 8.3.3.1(c) or as scheduled.

PSDK GABIONS AND PITCHING (SANS 1200DK)PSDK 3 MATERIALS

PSDK 3.1.1 Stone

Add the following to this clause and its sub-clauses:

The stone shall be clean, hard, unweathered and free from fissures and flaking. It shall have a relative density of 2.65 and should pass the requirements of the standard specification in terms of size, durability and finish.

No stone shall be of a size such that it will pass through a ring of diameter 88 mm. No stone shall be of a size: exceeding 250 mm, and at least 85% of the stones shall be of a size equal to or exceeding 120 mm, in the case of gabion boxes, and, exceeding 150 mm, and at least 85% of the stones shall be of a size equal to or exceeding 100 mm, in the case of mattresses.

The stone shall be subjected to the weathering test. The stone shall be subjected to the durability test.

PSDK 3.1.2 Gabion Cages

Replace Clause 3.1.2 with the following:

Gabion boxes shall consist of double twisted, hexagonal wire mesh, Mesh Type 80, with 4.4 mm o/d frame wire and 2.7 mm o/d mesh wire, complete with partitions at 1 m centres. All wire to be mild steel to SANS 1580, zinc coated by hot-dip galvanizing to SANS 675.

Mattresses shall consist of double twisted, hexagonal wire mesh, Mesh Type 60, with 4.0 mm o/d frame wire and 2.5 mm o/d mesh wire, complete with partitions at 1 m centres. All wire to be mild steel to SANS 1580, zinc coated by hot-dip galvanizing to SANS 675.

PSDK 3.1.3 Geotextile Material Add the following to Clause 3.1.3:

Filter fabric for groundwater drains shall be a non-woven continuous filament, spun-bonded polyester geotextile having the following physical characteristics:

Mass per unit surface.....	150 g/m ² (min)
Porosity under 0,5 kPa.....	93%
Porosity under 200 kPa.....	82%
Normal permeability under 2 kPa.....	3 x 10 ⁻³ m/s
Normal permeability under 200 kPa.....	7 x 10 ⁻⁴ m/s
Normal through-flow under constant head of 400mm.....	270 l /m ² /s

The material shall be placed as directed and shall not be exposed to direct sunlight for prolonged periods.

PSDK 5 CONSTRUCTION

PSDK 5.1.3 Type of cage

New Sub-Clause:

The size of cages for gabions shall be a maximum of 3 000 x 1 000 x 1 000 mm and shall be divided into cells having a volume not greater than one cubic metre. The size of cages for mattresses shall be a maximum of 2 000 x 1 000 x 300 mm and shall be divided into cells having a volume not greater than 0,3 m³.

PSDK 5.1.4 DiaphragmsNew Sub-Clause:

Each diaphragm shall be connected in the same manner to the sides and top panels in addition to the bottom panel.

PSDK 5.2.3 Assembly

Add to the Sub-Clause:

All gabion and mattress cages shall be connected to adjacent gabion and/or mattress cages by lacing the adjacent selvages together with 2,0 mm dia. galvanised steel wire. The lacing shall be in accordance with Sub-Clause 5.1.2.

PSDK 5.2.4 Rock filling

Particular care shall be taken in the filling gabions and mattresses so as to ensure that the voids in the rockfill are reduced to the minimum that can be reasonably achieved. In order to minimise the voids in the rockfilling, the filling shall proceed in layers not exceeding 300 mm deep and each layer shall be rodded and barred so as to compact the rockfill before filling of the next layer commences. Where appropriate, hand packing of selected rock particles shall be carried out.

PSDK 5.2.4.2 Mattresses used in revetments and aprons**Add to the Sub-clause:**

Where gabions and mattresses are placed in exposed positions the rock particles forming the exposed faces shall be specially selected so as to present a fair and even surface.

PSDK 5.3.4 Wired Pitching**Add to the Sub-Clause:**

The areas in which wired or grouted wire pitching is to be used will be indicated on site by the Engineer.

PSDK 8 MEASUREMENT AND PAYMENT

PSDK 8.2.3 Extra Over 8.2.2 for Packing Selected Stone for Exposed Face**Add to the Sub-Clause:**

The method of selecting and packing stone for exposed faces as scheduled shall be as specified in Sub-clause 5.2.7 - Special Finish.

PSG 7 TESTS

PSG 7.1.2 Frequency of sampling**Add the following to this clause:**

One sample shall consist of three concrete test cubes.

For each sample taken the position in the structure shall be recorded where the batch represented by that sample is placed also the date sampled.

Sampling of concrete of a particular grade shall be as specified in Sub-clause 7.1.2 with the following frequency of sampling referred to in Sub-clause 7.1.2.2 being amended to read as follows:

"A minimum of 4 samples per day of each grade of concrete placed or 6 samples for pours in excess of 10 m³ shall be taken."

PSG 7.2 Testing

Add the following Sub-clause:

PSG 7.2.5 Water tightness Testing of Concrete

The Clear/potable water retaining structures shall be disinfected before testing. Any re-testing that may be required shall be at the Contractor's expense.

The entire inside surface of the reservoir including columns and roof shall be thoroughly hosed down with water and brushed until properly cleaned off all dirt and other foreign matter.

The floor of the structure shall then be flooded to a depth of 150 mm with chlorinated water and dosed at the rate of 150 grams of chloride or lime to every cubic meter of water. The entire inside surface shall again be scrubbed using this water. The workers engaged in this operation shall wear clean rubber boots. On completion the floor of the structure shall be swept clean.

The chlorinated water shall be stored until the free chlorine level has dropped to an acceptable level. Excess dirt swept from the floor into the sump may be discharged subject to written approval being obtained from the Local Authority.

Payment shall be a lump sum. The rate shall cover the costs of all materials and water used. The reservoir shall be tested for

water tightness in accordance with BS 8007 1987 Section 9.

Testing of the Structure:

For testing the liquid retention, the structure shall be cleaned and initially filled to the normal maximum level with the water at a uniform rate of not greater than 2 m in 24 hours.

When first filled, the water level should be maintained by the addition of further water for a stabilising period while absorption and autogenous healing take place. After a stabilization period of 21 days, refill (top up) and record the water level at 24 hour intervals for a test period of 7 days. During this 7-day test period the total permissible drop in level, after allowing for evaporation and rainfall, should not exceed 10 mm.

Notwithstanding the satisfactory completion of the test, any evidence of seepage of the liquid to the outside faces of the liquid-retaining walls shall be assessed by the Engineer against the requirements of the specification. Any necessary remedial treatment of the concrete, cracks, or joints shall be carried out from the liquid face where practicable. If a lining is used for this purpose, it shall be sufficiently flexible and not be in any way detrimental to the water quality.

In the event of any leakage or dampness being evident at any stage of the filling or testing or in the event of the Engineer considering the final degree of water-tightness to be unsatisfactory, the Contractor when ordered by the Engineer shall discontinue such filling or testing and shall, at his own expense, immediately take approved steps to rectify the leakage and to make the work thoroughly sound to the complete satisfaction of the Engineer. All such rectification work shall be continued assiduously until a satisfactory test is obtained, which shall prove to the Engineer that water-tightness has been obtained.

If required by the Engineer, the structure shall be retested before the expiry of the Defects Liability Period.

The Works will not be certified complete until the structure has been proved by testing to be watertight to the satisfaction of the Engineer.

Testing of the Roof of water retaining structures

The roof shall be tested on completion by using a hose or sprinkler system to obtain a sheet flow over the whole area of the roof for a period of not less than 6 hours.

The roof shall be considered satisfactory if no leaks or damp patches appear on the soffit.

PSG7.2.6 Durability Testing:

Concrete shall comply with the durability parameters defined below:

Water Sorptivity:

Sorptivity is sensitive to surface effects and may be used to assess the effectiveness of initial curing.

PSL MEDIUM-PRESSURE PIPELINES (SANS 1200L)

PSL3 MATERIALS (Clause 3.1)

PS L 3.1 GENERAL

□

Substitute the first sentence of L 3.1 with the following:

Types and classes of pipes shall be as scheduled.

L 3.7 OTHER TYPES OF PIPES

PS L 3.7.1 uPVC Pipes

Substitute 'SABS 966' with 'SABS 966: Part 1'

The pressure rating, stiffness and diameter shall be as detailed in the bill of quantities and drawings.

PSL 3.4 STEEL PIPES, FITTINGS AND SPECIALS

PSL 3.4.4 Fittings and SpecialsAdd to the Sub-Clause:

All steel bends, fittings and specials shall be fabricated to the dimensions and details shown on the drawings and/or described in the Bill of Quantities.

The sides of taper pieces shall diverge at an angle of not more than 11° to each other.

The bend, fitting, and special fabricator shall supply written confirmation that all hand welding was carried out by coded welders.

Bends, fittings, shall have the internal lining and external coating made continuous ("made good") as specified elsewhere for welded joints on coated and lined pipes.

L 3.8 JOINTING MATERIALS

PS L 3.8.3 Flanges and Accessories

Replace "insertion piece" in the first sentence with the following:

"EPDM elastomer or equivalent in accordance with ISO 4633 – 1996 reinforced rubber gasket with a minimum thickness of 3mm".

Add the following to L 3.8.3:

Flanges shall be drilled according to SABS 1123, Table 1600/3

PS L 3.8.4 Loose Flanges

Substitute the first sentence of the last paragraph of L 3.8.4 with the following:

Bolts and nuts shall comply with the requirements of SABS 135.

PS L 3.8.6 Spigot and Socket Pipes

Add the following to L 3.8.6:

Socketed joints for DI pipes shall be push-on type. The material used for the rubber gaskets shall be EPDM elastomer or equivalent in accordance with ISO 4633 – 1966.

PS L 3.9 CORROSION PROTECTION

PS L 3.9.5 Joints, Bolts, Nuts and Washers

Substitute L 3.9.5 with the following:

All bolts, nuts and washers shall be heavy duty galvanised.

PS L 3.9.7 DI Pipes

PS L 3.9.7.1 Internal lining

Pipes shall be internally lined with a cement mortar in accordance with the European Standard EN 545 : 2002

PS L 3.9.7.2 External coating

Pipes shall be externally protected with metallic zinc coating in accordance with the European Standard EN 545 : 2002. The mass of sprayed metal shall be not less than 200g/m². After zinc coating, pipes shall be coated with bituminous paint, the mean thickness of the bituminous paint shall not be less than 70 microns, in accordance with the above specification.

Polyethylene sleeve shall be supplied and fitted in accordance with NF EN 545 and ISO 8180.

PS L 3.9.7.3 DI Fittings

Fittings shall be electro-deposited coating with minimum thickness of 50 microns applied on a blast cleaned surface and phosphate surface.

PS L 3.10 VALVES

PS L 3.10.1 Gate Valves

All gate valves shall comply with the requirements of SABS 664 and shall be suitable for a working pressure of 1,6 MPa. All gate valves must be supplied with a square spindle nut, suitable to be used with a valve key.

Gate valves shall have socketed ends for uPVC pipes unless shown differently on the drawings and shall open clockwise. The direction for opening and closing shall be permanently displayed on the valves. Valves shall have non-rising spindles.

Compression shut-off valves with rubber protected gate and smooth finish without recess inside, may be used.

All flanged gate valves shall be drilled according to SABS 1123 Table 1600/3. Pipes shall not be tested against a closed valve. Thrust blocks for test sections shall be approved by the Engineer prior to testing of pipes.

The cost shall include the chamber. Gate valves to detail, see drawing annexures.

PS L 3.10.4 Air Valves

Air valves for potable water shall be suitable for a working pressure of 1,6 Mpa for uPVC pipes. All air valves shall be double action air valves of Vent-o-mat series RBX air release and vacuum brake or similar. The branch of the tee on the main pipe shall be minimum 0,67 (2/3) of the diameter of the main pipe.

T-pieces for air valves shall be as follows:

Main pipe	Branch
mm dia	mm dia
75	75
110	80
160	100
200	150

All air valve installations shall be supplied with an isolating valve suitable for a working pressure of 1,6 Mpa and a distance piece between the air valve and the branch of the tee, and other fittings shown on the drawings.

The cost shall include the construction of the chamber. Air valves to detail, see drawing annexures.

PS L 3.10.5 Scour valves

Scour valves shall be suitable for a working pressure of 1,6 Mpa for uPVC pipes.

Scour valves shall consist of a flanged gate valve (size specified on drawings), coupled horizontally to a GMS flanged equal tee. The outlet pipe shall be galvanised flanged steel pipe section and a 45 deg galvanised flanged bend (as detailed on drawing no. 19-112. The outlet shall discharge above ground level in the direction of the fall of the natural ground surface, perpendicular to the main pipe.

PS L 3.10.6 Bulk Water Meter

The rate for water meters shall cover the cost of the supply of a water meter, with the necessary couplings to be connected to the appropriate pipes, gate valve, strainer, the installation, testing and putting into operation of the complete meter, including the construction of the chamber, as indicated on drawing.

Technical requirements for the meters

The bulk water meters shall be of the free-flow type manufactured from corrosion resistant material in a cast-iron casing. A distance of 10 times the diameter of the pipe before and 5 times the diameter after the water meter must be kept free of any obstructions such as bends, valves, reducers, etc.

The flow reading shall be given on a dial face and totalising shall occur by means of a roller counter and shall be accurate within $\pm 2\%$.

The meter shall be manufactured in such a way that all moving parts can be removed and replaced from the top without removing the whole meter. Replacement parts should be freely available. Each water meter installation shall be supplied with a gate valve on the upstream side of the water meter at a distance of 10 times the diameter of the pipe. This gate valve shall be provided for under the relevant item in the schedule of quantities.

Installation of meter

The meter shall be installed by a person approved by the supplier in order to validate the guarantee. All accessories for the complete installation shall be supplied by the Contractor.

All metal work shall be painted according to specifications after the testing and completion of the

installation. **L 3.11 MANHOLES AND SURFACE BOXES**

PS L 3.11.4 Step Irons

Substitute L 3.11.4 with the following:

Step irons shall consist of polypropylene coated 12 mm high tensile steel such as Calcamite or similar. The installation of the step irons shall be in accordance with the specification of the manufacturer.

PS L 3.11.6 Surface Boxes Add the following to L 3.11.6:

The type of boxes shall be as specified on the drawings.

PSL 4 PLANT

PSL 4.4 Packing (New Sub-Clause)

Goods should be suitably packed in such manner as will ensure safe and efficient transport by road or rail, and the Contractor shall include in his prices for whatever packing may be necessary in this respect. Small items particularly liable to damage or loss in transit should be crated. All crates and packing material shall, after use, become the property of the Employer, unless distinctly specified otherwise, or if returnable, shall be so at the Contractor's expense.

PSL 5 CONSTRUCTION

PSL 5.1 LAYING

PSL 5.1.3 Keeping Pipelines Clean**Add to the sub-clause:**

The Contractor shall take all of the steps necessary to prevent flooding of the Works and hence ensure that all work is carried out in the dry, and that the ingress of dirt and or dirty water into the pipes is prevented.

PSL 5.1.3.1 Cleaning Pipe Internals (New Sub-Clause)**Add new Sub-Clause:**

The Contractor shall ensure that all pipe work is installed internally free of any contaminants. All traces of dirty water, dirt and debris are to be removed from the inside of the pipe as it is installed.

The Contractor shall take note that flushing of the completed pipeline may not be allowed after construction has been completed and therefore clean house keeping practices will be required under all circumstances during construction. The tendered rates for pipe laying shall include for the clean house keeping practices required.

Each section of the pipeline is to be internally inspected and passed by the Engineer once construction has been completed. If the pipework is not satisfactory, the Contractor shall re clean the pipe at his own expense until the pipe is passed clean. The Engineer reserves the right to utilize cameras or any other means to inspect inaccessible areas.

PSL 5.1.3.2 Cleaning of Valves and Fittings (New Sub-Clause)**Add new Sub-Clause:**

All flanges, valves, fittings and equipment are to be installed in pipework only after they have been thoroughly cleaned. Flange faces shall be checked for damage before being incorporated into the permanent works and any damage shall be reported to the Engineer.

PS L 5.1.4 Depths and Cover

Add the following clause 5.1.4.6

The following cover will be allowed for:

- Trunk mains 800 mm
- Reticulation 600 mm
- Under cultivated land 1000 mm
- Road crossing 1000 mm
- Main road crossing uPVC sleeve

Backfill shall be executed to a depth of 0, 21 m by an average able-bodied labourer or group of such labourers, at a rate of not less than 34 m per 9,25 hour working day per labourer, using only picks, shovels, stumpers and similar hand tools.

PSL 5.1.8 End Caps (New Sub-Clause)**Add new Sub-Clause:**

The Contractor shall, at the end of each days work, fit end caps to the open ends of the pipeline under construction. The endcaps shall be manufactured in such a manner that it can be fitted to seal off the pipeline to the extent that it is totally dust and water proof. The end cap must be able to withstand a pressure of 1 m head of water externally when fitted.

End caps shall be maintained during non-working periods.

The tendered rates for the laying of pipe shall be deemed to include for the supply, fitment, and maintenance of the end caps.

PSL 5.1.9 Marker Posts (New sub-Clause)

Pre-cast concrete marker posts as shown on the drawings and painted white in colour shall be set at all horizontal direction changes and where otherwise indicated by the Engineer.

The standard marker post rate shall include the supply and erection of painted, inscribed posts. The rate shall be inclusive of erection and shall include for all necessary excavation, mass concrete footing and formwork.

PSL 5.2 JOINTING METHODS

PSL 5.2.2 Flanged JointsAdd to the Sub-Clause:

Before being brought together, the ends of the pipes, fittings, couplings and flanges are to be inspected and cleaned to ensure that all parts forming the joint are undamaged and clean.

When jointing flanges, the faces shall be cleaned thoroughly and approved jointing material (compressed asbestos cement fibre or other approved gaskets on flanged joints), cut properly to size, is to be inserted immediately before bringing the two flanges together. Before closing the joints, the flanges must be parallel to each other, with all bolts inserted in the bolt holes. After the fittings have thus been aligned and well supported, the joint shall be bolted up to a uniform tightness using torque wrenches to achieve the required compression force on the gasket.

If and where full face gaskets are used, the jointing material shall be flush with, or protrude beyond, the outer circumference of the flange (this is not applicable to raised face flanges). On completion of the joint, the flanges and bolts shall be protected as described in Clause PSL 3.9.3.8.

L 5.6 VALVE AND HYDRANT CHAMBERS

PS L 5.6.1 General

Substitute the first sentence of L 5.6.1 with the following:

The drawings of valve and hydrant chambers, which are bound into the document, shall supersede the corresponding drawings in the standard specification.

PSL 5.11 Cement Stabilising Bedding and Selected Fill around Pipes

Where shown on the drawings or directed by the Engineer, the bedding and selected material around the pipe shall be stabilized with 8% by mass of OPC. This is applicable to water course crossings, under trafficked areas and on steep slopes.

In all cases, the cement shall be added to the bedding / selected fill material outside the trench and in such a manner so as to achieve full dispersion of the cement in the material and achieve Optimum Moisture Content when placed and compacted around the pipe. Excess water content is to be avoided so as not to create a 'concrete encasement' of the pipe.

PSL 7.3 STANDARD HYDRAULIC PIPE TEST

Add new Sub-clause:

Water used for one filling of the pipeline for hydraulic testing will be provided by the Employer free of charge. Additional water used due to unsuccessful hydraulic tests will be charged at the Employer's bulk rate per kilolitre that is charged to the employer by DWS. Filling of the pipeline for hydraulic testing shall be carried out slowly to enable air to escape and under the direction of the Engineer.

GRP pipelines shall be tested in approximately 2km lengths for which standardised hydraulic test points have been specified.

PSL 7.3.1 Test Pressure and Time of TestAdd

to the Sub-clause:

The separate sections of pipeline to be pressure tested and the test pressure for each section (expressed as an elevation above sea level) shall be as shown on the construction drawing.

The Contractor shall make due allowance in the construction programme and in the tendered rates for the entire testing operation including for the provision of temporary end stops and any other costs incurred associated with testing the pipeline in intermediate sections.

The pipe shall not be tested until the associated structural concrete for anchorage has cured for 14 days or until such concrete has attained the specified design strength.

The section to be tested shall be pressurised to the specified pressure and left for 2 hours, during which period, the pressure drop (if any) and the quantity of water required to be pumped in to restore the test pressure shall be measured and recorded. In addition, all flexible and flanged joints shall be visually inspected and there shall be no sign of leakage.

The test pressure for field testing for uPVC pipes shall be 1,5 times the rated maximum working pressure of the pipe e.g. class 9 uPVC pipe (0,9 MPa rated working pressure) shall be tested to 1,35 MPa and class 12 uPVC pipe (1,2 MPa rated working pressure) to 1,8 MPa.

The test pressure applied according to L 7.3.1.2, must, with allowance for any level differences along the pipeline, be such that the pressure at any point in the pipeline will be at least 1,25 times and not more than 1,5 times the rated working pressure of the pipe.

At all times when there is water in the pipeline, and particularly during filling, testing and draining of the pipeline, all air valves shall be in operation and their individual isolating valves shall be open.

PSL 7.3.1.2 Delete the Sub-Clauses 7.3.1.2

PSL 7.3.1.3 Delete the Sub-Clauses 7.3.1.3

PSL 7.3.4 Initial Filling of Pipeline (New clause)

Add new Sub-Clause:

The entire process for filling the pipeline at any time during testing or disinfection shall be carried out under the supervision of the Engineer. Under no circumstances will the Contractor be allowed to carry out filling of the pipeline without the supervision of the Engineer, neither shall he/she permit any other persons to carry out such filling without the written permission of the Engineer.

Any damage to the pipeline caused by non-compliance with this clause shall be rectified at the Contractor's expense.

PSL 7.3.5 Connections After Testing (New Sub-Clause)

Add new Sub-clause:

The connections of the new pipework to the existing pipework shall only be carried out after the pipeline testing has been completed and accepted by the Engineer.

PSL 7.3.6 Remedial Measures (New Sub-Clause)

Add new Sub-clause:

In the event that a pipe section fails a test, the Contractor shall carry out all remedial measures necessary to obtain a successful test of each individual section and the entire pipeline, at his/her own expense. Such remedial measures shall in no way compromise the original pipeline specifications.

PSL 7.3.7 Draining of the Pipeline (New Sub-Clause)

Add new Sub-clause:

The pipeline may have to be drained to carry out remedial measures. The pipeline shall be drained via the scour valves in a manner that does not cause erosion of the streambeds or negatively impact on the environment in any way. All such drainage of the pipeline shall be carried out under the supervision of the Engineer.

PSL 7.6 Commissioning (New Sub-Clause)

Add new Sub-clause:

The pipeline will be considered to have been commissioned and practically complete once all the associated structures are sufficiently complete to carry out their structural and hydraulic function and the hydraulic test of the entire pipeline has been successfully completed.

PSL 8 MEASUREMENT AND PAYMENT

PS L 8.2.3 Extra-over 8.2.1 For The Supplying, Fixing and Bedding of Valves
..... Unit : No

Add the following to L 8.2.3:

Valves are measured and paid for per item, complete with the inclusion of the cutting of pipes, couplings, extra excavation

and all extra material and labour that is required, including tees, fittings, isolating valves (e.g. under air valves), complete as shown on the drawings.

PS L 8.2.10 Temporary Valves, Etc. Unit : Sum or No

Substitute L 8.2.10 with the following:

Temporary valves, end caps or blank flanges testing shall be included in the rate for the laying of pipes except where separate items are included in the schedule of quantities

PS L 8.2.11 Anchor/Thrust Blocks And Pedestals Unit : m³

Anchor and thrust blocks shall be measured per cubic metre concrete and the tendered rate shall include for all excavation, formwork and reinforcement (where specified) for the required dimensions.

PS L 8.2.13 Valves and Hydrant Chambers, etc Unit : No

Valve and hydrant chambers, manholes, etc., will be measured as a complete unit. The rate shall cover additional excavation (see Sub clause 8.2.2 and 8.2.3 of SANS 1200 DB), materials, plant and labour necessary for the complete construction including the installation of the surface bases or covers.

measured and paid for per item, complete with the inclusion of the cutting of pipes, couplings, extra excavation and all extra material and labour that is required, including tees, fittings, isolating valves (e.g. under air valves), complete as shown on the drawings.

PSL 8.2.17 Cutting into and Connecting to Existing Pipeline (New Sub-Clause)

"Cutting into and connecting to existing pipeline Unit : Sum

The rate for cutting into and connecting to existing pipelines shall cover the cost of exposing the existing pipeline, making arrangements with the Employer's staff to temporarily shut off the existing pipeline whilst effecting the connection, cleaning and preparing the pipe for cutting, cutting, dealing with all water (including that from possible leaking valves), preparing the pipe ends for jointing, welding / jointing and connecting the new pipework, making good internal linings and external coatings, re-commissioning the pipeline, and including all temporary supports, bedding and backfilling.

PSL 8.18 Cement Stabilising Bedding and Selected Fill around Pipes

An item, extra-over laying and bedding pipes, will be measured for payment for cement stabilising the bedding and selected fill around the pipes where directed by the Engineer. Separate items will be scheduled for stabilising on steep slopes and for stabilizing at watercourse crossings.

The tendered rates shall cover all additional costs associated with supplying the cement at the percentage specified and mixing it in and achieving Optimum Moisture Content for compaction around the pipe.

PS L 8.2.19 Pipeline markers Unit : No

The rate shall include the cost of all labour, material and equipment necessary to install pipeline markers according to drawing no. 19-004.

PS L 8.3 Water Meters Unit : No

The rate for water meters shall cover the cost of the supply of a water meter, with the necessary couplings to be connected to the appropriate pipes, gate valve, strainer, the installation, testing and putting into operation of the complete meter as described in PS L 3.10.6 and including the construction of the chamber, as indicated on drawing no. 19-114 for 40-150mm and drawing no. 19-115 for 200-300mm.

PSLB BEDDING (PIPES) (SANS 1200LB)**PSLB 2.3 DEFINITIONS**

Main fill:

Delete "150 mm" in second line and substitute "300 mm".

PSLB 3 MATERIALS**PSLB 3.1 Selected Granular Material**

(For bedding material for steel pipes see PSLB 3.3 below) In the second line delete "19 mm" and substitute "10 mm". Add to the Sub-Clause:

The maximum compactibility factor shall be 0,4.

PSLB 3.2 Selected Fill Material

Not required. All material up to the underside of backfill shall be measured as selected granular. (for bedding material for steel pipes see PSLB 3.3)

PSLB 3.3 Bedding Add to the Sub-Clause:

All steel pipes and fittings laid under this Contract will be considered as being flexible pipes. Bedding (selected granular and selected fill material) for steel pipes shall be fine sand or fine non-cohesive soil, carefully selected, with maximum particle size of 5 mm and which shall not cake nor form lumps when drying. Samples of bedding sand shall be submitted by the Contractor to the Engineer for approval well in advance of construction. Only after the Contractor has received written approval from the Engineer, may he/she proceed with placing sand as selected granular material.

No sharp-edged stones shall be allowed to come into contact with the pipes or fittings. Joint holes (pockets) shall be provided in the trench bottom and bedding, at each pipe joint to facilitate welding, and no extra payment will be made for forming or filling the joint holes (pockets) with padding sand.

All bedding used for the cradle beneath and surrounding the coated steel pipes shall comply with the following requirements:

GRADING ANALYSIS RANGE	
SIEVE SIZE (mm)	PERCENTAGE PASSING
6,7	98 to 100
4,76	85 to 100
2,36	55 to 95
1,18	30 to 75
0,60	20 to 50
0,425	16 to 38
0,30	13 to 27
0,15	5 to 18
0,075	0 to 12

The material shall be free of organic matter and shall have a compatibility factor of not more than 0.4. The material should be classified as silty to fine sand having a stiffness ratio of not less than 5,0 MPa. Furthermore, the origin of the materials should, preferably, be river transported since it is preferable that the larger grains (3,0 to 4,8 mm in size) be rounded and not sharp and angular.

The Contractor will be required to carry out his/her own quality control testing of the material to ensure that it meets the padding sand requirements and complies with this specification at all times. At least one grading analysis shall be carried out for every 100 lineal metres of bedding placed. The results of these tests shall be forwarded to the Engineer within 24 hours of completion of the test. Should the material not comply with the specification, the Contractor shall remove and replace it with approved material at his/her own cost.

Depending on the actual material supplied by the Contractor, the moisture content may be critical to enable satisfactory placing and compaction and the Contractor will be deemed to have allowed in his tendered rate for any and all adjustments required to the moisture content of the bedding material at all times.

Items have been provided in the Bill of Quantities for the provision of approved bedding sand from approved Commercial or other approved off-site sources for bedding sand.

No extra payment will be made for forming or filling joint holes (pockets).

PSLB 3.4 Selection**PSLB 3.4.1 Suitable Material Available from Trench Excavation****PSLB 3.4.1 Suitable Material Available from Trench Excavation**

Delete the Sub-Clause and substitute the following:

The excavation of a pipe trench shall comply with the requirements of Sub-Clause 5.4 of SANS 1200 DB and the provisions of Sub-Clause 3.7 of SABS 1200 DB (in terms of which, for the purposes of providing bedding materials, the Contractor is not required to use selective methods of excavating) shall apply. Nevertheless, the Contractor shall take every reasonable precaution to avoid burying or contaminating material that is suitable and is required for bedding or covering the pipeline. If, in the opinion of the Engineer, bedding material can be produced from the excavated material, the Contractor shall, if so ordered by the Engineer, screen or otherwise treat (as scheduled) the excavated material in order to produce material suitable for bedding (see also Sub-Clause PSLB 8.1.2).

PSLB 5 CONSTRUCTION**PSLB 5.1 GENERAL****PSLB 5.1.4 Compacting**

Delete the second line and substitute: top of the pipeline) shall be 93% mod AASHTO.

Add to Sub-Clause 5.1.4:

Steps will have to be taken by the Contractor to ensure that flexible pipes do not deform excessively in cross-section during and after construction and backfilling operations. The maximum deflection which will be acceptable at any stage during or after construction is 2% of the pipe diameter horizontally or vertically. The Contractor will be required to provide the necessary apparatus and to monitor deflection during construction.

Pipe deformations will only be maintained within the specified tolerances by correct backfilling practice. No heavy compaction equipment will be permitted for compaction of any pipe bedding, only pneumatic or hand rammers being acceptable. To this end, and to achieve the 93% compaction specified it is required that the bedding material be brought up evenly on either side of the pipe. The use of complete saturation of the material as a method of achieving the specified compaction may, subject to the Engineer's approval, be used. However, in this regard, Tenderers are advised that the presence of excessive quantities of water in the pipe trench could lead to flotation of the pipe.

Prior to the commencement of pipe laying the Contractor will be required to submit, to the Engineer, for his approval, his proposed methods of placing, and compacting methods which he proposes to implement in order to ensure compliance with the specification.

PSLB 5.1.5 Testing (New Sub-Clause)

Flexible and flanged joints shall be left exposed with a minimum of 300 mm clearance around the bottom of the pipe during hydraulic pressure testing of the pipe to facilitate inspection.

PSLB 5.2.5 Stone Bedding (New Sub-Clause)

In areas where waterlogged conditions exist or where ordered by the Engineer, special drains consisting of a 150 mm thickness (See PSDB 5.5) of single sized stone with a geofabric filter surround ("Bidim" Grade A4 or similar approved) extending the full width of the trench shall be provided below the bedding to the pipes. The excavation for these drains will be measured in cubic metres at the contract rate applying to unsuitable excavation below the bottom of the trench. The stone filling will be paid for per cubic metre and the geofabric filter will be paid for per square metre. All measurements in this connection will be to a width equal to the base widths and depths ordered.

PSLB 5.3 Placing and Compacting Flexible PipesPSLB 5.3 (a) Bedding Cradle

Delete the sub-clause and substitute the following:

The pipes shall be bedded on a minimum 100 thick layer of compacted granular bedding material on which a 50 mm thick layer of un-compacted granular bedding material has been placed and spread. Loose granular bedding material lying next to the pipe shall be placed into the haunch area and compacted with suitable hand tools (covered with rubber to prevent damage to the pipe coating), and additional selected granular material shall be added and compacted in 150 mm thick layers up to the mid-point of the pipe diameter in the vertical plane. The remainder of the bedding i.e. the selected fill blanket, shall be placed in layers up the sides of the pipe, each layer being compacted until a level of 300 mm above the crown of the pipe is reached.

All bell (fox) holes shall be filled with bedding material.

PSLB 5.3(b) Selected Fill Blanket

Delete "200 mm" from title.

PSLB 6 TOLERANCES

**PSLB 6.1 Moisture Content and DensityAdd
to the Sub-Clause:**

The permissible deviations applicable are to be those for Degree of Accuracy II class of work.

PSLB 8 MEASUREMENT AND PAYMENT

PSLB 8.1.3 Volume of Bedding Materials

Add to the Sub-Clause:

The volume of bedding material shall be measured net i.e. the volume of the pipe is to be deducted.

No additional payment will be made for bedding material placed in bell (fox) holes

PSLB 8.1.6 Freehaul

Delete the Sub-Clause and substitute the following:

All haul will be regarded as free haul. No overhaul will be paid for under this Contract.

PSLB 8.2.2 Provision of Bedding by Importation

Delete the sub-clause and substitute the following:

Including for screening and/or other treatment:

Selected granular material..... Unit : m³

Bedding sand to specified bedding dimensions Unit : m³

The rates shall cover the cost of acquiring, loading, transporting, offloading, screening or otherwise treating excavated material in order to produce bedding that complies with the relevant specification, delivering it to points alongside the trench spaced to suit the Contractor's methods of working and of disposing of displaced material.

NOTE: The rate for the supply and laying of pipelines covers the cost of handling the bedding material from alongside the trench, placing it under the pipeline, forming joint holes and completing the bedding around and over the pipeline.

PSLB 8.2.3 Concrete Bedding Cradle

Add the following paragraph to the Sub-Clause:

All concrete bedding to pipes will require formwork. The rate for concrete bedding shall include for the supply, installation and stripping of all formwork.

PSLB 8.2.4 Encasing of Pipes in Concrete

Delete the fifth and sixth lines and substitute the following:

encasing the pipe in concrete 150mm thick each side of the pipe and to 150mm above the crown of the pipe including the cost of formwork, (if any), etc. and the cost of formwork to form stop ends on either side of collars, couplings, joints etc. if instructed by the Engineer.

The rate for concrete encasing shall include for the supply, installation and stripping of all formwork.

PSLB 8.2.6 Drainage Layer (New Sub-Clause) Add the new sub-clause:

Supply and place beneath pipe, 150mm crushed stone layer as ground water drainage layer. The excavation for these drains will be measured in cubic metres at the tendered rate applying to unsuitable excavation below the bottom of the trench (SABS1200 DB 8.3.2 c).

The rate for stone filling shall be per cubic metre of stone fill, measured according to a width equal to the base widths and depths ordered Unit : m³

Supply and installation of geofabric filter material (BIDIM Grade A4 or similar) around stone. The rate shall be per square metre of geofabric to enclose the stone material, measured net according to a width equal to the base widths and depths ordered.

Particular Specification PA: Environmental Specification

ENVIRONMENTAL MANAGEMENT PLAN

PA 1 INTRODUCTION

This Environmental Management Plan (EMP) sets out the methods by which proper environmental controls are to be implemented by the contractor. The duration over which the contractor's controls shall be in place cover the construction period of the project as well as the limited time after contract completion defined by the General Conditions of Contract, and the project specifications, as the defects liability period (maintenance period).

This document may form part of the tender specification.

This document must not be used without permission from the author.

An Environmental Consultant cannot be held liable for non-compliance with any terms or condition of this specification or any permit or authorisation issued to the Client, Engineering Consultant or Contractor by DEAT or any Licence/Permit regulations from any other regulatory body. Non-compliance liabilities lies with the Client, Engineering firm, Contractor or any other party as will be stipulated in the contract document.

This specification does not remove the responsibility of the client to obtain the necessary approval envisaged in terms of Regulation in terms of Chapter 5 of the National Environmental Management Act (Act No.107 of 1998) or any other applicable legislature

The cost schedule for projects may provide payment items for complying with these specifications as part of the contract document.

PA 2 DEFINITIONS

Alien Vegetation: alien vegetation is defined as undesirable plant growth which shall include, but not be limited to; all declared category 1 and 2 listed invader species as set out in the Conservation of Agricultural Resources Act (CARA) regulations. Other vegetation deemed to be alien shall be those plant species that show the potential to occupy in number, any area within the defined construction area and which are declared to be undesirable

Construction Activity: a construction activity is any action taken by the contractor, his subcontractors, suppliers or personnel during the construction process as defined in the contract document

Environment: environment means the surroundings within which humans exist and that could be made up of -

- (i) The land, water and atmosphere of the earth;
- (ii) Micro-organisms, plant and animal life;
- (iii) Any part or combination of (i) and (ii) and the interrelationships among and between them; and
- (iv) The physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.

Environmental Aspect: an environmental aspect is any component of a contractor's construction activity that is likely to interact with the environment.

Environmental Impact: an impact or environmental impact is the change to the environment, whether desirable or undesirable, that will result from the effect of a construction activity. An impact may be the direct or indirect consequence of a construction activity.

Pipeline Reserve: is a corridor of land, defined by co-ordinates and proclamation, within which the pipeline, including its associated works, is situated.

PA 2.1 Legal Aspect

The following is a list of the legislation which can, inter alia, have an effect on construction activities or the environment. This is not necessarily complete and the onus shall remain on the Contractor to ensure that all relevant legislation is conformed with.

Environmental Conservation Act, No 73 of 1989.
National Environmental Management Act (No.107 of 1988) particularly (GN R.33306 dated 18 June 2010)
Forest Act, No 122 of 1984.
Provincial Nature Conservation Ordinates.
Minerals and Petroleum Resources Development Act, No 28 of 2002.
National Water Act, 1998
Health Water Act, 1977
Conservation of Agriculture Resources Act, No 45 of 1983.
Atmospheric Pollution Prevention Act, No 45 of 1965.
Occupation Health & Safety Act, No. 85 of 1993
National Heritage Resources Act no 24 of 1999

Construction will be according to the best construction industry practices, as identified in the project documents. This EMP, which forms an integral part of the contract documents, informs the contractor as to his duties in the fulfilment of the project objectives, with particular reference to the prevention and mitigation of environmental impacts caused by construction activities associated with the project. The contractor should note that obligations imposed by the EMP are legally binding in terms of environmental statutory legislation and in terms of the additional conditions (project specific conditions) to the general conditions of contract that pertain to this project. In the event that any rights and obligations contained in this document contradict those specified in the standard or project specifications then the latter shall prevail.

The contractor is deemed to have made himself conversant with all legislation pertaining to the environment, including provincial and local government ordinances, which may be applicable to the contract.

PA 2.2 Administration of Environmental Obligations

a) Formation of an Environmental Monitoring Committee (EMC)

For the purpose of monitoring the implementation of the EMP, an EMC will be required of which its composition must include all project stake holders. This must be chaired by a neutral stakeholder. The project environmental officer (PEO)'s reports and recommendations together with the engineer's instructions must be presented to EMC for commenting. Any non-compliance must be reported to the EMC for action and scrutiny and decision whether to forward it to higher authorities or fining the contractor as per EMC table of fine.

b) Appointment of a Project Environmental Officer (DEO)

For the purposes of implementing the conditions contained herein, the contractor shall submit to the engineer for approval the appointment of a nominated representative of the contractor as the PEO for the contract. The PEO will be responsible for ensuring that the provisions of the EMP are complied with during the life of the contract. The engineer or an Environmental company appointed by the Client through the engineer, will be responsible for issuing instructions to the contractor where environmental considerations call for action to be taken. The PEO shall submit regular written reports to the engineer, but not less frequently than once a month. The PEO shall be on site on daily basis or visit the site at the rate agreed by the client.

c) Administration

Before the contractor begins each construction activity the PEO shall give to the engineer an environmental method statement. The intention of a method statement is to set out the order in which the work will be done and to describe the steps that need to be followed to carry out the work in a manner that will result in the least environmental impact.

The contractor may provide such information in advance of any or all construction activities provided that new submissions shall be given to the engineer whenever there is a change or variation to the original.

d) Training

The PEO must be conversant with all legislation pertaining to the environment applicable to this contract and must be appropriately trained in environmental management and must possess the skills necessary to impart environmental management skills to all personnel involved in the contract.

The contractor shall ensure that adequate environmental training takes place. All employees shall have been given an induction presentation on environmental awareness. Where possible, the presentation needs to be conducted in the language of the employees. In every induction, records of such must be kept.

PA 3 ENVIRONMENTAL MITIGATIONS

PA 3.1 Social;

- ▲ Since South Africa is a signatory to a number of international conventions and declarations, any construction must adhere to the internationally accepted developmental standards.
- ▲ Since the project is part of poverty alleviation; it must be executed for social equity in addition to environmental and financial sustainability
- ▲ Since the project is in an already built environment, the implementing team must practice adaptive management whilst following current best practices in construction and also in conservation management
- ▲ A strict code of ethics, based on the above points of departure, will be considered mandatory in this development
- ▲ The relevant stakeholders/departments and other interested parties must employ appropriate philosophical environmental ethics to achieve sustainable development during and after project implementation
- ▲ The main beneficiaries of the project must be the local residents of villages covered by the project.
- ▲ OR Tambo District Municipality will act as the implementing agent for the project through their engineers, S Zoko Consulting cc.
- ▲ Contracts generally take place on community land it is important to respect community structures and artifacts. Boundary marker stones are not to be moved or damaged. The contractor is to mark stones and maintain an exclusion zone around the sites.
- ▲ All graves sites are to be respected and all set outs are to be off-set at least 20 metres from any graves. It is responsibility of the Engineer to mark graves and especially indicate these sites to the Contractor. In the event of a grave being disturbed, or artifacts being uncovered, work is to stop immediately and the area must be secured. The maintenance and protection of the site shall be the responsibility of the contractor until either the South Africa Police Services or the National Monuments Council issue a directive.
- ▲ The contractor and his staff are to try by all means possible to respect the socio-cultural values of the community, e.g. no gangsters and no father less children are to be left after construction.

PA 3.2 Environmental;

PA 3.2.1 Site Camps

PA 3.2.1.1 General

Site camp must be selected with the help of the project steering committee members. The contractor shall establish his construction camps, offices, workshops, staff accommodation and testing facilities on the site in a manner that does not adversely affect the environment. The contractor shall submit to the engineer for his approval, layout

plans showing exact location, extent and construction details of these facilities and the impact mitigation measures the contractor proposes to put in place.

Clearing of the site camp must be restricted to the site camp boundaries. Where there is vegetation clearing, only trees and shrubs directly affected by the works, and such others as may be indicated by the engineer in writing (approved by DAFF and DEAT), may be felled or cleared. Topsoil removal is to be to a depth of 150 mm or as specified by the engineer, and stockpiled according to the section on topsoil conservation.

The site shall be located more than 100 metres from watercourses and wetlands. Runoff from the site must be prevented from entering any watercourse or wetland in the vicinity of the site camp or work area by means of diversion berms and settling ponds .

After completion of the works the Contractor shall restore the area used by him to its former condition, including removal of rubble and foundations. Any compacted grounds shall be ripped to loosen soil. Topsoil is to be spread evenly over the site and grass cover re-established.

PA 3.2.1.2 Water for human consumption

Water for human consumption shall be available at the site offices and at other convenient locations on site.

All effluent water from the camp / office sites shall be disposed of in a properly designed and constructed system, situated so as not to adversely affect water sources (streams, rivers, pans dams etc.). Only domestic type wastewater shall be allowed to enter this drain.

PA 3.2.1.3 Heating and cooking fuel

The contractor shall provide adequate facilities for his staff so that they are not encouraged to supplement their comforts on site by accessing what can be taken from the natural surroundings. The contractor shall ensure that energy sources are available at all times for construction and supervision personnel for heating and cooking purposes.

PA 3.2.1.4 Clearing the Site

In all areas where the contractor intends to, or is required to clear the natural vegetation and soil, either within the pipeline reserve, or at designated or instructed areas outside the this reserve, a plan of action shall first be submitted to the engineer for his approval.

The plan shall contain a photographic record and chainage/land reference of the areas to be disturbed. This shall be submitted to the engineer for his records before any disturbance/stockpiling may occur. The record shall be comprehensive and clear, allowing for easy identification during subsequent inspections.

PA 3.3 Construction Site

PA 3.3.1 Sanitation

Sanitary arrangements should be to the satisfaction of project management, the local authorities and legal requirements.

Dry-composting toilets such as “enviro loos”, or the use of chemical toilets which are supplied and maintained by a subcontractor recommended for this contract.

Adequate toilet facilities are to be provided within 200 m of all work sites and at the site camp. All toilets shall be maintained by the Contractor in a clean sanitary condition to the satisfaction of the Engineer. Toilets shall not be located on flood plains where the possibility of flooding exists.

Contractors are required to provide separate toilets for male and female workers on site. The disposal of toilet wasters shall be done to an approved facility and proof of safe disposal certificates are to be presented at each monthly site meetings.

Contractors shall instruct their staff and sub-contractors that they must use toilets provided and not the veld, bush or streams.

PA 3.3.2 Waste Management

The contractor's intended methods for waste management and waste minimisation shall be implemented at the outset of the contract. All personnel shall be instructed to dispose of all waste in the proper manner.

PA 3.3.2.1 Solid Waste

Solid waste shall be stored in an appointed area in covered, tip proof bins for collection and disposal. A refuse control system shall be established for the collection and removal of refuse to the satisfaction of the engineer. Disposal of solid waste shall be at a licensed landfill site. No waste shall be burned or buried at or near the site offices or anywhere else on the site, including the approved solid waste disposal site.

PA 3.3.2.2 Litter

No littering by construction workers shall be allowed. During the construction period, the facilities shall be maintained in a neat and tidy condition and the site shall be kept free of litter. At all places of work the contractor shall provide litter collection facilities for later safe disposal at approved sites.

PA 3.3.2.3 Hazardous waste

Hazardous waste shall be disposed of in a licensed landfill site.

PA 3.3.3 Control at the workshop

The contractor's management and maintenance of his plant and machinery will be strictly monitored according to the criteria given below, regardless whether it is serviced on the site (i.e. at the place of construction activity or at a formalised workshop).

PA 3.3.3.1 Safety

All the necessary handling and safety equipment required for the safe use of petrochemicals and oils shall be provided by the contractor to, and used or worn by, the staff whose duty it is to manage and maintain the contractor's and his subcontractor's and supplier's plant, machinery and equipment.

PA 3.3.3.2 Fuel Storage

Fuel shall be stored in a secure area in a steel tank supplied and maintained by the fuel suppliers. An adequate bund wall, 110% of volume, shall be provided for fuel and diesel areas to accommodate any leakage spillage or overflow of these substances. The area inside the bund wall shall be lined with an impervious lining to prevent infiltration of the fuel into the soil. Any leakage, spillage or overflow of fuel shall be attended to without delay.

PA 3.3.3.3 Oil and Lubricant Waste

Used oil, lubricants and cleaning materials from the maintenance of vehicles and machinery shall be collected in a holding tank and sent back to the supplier. Water and oil should be separated in an oil trap. Oils collected in this manner, shall be retained in a safe holding tank and removed from site by a specialist oil recycling company for disposal at approved waste disposal sites for toxic/hazardous materials. Oil collected by a mobile servicing unit shall be stored in the service unit's sludge tank and discharged into the safe holding tank for collection by the specialist oil recycling company.

PA 3.3.4 Noise

Noise levels are to be kept within reasonable norms as determined by the Engineer, taking into account the context of the site location. The contractor shall endeavour to keep noise generating activities to a minimum (85db max, 65db recommended). Noises that could cause a major disturbance, for instance blasting and crushing activities, should only be carried out during daylight hours. Compliance with the appropriate legislation with respect to noise shall be mandatory (OHS ACT in particular).

Silencers on all machinery and vehicles shall be well maintained.

Schools shall be notified by the Contractor at least 3 days before construction is due to commence in their vicinity. Any excessively noisy activity shall be conducted outside of school hours.

PA 3.3.5 Dust

Dust is regarded as a nuisance when it reduces visibility, soils private property or is aesthetically displeasing.

Dust generated by construction related activities must therefore be minimised.

The contractor shall control dust over the site of the Works, on access roads/tracks, on stockpiles and spoil sites or borrow pits.

Control of dust may involve spraying with water. The quantities of water used should not be large enough or applied with sufficient force to generate run off which could result in soil erosion. The contractor shall have the necessary equipment available on site to control dust. Dust from truck loads must be prevented from load covering (e.g. canvas cover)

PA 3.3.6 Blasting

Blasting has a number of impacts such as dust, fly rock, and vibration.

No blasting will be permitted unless the Contractor has satisfied the Engineer that his proposed blasting methods and controls are such that no damage will be caused to any adjoining structure, pipeline, services, trees or sensitive vegetation.

Topsoil may not be used as cover material for blasting.

PA 3.3.7 Existing Services and Infrastructure

The Contractor shall ensure that existing services, (road, pipelines, power lines, and telephone services) are not damaged or disrupted unless required by the Contract and then they shall only take place with the permission of the Engineer.

The Contractor will be responsible for the repair and reinstatement of any infrastructure that is damaged or services which is interrupted.

PA 3.3.8 Open Trench Length

Unless otherwise permitted in writing by the Engineer, not more than 500m trench pipe laying gang shall be open at any time. This length implies that opening, pipe laying and closure take place within the 500m work area. "Open trench" includes the period from initial removal of topsoil to replacement of topsoil after backfilling. For the purposes of controlling the number of openings left on trench lines (for thrust blocks, valves, scours etc.), 15 openings will be deemed to be equivalent to 550m of open trench.

Following installation, the testing of pipelines and backfilling of trenches (including topsoil) shall be completed for each section of pipeline without delay. The reason for this is to minimise the negative impacts associated with open trenches and maximise the likelihood that grass contained in topsoil will regrow.

Any work that is authorised to take place through wetlands and streams shall not commence until the Contractor confirms that all the material is on site and that work can commence and be completed with the available material. Once work begins in these areas (wetland or stream) open trench time shall not exceed 14 days from the start date to rehabilitation unless a full motivation is submitted within 14 days construction period, and that the delay relates to construction issues and not material or equipment. Failure to complete work in sensitive areas within the allocated time will result in daily penalties until the work is completed.

PA 3.3.9 Open Trench Protection

Adequate measures must be taken to prevent humans or stock from injuring themselves by falling into a open trench adjacent to public access ways.

PA 3.3.10 Reinstatement of Trenches

The topsoil shall be replaced on top after backfilling and only lightly compacted (e.g. by trampling under foot). Where grass seeding is required it must be carried out on the same day as topsoil replacement and before lightly compacting the soil.

Care shall be taken to ensure that the finished surface is not below the surrounding ground to avoid channelling or concentrating

Where slope gradients exceed 12% in long-section, anti-erosion berms shall be made which are angled at approximately 10° across the contours such that they lead water off the disturbed corridor. These berms shall be at least 300 mm high and shall be long enough to lead water off the entire disturbed surface. The ridges shall be at a maximum spacing which is the lesser of 30m horizontal distance or 1m vertical distance. No additional payment shall be made for anti-erosion measures. If a specification takes precedence.

These berms shall be made immediately after backfilling and before topsoil replacement and berms shall not be made of, or contain, large rocks.

PA 3.3.11 Scour Valves

The positions of scour valves are to be checked on site by the Engineer and Contractor prior to construction to ensure that scouring will not cause erosion, nor damage to agriculture lands or property. All scour positions will require some form of erosion protection.

PA 3.3.12 Stream and River Crossing

The crossing of any stream bed, flowing or river requires a license from Department of Water Affairs and the Engineer shall be responsible for obtaining such approvals prior to any work commencing on site. No structure placed in the bed of any water course shall obstruct the flow of the river after construction is complete and pipeline crossings are to be placed on the river bed. Alternatively fly over pipeline crossing is recommended were the river or stream bed is deep.

PA 3.3.13 Overhead Power Lines

Where work being carried out in the vicinity of overhead power lines, the Contractor is responsible for ensuring that all persons working in such areas are aware of the relatively large distance that high voltage electricity can short to earth when large masses of the of steel such as steel pipes or machinery bare close to power lines. The Contractor's attention is drawn to OHSA (1993) which gives safe clearances for various voltages.

PA 3.4 Protection of Public

The Contractor shall be responsible for protecting the public from anything dangerous to persons or property and for the safe and easy passage of pedestrians, vehicular traffic and rail traffic in those areas affected by the Works.

This clause shall apply from time that any portion of the Works shall be commenced until the completion of all outstanding works, which the Contractor has undertake to finish during the period of maintenance.

Any excavations, material dumps, spoil dumps or other obstructions likely to cause injury to any persons or thing shall be suitable barricaded

PA 3.5 Topsoil Conservation

Topsoil shall be excavated to the base of the A-horizontal or 150 mm whichever is greater, and stockpiled on one side of the trench. Subsoil shall be stockpiled separately from top soil.

Erosion of stockpiles will not be permitted. At reservoirs where soil will be stockpiled for several months, these stockpiles shall be hand seeded with a suitable rehabilitation mix rate of not less than 8 kg/ha.

Compaction of the topsoil by, inter alia, driving over it is not permitted.

PA 3.6 Borrow Pits, Spoil Sites And Donga/Erosion Gullies

The Contractor shall advise the Engineer at least 5 days in advance of his intention to open up each borrow pit or spoil site. Borrow pits shall only be developed after approval from Department of Mineral and Energy Affairs. For the purposes of controlling materials used on site preventing supply from unlicensed sites, contractors are required to declare their sources of material supply and provided proof that these supplies are registered with DME.

The topsoil shall be removed, stockpiles and maintained for replacements according to specification given for topsoil conservation. The stockpile height must be not more than 2m

The Engineer will determine what environmental protection or rehabilitation measures will be necessary in each case.

Spoiling of soil and rock shall not be permitted along drainage lines except that blast rock or boulders may be used to heal dongas with prior approval of the engineer.

Diversion berms are to constructed to avoid runoff water from entering into the borrow pit and settling ponds are to constructed runoff water from the borrow pit.

PA 4 REHABILITATION THE WORKS AREA

The Contractor is responsible for all the areas affected by constructed whether within the project boundaries or not. The demarcations required for the whole project area should also be used at all defined sites within the works area (reservoirs, structures linear work). Complete rehabilitation of all work areas will be required to return the site to its former condition. This will include removal of all cement sludge, waste concrete, builders, refuse etc, ripping of compact surfaces to loosen soil, replacement of topsoil and re-grassing.

PA 5 EROSION CONTROL

No erosion will be permitted on site.

Areas affected by construction related activities must be monitored on an ongoing basis for evidence of erosion. Remedial measures shall be applied at an early stage before a severe erosion problem arises.

Erosion prevention measures must be implemented under the instruction of the Engineer.

Areas particularly susceptible to erosion are areas where topsoil has been stripped, soil stockpiles, trenches, spoil sites and borrow pits. Slopes with gradients exceeding 12% are particularly susceptible. Trenches on slopes or hillsides are not to be opened in sections exceeding 100 metres to limit erosion during rainfall.

On any areas where the risk of erosion is evident, special measures may be necessary to prevent erosion.

PA 6 POACHING OF WILDLIFE

No fauna shall be disturbed on site or in surrounding forestry /bush areas. Any Contractor's staff caught interfering with wildlife will face suspension from the project. Criminal charges will be made if poaching is detected.

PA 7 INDEGENOUS VEGETATION

Every effort must be made to avoid disturbance to indigenous vegetation.

No indigenous tree or bush shall be disturbed or removed without approval from the Engineer who shall discuss removal of natural trees or bush with the Project Environmental Officer.

Areas where construction will occur in close proximity to indigenous forest/bush must be strictly controlled. The minimum of indigenous bushes disturbances, and the limits of the construction activities must be demarcated with a barricade tape. This tape must be removed once construction is complete in the area.

No construction staff may be permitted access to indigenous forest/bush outside of the permissible working corridor at any time.

PA 8 REMOVAL OF TREES

Indigenous trees may not be removed nor damaged without approval from DAFF. It should be noted that no wood or forest products may be transported from site without a valid permit.

Soil shall not be piled around the stems of the trees as this can result in attack by termites, which can ringbark and kill the trees.

PA 9 ALIEN VEGETATION

The contractor shall be held responsible for the removal of alien vegetation within the areas disturbed during construction. This includes, for example, service roads, stockpile areas.

PA 10 RE-VEGETATION REQUIREMENTS (OVER GRASSLAND)

Grass seed shall be planted immediately after replacement of the topsoil in the following areas;

- On slopes where the gradient exceeds 12% in long or cross section.
- On high lying, exposed slopes where the soil will dry out easily.
- Where existing topsoil is thin (less than 100 mm).
- Where soil is very infertile such as on shales and sandy soils.
- Adjacent to watercourses.

PA 11 FIRE PREVENTION AND CONTROL

The contractor and his staff must at all times ensure that fires are not started. The Contractor shall immediately employ such plant and labour as is at his disposal and shall take all necessary action to bring any fire under control, all at his own cost.

A fire extinguisher must be on hand whenever welding or any other spark generating activity is conducted.

In addition, rubber beaters are to be on hand at all work stations all times as these represent the quickest form of response to fire. It is the responsibility of the Contractor to ensure that staffs are trained in the fire fighting equipment.

No fires may be made other than for the purpose of cooking except when authorised for controlled destruction of dry, stockpiled alien vegetation. Cooking fires must be contained in a fire drum and be in a designated area approved by the Engineer. All fires are to be extinguished with water once they have their purpose.

No fire is to be left unattended at any time.

No burning of grassland to clear is permitted.

No cutting of timber for firewood will be allowed.

No fires are to be allowed when the Fire Danger Index is high (46⁰ and above) i.e. fire alert stage yellow.

PA 12 CONCRETE BATCHING

Concrete batching plants shall be located more than 100 m from the nearest river channel or wetland. The batching site shall be bunded with earth berms or sandbags such that runoff cannot escape from site. Contaminated storm water and wastewater runoff shall not be permitted to enter streams but shall be led to a pit where the water can soak away.

In the event that water with a pH exceeding pH 9 reaches a stream this would be in contravention of the General Standards for Water Quality under the National Water Act of 1998.

Waste concrete and cement sludge shall be scraped off the site of the batching plant and removed to an approved landfill site. This measure is intended to prevent pollution in the event of rainfall.

Adequate measures shall be taken to control dust from stockpiles and batching plant processes. The placement of the batching plant shall not be closer than 500 meters from the nearest dwelling or occupied premises (other than the site camp).

PA 13 SERVICING OF EQUIPMENT

The contractor will be required to conduct all servicing of machine and equipment within a designated area within the site camp. The contractor shall ensure that there are adequate facilities for the handling and storage of used parts, oils, grease, fluids and fuels. Drip trays are to be available for use at the servicing area. In the event of a breakdown on site, the contractor may temporarily repair equipment on location provided that drip trays are in place during all work and spill control kit is within 30 metres of the works area. All sites shall have at least one spill control kit on site at all times and the contractor shall have suitably trained staff available when work is taking place on site.

PA 14 CONTROL OF STORAGE AREAS

All areas used for the storage materials shall be clearly demarcated and should not allow unauthorised access especially if there is any danger to the residents. The storage of sand, stone, bricks, large pipes is not to take place on areas without removing and protecting topsoil. Rehabilitation of the site after use is the contractor's responsibility.

PA 15 REQUIREMENT FOR METHOD STATEMENTS

Work in environmentally sensitive areas will require method statements that reflect the manner in which the Contractor intends to protect the environment while conducting work within the area. These method statements are required 14 days prior to any work commencing within a sensitive site, and then the work may only start once the method statements are approved by the Engineer and the PEO. To assist in the development of method statements, an example is included in an addendum to this specification.

PA 16 NON-COMPLIANCE.

PA 16.1 Penalties

In the event of noncompliance to the EMP, penalty must be applied at a fee determined by the EMC.

PA 16.2 Suspension Of The Works

In the event non-compliance exceed levels warranting penalties, the relevant Government department must be informed and this may result in withdrawal of the authorisation and suspension of the works until such a time when the all the conditions are complied with.

Particular Specification PB: Labour Intensive Methods

PB LABOUR INTENSIVE METHODS

PB 1 SCOPE

This Particular Specification covers the requirements, wherever labour intensive methods of construction in accordance with the Tender Conditions are specified.

PB 2 INTERPRETATIONS

PB 2.1 Supporting Specifications

Where this Particular Specification is applicable, the following specifications shall, inter-alia, form part of the contract document.

- | | | | |
|----|----------------------------|---|--------------------------------------|
| a) | SANS 1200 C | - | Site Clearance |
| b) | SANS 1200 D | - | Earthworks |
| c) | SANS 1200 DA | - | Earthworks (Small works) |
| d) | SANS 1200 DB | - | Earthworks (Pipe Trenches) |
| e) | SANS 1200 DK | - | Gabions & Pitching |
| f) | SANS 1200 GA | - | Concrete (Small Works) |
| g) | SANS 1200 L | - | Concrete (Medium pressure Pipelines) |
| h) | SANS 1200 LB | - | Bedding |
| i) | The Project Specifications | | |

PB 2.2 Application

This Particular Specification contains clauses that are applicable wherever labour intensive methods of construction are to be employed.

Machine applications shall only be allowed by the Engineer for the specific operation listed hereunder or, if so directed, by unforeseen or special circumstances on site.

Loss of contract time owing to unsatisfactory progress, poor contract management or whatsoever related reason will not be regarded as "unforeseen or special circumstances", unless ruled to the contrary by the Engineer.

The contractor shall request permission from the Engineer in writing, at least fourteen (14) calendar days in advance, (if possible), of his intention to use machine operations for work reserved for hand labour execution. The request is to be substantiated by a proper motivation.

No machine operations subject to the above request are to commence without the prior written approval of the Engineer and no additional payment of whatsoever nature shall be allowed should the Engineer agree to the request submitted by the Contractor. The tendered rates and prices applicable to hand labour execution shall suffice.

PB 2.3 Definitions

Labour Intensive - An activity that is undertaken by labour only, specifically excluding the use of any plant or mechanical equipment, except hand tools and related equipment.

PB 3 ACTIVITIES THAT MAY MAKE USE OF MACHINE INTENSIVE OPERATION

The activities listed hereunder may be executed by machine intensive means; if not listed hereunder the execution shall be labour intensive.

- a) Excavation in Classes 2 or 1 materials and Machine class materials as for restricted excavations.
- b) Excavation in Classes intermediate and hard rock as for bulk excavations

- c) Excavations in any Class materials as for bulk excavations in excess of 50 Cu m from a single position, subject to the Engineer's prior approval.
- d) Excavations in Pickable Material as for restricted excavations where the utilisation of hand labour has been approved to be impracticable, subject to the Engineers' prior approval
- e) Restricted excavation with total depth in excess of 1.6m.
- f) Stripping and stockpiling of overburden at approved borrow areas
- g) Loosening and/or stockpiling of borrow material at approved borrow areas.
- h) Hauling of all materials
- i) Pumping and transporting of water
- j) Mixing of concrete for water retaining structures where strength and reinforced concrete is specified and the volume of a particular cast exceeds 5 Cu m.
- k) Compaction of fill and in-situ material
- l) Site clearance that requires breaking up of concrete and other permanent structures
- m) Any operation as may be specified by the Engineer

PB 4 MATERIALS

The requirements of the applicable SANS specification and/or Project Specification shall apply except where superseded by this Particular Specification.

PB 5 CLASSES OF EXCAVATION

Refer to PSDA3.1.2 and PSD3.1

PB 6 PLANT

Where plant is to be used, as authorised by this Particular Specification, the requirements of the applicable SANS 1200 Specification and/or Project Specification shall apply except where superseded by this Particular Specification.

PB 7 CONSTRUCTION

The requirements of the applicable SANS 1200 Specification and/or Project Specification shall apply.

PB 8 TOLERANCES

The requirements of the applicable SANS 1200 Specification and/or Project Specification shall apply.

PB 9 TESTING

The requirements of the applicable SANS 1200 Specification and/or Project Specification shall apply.

PB 10 MEASUREMENT AND PAYMENT

The requirements of the applicable SANS 1200 Specification and/or Project Specification shall apply except where superseded by this Particular Specification.

PB 10.1 Penalty for non-compliance

Should the contractor during the execution of the Work reserved for labour intensive execution:

- a) use unspecified plant; or
- b) contravene the requirements of Particular Specification PB; or
- c) execute work outside normal working hours or on special non-working days (refer Clause 41 of the General Conditions of Contract) without the Engineer's permission in writing;

Then the contractor shall pay to the Employer the penalty as set out hereunder and the Employer may without prejudice to any other method of recovery deduct the amount of such penalty from any monies in the hands due or which may become due to the contractor. The penalty shall be the sum of:

- a) R1,000.00 per occurrence; plus
- b) 15 % of the value of work so executed calculated as the product of the quantity (calculated by the Engineer) and the applicable tendered rate.

Particular Specification PC: Building Works

PC 1 ABBREVIATIONS

The following abbreviations shall apply:

AASHTO	:	American Association of State Highway and Transportation Officials
AISI	:	American Institute of Steel Industries
BS	:	British Standard
CKS	:	Co-ordinating Specifications issued by the Central Co-ordinating Committee under the auspices of the South African Bureau of Standards
CSIR	:	Council for Scientific and Industrial Research
SABS	:	South African Bureau of Standards and the number following shall refer to the relevant specification or code of practice as the case may be.

PC 2 MASONRY

PC 2.1 Materials

Materials and workmanship shall comply with the following specifications and requirements:

Material	SANS Specifications	TYPE
Burnt clay masonry units	227	-
Calcium silicate masonry units	285	-
Lime for use in building	523	Hydrated bedding mortar lime
Sand for plaster and mortar	1090	-
Concrete masonry units	1215	-
Prestressed concrete lintels	1504	-
Burnt clay paving units	1575	-
Metal ties for cavity walls	28	-
Masonry cement	ENV 413-1 CKS Specification	MC 12,5
Concrete flooring tiles	208 SABS Code of Practice	
Concrete masonry construction	145	
The structural use of masonry	0164	
Masonry walling	0249	

PC 2.2 Sands

Sand shall be washed where necessary and screened through a 2,4 mm mesh sieve.

PC 2.3 Burnt Clay Bricks

Burnt clay bricks shall be of nominal size 222 x 106 x 73 mm unless otherwise stated. Common bricks shall be General Purpose bricks. Extra hard burnt bricks shall be General Purpose (Special) bricks. Facing bricks shall exhibit a liability to efflorescence not in excess of "Slight" and water absorption when tested in conformity with the requirements of SABS 227 shall not exceed 14%. Particular care shall be taken to preserve arises and faces of facing and paving bricks during transit and handling.

PC 2.4 Concrete Bricks

Concrete bricks shall have a minimum compressive strength of 7 MPa.

PC 2.5 Quarry Tiles, etc

Quarry, cement and similar tiles shall be of approved manufacture, even in shape and size, free from cracks, twits, blemishes and uniform in colour.

PC 2.6 Wire Ties

Wire ties shall be of galvanized steel of the single wire type for solid walls and either the "Butterfly" or Modified PWD type for hollow walls. Ties shall be of sufficient length to allow not less 75 mm of each end to be built into brickwork or embedded in concrete.

PC 2.7 Brickwork Reinforcement

Brickwork reinforcement shall be manufactured from hard drawn steel wire conforming to BS 785 and shall consist of two 2,8 mm diameter main wires with 2,5 mm diameter cross wires at 300 mm centers welded at intersections. Brickwork reinforcement shall be lapped not less than 300 mm at end joints and for a length equal to the width of the widest reinforcement at intersections.

PC 2.8 Mortar

Mortar shall comply with the following table:

1	2	3	4
Mortar Class	Masonry Cement kg	Lime liter	Sand (measured loose and damp) liter max
I	50	0 – 10	130
II	50	0 – 40	200
III	50	0 – 80	300

Mortar shall be Class II unless otherwise specified. Mortar plasticizers may only be used with the approval of the Principal Agent. The materials shall be mixed dry until of uniform colour, water added and the mixture turned over until the ingredients are thoroughly incorporated. Mortar shall be produced in such quantities as can be used before commencement of set and no mortar that has set shall be used.

PC 2.9 Compo Mortar

Compo mortar shall be Class III mortar in accordance with clause F.8 but with a lime content of 80 liter

The lime and sand shall be mixed dry until of uniform colour, water added and the mixture turned over until the ingredients are thoroughly incorporated.

Immediately before use, the cement shall be mixed in and the requisite amount of water added.

Compo mortar shall be produced in such quantities as can be used before commencement of set and no compo mortar that has set shall be used.

PC 2.10 Brickwork

Wherever practicable, brickwork shall be built in stretcher bond. Unless legitimately required to form bond, no false headers shall be used. English bond shall only be used where specifically so indicated or where stretcher bond is not practicable.

Brickwork, unless otherwise described, shall be built in Class II mortar.

Bricks shall be laid on a solid bed of mortar and all joints shall be grouted up solid.

The brickwork shall be carried up in a uniform manner, no part being raised more than 1,2 m above adjoining work.

Where necessary, bricks shall be wetted before being laid and the course of bricks last laid shall be well wetted before laying a fresh course upon it.

Walls in thicknesses of more than one skin shall have at least five wire ties per square metre. Linings to concrete, unless otherwise specified, shall be tied to the concrete with at least five wire ties per square metre.

Hollow walls, unless otherwise specified, shall be built of two half brick skins with cavity between, tied together with at least five wire ties per square metre.

The cavities shall be kept free of all rubbish, mortar droppings and projecting mortar.
Mortar joints to brickwork shall be not less than 8 mm or more than 12 mm thick.

PC 2.11 Blockwork

Unless otherwise described, all blockwork shall be built in stretcher bond. Whole blocks shall be used except where bats or closers are required to form bond.

Blockwork, unless otherwise described, shall be built in Class II mortar.
Solid blocks shall be laid on a solid bed of mortar and all joints shall be grouted up solid.
Hollow blocks shall be laid in shell bedding, i.e. only the inner and outer shells of the blocks shall be covered with mortar. Vertical joints shall be similarly formed.

The blockwork shall be carried up in a uniform manner, no part being raised more than 1,2 m above adjoining work.

Clay blocks shall be wetted before being laid and the course of blocks last laid shall be well wetted before laying a fresh course upon it.

PC 2.12 Centres And Turning Pieces

Centres and turning pieces to soffits of arches and lintels shall be left in position for not less than 14 days.

PC 2.13 Face Brickwork

Face brickwork shall be built in stretcher bond, unless otherwise specified, to a true and fair face. Perpenders shall be vertically aligned.

Facing bricks shall be mixed to ensure that the proper blending of bricks within the colour range of each facing brick being used is obtained.

PC 2.14 Pavings, Sills, Copings, etc

Clay bricks and tiles shall be wetted before fixing and shall be solidly bedded and jointed in Class I mortar and pointed with slightly keyed joints.

PC 3 WATERPROOFING

PE3.1 Materials

Materials and workmanship shall comply with the following specifications and requirements:

Material	SABS Specifications	Type and/o Additional Requirements
Bituminous damp-proof courses	24B	Type FV
Polyolefin sheet in damp-proof courses to walls, sills, etc.	952	Type B
Ditto, to floors and basements	952	Type C

Mastic asphalt for roofing	297	-
Mastic asphalt for damp-proof courses and tanking	298	-
Bituminous roofing felt	92	Type 60
Polyolefin sheet for the waterproofing of flat roofs	952	Type A
Chloroprene rubber sheet (for waterproofing)	580	At least 2,5 mm thick and 1200 mm wide
Sealing compounds with two component polysulphide Base	110	Type 2 Gun Grade
Sealing compounds with two component polyurethane base	1077 SABS Code of Practice	-
The waterproofing of buildings	021	
The installation of profiled roof and side cladding	0237	

PC 3.2 Waterproofing to Roofs, Basements, etc

Waterproofing to roofs, basements, etc shall be carried out by workmen who are experienced in this type of work.

PC 3.3 Damp-Proof Course to Walls

All joints in damp-proof course to walls shall be lapped a minimum of 150 mm except at junctions and corners where the lap shall equal the full thickness of the wall.

PC4 ROOF COVERINGS, ETC

PC4.1 Materials

Materials and workmanship shall comply with the following specifications and requirements:

Material	SABS Specifications
Concrete roofing tiles	542
Clay roofing tiles	632
Softwood brandering and battens	653
Fibre-cement sheets: profiled and flat	685
Aluminium alloy and toughened sheets	903
Zinc coatings	934
Polyethylene sheeting for roof underlay	952
Metal roofing tiles	1022
Glass reinforced polyester laminated sheets (profiled or flat)	1150
Fasteners for roof and wall coverings in the form of sheeting	1273
Materials for thermal insulation of buildings	1381
	BS Specification
Sheet zinc	849
Sheet lead	1178
Sheet aluminium	1470
Sheet copper	2870

SABS

	Code of Practice
Fixing of concrete interlocking roofing tiles	062

PC 4.2 Galvanized Steel Profiled Sheets, etc

Galvanized steel profiled sheets, ridge and hip coverings, etc. shall be coated with a minimum of 275 g zinc per m² and shall be free of white rust.

PC 4.3 Galvanized Sheet Iron

Galvanized sheet iron shall be rolled steel sheet coated on both sides with a minimum of 275 g of zinc per m² and shall be free from white rust.

PC 4.4 Nailing and Screwing

Where nailing and screwing is required: galvanized iron nails and screws shall be used for galvanized sheet iron and sheet zinc copper or copper alloy nails and screws for sheet copper and sheet lead aluminium alloy or stainless steel nails and screws for sheet aluminium.

PC 4.5 Laps

Sheet metal flashings shall have 100 mm laps and linings to valleys, secret gutters, etc. 225 mm laps.

PC 4.6 General

Rates for profiled sheet roofing and rolled edges, ridge and hip coverings, flashing pieces, etc. of metal, fibre-cement, plastic, etc. shall include fixing accessories.

PC 5 CARPENTRY AND JOINERY

PC 5.1 Materials

Materials shall comply with the following specifications and requirements:

Material	SABS Specifications	Grade or Class
Softwood general structural timber	563	Stress grade 4
Softwood engineering timber	1245	As specified
Softwood studs for timber frames in buildings	1146	-
Softwood brandering and battens	653	-
Softwood flooring boards	629	Flooring Grade Heavy Flooring boards
Softwood joinery timber	1359	-
Hardwood joinery timber	1099	Knotty grade
Hardwood strip flooring	281	As specified
Wooden ceiling and paneling boards	1039	As specified
Laminated timber (glulam)	1460	As specified
Gypsum plasterboard	266	-
Wood fibreboard	540	As specified
Wood-wool panels (cement bonded)	637	-
Fibre-cement sheets: profiled and flat	685	As specified
Fibre-cement boards	803	As specified
Plywood and composite board	929	As specified

Particle board: highly moisture resistant exterior and flooring type	1300	-
Particle board: interior type	1301	-
Decorative laminates	1405	High pressure
Wooden doors (flush)	545	Class 4 Dry interior quality
Materials for thermal insulation of buildings	1381	-
Mild steel nails	820	-
Metal screws for wood	1171	-
Creosote	538	As specified

Softwood shall bear the relevant SABS mark and shall be ordered in the sizes in which it will be used as no scantlings of marked timber will be allowed. Should SABS marked timber be unavailable, the Principal Agent's prior permission shall be obtained before using unmarked timber.

PC 5.2 Nomenclature Of Imported Timbers

The names used for imported timbers are those given in Supplement No.1 to SABS 02 namely "Nomenclature of Standards Trade Names of Imported Commercial Timber used in South Africa".

PC 5.3 Hardwoods

All hardwoods shall be specially selected, well-seasoned, and free from sapwood and well kiln dried. Meranti shall be Red or Medium Brown Meranti, even in grain and colour, selected from "Standard and Better" quality from Malaysia.

PC 5.4 Infection and Pretreatment of Timber

All timber used on the site, whether for permanent or temporary work, shall be free of borer or other beetle and termite infection. If the work under this contract fails within an area designated under Government Notice R2577 of 1978-12-29, permanent softwood fixed in the building shall be treated against borer, etc in accordance with Government Notice R451 of 1969-03-28 using Class B or C preservative. The type of preservative used shall be appropriate to the use of the timber. Any prescribed treatment shall comply with SABS 05. When treated timbers are cut, the cut surfaces shall be effectively brushed with at least two coats of preservative solution.

PC 5.5 Construction in General

Where applicable, construction methods shall comply with SABS 082. Boarded floors shall be laid in accordance with SABS 043. Roof trusses shall be manufactured, erected and braced in accordance with SABS 0243.

PC 5.6 Structural Timber

Timbers generally shall be in single lengths and joining of timbers will only be permitted when the required length is unobtainable. Only the absolute minimum of joints to obtain a particular length will be permitted and such joints are to be evenly spaced along the length of the timber.

Finger-jointing of structural timber will be permitted, in which case it shall be manufactured in accordance with SABS 096.

PC 5.7 Plate Nailed Timber Roof Trusses

Plate nailed timber roof trusses shall be of approved design and manufacture and constructed with softwood structural timber by a truss Fabricator holding a current Certificate of Competence awarded by the Institute of Timber Construction.

Each roof truss shall have all its members accurately cut and closely butted together and rigidly fixed by CSIR approved patented galvanized metal spiked connectors, precision pressed on both sides of each intersection by an approved method, all in accordance with the manufacturer's instructions.

The design, manufacture and transportation of the roof trusses, bracing, etc. shall be under the control of a registered Structural Engineer in accordance with SABS 0160 and SABS 0163, who shall, after erection, provide a certificate confirming that the design, manufacture, transportation, erection and bracing has been carried out in accordance with this specification.

The design shall include for all live loads, wind loads and for dead loads imposed by roof covering, purlins, ceilings, etc. Fully detailed shop drawings of all trusses, etc., indicating sizes, bracing, loading, etc., shall be submitted to the Principal Agent for approval prior to fabrication.

Unless specific erection instructions are given, erection shall be carried out in accordance with the procedures and recommendations of the manual "The Erection and Bracing of Timber Roof Trusses" published by the Institute for Timber

Construction and the Council for Scientific and Industrial Research or as detailed by the designer. Roof trusses and bracing shall include design and preparation of shop drawings.

PC 6 TONGUED AND GROOVED BOARDING

Tongued and grooved boards for floors, paneling, etc shall be in long varying lengths with joints tightly cramped up and secret nailed. Flooring boarding shall be flush jointed with staggered heading joints and machine sanded after fixing.

PC 7 JOINERY

Skirtings, cornices, rails, etc. shall be in single lengths wherever practicable and shall have splayed heading joints where necessary. Skirtings shall be trenched at back.

All horns of door frames shall be checked and splayed back where frames are fixed projecting or flush with surface and built in. Heads of screws in exposed faces of hardwood joinery shall be sunk and match pelleted.

Joinery shall have arris rounded angles and shall be blocked and planted on.

PC 8 VENEERS

All face veneers shall be of kiln dried timber, free from knots, cracks, patchwork, sapwood and other defects, selected and glued, dried and machine-sanded to a smooth finish. All veneers shall be applied under hydraulic pressure.

PC 9 DOORS

Flush doors shall have solid timber edge strips with concealed edges. Where doors are to be finished with a transparent finish, the veneer and the edge strips shall be timber of the same species and as far as possible of matching colour. Unless otherwise described all flush doors shall be of interior quality, but where exterior quality doors are specified the glue used shall be of the WBP type.

Framed and ledged batten doors described as filled in with V-jointed boarding shall be filled in flush on one side with tongued and grooved vertical boarding. V-jointed on one or both sides and of the thickness stated. The boarding shall be in narrow widths, closely cramped up, rebated or tongued on outer edges and housed to grooves in stiles and rails and twice countersunk brass screwed at each intersection with ledges and braces and the inner edges of the abutting stiles and rails shall be chamfered to form a V-joint at junction with the board.

Unless otherwise described double doors shall have rebated meeting stiles.

PC 10 FIXING

All nails and screws shall be of the size, length and type appropriate to their respective uses. All screws for hardwood joinery work shall be brass.

Items described as “plugged” shall be screwed to fibre, plastic or metal plugs at not exceeding 600 mm centers. Where items are described as “bolted”, the bolts have been given separately.

PC 11 ADHESIVES

Adhesives shall comply with BS 1204 and 4071 where applicable. Adhesives used in the manufacture of external joinery exposed to excessive moisture (e.g. kitchen and laboratory worktops) shall be of the WBP type.

PC 12 CEILINGS, PARTITIONS AND ACCESS FLOORING

PC 12.1 Materials

Materials shall comply with the following specifications and requirements:

Material	SABS Specifications	Grade or Class
Gypsum plasterboard	266	-
Fibre board	540	As specified
Gypsum cove cornice	622	-
Wood-wool panels (cement bonded)	637	-
Softwood brandering and battens	653	-
Fibre-cement boards	803	as specified
Plywood and composite board	929	as specified
Wooden ceiling and paneling boards	1039	as specified
Softwood studs for timber frames in buildings	1146	-
Materials for thermal insulation of buildings	1381	-
Expanded polystyrene thermal insulation boards	1508	-
Raised access flooring	1549	-

PC 12.2 Tongued and Grooved Boarding

Tongued and grooved boarding for ceilings shall be in long varying lengths, V-jointed one side and with joints tightly cramped up and secret nailed.

PC 12.3 Brandering

Brandering for ceilings and eaves soffit coverings shall be symmetrically arranged with necessary smaller panels. Main branders shall be at right angles to roof timbers, with cross branders cut in between and branders shall be fixed with galvanized wire nails driven in on skew alternately in opposite directions.

PC 12.4 Ceiling Boards

Ceiling boards shall be in long lengths symmetrically arranged with necessary smaller panels, closely butted and secured at 150 mm centers to brandering with galvanized or cadmium-plated clout-headed nails.

PC 12.5 Gypsum Skim Plaster

Gypsum skim plaster shall be pure gypsum plaster finished with a steel trowel.

PC 12.6 Exposed Tee-System Suspended Ceilings

The ceiling panels shall be as described in the items and the panels shall be stiffened at back as recommended by the manufacturer to prevent bowing or sagging.

The exposed surfaces of all ceiling panels and supporting members shall be uniform in colour and free from surface blemishes.

The suspension grid system shall be an approved patent suspension system comprising 38 mm galvanized steel main and cross tee bearers spaced in both directions at centers to suit sizes of ceiling panels used, with the cross bearers fitted between and notched to form flush fit with main bearers. The exposed flange of the tees shall be 25 mm wide, covered with a rolled aluminium cap painted a low sheen satin white. Cornices, etc shall be as described in the item and shall be finished to match the exposed tees.

The main tee bearers shall have holes for cross tees at 300 mm centers and holes for hangers at 50 mm centers. In addition, main and cross tee bearers shall be holed as necessary for and provided with timber wedges or steel clips where recommended by the manufacturer to prevent ceiling panels from lifting.

The web of the exposed cross tee bearers shall extend to form a positive interlock with the main tee bearers and the lower flange shall be cut back to provide a joint free appearance.

All hangers shall be galvanized and shall be at centers to meet the requirements of the specification with one end fixed to the suspension grid main bearers and the other end fitted with suitable galvanized fixing cleat securely fixed to the structure. Fixing point shall be agreed to by the Principal Agent before any power shot fixings are made.

Hangers shall not be suspended from air conditioning ducts. Where recommended by the manufacturer, hangers shall be of the rigid type.

Component parts and fixings shall be non-corrosive and able to withstand atmospheric pollution. Surfaces of aluminium which are in contact with other materials when fixed, particularly metals, shall be suitably insulated to prevent electrolytic corrosion.

Ceilings shall comprise hangers, suspension grid system and ceiling panels, shall be constructed in a manner suitable for carrying air conditioning diffusers and light fittings in the positions required, shall be set out to layouts approved by the Principal Agent and shall have the standard suspension system modified as necessary to work around any pipes or light fittings.

PC 12.7 Flush Plastered Suspended Ceilings

Gypsum plasterboard panels of the specified thickness generally in 1200 mm width and in long lengths shall be fixed grey side down with self-tapping screws to the suspension system with the joints between boards loosely butt jointed and covered with 50 mm wide strips of self-adhesive fibre tape.

The plasterboard panels shall be finished with gypsum skim plaster trowelled to a smooth polished surface to the thickness, etc. recommended by the manufacturer.

The suspension system shall be an approved patent concealed suspension system consisting of galvanized mild steel bearers suspended on approved non-rusting metal hangers spaced generally at 1200 mm centers or to suit layout of air conditioning ducts and other services, etc. above ceiling with one end bolted to the bearer and the other end fitted with a galvanized fixing cleat securely fixed to the structure as required.

Fixing points shall be agreed to by the Principal Agent before any power shot fixings are made. Hangers shall not be suspended from air conditioning ducting.

Ceilings shall comprise hangers, suspension system, ceiling panels and plaster finish, shall be constructed in a manner suitable for carrying air-conditioning diffusers and light fittings in the positions required, shall be set out to layouts approved by the Principal

Agent and shall have the standard suspension system modified as necessary to work around any pipes or light fittings.

PC 13 FLOOR COVERINGS, WALL LININGS, ETC

PC 13.1 Materials

Materials and workmanship shall comply with the following specifications and requirements:

Material	SABS Specification	Grade or Class
Semi-flexible vinyl floor tiles	581	-
Resin modified vinyl floor tiles (thermoplastic)	586	-
Flexible vinyl flooring	786	-
Hardwood block flooring	281	Clear grade
Wood mosaic flooring	978	-
Textile floor coverings (pile construction)	1375	-
Textile floor coverings (needlepunched construction)	1415	-
Carpet underlays	1419	-
	BS Specification	
Sheet linoleum (calendered types), cork, carpet and linoleum tiles	810	-
Solid rubber flooring	1711	
Felt backed linoleum	1863	-
	SABS Code of Practice	
The laying of wood floors	043	
The installation of resilient thermoplastic and similar flexible floor covering materials	070	
The installation of textile floor coverings	0186	

PC 13.2 Laying of Material

Floor tiles shall be laid with continuous joints in both directions.
 Patterned floor coverings shall be matched at joints.

PC 13.3 General

Floor coverings, wall linings, skirtings, nosings, etc. shall include all preparatory work to screeded or plastered surfaces, etc., priming coats and adhesives.

Floor coverings and wall linings shall be dressed around and into corners.

Wood block and wood mosaic flooring shall be sanded with a sanding machine and sealed with a coat of approved penetrating sealer.

Plastic handrails shall have welded and polished butt joints.

PC 14 IRONMONGERY

PC 14.1 Materials

Material shall comply with the following specifications and requirements:

Material	SABS Specifications	Type
Locks, latches and associated furniture for doors	4	-
Kitchen cupboards of steel, composite board and timber	1385	-
Single action overhead door closers	1510	-
Padlocks	1533	-
	CKS Specification	
Vitreous enameled chalkboards	36	—

PC 14.2 Keys

Locks shall have the minimum possible number of interchangeable keys. Cylinder locks and locks described as “ensuite” shall be clearly marked with consecutive numbers and each key shall be punched with the corresponding number of the relative lock.

PC 14.3 Fixing

Unless otherwise described, ironmongery is to be fixed to wood.

Items described as “plugged” shall be screwed to fibre, plastic or metal plugs.

Screws, bolts, etc. for fixing of ironmongery shall be of matching metal and finish, excepts for aluminium ironmongery or ironmongery fixed to aluminium in which cases stainless steel screws may be used.

All necessary preparation of pressed steel door frames for the fixing of ironmongery to the frames has been included with the pressed steel door frames.

PC 15 KITCHEN CUPBOARDS

Steel cupboards shall be finished with baked enamel. Tops and floor cupboards shall have laminated plastic covering.

Cupboards shall be fitted with all necessary hinges, handles, catches, etc. Cupboards shall be securely fixed with all necessary screws and fibre, plastic or metal plugs.

Where cupboards are described as a “series”, tops shall be continuous and cupboards shall be bolted or screwed together, including bolts, screws, holes, etc.

PC 16 PLASTERING

PC 16.1 Materials

Materials and workmanship shall comply with the following specifications and requirements:

Material	SABS Specifications	Type
Masonry cement	ENV 413-1	MC12,5
Lime for use in buildings	523	A2P

Sand for plaster and mortar	1090	—
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PC 16.2 Preparatory Work

Surfaces shall be clean and free of oil and thoroughly wetted directly before any plastering or other in situ finishes are commenced. Concrete surfaces shall be slushed with a mixture of one part cement and one part coarses and or otherwise treated to form a proper key. Preparatory coats shall be thoroughly scored and roughened to form a proper key.

PC 16.3 Constituents Of Mixes

All constituents shall be mixed by volume.

PC 16.4 Finish

All coats of paving and plastering shall be executed in one operation without any blemishes.

PC 16.5 Screeds

Screeds shall be composed of one part cement and four parts sand.

PC 16.6 Cement Render

Cement render shall be composed of one part cement and three parts sand finished with a steel trowel to a smooth polished surface and cured for at least seven days after laying.

Cement render finish shall be divided into panels not exceeding 6m2 with V-joints and deep trowel cuts.

PC 16.7 Granolithic

Granolithic shall be composed of one part cement, one part fine sand, two parts coarse sand and one part granite or other approved stone aggregate that will pass through a 5mm sieve, finished with a steel trowel to a smooth polished surface and cured for atleast seven days after laying.

Coloured granolithic shall be carried out in two coats in one operation and shall be tinted to the required colour with approved colouring pigment mixed into the finishing coat. Under no circumstances is the pigment to be sprinkled on and toweled in after the granolithic is laid.

Granolithic shall be divided into panels not exceeding 6 m2 with V-joints and deep trowel cuts.

PC 16.8 Terrazzo

Terrazzo shall be applied in two coats. The undercoat shall be composed of one part cement and three parts sand and shall be finished with a wooden float. The finishing coat shall be composed of one part cement and two parts marble or stone aggregate of a colour and size to obtain the required colour and texture and shall be at least 12 mm thick, and applied before the undercoat has dried out. The finishing coat shall be compacted by tamping or rolling until superfluous water has been expelled, finished with a steel trowel and cured for at least seven days after laying. The finished surface shall show at least 80% of the aggregate.

Surfaces described as "polished" shall be polished by machine using various grades of abrasive and grouting with tinted cement as necessary between polishings.

Surfaces described as "brushed" shall be brushed with a steel wire brush on the day the terrazzo has been laid to expose the aggregate as required.

Where required, brass or other dividing strips shall be embedded in the undercoat to finish flush with the finished surface.

Sample blocks, each size 300 x 300 mm, as separately measured shall be prepared for approval by the Principal Agent and kept in an accessible place on the site until the completion of the contract.

PC 16.9 Skirtings

Skirtings shall not exceed 25 mm thick and shall have a fair edge with arris or rounded external angle at top edge or V-joint to finish flush with plaster and coved or square junction with floor finish.

PEC 6.10 Thickness of Plaster

All plaster, other than skim plaster, shall be not less than 10 mm and not more than 20mm thick.

PC 16.11 Cement Plaster

Cement plaster shall be composed of one part cement and five parts sand.

PC 16.12 Compo Plaster

Compo plaster shall be composed of one part cement, two parts lime and nine parts sand.

PC 16.13 Gypsum Skim Plaster

Gypsum skim plaster shall be pure gypsum plaster finished with a steel trowel.

PC 16.14 Two-Coat Plaster With Gypsum Finish

Two coat plaster with gypsum finish shall comprise an undercoat composed of one part cement and five parts sand finished with a wooden float. The finishing coat shall be composed of one part cement and three parts stone aggregate that will pass through a 4 mm sieve. The finishing coat shall be flicked on with a machine before the undercoat has set to obtain an even texture.

PC 16.15 Fine Rough-Cast Plaster

Fine rough-cast plaster shall be as for rough-cast plaster but the finishing coat shall be composed of one part cement and three parts coarse sand.

PC 16.16 General

Rates for plastering described as being on vertical surfaces of brickwork or blockwork shall include concrete columns, beams and lintels flush with the face of the wall.

PC 17 TILING

PC 17.1 Materials

Materials and workmanship shall comply with the following specifications and requirements:

Material	SABS Specifications	Type
Glazed ceramic wall tiles and fittings	22	
Glazed and unglazed ceramic wall and floor tiles, fittings and bedding	1449	
Masonry cement	ENV 413-1	MC 12,5
Sand for plaster and mortar	1090 SABS	

The installation of ceramic tiling

Code of
Practice
0107

PC 17.2 Tiles, Mosaics, Etc.

Tiles, mosaics, etc shall be even in shape and size, free from cracks, twists or blemishes and uniform in colour.

PC 17.3 Preparatory Work

Surfaces shall be clean and free of oil and thoroughly wetted directly before any tiling is commenced. Concrete surfaces shall be slushed with a mixture of one part cement and one part coarse sand or otherwise treated to form a proper key.

PC 17.4 Ceramic Wall And Floor Tiling

Where tiles are fixed to plaster or screeds with an adhesive, the adhesive shall be as recommended by the manufacturer of the tiles. Joints shall be straight, continuous and flush pointed with an approved grouting compound.

PC 17.5 General

Tiling described as "on walls" is on brick walls or block walls unless otherwise stated and shall include concrete columns, beams and lintels flush with the face of the wall.

PC 18 PLUMBING AND DRAINAGE

PC 18.1 Materials

Materials and workmanship shall comply with the following specifications and requirements:

Sheet Metal	BS Specifications	
Sheet zinc	849	
Sheet aluminium	1470	
Sheet copper	2870	
Rainwater systems	SABS Specifications	
Unplasticized polyvinyl chloride (UPVC) components for external rainwater systems	11	
Pipes and fittings SABS Class or type Specifications		
Steel pipes and fittings up to 150mm nominal bore and suitable for screwing to ISO R7 pipe threads	62	Medium class, galvanized
Copper tubes for domestic plumbing services	460	Class 1 – Above ground Class 2 – under ground
Hard drawn copper tubes	460	Class 0 – Above ground
Malleable cast iron pipe fittings	509	Galvanized
Black polyethylene pressure pipes for cold water supply	533	-
Cast iron fittings for fibre-cement pressure pipes	546	-
Vitrified clay sewer pipes and fittings	559	-

Reinforced concrete pressure pipes	676	-	
Concrete non-pressure pipes	677	SC Type; Class B	
Cast iron pipes and pipe fittings for use above ground in drainage installations	746	Type B pipes	
Unplasticized polyvinyl chloride (UPVC) sewer and drain pipes and pipe fittings	791	Normal duty, with socket and rubber ring type joint	
Fibre-cement pipes and fittings for drains	819	Class 3	
Pipes and fittings	SABS Specification	Class or type	
Pitch-impregnated fibre pipes and fittings	921	Fittings shall be polypropylene	
Unplasticized polyvinyl chloride (UPVC) pressure pipes and fittings for cold water supply	966	-	
Unplasticized polyvinyl chloride (UPVC) soil, waste and vent pipes and pipe fittings for use above ground in drainage installation	967	-	
Pipes and fittings	SABS Specification	Class or type	
Rubber joint (non-cellular) rings for Pipes	974	-	
Compression and capillary solderfittings for copper tubes	1067	-	
Fibre-cement pressure pipes and couplings (constant internal diameter type)	1223	-	
Polypropylene pressure pipes	1315	-	
Plastic and rubber traps	1321	-	
Vent valves for drainage installations	1532	-	
Pipes and fittings	BS Specification		
Heavy duty cast iron pipe fittings for drainage and gas and water supplies	78		
Lead pipes	602		
Cast iron pressure pipes for use in drainage and gas and water supplies	1211		
Stainless steel pipes for use with compression fittings	4127		
Sanitary fittings, etc.	SABS Specification	Remarks	
Stainless steel sinks with draining boards (for domestic use)	242	-	
Stainless steel wash hand basins	906		Each with two soap recesses
Stainless steel wash troughs	906	For	Installation against walls
Stainless steel sinks for institutional use	907	-	
Stainless steel stall urinals	924	-	

Sanitary fittings, etc	SABS Specifications	Remarks
Acrylic resinous baths	1402	-
Glazed ceramic wash hand basins, sinks, wash down closet pans, urinals, cisterns and block channels	497	-
Hand operated W.C. flushing cisterns	821	-
Flushing devices for W.C. flushing cisterns	1509	-
Flush pipes for high level cisterns	821	-
Flush pipes for low level cisterns	821	-
Taps, valves, etc.	SABS Specification	Class
Taps (metallic)	226	Pillar taps, mixer taps and stoptaps shall be Class 2
Plastic water taps	1021	-
Single control mixer taps	1480	-
Float valves	752	-
Plastic ball floats for ball valves	1006	-
Functional control and safety valves	198	-
Cast iron gate valves	664	-
Automatic shut-off flush valves for water closets and urinals	1240	-
Check valves	1551	-
Portable rechargeable fire Extinguishers	SABS Specification	
Dry powder	810	
Water	889	
Halogenated hydrocarbon	1151	
Other	SABS Specification	
Fixed electric storage water heaters	151	
Fire hose reels (with hose)	543	
Drainage covers, gratings, etc	SABS Specification	
Cast iron surface boxes and manhole and inspection covers and frames	558	
Cast iron gratings for gullies and stormwater drains	1115	
	BS Specifications	
Cast iron step irons	1247	
	SABS Code of Practice	
The installation of polyethylene and unplasticized polyvinyl chloride pipes	0112	
Water supply and drainage for buildings	252	

PC 19 EXCAVATIONS AND BACKFILLING

Earthworks will be done according to SABS 1200D, 1200DB and 1200LB and according to the drawings.

PC 19.1 Concrete

Concrete will be according to SABS 1200G and according to the drawings.

PC 19.2 Brickwork

Brickwork shall be of extra hard burnt bricks built in Class I mortar.

PC 19.3 Plaster

Plaster shall be 1:3 cement plaster finished smooth with a steel trowel. All angles shall be rounded.

PC 19.4 Diameters of Pipes, etc

Diameters stated for pipes, traps, valves, etc are internal diameters except PVC, polyethylene, stainless steel and copper pipes and traps for which external diameters are stated.

PC 20 SHEET METAL WORK AND GUTTERS

PC 20.1 Galvanized Sheet Iron

Galvanized sheet iron shall be rolled steel sheet coated on both sides with Class C zinc coating complying with SABS 934, Sheets shall be free from white rust.

PC 20.2 Galvanized Sheet Iron Gutters

Galvanized sheet iron gutters shall have beaded edges and all joints shall be riveted and soldered. Angles shall be strengthened with 50 x 0,6 mm galvanized sheet iron strips soldered on over the internal faces of mitres.

Gutters shall be fixed with falls to outlets on 30 x 3 mm galvanized mild steel brackets, bent to the shape of gutters, with front ends taken up to the underside of beaded edge of gutter and each screwed to roof timbers or bolted to fibre-cement fascias with 6 mm galvanized gutter bolts.

Gutters shall be bolted to brackets at front with 6 mm galvanized gutter bolts, one to each bracket.

Brackets shall be positioned at joints of gutters and intermediately at non exceeding 1, 25 m centres.

PC 20.3 Fibres-Cement Gutters

Fibre-cement gutters shall have spigot and socket joints.

Gutters shall be fixed with falls to outlets on standard aluminium alloy brackets, screwed or bolted to roof timbers or fascias.

PC 20.4 Unplasticized Polyvinyl Chloride (UPVC) Gutters

Gutters shall be fixed with falls to outlets on brackets as supplied by the manufacturer, screwed or bolted to roof timbers or fascias.

PC 20.5 Aluminium Gutters

Aluminium gutters shall be roll formed on site to required lengths and profiles from 3003H14-3SH4 alloy strip not less than 0, 7 mm thick factory coated on both sides with baked enamel and two coats of silicone modified polyester

to a total minimum thickness of 20 micrometres. Angles, stopped ends, etc. shall be prefabricated units pop riveted to gutters with joints sealed with mastic. The guttering shall be in continuous lengths between angles, stopped ends, etc.

PC 21 RAINWATER PIPES

PC 21.1 Galvanized Sheet Iron Pipes

Galvanized sheet iron pipes shall have seams at the back and shall be jointed with soldered slip joints.

Pipes shall be fixed to walls, etc. with galvanized mild steel holderbats spaced at not exceeding 2 m centers with tails driven in or cut and pinned in 1:3 cement mortar.

PC 21.2 Fibres-Cement Pipes

Fibre-cement pipes shall have spigot and socket joints.

Pipes shall be fixed to walls, etc. with standard aluminium alloy holderbats with tails driven in or cut and pinned in 1:3 cement mortar.

PC 21.3 Unplasticized Polyvinyl Chloride (UPVC) Pipes

Pipes shall be fixed to walls, etc. with patented UPVC or aluminium clips and holderbats as supplied by the manufacturer of the pipe.

PC 21.4 Aluminium Pipes

Aluminium pipes and fixing straps shall be formed from 3003H14-3SH4 alloy strip not less than 0,7 mm thick factory coated on both sides as described for aluminium gutters.

Pipes shall be in continuous lengths with formed angles, offsets, shoes, etc.

Pipes shall be fixed to walls, etc. with 20 x 0,6 mm straps at not exceeding 1,5 m centers screwed to 25 x 75 x 100 mm hardwood chamfered and oiled blocks plugged to walls.

PC 21.5 Stormwater Channels

In-situ concrete stormwater channels shall be constructed of unreinforced concrete with segmental channel formed in top. Channels shall be laid to falls on a well rammed earth bottom and finished smooth on exposed surfaces.

Precast concrete channels shall be of 25 MPa concrete, generally in 1m length, finished smooth from the mould on exposed surfaces, laid to falls on a well rammed earth bottom, jointed in 1:3 cement mortar and pointed with keyed joints.

PC 21.6 Joints

Joints of pipes not covered in SABS Specifications shall be as follows:

Pipe

Fibre-cement, concrete, pitch impregnated fibre and vitrified clay pipes for use underground in non-pressure pipe lines.
Cast iron for use above ground

Joint

Flexible joints in accordance with the manufacturer's instructions

Spigot and socket joints with tarred rope yarn and caulking compound

Or

Plain ended joints with stainless steel couplings with neoprene rubber sleeves.

Cast iron for use below ground	Spigot and socket joints with tarred rope yarn and caulking compound.
Galvanized mild steel materials shall be as follows:	Joints of screwed galvanized steel sockets or bolted galvanized iron flanges.
	Screwed joints with plastic jointing tape or hemp.
	Flanged joints which shall be bolted and provided with rubber gaskets and with flanges screwed to pipes
Joints between pipes of different materials shall be as follows:	Spigot and socket joint with semi-dry cement caulking and 1:2 cement mortar fillet
Between cast iron and mild steel	
Between cast iron and clay	Spigot and socket joint with semi-dry cement caulking and 1:2 cement mortar fillet

PC 21.7 Fixing of Pipes

Pipes shall be fixed as follows: Galvanised mild steel (except those stated in 8.3)	To walls with galvanized mild steel brackets for pipes not exceeding 80 mm diameter and with galvanized cast iron hinged holderbats with brass pins or bolts for pipes exceeding 80 mm diameter, both types with tails cut and pinned in 1:3 cement mortar
Copper and stainless steel	To walls with brass holderbats or screw-on type two-piece spacing clips for pipes not exceeding 75 mm diameter and with purpose made holderbats for pipes exceeding 75mm diameter; both types with tails cut and pinned in 1:3 cement mortar. To woodwork with screw-on type brass holderbats
Cast iron and galvanized mild steel for soil, waste and vent pipes	To walls with hinged cast iron holderbats with brass bolts and with tails cut and pinned in 1:3 cement mortar To woodwork with screw-on type galvanized mild steel holderbats
Polyethylene, polypropylene and patented UPVC or unplasticized polyvinyl chloride	To walls, woodwork, etc with aluminium clips and holderbats as supplied by the manufacturer of the pipes
Fibre-cement	To walls with aluminium alloy holderbats with tails cut and pinned in 1:3 cement mortar
Pipes fixed to ceilings	Fixed with holderbats and standard or purpose made hangers, with extended hangers for pipes to falls

PC 22 PIPES LAID IN GROUND

PC 22.1 Water Pipes

Water pipes, gas pipes, etc laid in ground shall be at least 600 mm deep from the crown of the pipe to the finished surface.

PC 22.2 Drain Pipes

Excavations taken out too deep shall be filled in with selected soil and compacted.

Backfilling to sides and up to 300 mm above plastic pipes shall be free from stone or hard substances which will not pass a 10 mm mesh.

PC 22.3 Cleaning Eye Lids

Cleaning eye lids for drain pipe fittings shall be fixed and sealed as follows:

Pipe fittings	Method of sealing and fixing
Fibre-cement	Sealed with synthetic rubber or bituminous mastic packing and fixed with screws
Vitrified clay	Polypropylene lid sealed with synthetic rubber packing and pressed into position
Polypropylene and unplasticized polyvinyl chloride	Sealed with synthetic rubber packing and screwed on or pressed into position
Cast iron	Sealed with tallow or putty and fixed with non-ferrous metal screws
Galvanized malleable cast iron and cast brass	Sealed with synthetic rubber packing and screwed in

PC 22.4 Cleaning Eyes

Cleaning eyes shall consist of cast iron frames and lids with letters "CE" (or "SO") cast in lids. The lids shall be secured with non-ferrous metal screws. Frames shall be jointed to vertical drain pipes. Cleaning eyes shall be encased in unreinforced concrete taken up to ground level and plastered on exposed surfaces.

PC 22.5 Inspection Eye Marker Slabs

Inspection eye marker slabs shall be 350 x 350 x 50 mm thick precast concrete finished smooth from the mould, with letters "IE" (or "IO") formed in top and placed flush in ground or paving.

PC 22.6 Gulleys

Gulleys shall be built up of traps, vertical piping and gulley heads with loose gratings, all encased in unreinforced concrete to finish flush with gulley head top and taken up to at least 50 mm above surrounding finished surfaces. The outer top edge of the concrete encasing shall be splayed and the exposed surfaces plastered.

PC 22.7 Dished Gulleys

Dished gulleys shall be built up of traps, vertical piping and gulley heads with loose gratings, all encased in unreinforced concrete and with dished unreinforced concrete hopper size 450 x 450 mm overall around gulley head with rounded kerb 50 mm wide to front and sides and 25 mm wide at back, 100 mm high above top of dishing and the hopper plastered on exposed surfaces. Top of hopper shall be taken up to at least 50 mm above surrounding finished surfaces.

PC 23 SUMPS, CATCHPITS, INSPECTION CHAMBERS

PC 23.1 Rainwater Sumps

Rainwater sumps shall be built with half-brick sides on 100 mm thick unreinforced concrete bottom, plastered internally on walls and with 80 mm high unreinforced concrete kerb at top rebated for grating or cover and plastered on exposed surfaces.

PC 23.2 Stormwater Catchpits and Inspection Chambers

Brick catchpits and inspection chambers shall be built with one-brick sides on 150 mm thick unreinforced concrete bottom projecting 100 mm beyond walls all round, plastered internally on walls and with 100 mm thick reinforced concrete cover slab with opening rebated for frame of grating or cover and plastered on exposed surfaces.

Precast concrete catchpits and inspection chambers shall be constructed in accordance with the applicable details shown on Drawing LE-1 of SABS 1200LE.

Precast concrete manhole sections and slabs shall comply with SABS 1294 and the requirements for pipes of SC type and Class A of SABS 677.

PC 23.3 Sewer Inspection Chambers

Brick inspection chambers shall be built as for brick stormwater inspection chambers and with the bottom of the chamber well benched around half round channels, bends, junctions, etc. up to sides of chamber in unreinforced concrete finished smooth.

Precast concrete inspection chambers shall be constructed in accordance with the applicable details shown on Drawing LD-5 of SABS 1200LD. Precast concrete manhole sections and slabs shall comply with SABS 1294 and the requirements for pipes of SC type and Class A of SABS 677.

PC 23.4 Stormwater Drain Junction Boxes

Junction boxes shall be formed of 150 mm thick unreinforced concrete bottom and sides to suit the various sizes of the drain pipes and built after the pipes have been laid, with the sides taken up slightly higher than the highest pipe and finished level on top for and covered with a 75 mm thick loose precast concrete slab.

PC 23.5 Step Irons

Where inspection Chambers exceed 1,2 m deep, cast iron step irons shall be provided, built into the wall at 300 mm centers and staggered regularly in vertical rows spaced at 200 mm centers horizontally.

PC 23.6 Stopcock and Meter Boxes

Stopcock and meter boxes shall be built with half-brick sides with a cast iron box and lid complying with SABS 558 set in 75 mm wide unreinforced concrete kerb for the full depth of the cast iron box and plastered on exposed surfaces.

PC 23.7 Valve Chambers

Valve chambers shall be built with half-brick sides with 100 mm thick unreinforced concrete kerb to top with rebate for cover and frame to finish flush with adjacent paving or finished ground level and plastered on exposed surfaces.

PC 23.8 Cast Iron Covers, Gratings, etc.

All cast iron covers, gratings, frames and surface boxes shall be coated with preservative solution. Frames shall be cast into concrete. Covers, except covers to stormwater drainage or electrical cable inspection chambers, shall be set in grease.

PC 23.9 Concrete Encasing

Concrete encasing for pipes, bends, traps, gulleys, grease traps, etc. shall be unreinforced concrete not less than 100 mm thick all round.

PC 24 SANITARY FITTINGS

PC 24.1 General

Glazed ceramic, acrylic and porcelain enameled sanitary fittings and component parts shall be white. Accessories for sanitary fittings shall be chromium plated brass.

Waste outlets for baths, basins, etc. shall comprise chromium plates brass waste union with grating, rubber washers and locknut, fitted with rubber or vulcanite plug on a chromium plated brass chain and stay.

PC 24.2 Stainless Steel Sanitary Fittings

Stainless steel sinks and draining boards, basins, wash troughs and urinals shall be AISI Type 304 satin finished stainless steel.

All stainless steel fittings shall be treated on the back with a vermin proof sound deadening coated.

Sinks, basins and wash troughs shall be provided with 40 mm diameter screwed waste outlets.

PC 24.3 Precast Concrete Wash Troughs

Reinforced precast concrete wash troughs shall have a sloping front with ribbed rubbing surface and shall be finished smooth on exposed faces with top edges and inner angles rounded. Each compartment shall be fitted with a 40 mm diameter waste outlet. Wash troughs shall each be supported on two reinforced precast concrete pedestals finished smooth on exposed faces.

PC 24.4 Steel Baths

Steel baths shall be porcelain enamelled internally and painted externally and fitted with waste outlet and overflow grating with coupling.

PC 24.5 Acrylic Resinous Baths

Acrylic resinous baths shall be fitted with waste outlet and overflow grating with coupling.

PC 24.6 Acrylic Resinous Wash Hand Basins

Acrylic resinous wash hand basins and vanity units shall have a smooth high gloss finish, with outlet openings, soap recesses, tap-holes and integral overflow and shall be fitted with waste outlet and overflow grating with coupling.

PC 24.7 Glazed Ceramic Sanitary Fittings

Sinks shall be provided with integral weir overflows.

Wash-down closet pans shall have wash-down action and be provided with smooth finished injection moulded polypropylene heavy duty double flap seats fixed with nonferrous bolts.

Urinal channels shall be provided with outlet gratings fitted in bitumen.

PC 24.8 Flushes And Sparge Pipes

Flush pipes for high level cisterns shall be of plastic or drawn galvanized steel.

Flushpipes for low level cisterns shall be of plastic.

Flush and sparge pipes for urinals with high level cisterns shall be of chromium plated copper piping and of the sizes recommended by the manufacturer of the urinal.

PC 25 INSTALLATION OF SANITARY FITTINGS

Sanitary fittings shall be installed as follows:

PC 25.1 Recast Concrete Wash Troughs

Precast concrete wash troughs shall be bedded on top of pedestals which shall be bedded on floors in 1:3 cement mortar.

PC 25.2 Stainless Steel Wash Troughs And Wash Hand Basins

Stainless steel wash troughs and wash hand basins shall be fixed to walls on a pair of galvanized mild steel galleys brackets bolted to wall with 6 mm diameter expanding bolts.

PC 25.3 Acrylic Resinous Wash Hand Basins

Acrylic resinous wash hand basins shall be fixed to walls on a pair of standard painted cast iron brackets screwed to underside of basin and bolted to wall with 6 mm diameter expanding bolts.

PC 25.4 Ceramic Wash Hand Basins

Ceramic wash hand basins shall be fixed to walls on a pair of standard painted steel or cast iron brackets bolted to wall with 6mm diameter expanding bolts.

PC 25.5 Acrylic Resinous Baths

Acrylic resinous baths shall be bedded in 1:5 cement mortar on three cross rows of bricks or bedded solid on a layer of dry river sand and fixed to wall with galvanized steel brackets under edges (in the middle of the sides against walls) bolted to wall with 6mm diameter expanding bolts and sealed along top against wall finishes with patent mildew resistant silicone rubber.

PC 25.6 Washdown Closet Pans And Cisterns

Wash-down closet pans shall be bedded on floors in 1:3 cement mortar. Cisterns shall be fixed to walls with 6mm diameter expanding bolts.

PC 25.7 Ceramic Urinals

Ceramic stall and slab urinals shall be bedded on floors and against walls in 1:3 cement mortar. Slabs, channels, treads, etc. shall be jointed in 1:3 cement mortar and pointed in white cement.

Ceramic bowl urinals shall be fixed to walls on standard steel brackets bolted to wall with 6 mm diameter expanding bolts. Cisterns shall be fixed to walls on standard brackets bolted to wall with 6mm diameter expanding bolts.

PC 25.8 Stainless Steel Urinals

Stainless steel stall and slab urinals shall be bedded on floors in 1:3 cement mortar and with backs and sides against walls filled in with fine unreinforced concrete. Cisterns shall be fixed as cisterns for ceramic urinals.

PC 25.9 Fire Hose Reels

Fire hose reels shall each be fitted with a 30m long hose of internal diameter not less than 19 mm with a 4,8 mm internal diameter chromium plated brass nozzle.

PC 26 FIRE EXTINGUISHERS

All fire extinguishers shall be fully charged.

PC 27 TESTS

Medium Pressure pipelines, sanitary plumbing including fittings and hot and cold water supply and fire service shall be tested to the approval of the Principal Agent and Local Authority.

The Contractor shall provide all testing apparatus, material and labour required for the tests and inspections.

PC 28 GLAZING

PC 28.1 Materials

Materials and workmanship shall comply with the following specifications and requirements:

MATERIAL	SABS Specifications	Class
Glazing putty	680	-
Silvered glass mirrors	1236	A
Safety and security glazing materials	1263	-
Base sealing compounds	1305	-
	CKS Specifications	
Glass for glazing	55	
	BS Specifications	
Glass	952	
	SABS Code of Practice	
Installation of glazing materials in buildings	0137	

PC 29 PUTTY

Glazing putty shall be Type I for wooden sashes and Type II for steel sashes. Putty for glazing to unpainted hardwood shall be tinted to match the colour of the wood.

Back putty shall not exceed 3 mm thick. Putty shall not be painted until it has formed a surface crust, and if the putty does not form a surface crust it shall be replaced.

Butyl putty shall be used where glass is to be fixed in aluminium sashes with glazing beads.

Non-setting compounds shall be used where laminated glass is fixed in sashes with glazing beads.

PC 30 PAINTWORK

PC 30.1 Materials

Materials shall comply with the following specifications and requirements:

MATERIAL	SABS Specifications	Grade or Type
Matt or eggshell decorative paint for internal work	515	-
Decorative high gloss enamel paint for internal and exterior work	630	Grade I
Primers for wood for external work	678	Type I
Primers for wood for internal work	678	Type III
Zinc chromate primers for steel	679	Type I
Undercoats for paints (except emulsion paint)	681	Type I
Aluminium paint	682	Grade II
Roof paints	683	Type B
Structural steel paint	684	Type B
Wash primer (metal etch primer)	723	-
Varnish for interior use	887	Type I
Calcium plumbate primer	912	-
Emulsion paints	1586	-

Materials for paintwork shall be delivered to the site in unopened containers and applied in accordance with the manufacturer's instructions. Materials shall be suitable for application to the surfaces concerned. Undercoats shall be as recommended by the manufacturer of the finishing coats.

PC 30.2 Preparatory Work

PC 30.2.1 Plastered surfaces

Plastered surfaces shall be thoroughly inspected and, if necessary, washed down and brushed in order to remove any traces of efflorescence and allowed to dry completely before any paint finish is applied. Before any paint is applied, holes, cracks and irregularities in plaster and other surfaces shall be filled with a suitable filler and finished smooth. Unfinished concrete surfaces shall have all projections rubbed off and shall be thoroughly cleaned with a spirits-of-salts solution (1 part concentrated spirits of- salts to 4 parts water).

PC 30.2.2 Metal surfaces

Metal surfaces shall be sanded, where necessary, washed with a suitable cleaning agent and left smooth.

Protective coatings applied by manufacturers to galvanized metal surfaces shall be removed with a suitable agent and the surfaces washed down.

Rust, grease and defective factory primers on metal surfaces, as well as pitch on cast iron pipes, shall be removed.

PC 30.2.3 Wood surfaces

Knots in woodwork shall be treated with knotting. Minor blemishes shall be filled with suitable filler. Wood surfaces shall be sanded smooth.

PC 30.3 Application of Paint

Primers to wood surfaces shall be applied by brush. Primers to other surfaces may be applied by roller with the approval of the Principal Agent. Undercoats and finishing coats may be applied by brush or roller.

Paint shall not be sprayed on except in the case of cellulose and other special paints where spray painting is the accepted method of application.

Before subsequent coats of paints are applied the previous coat shall be properly dry and shall be sanded down where necessary.

PC 30.4 Colour Scheme

A colour scheme comprising colours and the blending of colours approved by the

Principal Agent shall be used for the paintwork. The tints of the undercoats shall closely match the finishing coat but nevertheless differ sufficiently to indicate the number of undercoats. Colour samples of the finishing coats shall be provided in all cases.

PC 30.5 General

Paintwork shall include the preparation of surfaces, filling, stopping, sanding and priming of nail heads and screws.

Where windows, sashes, etc. are to be painted, the rebates of the openings to be glazed shall be primed

Particular Specification PD: HIV / AIDS **Specification**

HIV/AIDS SPECIFICATION

HIV/AIDS REQUIREMENTS

PD 1 SCOPE

This specification contains all requirements applicable to the contractor for creating HIV/AIDS awareness amongst all the Workers involved in this project for the duration of the construction period, through the following strategies:

- Raising awareness about HIV/AIDS through education and information on the nature of the disease, how its transmitted, safe sexual behaviour, attitudes towards people affected and people living with HIV/AIDS, how to live a healthy lifestyle with HIV/AIDS, the importance of voluntary testing and counselling, the diagnosis and treatment of Sexually Transmitted Infections and the closest health Service Providers
- Informing Workers of their rights with regard to HIV/AIDS in the workplace
- Providing Workers with access to condoms and other awareness material that will enable them to make informed decisions about sexual practices

PD 2 DEFINITIONS AND ABBREVIATIONS

PD 2.1 Definitions

Service Provider: The natural or juristic person recognized and approved by the Alfred Nzo District Municipality as a specialist in conducting HIV/AIDS awareness programmes

Service Provider Workshop Plan: A plan outlining the content, process and schedule of the training and education workshops, present by an Service Provider which has been approved by the Representative/Agent

Worker: Person in the employ of the Contractor or under the direction or supervision of the Contractor or any of his Sub-contractor, who is on site for a minimum period of 30 days in all

PD 2.2 Abbreviation

HIV	:	Human Immunodeficiency Virus
AIDS	:	Acquired Immune Deficiency Syndrome
STI	:	Sexually Transmitted Infection

PD 3 BASIC METHOD REQUIREMENT

The Contractor shall, through a Service Provider, conduct onsite workshops with the Workers

The Service Provider shall develop and compile a Service Provider Workshop Plan to be presented at the workshops and which will be best suited for this project to achieve the specified objectives with the regard to HIV/AIDS awareness.

The Service Provider Workshop Plan shall be based on the following information provided by the Contractor:

- Number of Workers and Sub-contractors on site
- When new Workers or Sub-contractors will join the construction project
- Duration of Workers and Sub-contractors on site
- How the maximum number of Workers can be targeted with workshops
- How the Contractor prefers workshops to be scheduled, e.g. three hourly sessions per Worker, or one 2.5 hour workshop per Worker
- Profile of Workers, including educational level, age and gender (if available)
- Preferred time of day or month to conduct workshops
- A Gantt chart reflecting the construction programme, for scheduling of workshops
- Suitable venues for workshops

The Contractor shall submit the Service Provider Workshop Plan for approval within 21 days after the tender acceptance date. After approval by the Representative/Agent, the Contractor shall make available a suitable venue that will be conducive to education and training

The Service Provider Workshop Plan shall address, but will not be limited to the following:

- 3.1 The nature of the disease;
- 3.2 How it is transmitted;
- 3.3 Safe sexual behaviour;
- 3.4 Post exposure services such as voluntary counseling and testing (VCT) and nutritional plans for people living with HIV/AIDS;
- 3.5 Attitudes towards other people with HIV/AIDS;
- 3.6 Rights of the Worker in the workplace;
- 3.7 How the Awareness Champion will be equipped prior to commencement of the HIV/AIDS awareness programme with basic HIV/AIDS information and the necessary skills to handle questions regarding the HIV/AIDS awareness programme on site sensitively and confidentially;
- 3.8 How the Service Provider will support the Awareness Champion;
- 3.9 Location and contact numbers of the closest clinics, VCT facilities, counselling services and referral systems;
- 3.10 How the workshop will be presented, including frequency and duration;

- 3.11 How the workshop will fit in with the construction programme;
- 3.12 How the Service Provider will assess the knowledge and attitude levels of attendees to structure workshops accordingly;
- 3.13 How the video will be used;
- 3.14 How the Service Provider will elicit maximum participation from the Workers;
- 3.15 A questions and answers slot (interactive session)

The Service Provider Workshop Plan shall encompass the Specific Learning Outcomes (SLO) as stipulated

PD 4 HIV/AIDS AWARENESS EDUCATION AND TRAINING

PD 4.1 Workshops

The Contractor shall ensure that all Workers attend the workshop

The workshops shall adequately deal with all the aspects contained in the Service Provider Workshop Plan. In order to enhance the learning experience, groups of not exceeding 25 people shall attend the interactive sessions of the workshops

PD 4.2 Recommended practice

PD 4.2.1 Workshop Schedule

Presenting information contained in the Service Provider Workshop Plan can be divided in as many workshops sessions as deemed practicable by the Contractor, provided that all Workers are exposed to all aspects of the workshops as outlined in the Service Provider Workshop Plan

Breaking down the content of information to be presented to the Workers into more than one workshop session however, has the added advantage that messages are reinforced over time while providing opportunity between workshop sessions for Workers to reflect and test information. Workers will also have an opportunity to ask questions at a following session

PD 4.2.3 HIV/AIDS Specific Learning Outcomes and Assessment Criteria

Workers shall be exposed to workshops for a minimum duration of two-and –a-half hours. In order to set a minimum standard requirement, the following specific learning outcomes and assessment criteria shall be met

PD 4.2.3.1 UNIT 1: The nature of HIV/AIDS

After studying and understanding this unit, the Worker will be able to differentiate between HIV and AIDS and comprehend whether or not it is curable. The Worker will also be able to explain how HI virus operates once a person is infected and identify the symptoms associated with the progression of HIV/AIDS

Assessment Criteria:

1. Define and describe HIV and AIDS
2. List and describe the progression of HIV/AIDS

PD 4.2.3.2 UNIT 2: Transmission of the HI virus

After studying and understanding this unit, the Worker will be able to identify bodily fluids that carry the HI virus. The Worker will be able to recognize how HIV/AIDS is transmitted and how it is not transmitted

Assessment Criteria:

1. Record in what bodily fluids the HI virus can be found
2. Describe how HIV/AIDS can be transmitted
3. Demonstrate the ability to distinguish between how HIV/AIDS is transmitted and misconceptions around transmittance of HIV/AIDS

PD 4.2.3.3 UNIT 3: HIV/AIDS preventative measures

After studying and understanding this unit, the Worker will comprehend how to act in a way that would minimize the risk if HIV/AIDS infection and to use measures to prevent the HI virus from entering the bloodstream

Assessment Criteria:

1. Report on how to minimize the risk of HIV/AIDS infection
2. Report on precautions that can be taken to prevent HIV/AIDS infection
3. Explain or demonstrate how to use a male and female condom
4. List the factors that could jeopardize the safety of condoms provided against

HIV/AIDS transmission

PD 4.2.3.4 UNIT 4: Voluntary HIV/AIDS counselling and testing

After studying and understanding this unit, the Worker will be able to recognize methods of testing for HIV/AIDS infection. The Worker will be able to understand the purpose of voluntary HIV/AIDS testing and pre- and post-test counselling

Assessment Criteria:

1. Describe methods of testing for HIV/AIDS infection
2. Report on why voluntary testing is important
3. Report on why pre- and post-test counselling is important

PD 4.2.3.5 UNIT 5: Living with HIV/AIDS

After studying and understanding this unit, the Worker will be able to recognize the importance of caring for people living with HIV/AIDS and be able to manage HIV/AIDS

Assessment Criteria:

1. List and describe ways to manage HIV/AIDS
2. Describe nutritional needs of people living with HIV/AIDS
3. Describe ways to embrace a healthy lifestyle as a person living with HIV/AIDS
4. Explain the need for counselling and support to people living with HIV/AIDS

PD 4.2.3.6 UNIT 6: Treatment options for people with HIV/AIDS

After studying and understanding this unit, the Worker will be familiar with various treatments available to HIV/AIDS infected or potentially HIV/AIDS infected people

Assessment Criteria:

1. Discuss anti-retroviral therapy
2. List methods of treatment to prevent HIV/AIDS transmission from mother-to-child
3. Describe the need for treatment of opportunistic diseases for people living with HIV/AIDS
4. Describe post exposure prophylactics

PD 4.2.3.7 UNIT 7: The rights and responsibility of Workers in the workplace with regard to HIV/AIDS

After studying and understanding this unit, the Worker will be able to identify the rights and responsibilities of the Worker living with HIV/AIDS in the workplace. The Worker will recognize the importance of accepting colleagues living with HIV/AIDS and treating them in a non-discriminative way

Assessment Criteria

1. Discuss the rights of a person living with HIV/AIDS in the workplace
2. Discuss the responsibilities of a person living with HIV/AIDS in the workplace
3. Report on why acceptance and non-discrimination of colleagues living with HIV/AIDS is important

PD 4.3 Displaying of plastic laminated posters and distribution of information booklets

The Contractor shall obtain a set of four laminated posters conveying different key messages and information booklets.

The above-mentioned posters and information booklets have been prepared to raise awareness and share information about HIV/AIDS and STI's

Posters or display stands shall be displayed on site as soon as possible , but not later than 14 days after the date of site handover

Posters shall be displayed in areas highly trafficked by Workers, including toilets, rest areas, the site office and compounds

The posters on display must always be intact, clear and readable

Information booklets must be distributed to all Workers as soon as possible, but not later than 14 days after site handover, or as soon as the Worker joins the site

PD 5 PROVIDING WORKERS WITH ACCESS TO CONDOMS

The contractor shall provide and maintain condom dispensers and make both male and female condoms, complying with the requirements of SABS ISO 4074, available at all times to all Workers at readily accessible points on site, for the duration of the contract. The Contractor may obtain condom dispensers from the Department of Health and condoms may be obtained from the Local Clinic or the Department of Health

At least one male and one female condom dispenser and a sufficient supply of condoms, all to the approval of the Representative /Agent, shall be made available on site within 14 days of site hand over. Contractors should note that arrangements to obtain condoms from the Department of Health Clinics prior to site hand over may be necessary, to ensure that condoms are available within 14 days of site handover

Condoms shall be made available in areas highly trafficked by Workers, including toilets, the site office and compounds

PD 6 ENSURING ACCESS TO HIV/AIDS TESTING AND COUNSELLING FACILITIES AND TREATMENT OF SEXUALLY TRANSMITTED INFECTIONS (STI)

The Contractor shall provide Workers with the names of the closest Service Providers that provide HIV/AIDS testing and counseling and Clinics providing Sexually Transmitted Infection (STI) diagnosis and treatment. Information on these Service Providers and Clinics must be displayed on a poster of a size not smaller than A1 in an area highly trafficked by Workers

PD 7 APPOINTMENT OF AN HIV/AIDS AWARENESS CHAMPION

Within 14 days of site handover the Contractor shall appoint an Awareness Champion from amongst the Workers, who speaks, reads and writes English, who speaks and understands all the local languages spoken by the Workers and who shall be on site during all stages of the construction period. The Contractor shall ensure that the Awareness Champion has been trained by the Service Provider on basic HIV/AIDS information, the support services available and the necessary skills to handle questions regarding the HIV/AIDS programme in a sensitive and confidential manner

The Awareness Champion shall be responsible for:

- 1.1 Liaising with the Service Provider on organizing awareness workshops;
- 1.2 Filling condom dispensers and monitoring condom distribution;
- 1.3 Handing out information booklets;
- 1.4 Placing and maintaining poster

PD 8 MONITORING

The Contractor shall grant to the Representative/Agent reasonable access to the construction site, in order to establish that the Contractor complies with his obligations regarding HIV/AIDS awareness under this contract

The Contractor must report problems experienced in implementing the HIV/AIDS requirements to the Representative/Agent

The attached SITE CHECKLIST (SCHEDULE A) shall be completed and submitted at every construction progress inspection to the Representative/Agent

The attached SERVICE PROVIDER REPORT (SCHEDULE B) shall be completed and submitted on a monthly basis to the Client's Project Manager, through the Representative/Agent

The attached CONTRACTOR HIV/AIDS PROGRAMME REPORT (SCHEDULE C), a close out programme report, shall be completed by the Contractor at the end of the contract

Particular Specification PE: Contractors Reports

CONTRACTOR MONTHLY REPORT

Project No: **Project Name:**.....

Contract No:

Contractor Name:

Claim No:..... **For Period Ending:**.....

Date of Report:

The Contractors Monthly Report comprises an integral part of the Contractors Payment Claim and processing of the payment claim is not permitted without this report also being submitted i.e. "NO REPORT – NO PAYMENT".

Attachments:

Part 2 Overall Project Worker Schedule: Schedule of all local labourers Employed since the start of the project

Part 3 Weekly Task Wage Register

Part 4 Local Labour Schedule

OVERALL PROJECT WORKER SCHEDULE (local labourers only) Contact No: **PART 2**

Project No.

Project Name:

Month of Report:

Names of all **Local Workers** employed **at any time on the project** are to be entered in the table below irrespective of how long they worked on the project.

No.	Name of Local Labourer	Identity Number	Month Worker Started	Age	Tick if Yes										Place a tick in the box which corresponds to the Gender and Age of the Worker					
					Female Head of Household with Dependants	Disabled	Labourer	Semi-Skilled	Skilled	Supervisor	Clerical	Managerial	Professional	Women		Men				
														Over 35 yrs 2A	35 yrs & under 2B	Over 35 yrs 2C	35 yrs & under 2D			
Totals for this sheet																				Total No. of workers Employed on the Project
Totals from previous sheet																				
Totals carried forward																				
					(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N) = (J+K+L)		

Completed by: Name:..... Signature:Capacity:..... Date:.....

Arthur Homes Water Supply

Project No. ProjectName: Week Ending: Sheet:..... of.....

(A)

C.3.1 118

CONTRACT NO.: ORTDM SCMU 01-24/25
Arthur Homes Water Supply

Completed by: Name..... Signature:..... Capacity:..... Date:

Local Labour and Material Schedule

Part 4

Contract No

Date of Report:

Project No

Project Name:.....

Claim No:

For Period Ending:.....

Contractor Name:

1. Summary of Day Tasks worked and Amount Spent on Local Labour this month

Week no.	Week Ending	Total Day Tasks/Person Days Worked	Total Amount Paid
		(Total of (A) From Form 4 for each week)	(Total of (B) from Form 4 for each week)
1			R
2			R
3			R
4			R
5			R
6			R
7			R
8			R
9			R
Total		R	

Transfer to 2 in table below

2. Summary of Amount Spent on Local Labour to date

1. Previous Amount Spent on Local Labour (From previous claim)	R
2. Amount Spent on Local Labour this month (From total above)	R
3. Total Amount Spent on Local Labour to date (3)=(1+2)	R

3. Local Labour Schedule

Summary of Local Labour Employed	No of local workers who worked on the project to date (From part 2)	% of Total
Columns refer to Columns in Part 2		
1. Total No. of Individual local workers who have worked on the Project (Column N)		100%
10. How many of the Total No. are local youth (35 yrs and under) (Column B&D)		
11. How many of the Total No. are Local women (Column A + B)		

4. Summary of Amount Spent on Material to Date (Cumulative)

Item	This month	Total to date
1. Material from Local Municipality		
2. Material from Local District Municipality		
3. Material from Outside the Eastern Cape		

4. Material from other areas within the Eastern Cape		
Total material		
Total material as percentage of contractor expenditure		
Total as percentage of contractor budget		

5. Training of Local Workers

Category of training	Name of course	No. trained	Days trained	Comments on progress
(a) Technical training for implementation	Bricklaying			
	Carpentry			
	Plumbing			
	Fencing			
	Plastering			
	Painting			
	House Building			
	Handyman			
	Electrical			
(b) Institutional training for local management beyond construction				
(c) Technical training for OMM				
(d) Institutional training for implementation				
(e) HIV/AIDS etc.				
Other – Please Specify				
Total				

Completed by:
Name Signature Capacity Date

Particular Specification PF: Health and Safety

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PART A

GENERAL OCCUPATIONAL HEALTH AND SAFETY PROVISIONS

1. INTRODUCTION

In terms of the Construction Regulation 4(1) (a) of the Occupational Health and Safety Act, No. 85 of 1993, ORTDM, as the Client, is required to compile a Health & Safety Specification for any intended construction project and provide such specification to any prospective tenderer.

This Construction Health and Safety Specification (CHSS) has as an objective to ensure that Principal Contractors / Contractors entering into a Contract with ORTDM achieve an acceptable level of occupational health and safety performance. This document forms an integral part of the Contract and Principal and other Contractors should make it part of any Contracts that they may have with Contractors and/or Suppliers.

Compliance with this construction health and safety specification does not absolve the Principal Contractor / Contractor from complying with minimum legal requirements and the Principal Contractor / Contractor remains responsible for the health & safety of his employees and those of his Mandataries.

2. SCOPE

This Construction Health And Safety Specification shall be applicable to all projects commissioned by ORTDM (Client) involving "Construction Work" as defined in the Occupational Health And Safety Act 85 of 1993 (As Amended) and applicable regulations regardless of size and value of works.

The construction health and safety specification will provide the requirements that Principal Contractors and other Contractors will have to comply with in order to reduce the risks associated with construction work that may lead to incidents causing injury and/or ill health, to a level as low as reasonably practicable.

3. LEGAL REQUIREMENTS

All Principal Contractors / Contractors entering into a contract with the ORTDM shall, as a minimum requirement but not limited, comply with the following legislation:

- Occupational Health & Safety Act and Regulations (Act 85 of 1993)
- Compensation for Occupational Injuries & Diseases Act (Act 130 of 1993)
- Construction Regulations, 2014 (Government Gazette 37305).

4. STRUCTURE AND RESPONSIBILITIES

OVERALL SUPERVISION AND RESPONSIBILITY FOR OH&S

The Chief Executive Officer of the Principal Contractor / Contractor, in terms of Section 16(1) of the Act, shall ensure that the Employer (as defined in the Act) complies with the Act.

Annexure 2 "Legal Compliance Audit" may be used for this purpose.

Every Principal Contractor / Contractor when appointing Contractors (Sub-contractors) in terms of Construction Regulations 5(3), (5), (9), (10) and (12) shall do so in terms of section 37(2) of the Occupational Health And Safety Act 85 of 1993 (As amended).

Every Principal Contractor / Contractor shall appoint designated competent employees and/or other competent persons as required by the Act and Regulations.

Below is a list of identified possible (not limited to these) appointments / designations required depending on the size and nature of the project where applicable.

Designation / Appointment	Ref. Section/Regulation in OHS Act.
Asbestos Stripping/Demolishing Supervisor	(Asbestos Regulations)Batch Plant
Supervisor	(Construction Regulation 18(1))
Construction Vehicles/Mobile Plant/Machinery Supervisor	(Construction Regulation 18(1))
Demolition Supervisor	(Construction Regulation 21)
Drivers/Operators Of Construction Vehicles/Plant	(Construction Regulation 12)
Electrical Installation And Appliances Inspector	(Construction Regulation 21)
Emergency/Security/Fire Coordinator	(Construction Regulation 22)
Excavation Supervisor	(Construction Regulation 27)
Explosive Powered Tool Supervisor	(Construction Regulation 11)
Fall Protection Supervisor	(Construction Regulation 19)
First Aider	(Construction Regulation 8)
Fire Equipment Inspector	(General Safety Regulation 3)
Formwork & Support Work Supervisor	(Construction Regulation 27)
Hazardous Chemical Substances Supervisor	(Construction Regulation 10)
Incident Investigator	(Hcs Regulations)
Ladder Inspector	(General Admin Regulation 29)
Lifting Equipment Inspector	(Gen. Safety Reg. 13a)
Materials Hoist Inspector	(Construction Regulation 20)
OH&S Committee	(Construction Regulation 17)
OH&S Officer	(Construction Regulation 17)
OH&S Representatives	(OHS Act Section 19)
Person Responsible For Machinery	(Construction Regulation 6(6))
Scaffolding Supervisor	(OHS Act Section 17)
Stacking & Storage Supervisor	(General Mach. Regulation 2)
Structures Supervisor	(Construction Regulation 14)
Suspended Platform Supervisor	(Construction Regulation 26)
Tunnelling Supervisor	(Construction Regulation 9)
Vessels Under Pressure Supervisor	(Construction Regulation 15)
Working on/next to Water Supervisor	(Construction Regulation 13)
Welding Supervision	(VUP Regulations)
	(Construction Regulation 24)
	(General Safety Regulation 9)

The appointments shall be in writing on Principal Contractor's / Contractor's letterhead and the responsibilities clearly stated together with the period for which the appointment/designation is valid. This information shall be communicated and agreed with the appointees.

Copies of appointments/designations shall be submitted to the ORTDM together with concise CV's of the appointees. ORTDM reserves the right to approve / disapprove an appointee and any changes in appointed / designated personnel shall be brought to the attention of ORTDM before the appointee assumes responsibility.

The Principal Contractor / Contractor shall, provide ORTDM with an organogram of all appointed / designated personnel and contractors and keep an up to date copy on site at all times.

In terms of Construction Regulation 6(6), or when instructed by ORTDM or an Inspector of the Department of Labour, the Principal Contractor /Contractor shall appoint a full-time or part-time competent Occupational Health And Safety Construction Officer (SHE Officer). This appointment shall be subject to approval by ORTDM.

5. DESIGNATION OF OH&S REPRESENTATIVES (SECTION 18 OF THE OHSACT)

Where the Principal Contractor / Contractor employs more than 20 persons (including the employees of other Contractors), the Principal Contractor / Contractor shall ensure that Occupational Health and Safety Representatives are appointed in terms of the General Administrative Regulations and section 17 of the Act. OH&S Representatives shall be designated in writing and the designation must include the area of responsibility of the person and term of the designation.

6. DUTIES AND FUNCTIONS OF THE OH&S REPRESENTATIVES (SECTION 19 OF THE ACT)

The Principal Contractor / Contractor shall ensure that the designated SHE Reps conduct weekly inspections of their respective areas of responsibility using a checklist and report thereon to the Principal Contractor.

7. APPOINTMENT OF OH&S COMMITTEE (SECTION 20 OF THE OHASA ACT)

The Principal Contractor / Contractor shall establish an Occupational Health & Safety Committee consisting of all the designated SHE Reps and other co-opted persons.

Members of this committee shall be appointed in writing and shall meet at least monthly and the meeting Agenda shall contain the following but not limited to:

- Opening & Welcome
- Present/Apologies/Absent
- Minutes of previous Meeting
- Matters Arising from the previous Minutes
- OH&S Reps Reports
- Incident Reports & Investigations
- Incident /Injury Statistics
- Other Matters
- Endorsement of registers and other statutory documents by a representative of the Principal Contractor
- Close/Next Meeting.

**8. HAZARD IDENTIFICATION AND RISK ASSESSMENT
(CONSTRUCTION REGULATION 7)**

RISK ASSESSMENTS

Part B contains a list of Risk Assessment headings that have been identified by ORTDM as possibly applicable to the abovementioned construction work. It is, by no means, exhaustive and is offered as assistance to Principal Contractor / Contractor intending to tender.

DEVELOPMENT OF RISK ASSESSMENTS

Every Principal Contractor / Contractor performing Construction Work shall, before the commencement of any Construction Work or work associated with the aforesaid Construction Work and during such work, cause a Risk Assessment to be performed by a competent person, appointed in writing, and the Risk Assessment shall form part of the OH&S Plan and be implemented and maintained as contemplated in Construction Regulation 5(1).

THE RISK ASSESSMENT SHALL INCLUDE, AT LEAST:

- the identification of the risks and hazards to which persons may be exposed to
- the analysis and evaluation of the risks and hazards identified
- a documented plan of safe work procedures to mitigate, reduce or control the risks and hazards that have been identified

- a monitoring plan
- a review plan.

Based on the Risk Assessments, the Principal Contractor / Contractor shall develop a set of site-specific Safe Work Procedures (SWP's) that will be applied to regulate the OH&S aspects of the construction.

The Risk Assessments, together with the site-specific SWP's shall be submitted together with the Occupational Health and Safety Plan to ORTDM before site hand over.

Despite the Risk Assessments listed in Annexure 7, the Principal Contractor / Contractor shall conduct a baseline Risk Assessment and the aforesaid listed Risk Assessments must be incorporated into the base-line Risk Assessment. The baseline Risk Assessment shall further include Safe Working Procedures (SWP's) and the applicable Method Statements based on the Risk Assessments.

REVIEW OF RISK ASSESSMENTS

The Principal Contractor / Contractor shall review the Hazard Identification, Risk Assessments and SWP's at each Production Planning and Progress Report meeting as the construction work develops and progresses and each time changes are made to the designs, plans and construction methods and processes.

The Principal Contractor / Contractor shall provide the ORTDM and other Contractors with copies of any changes, alterations or amendments of the abovementioned.

9. THE OCCUPATIONAL HEALTH AND SAFETY FILE

As required by Construction Regulation 5(7), the Principal Contractor / Contractor shall keep and maintain a Site Health And Safety File/s containing the following documents as a minimum:

- Notification of Construction Work (Construction Regulation 3.)
- Copy of OH&S Act and applicable Regulations
- Proof of Registration and good standing with a COID Insurer (Construction Regulation 4 (g))
- Occupational Health & Safety Plan agreed with the Client including the underpinning Risk Assessment/s & Method Statements (Construction regulation 5 (1))
- Copies of OH&S Committee and other relevant Minutes
- Designs / drawings (Construction Regulation 5 (8))
- Legal compliance registers
- A list of Contractors (Sub-Contractors) including copies of the agreements between the parties and the type of work being done by each Contractor (Construction Regulation 9).

10. LEGAL INSPECTION REGISTERS AS FOLLOWS:

The Principal Contractor / Contractor shall conduct all prescribed inspections using legal compliance registers. All registers shall be kept on file/s and ORTDM reserves the right to inspect all legal compliance registers.

- Accident/Incident Register (Annexure 1 of the General Administrative Regulations)
- OH&S Representatives Inspection Register
- Asbestos Demolition & Stripping Register
- Batch Plant Inspections
- Construction Vehicles & Mobile Plant Inspections by Controller
- Daily Inspection of Vehicles and Plant and other Equipment by the Operator/Driver/User
- Demolition Inspection Register
- Designer's Inspection of Structures Record
- Electrical Installations, -Equipment & -Appliances (including Portable Electrical Tools)
- Excavations Inspection

- Explosive Powered Tool Inspection/Maintenance/Issue>Returns Register (incl. cartridges & nails)
- Fall Protection Inspection Register
- First Aid Box Contents
- Fire Equipment Inspection & Maintenance
- Formwork & Support Work Inspections
- Hazardous Chemical Substances Record
- Ladder Inspections
- Lifting Equipment Register
- Materials Hoist Inspection Register
- Machinery Safety Inspection Register (incl. machine guards, lock-outs etc.)
- Scaffolding Inspections
- Stacking & Storage Inspection
- Inspection of Structures
- Inspection of Suspended Platforms
- Inspection of Tunneling Operations
- Inspection of Vessels under Pressure
- Welding Equipment Inspections
- Inspection of Work conducted on or near water
- All other applicable records.

11. OH&S GOALS & OBJECTIVES & ARRANGEMENTS FOR MONITORING & REVIEW OF OH&S PERFORMANCE

The Principal Contractor shall maintain a Compensation Incidence Frequency Rate (CIFR) of at least 8 (See Annexure 3. "Measuring Injury Experience") and report on this to ORTDM on a monthly basis.

12. NOTIFICATION OF CONSTRUCTION WORK (CONSTRUCTION REGULATION 3.)

The Principal Contractor shall, where the Contract meets the requirements laid down in Construction Regulation 3, within 5 working days of appointment, notify the Department of Labour of the intention to carry out construction work and use the form (Annexure A in the Construction Regulations) for the purpose. A copy shall be kept on file.

13. TRAINING, AWARENESS AND COMPETENCE

The Principal Contractor / Contractor shall include training certificates of appointed / designated personnel in the Health and Safety Plan.

14. SITE SPECIFIC INDUCTION TRAINING

The Principal Contractor / Contractor shall develop project specific Health and Safety Induction Training based on the Risk Assessments and ensure that all employees receive induction training. No employees shall be allowed on site unless there is proof of induction training and identification at all times.

15. OTHER TRAINING

All operators, drivers and users of construction vehicles, mobile plant and other equipment shall be in possession of valid proof of training.

All employees in jobs requiring training in terms of the Act and Regulations shall be in possession of valid proof of training.

Failure to adhere to the above mentioned will result in the operator's eviction off site and no delay claims will be entertained by the client.

OH&S Training Requirements: (as required by the Construction Regulations and as indicated by the OH&S Specification & the Risk Assessment/s):

- General Induction (Section 8 of the Act)
- Site/Job Specific Induction (also visitors) (Sections 8 & 9 of the Act)
- Site/Project Manager
- Construction Supervisor
- OH&S Representatives (Section 18 (3) of the Act)
- Operators & Drivers of Construction Vehicles & Mobile Plant (Construction Regulation 21)
- Basic Fire Prevention & Protection (Environmental Regulations 9 and Construction regulation 27)
- Basic First Aid (General Safety Regulations 3)
- Storekeeping Methods & Safe Stacking (Construction Regulation 26)
- Emergency, Security and Fire Coordinator.

16. AWARENESS & PROMOTION

The Principal Contractor / Contractor shall develop and implement a health and safety promotion and awareness scheme for all employees and others affected by work activities. The following are some of the methods that may be used:

- Toolbox Talks
- OH&S Posters
- Videos
- Competitions
- Suggestion schemes
- Participative activities such as OH&S Safety circles.

17. COMPETENCE

The Principal Contractor / Contractor shall ensure that his and other Contractors' personnel appointed are competent and that all training required to do the work safely and without risk to health, has been completed before work commences.

The Principal Contractor / Contractor shall ensure that follow-up and refresher training is conducted as construction work progresses and the work situation changes.

Records of all training shall be kept on the OH&S File for auditing purposes.

18. CONSULTATION, COMMUNICATION AND LIAISON

All occupational health and safety liaison between the Client, the Principal Contractor, other Contractors, the Designer and other concerned parties shall be through the OH&S committee.

In addition to the above, communication may be directly to the Client or his appointed Agent, in writing, as and when the need arises.

Consultation with the workforce on OH&S matters shall be through their Supervisors, OH&S Representatives, the OH&S committee and their elected Trade Union Representatives, if any.

The Principal Contractor / Contractor shall be responsible for the dissemination of all relevant OH&S information to other Contractors e.g. design changes agreed with the Client and the Designer, instructions by the Client and/or his/her Agent, exchange of information between Contractors, the reporting of hazardous/dangerous conditions/situations etc.

19. AUDITS, REPORTING AND CORRECTIVE ACTIONS

MONTHLY AUDIT BY ORTDM (CLIENT) (CONSTRUCTION REGULATION 1(D))

Occupational Health and Safety Audits will be conducted monthly to comply with Construction Regulation 4(1) (d) to ensure that the Principal Contractor / Contractor has implemented and is

maintaining the agreed and approved OH&S Plan.

OTHER AUDITS AND INSPECTIONS BY O. R. TAMBO DISTRICT MUNICIPALITY

ORTDM reserves the right to conduct other ad hoc audits and inspections as deemed necessary.

CONDUCTING AN AUDIT

A representative of the Principal Contractor / Contractor shall accompany O R Tambo District Municipality's Representative on all Audits and Inspections and may conduct his / her own audit / inspection at the same time.

CONTRACTOR'S AUDITS AND INSPECTIONS

The Principal Contractor / Contractor shall conduct monthly internal audits to verify compliance with his own occupational health and safety management systems and procedures.

INSPECTIONS BY OCCUPATIONAL HEALTH AND SAFETY REPRESENTATIVE'S AND OTHER APPOINTEES

Occupational Health and Safety Representatives shall conduct weekly inspections of their areas of responsibility and report thereon to their foreman or supervisor whilst other appointees shall conduct inspections and report thereon as specified in their appointments e.g. vehicle, plant and machinery drivers, operators and users must conduct daily inspections before start-up.

20. RECORDING AND REVIEW OF INSPECTION RESULTS

All the results of the abovementioned inspections to be in writing, reviewed by the occupational health and safety committee, and endorsed by the chairman of the meeting and kept on file.

21. REPORTING OF INSPECTION RESULTS

The Principal Contractor / Contractor shall provide ORTDM a monthly report in the format as per the attached Annexure 4: "SHE Risk Management Report"

22. INCIDENT REPORTING

REPORTING OF ACCIDENTS AND INCIDENTS (SECTION 24 AND GENERAL ADMINISTRATIVE REGULATION 8 OF THE OHASA ACT)

The Principal Contractor shall report all reportable (in terms of the Act and Regulations) and shall provide ORTDM with copies of all statutory reports required in terms of the Act within 7 days of the incident occurring.

The Principal Contractor shall provide ORTDM with copies of all internal and external accident / incident investigation reports including the reports contemplated above and below within 7 days of the incident occurring.

23. ACCIDENT AND INCIDENT INVESTIGATION (GENERAL ADMINISTRATIVE REGULATION 9)

The Principal Contractor / Contractor shall investigate all accidents / incidents where employees and non-employees were injured to the extent that he / she / they had to be referred for medical treatment by a doctor, hospital or clinic and results recorded on file.

The Principal Contractor / Contractor shall investigate all minor and non-injury incidents as described in Section 24 (1) (b) & (c) of the Act and keep a record of the results of such investigations including the steps taken to prevent similar incidents in future.

The Principal Contractor / Contractor shall investigate all road traffic accidents and keep a record of the results of such investigations including the steps taken to prevent similar accidents in future.

ORTDM reserves the right to hold its own Investigation into any incident or call for an independent external investigation.

24. EMERGENCY PREPAREDNESS, CONTINGENCY PLANNING AND RESPONSE

The Principal Contractor / Contractor shall appoint a competent person to act as Emergency Controller/Coordinator.

The Principal Contractor / Contractor shall conduct an emergency identification exercise and establish what emergencies could possibly develop. He/she shall then develop detailed contingency plans and emergency procedures, taking into account any emergency plan that ORTDM may have in place.

The Principal Contractor / Contractor shall hold regular practice drills of contingency plans and emergency procedures to test them and familiarize employees with them.

25. FIRST AID (GENERAL SAFETY REGULATION 3)

The Principal Contractor / Contractor shall provide First Aid equipment (***including a stretcher***) and have qualified First Aider/s as required by General Safety Regulation 3 of the Occupational Health and Safety Act 85 of 1993 (As amended).

The Contingency Plan of the Principal Contractor / Contractor (See 23. above) shall include the arrangements for speedily and timeously transporting injured / ill person/s to a medical facility or of getting emergency medical assistance to person/s that may require it.

The Principal Contractor / Contractor shall have firm arrangements with his other Contractors in place regarding the responsibility of the other Contractors injured / ill employees.

26. SECURITY

The Principal Contractor / Contractor shall establish site access rules, implement and maintain these throughout the construction period. Access control procedure shall ensure that non-employees do not proceed on to work areas unaccompanied by a senior site responsible person or other.

27. FIRE PREVENTION AND PROTECTION

The Principal Contractor / Contractor shall at all times ensure that:

- The risk of fire is avoided;
- Sufficient & suitable storage of flammables is provided;
- Sources of ignition is obviated wherever flammable or highly combustible material is present in the workplace e.g.:
 - notices prohibiting smoking is displayed and enforced;
 - welding and flame cutting is only allowed under controlled conditions that includes written hot work permits;
 - only spark-free hand and power tools are used;
 - no grinding, cutting and shaping of ferrous metals are allowed using electrically driven power tools that produces sparks;
 - flameproof switches & fittings are to be used in the flammable atmosphere;
 - good housekeeping is maintained to prevent the accumulation of unnecessary combustibles;
 - adequate ventilation is maintained;
 - adequate and suitable fixed and portable fire appliances is provided and maintained in good working order.

Maintenance Shall Include:

- Regular inspection by a competent person appointed in writing and keeping a register;
- Annual inspection and service by an accredited service provider.

All employees are instructed in the use of the Fire equipment and know how to attempt to extinguish a fire. A sufficient number of employees are appointed and trained to act as Emergency Team to deal with fires and other emergencies.

- Employees are informed regarding emergency evacuation procedures and escape routes
- Emergency escape routes are kept clear at all times
- After evacuation assembly points are demarcated
- Evacuation is practiced to ensure that all are evacuated timeously
- Roll call is held after evacuation to account for all personnel and ensure that no one has been left behind.
- A clearly audible, to all persons on site, siren or alarm is fitted.

28. TOILETS

The provision of Toilets is required in terms of the National Building Regulations and Construction Regulation 28.

Chemical toilets are allowed instead of the water borne sewerage type. Toilets shall be provided at a ratio of 1 toilet per 30 workers.

29. SHOWERS

Regardless of size and nature of a project, the Principal Contractor / Contractor shall provide at least cold water showers or similar facility a ratio of 1 shower per 15 workers.

30. CHANGE ROOMS

Regardless of size and nature of a project, the Principal Contractor / Contractor shall provide screened off changing facility must be provided separately for each sex.

31. EATING FACILITY

Regardless of size and nature of a project, the Principal Contractor / Contractor shall provide and maintain an eating facility sheltered from the sun, wind and rain, etc.

32. LIVING ACCOMMODATION

Where the site is in a remote location and transport home is not readily available, reasonable and suitable living accommodation shall be provided.

33. PERSONAL & OTHER PROTECTIVE EQUIPMENT (SECTIONS 8/15/23 OF THE OHS ACT)

The Principal Contractor / Contractor shall identify the hazards in the workplace and deal with them. Personal Protective Equipment (PPE) should, however, be the last resort and there should always first be an attempt to apply engineering and other solutions to mitigating hazardous situations before the issuing of PPE is considered.

Where it is not possible to create an absolutely safe and healthy workplace the Contractor shall inform employees regarding this and issue, free of charge, suitable equipment to protect them from any hazards being present and that allows them to work safely and without risk to health in the hazardous environment.

It is a further requirement that the Contractor maintain the said equipment, that he instructs and trains the employees in the use of the equipment and ensures that the prescribed equipment is used by the

employee/s.

Employees do not have the right to refuse to use/wear the equipment prescribed by the employer and, if it is impossible for an employee to use or wear prescribed protective equipment through health or any other reason, the employee cannot be allowed to continue working under the hazardous condition/s for which the equipment was prescribed but an alternative solution has to be found that may include relocating or discharging the employee.

The Contractor may not charge any fee for protective equipment prescribed by him/her but may charge for equipment under the following conditions:

- Where the employee requests additional issue in excess of what is prescribed
- Where the employee has deliberately abused or neglected the equipment leading to early failure
- Where the employee has lost the equipment.

All employees shall be issued with the following PPE on ORTDM projects (where appropriate to the conditions they are working in) and instructed to wear them:

- Protective overalls
- Protective footwear
- Protective headwear
- Eye/face protection
- Hearing protection
- Breathing protection.

34. PUBLIC HEALTH & SAFETY (SECTION 9 OF THE OHS ACT)

The Principal Contractor / Contractor shall be responsible for ensuring that non-employees affected by the construction work are made aware of the dangers likely to arise from said construction work as well as the precautionary measures to be observed to avoid or minimize these dangers. This includes:

- Non- employees entering the site for whatever reason
- The surrounding community
- Passers-by.

Appropriate signage shall be posted to this effect and all employees on site shall be instructed on ensuring that non-employees are protected at all times.

All non-employees entering the site shall receive induction into the hazards and risks and the control measures for these.

PART B – SITE SPECIFIC REQUIREMENTS

35. FALL PROTECTION (CONSTRUCTION REGULATION 8.)

A pre-emptive Risk Assessment shall be required for any work carried above two metres from the ground or any floor level and will be classified as “Work in Elevated Positions”.

As far as is practicable, any person working in an elevated position shall work from a platform, ladder or other device that is at least as safe as if he/she is working at ground level and whilst working in this position be wearing a single belt with lanyard that shall be worn to prevent the person falling from the platform, ladder or other device utilized.

This safety belt shall be, as far as is possible, secured to a point away from the edge over which the person might fall and the lanyard shall be of such a length that the person will not be able to move over the edge.

Alternatively any platform, slab, deck or surface forming an edge over which a person may fall may be fitted with guard rails at two different heights as prescribed in SANS 1085: Code of Practice for the Design, Erection, Use and Inspection of Access Scaffolding.

Where the above mentioned requirement is not practicable, the person shall be provided with a full body harness that shall be worn and attached above the wearer's head at all times and the lanyard must be fitted with a shock absorbing device.

Where the above-mentioned requirements are not practicable, a suitable catch net shall be erected. Workers working in elevated positions shall be trained to do this safely and without risk to safety and health. Where work on roofs is carried out, the Risk Assessment shall take into account the possibility of persons falling through fragile material, skylights and openings in the roof.

36. STRUCTURES (CONSTRUCTION REGULATION 9)

The Principal Contractor / Contractor shall ensure that:

- Steps are taken to ensure that no structure becomes unstable or collapses due to construction work being performed on it or in the vicinity of it
- No structure is overloaded to the extent where it becomes unsafe
- He/she has received from the designer the following information:
 - Information on known or anticipated hazards relating to the construction work and the relevant information required for the safe execution of the construction work
 - A geo-scientific report (where applicable)
 - The load the structure is designed to bear
 - The methods and sequence of the construction process
- All drawings pertaining to the design are on site and available for inspection.

37. FORMWORK AND SUPPORT WORK (CONSTRUCTION REGULATION 10.)

- Formwork and Support work shall be carried out under the supervision of a competent person designated in writing
- Formwork and Support work Structures shall be so designed, erected, supported, braced and maintained that it will be able to support any vertical or lateral loads that may be applied
- No load is to be imposed onto the structure that the structure is not designed to carry
- Formwork & Support work shall be erected in accordance with the structural design drawings for that Formwork and Support work and, if there is any uncertainty, the designer must be consulted before proceeding with the erection/use of the formwork and support work
- All drawings pertaining to the formwork and support work shall be kept available on site
- A competent person, before use must check all equipment used in the erection of formwork and support work
- The foundation or base upon which formwork and support is erected on shall be able to bear the weight and keep the structure stable
- Employees erecting formwork and support work shall be trained in the safe work procedures for the erection, moving and dismantling
- Safe access (and emergency escape) shall be provided for workers

- A competent person must inspect formwork and support work structures that have been erected before, during and after pouring of concrete or the placing of any other load and thereafter daily until the formwork and support work is stripped.
- The results of all inspections must be recorded in a register kept on site
- The formwork and support work shall be left in place until the concrete has reached sufficient strength to bear its own weight plus any additional weight that may be imposed upon it and not until the designated competent person has authorized its stripping in writing
- Any damaged formwork and support work shall be repaired / rectified immediately
- Deck panels shall be secured against displacement.
- The slipping of persons on release agents on deck panels shall be prevented
- Person's health shall be protected against the use of solvents, oils or other similar substances.

38. EXCAVATIONS (CONSTRUCTION REGULATION 11.)

Where excavations will exceed 1, 5 m in depth the Principal Contractor / Contractor shall submit a Method Statement to ORTDM for approval before commencing with the excavation and ORTDM will issue a permit to proceed once the Risk Assessment and Method Statement are approved.

- Excavation work shall be carried out under the supervision of a competent person who has been appointed in writing.
- Before excavation work begins the stability of the ground shall be evaluated.
- Whilst excavation work is being performed, the contractor shall take suitable and sufficient steps to prevent any person from being buried or trapped by a fall or dislodgement of material.
- No person may be required or permitted to work in an excavation that has not been adequately shored or braced or where:
 - the excavation is in stable material or where;
 - the sides of the excavation are sloped back to at least the maximum angle of repose measured relative to the horizontal plane.
- The shoring or bracing may not be left out unless written permission has been obtained from the appointed competent person and shoring and bracing shall be designed and constructed to safely support the sides of the excavation.
- Where uncertainty exists regarding the stability of the soil the opinion of a competent professional engineer or professional technologist shall be obtained whose opinion will be decisive. The opinion must be in writing and signed by the engineer or technologist as well as the appointed excavator.
- No load or material may be placed near the edge of an excavation if it is likely to cause a collapse of the trench unless suitable shoring has been installed to be able to carry the additional load.
- Any neighbouring building, structure or road that may be affected or endangered by the excavation shall be protected from damage or collapse.
- Every excavation shall be provided with means of access that must be within 6 metres of any worker within the excavation.
- The location and nature of any existing services such as water, electricity, gas etc. shall be established before any excavation is commenced with and any service that may be affected by the excavation must be protected and made safe for workers in the excavation.
- Every excavation including the shoring and bracing or any other method to prevent collapse shall be inspected by the appointed competent person as follows:
 - Daily before work commences
 - After every blasting operation
 - After an unexpected collapse of the excavation
 - After substantial damage to any supports
 - After rain.

The results of any inspections shall be recorded in a register and kept on site.

Every excavation accessible to the public or that is adjacent to a public road or thoroughfare or that threatens the safety of persons, shall be adequately barricaded or fenced to at least one metre high and as close to the excavation as practicable and provided with warning lights or visible boundary indicators after dark or when visibility is poor.

Upon entering an excavation the requirements of General Safety Regulation 5 shall be observed:

- any confined space may only be entered after the air quality has been tested to ensure that it is safe to breathe and does not contain any flammable mixture or
- the confined space has been purged and ventilated of any hazardous or flammable gas, vapour, dust or fumes the safe atmosphere must be maintained or
- employees shall wear breathing apparatus and wear a safety harness with a rope with the free end of the rope being attended to by a person outside the confined space

An additional person trained in resuscitation shall be in full-time attendance immediately outside the confined space and additional breathing and rescue apparatus shall be kept immediately outside the confined space for rescue purposes. All pipes, ducts etc. that may leak into the confined space to be blanked off sufficiently to prevent any leakage or seepage.

The employer shall ensure that all employees have left the confined space after the completion of work where flammable gas is present in a confined space no work may be performed in close proximity to the flammable atmosphere that may ignite the flammable gas or vapour.

39. DEMOLITION WORK (CONSTRUCTION REGULATION 12.)

Demolition work to be carried out under the supervision of a competent person who has been appointed in writing.

A detailed structural engineering survey of the structure to be demolished shall be carried out and a method statement on the procedure to be followed in demolishing the structure to be developed by a competent person, before any demolition may be commenced.

As demolishing progresses the structural integrity of the structure is to be checked at intervals as determined in the method statement by the appointed competent person in order to prevent any premature collapse.

Steps shall be taken to ensure that where a structure is being demolished:

- no floor, roof or any other part of the structure is overloaded with debris or material that would make it unsafe
- precautions are taken to prevent the collapse of the structure when any frame or support is cut or removed
- shoring or propping is applied where necessary.

No person shall be required or allowed to work under unsupported overhanging material. The stability of any adjacent building, structure or road shall be maintained at all times. The location and nature of any existing services such as water, electricity, gas, etc. shall be established before any demolition is commenced with and any service that may be affected by the demolition must be protected and made safe for workers.

Every stairwell in a building being demolished shall be adequately illuminated.

Convenient and safe means of access shall be provided.

A catch platform or net shall be erected over every entrance to the building or structure being demolished where the likelihood exists of material or debris falling on persons entering and leaving and every other area where the likelihood exists of material or debris falling on persons, shall be fenced or barricaded.

No material may be dropped on the outside of the building unless the area into which it is dropped is fenced off or barricaded.

Waste and debris may only be disposed of from a height in a chute with the following design:

- Adequately constructed and rigidly fastened
- If inclined >45 degrees enclosed on all four sides
- Fitted with a gate or control mechanism to control the flow of material that may not freefall down the chute
- Discharged into a container or a barricaded area.

Demolition equipment may only be used on floors or slabs that are able to support it.

Asbestos related work shall be conducted to the requirements of the Asbestos regulations promulgated under the OHS Act and in particular Asbestos Regulation 21:

- Demolition of asbestos may only be carried out by a registered (with the Department of Labour) Asbestos Contractor;
- All asbestos materials likely to become airborne must be identified;
- A Plan of Work must be submitted for approval to an Approved Asbestos Inspection Authority (AAIA) (approved by the Department of Labour) 30 days prior to commencement of demolishing work unless the Plan was drawn up by an AAIA and a signed (by all parties) copy must be submitted to the Department of Labour 14 days before commencement of the demolishing.

DURING DEMOLITION WORK:

- All asbestos containing material shall be disposed of safely.
- Employees shall be issued with appropriate PPE and the proper use thereof enforced.
- After the demolition has been completed the area/premises shall be thoroughly checked to ensure that all asbestos waste has been removed.
- No person is allowed to:
 - o Use compressed air or permit the use of compressed air to remove asbestos dust from any surface or person
 - o Smoke, eat, drink or keep food or beverages in an area not specifically designated for this
 - o Apply asbestos by spraying.
- Lead related work shall be conducted to the requirements of the Lead regulations promulgated under the OHS Act.
- Where demolition work will involve the use of explosives a method statement must be developed by a competent person in accordance with applicable explosives legislation.

40. TUNNELLING (CONSTRUCTION REGULATION 13)

Definition of Tunnelling: "the construction of any tunnel beneath the natural surface of the earth for the purpose other than the searching for or winning of a mineral.

To be performed in accordance with the Tunnelling Regulations as published under the Mines Health & Safety Act (29 of 1996).

No person shall enter a tunnel that has a height dimension less than 800 mm.

41. ACCESS SCAFFOLDING (CONSTRUCTION REGULATION 14)

Access Scaffolding shall be erected, used and maintained safely in accordance with Construction Regulation 14 and SA Bureau of Standards Code of Practice, SANS 1085 entitled, "The Design, Erection, Use & Inspection of Access Scaffolding.

Detailed consideration shall be given to all scaffolding to ensure that it is properly planned to meet the working requirements, designed to carry the necessary loadings and maintained in a sound condition. It shall also be ensured that there is sufficient material available to erect the scaffolding properly.

Scaffolding may only be erected, altered or dismantled by a person who has adequate training and experience in this type of work or under the supervision of such a person.

42. SUSPENDED PLATFORMS & BOATSWAINS CHAIRS

(CONSTRUCTION REGULATION 15 & 16)

The Principal Contractor / Contractor shall design, erect, use and maintain suspended platforms in accordance with the requirements of Construction Regulation 15.

Boatswains' chairs are to be erected, used, maintained and inspected in accordance with the requirements of Construction Regulation 16.

43. BATCH PLANTS (CONSTRUCTION REGULATION 18)

The Principal Contractor / Contractor shall erect, operate and maintain Batch Plants in accordance with the requirements of Construction Regulation 18.

44. EXPLOSIVE POWERED TOOLS (EPT) (CONSTRUCTION REGULATION 19)

Every explosive powered tools shall be:

- Provided with a guard around the muzzle to confine flying fragments or particles
- A firing mechanism that will prevent the EPT from firing unless it is pushed against the surface and at right angle (where the EPT is fitted with an intermediate piston between the charge and the nail this requirement is waived)
- The Contractor or user shall ensure that:
 - o Only the correct type of cartridge is used
 - o The EPT is cleaned inspected and cleaned daily before use by an appointed competent person who keeps register with the findings of his inspection and the details of cleaning, service and repairs
 - o The safety devices are in good working order before the EPT is use
 - o When the EPT is not being used it is stored in an unloaded condition together with the cartridges in a safe/secure place inaccessible to unauthorized persons
 - o A warning notice is displayed at the point where the EPT is in use
 - o The issue and return of cartridges must be by issue/returns register signed by both issuer and user and empty cartridge cases must be returned with unspent cartridges
 - o Users/operators of the EPT have received the necessary training and has been authorized as competent to use/operate the EPT
 - o Users/operators must wear the prescribed PPE whilst using/operating the tool;

45. CRANES & LIFTING EQUIPMENT (CONSTRUCTION REGULATION 20)

Cranes and Lifting equipment shall be designed and constructed in accordance with generally accepted technical standards and operated, used, inspected and maintained in accordance with the requirements of Driven Machinery Regulation 8 of the OHS Act:

- to be clearly and conspicuously marked with the maximum mass load (MML) that it is designed to carry safely. When the MML varies with the conditions of use, the a table should be used by the driver/operator;
- each winch on a lifting machine must at all times have, at least, three full turns of rope on the drum when the winch has been run to its lowest limit;
- fitted with a brake or other device capable of holding the MML. This brake or device to automatically prevent the downward movement of the load when the lifting power is interrupted;
- fitted with a load limiting device that automatically arrest the lift when:
 - o the load reaches its highest safe position or
 - o when the mass of the load is greater than the MML.
- every chain or rope on a lifting machine that forms an integral part of the machine must have;
- a factor of safety as prescribed by the manufacturer of the machine and where no standard is available the factor of safety must be:
 - o chains – 4 (four)
 - o steel wire ropes - 5 (five)
 - o fibre ropes- 10 (ten).
- every hook or load attaching device shall be designed as such or fitted with a device that will prevent the load from slipping off or disconnecting

- every lifting machine shall be inspected and load tested by a competent person every time it has been dismantled and re-erected and every 12 months after that. The load test shall be in accordance with the manufacturers prescription or to 110% of the MML in addition all ropes, chains, hooks or other attaching devices, sheaves, brakes and safety devices forming an integral part of a lifting machine must be inspected every 6 months by a competent person;
- all maintenance, repairs, alterations and inspection results shall be recorded in a log book and each lifting machine must have its own log book
- no person may be lifted by a lifting machine not designed for lifting persons unless in a cradle approved by an inspector of the Department of Labour
- every jib crane with an MML of 5 000 kg or more at minimum jib radius shall be provided with a load indicator or a load lifting limiting device.

46. LIFTING TACKLE

- to be manufactured of sound material, well-constructed and free from patent defects;
- to be clearly and conspicuously marked with ID number and MML;
- factor of safety:
 - o Natural fibre ropes - 10(ten)
 - o Man-made fibre ropes & woven webbing - 06(six)
 - o Steel wire ropes – single rope - 06(six)
 - o Steel wire ropes – combination slings - 08(eight)
 - o Mild Steel chains - 05(five)
 - o High tensile/alloy steel chains - 04(four)
- steel wire ropes shall be discarded (not used any further for lifting purposes) when excessive wear and corrosion is evident and must be examined by a competent person every three months for this purpose and the results recorded.

47. OPERATOR

- Every lifting machine operator shall be trained specifically for the type of lifting machine that he/she is operating
- Operators of Jib cranes with a MML of 5 00 kg or more shall be in possession of a certificate of training issued by an accredited (by The Department of Labour) training provider.

48. CRANES (CONSTRUCTION REGULATION 20)

Where tower cranes (TC) are used:

- account must be taken of the effects of wind force on the structure
- account must be taken of the bearing capacity of the ground on which TC is to be erected
- the bases for the TC and tracks for rail mounted TC's must be firm and level
- shall be erected at a safe distance from excavations
- clear space must be provided and maintained for erection, operation, maintenance and dismantling
- TC operators must be competent to carry out the work safely
- TC operators must be in possession of a valid medical certificate testifying that the holder is physically and psychologically fit to work on a TC.

A competent person shall plan all lifting operations where the lift will exceed 2000 kg and the plan submitted to Amatole District Municipality for approval and permission to carry out the lift.

49. CONSTRUCTION VEHICLES & MOBILE PLANT (CONSTRUCTION REGULATION 21)

Construction Vehicles and Mobile Plant shall be inspected by a competent prior to being allowed on a project site and suppliers of hired vehicles, plant and equipment will be required to comply with this specification as well as the OHS Act and Regulations.

Construction Vehicles and Mobile Plant (CV&MP) to be:

- of acceptable design and construction
- maintained in good working order
- used in accordance with their design and intention for which they were designed
- operated/driven by trained, competent and authorized operators/drivers;
- no unauthorized persons to be allowed to drive CV&MP
- operators and drivers of CV&MP must be in possession of a valid medical certificate declaring the operator/drive physically and psychologically fit to operate or drive CV&MP
- provided with safe and suitable means of access
- fitted with adequate signaling devices to make movement safe including reversing
- excavations and other openings must be provided with sufficient barriers to prevent CV&MP from falling into same
- provided with roll-over protection
- inspected daily before start-up by the driver/operator/user and the findings recorded in a register/log book
- CV&MP to be fitted with two head and two tail lights whilst operating under poor visibility conditions
- no loose tools, material etc. is allowed in the driver/operators compartment/cabin nor in the compartment in which any other persons are transported
- CV&MP used for transporting persons must have seats firmly secured and sufficient for the number of persons being transported.

No person may ride on a CV&MP except for in a safe place provided for the purpose. The construction site shall be organized to facilitate the movement of CV&MP so that pedestrians and other vehicles are not endangered. Traffic routes are to be suitable, sufficient in number and adequately demarcated. CV&MP left unattended after hours adjacent to roads and areas where there is traffic movement must be fitted with lights reflectors or barricades to prevent moving traffic coming into contact with the parked CV&MP.

In addition, CV&MP left unattended after hours shall be parked with all buckets, booms etc. fully lowered, the emergency brakes engaged and, where necessary, the wheels locked, the transmission in neutral, the motor switched off and the ignition key removed and stored safely.

Workers employed adjacent to or on public roads shall wear reflective safety vests.

All CV&MP inspection records shall be kept in the OH&S File.

50. ELECTRICAL INSTALLATIONS (CONSTRUCTION REGULATION 22)

The installation of temporary electricity for Construction shall be in accordance with the Construction Regulation 22 and the Electrical Installation Regulations.

The Contractor must ensure that:

- existing services are located and marked before construction commences and during the progress thereof
- where the abovementioned is not possible, workers with jackhammers etc. are protected against electric shock by the use of suitable protective equipment e.g. rubber mats, insulated handles etc.
- electrical installations and -machinery are sufficiently robust to withstand working conditions on site
- temporary electrical installations shall be inspected at least once per week by a competent person and a record of the inspections kept on the OH&S File
- electrical machinery used on a construction site shall be inspected daily before start-up by the competent driver/operator or any other competent person and a record of the inspections kept on the OH&S File
- A competent person appointed in writing shall control all temporary electrical installations.

51. ELECTRICAL & MECHANICAL LOCK-OUT

An electrical and mechanical lock-out procedure shall be developed and implemented. This lock-out procedure is to be adhered to by all Contractors on site.

52. USE & STORAGE OF FLAMMABLES (CONSTRUCTION REGULATION 23)

The Principal Contractor / Contractor to ensure that:

- No person is required or permitted to work in a place where there is the danger of fire or an explosion due to flammable vapors being present unless adequate precautions are taken;
- No flammable is used or applied e.g. in spray painting, unless in a room or cabinet or other enclosure specially designed and constructed for the purpose unless there is no danger of fire or explosion due to the application of adequate ventilation;
- The workplace is effectively ventilated. Where this cannot be achieved:
 - o Employees must wear suitable respiratory equipment
 - o No smoking or other sources of ignition is allowed in the area
 - o The area is conspicuously demarcated as "flammable"
- Flammables stored on a construction site are stored in a well-ventilated, reasonably fire-resistant container, cage or room that is kept locked with access control measures in place and sufficient firefighting equipment installed and fire prevention methods practiced e.g. proper housekeeping;
- Flammables stored in a permanent flammables store are stored so that no fire or explosion is caused i.e.:
 - o stored in a locked well-ventilated reasonably fire resistant container, cage or room conspicuously demarcated as "Flammable Store – No Smoking or Naked Lights"
 - o the flammables store to be constructed of two-hour fire retardant walls and roof and separated from adjoining rooms or workplaces by means of a two-hour fire retardant fire wall
 - o Adequate and suitable fire fighting equipment installed around the flammables store and marked with the prescribed signs
 - o All electrical switches and fittings to be of a flameproof design
 - o Any work done with tools in a flammables store or work areas to be of a non-sparking nature
 - o No Class A combustibles such as paper, cardboard, wood, plastic, straw etc. to be stored together with Flammables
 - o The flammable store to be designed and constructed to, in the event of spillage of liquids in the store, to contain the full quantity + 10% of the liquids stored
 - o A sign indicating the capacity of the store to be displayed on the door
- Only one day's quantity of Flammables is to be kept in the workplace
- Containers (including empty containers) to be kept closed to prevent fumes/vapors from escaping and accumulating in low lying areas
- Metal containers to be bonded to earth whilst decanting to prevent build-up of static
- Welding and other flammable gases to be stored segregated as to type of gas and empty and full cylinders.

53. WORKING ON OR NEAR WATER (CONSTRUCTION REGULATION 24)

The Principal Contractor / Contractor shall ensure that, where construction work is being carried out over or in close proximity to water:

- Measures are in place to prevent workers from falling into the water and drowning. These measure to include the availability of lifejackets
- Measures are in place to rescue any worker/ that has fallen into the water
- Measures for the timeous warning of flooding are in place.

54. HOUSEKEEPING (CONSTRUCTION REGULATION 25)

The Principal Contractor / Contractor to ensure that:

- Housekeeping is continuously implemented
- Materials & equipment are properly stored

- Scrap, waste & debris are removed regularly
- Materials placed for use are placed safely and not allowed to accumulate or cause obstruction to free flow of pedestrian and vehicular traffic
- Waste & debris not to be removed by throwing from heights but by chute or crane
- Where practicable, Construction sites are fenced off to prevent entry of unauthorized persons
- Catch platforms or nets are erected over entry and exit ways or over places where persons are working to prevent them being struck by falling objects
- An unimpeded work space is maintained for every employee
- Every workplace is kept clean, orderly and free of tools etc. that are not required for the work being done materials
- As far as is practicable, every floor, walkway, stair, passage and gangway is kept in good state of repair, skid-free and free of obstruction, waste and materials
- The walls and roof of every indoors workplace is sound and leak-free
- Openings in floors, hatchways, stairways and open sides of floors or buildings are barricaded, fenced, boarded over or provided with protection to prevent persons from falling.

55. STACKING & STORAGE (CONSTRUCTION REGULATION 27)

The Principal Contractor / Contractor shall ensure that:

- A competent person is appointed in writing to supervise all stacking and storage on a construction site
- Adequate storage areas are provided and demarcated
- The storage areas are kept neat and under control
- The base of any stack is level and capable of sustaining the weight exerted on it by the stack
- The items in the lower layers can support the weight exerted by the top layers
- Cartons and other containers that may become unstable due to wet conditions are kept dry
- Pallets and containers are in good condition and no material is allowed to spill out
- The height of any stack does not exceed 3X the base unless stepped back at least half the depth of a single container at least every fifth tier or
- The approval of an inspector has been obtained to build the stacks higher with the aid of a machine. (The operator of the machine must be protected against items falling from overhead off the stack and no items may overhang)
- The articles that make up a single tier are consistently of the same size, shape and mass
- Structures for supporting stacks are structurally sound and able to support the mass of the stack
- No articles are removed from the bottom of the stack first but from the top tier first
- Anybody climbing onto a stack can and does do it safely and that the stack is sufficiently stable to support him/her
- Stacks that are in danger of collapsing are broken down and restacked
- Stability of stacks are not threatened by vehicles or other moving plant and machinery
- Stepped back at least half the depth of a single container at least every fifth tier
- Persons climbing onto stacks do not approach unguarded moving machinery or electrical installations.

56. STORAGE OF FLAMMABLES AND HAZARDOUS CHEMICALS (HAZARDOUS CHEMICAL SUBSTANCES REGULATIONS)

See 55 above and 58 below.

57. PORTABLE ELECTRICAL TOOLS & EQUIPMENT (ELECTRICAL MACHINERY REGULATION 9)

Portable electrical tools and equipment includes every unit that takes electrical power from a 15 amp. plug point and is moved around for use in the workplace i.e. drills, saws, grindstones, portable lights, etc. In addition electrical appliances such as fridges, hotplates, heaters, etc. shall be inspected and maintained to the same standards as portable electrical tools and appliances.

The use, inspection and maintenance of portable electrical tools and equipment must be governed by the following:

- Regular inspections by a competent person appointed in writing
- Inspection results must be recorded in a register
- Only competent authorized persons are allowed to use portable electrical tools and equipment
- The correct protective equipment is worn/used whilst operating portable electrical tools and equipment.

PORTABLE ELECTRICAL TOOLS

Shall be maintained in good condition at all times to prevent an electrical shock to the user. The main source shall incorporate an earth leakage protection device or receive power through a double wound transformer or be double insulated and clearly marked as such. All equipment shall be fitted with a switch to allow for safe & easy starting and stopping.

PORTABLE LIGHTS

- Shall be fitted with a robust non-hygroscopic non-conducting handle
- Live metal parts/parts which may become live must be protected against contact
- The lamp must be protected by a strong guard
- The cable lead-in must withstand rough handling
- It is suggested that a register be kept for each piece of equipment and findings of regular inspections must be entered
- Inspections must concentrate on plug, cord, switch and any obvious faults
- When used in wet/damp/metal container conditions, it must be protected as for portable electrical tools, above.

58. HAZARDOUS CHEMICAL SUBSTANCES

The Principal Contractor / Contractor shall ensure that:

- Employees receive the necessary information & training to be able to use and store HCS safely
- Employees obey lawful instructions regarding:
 - o the wearing and use of protective equipment
 - o the use and storage of HCS
 - o the prevention of the release of HCS
 - o the wearing of exposure monitoring and measuring equipment
 - o the cleaning up and disposal of materials containing HCS
 - o housekeeping, personal hygiene and the protection of the environment
 - o the Risk Assessments required in terms of Construction Regulation 7 include employee exposure to HCS and that the necessary steps to protect persons from being detrimentally affected by HCS present or used in the workplace, are taken
 - o suppliers provide the necessary information in the form of a Material Safety Data Sheet (MSDS) regarding an HCS required to ensure the safe use and storage of that HCS
 - o an up-to-date list is kept on site of HCS's stored and used together with the MSDS's of the said HCS's
 - o HCS containers are clearly marked as to the contents and main hazardous category "Flammable" or "Corrosive" and the reference number of the HCS on the list indicated above
 - o HCS e.g. Asbestos dust is not cleared by the use of compressed air but is vacuumed
 - o No person eats or drinks in a HCS workplace
 - o HCS waste is disposed of safely in terms of hazardous waste disposal requirements.

PART C – BASELINE RISK ASSESSMENT

NOTES to TENDERERS:							
1 -This covers 6 AREAS of Risk; each AREA has one or more OBJECTIVES to be scored.							
2 -There are a total of 12 OBJECTIVES so there will be 12 points to add-up to give an overall score.							
3 -Each OBJECTIVE identifies a target objective criterion to be met. MEETING or EXCEEDING this criterion is classified as a LOW RISK. Not quite meeting it is a MEDIUM RISK. Falling far short is a HIGH RISK.							
4 -The scoring of points is done by identifying which of the Scoring Objective statements matches the information given in the submitted tender documents and then applying the score attached to the particular statement.							
5 -The overall score will fall into one of 3 risk ranges (given at the bottom of the spreadsheet) and the overall risk assessment is based on which range the scored Tenderer falls into.							
DETAILS OF RISK ASSESSMENT		RISK ASSESSMENT CRITERIA (ONE score per Objective)					
ASSESSED RISK	OBJECTIVE	'LOW RISK' ASSESSMENT		'MEDIUM RISK' ASSESSMENT		'HIGH RISK' ASSESSMENT	
		Scoring Objective	Points	Scoring Objective	Points	Scoring Objective	Points
1. Tendering Company's Experience: Assessment based on information supplied of successfully completed projects over the last 5 years of similar or relevant scope and value) 2 Objectives to be scored: MAX SCORE: 15 MIN SCORE: 0	1. Two or more previous projects match or exceed scope and value of this contract	More than 2 projects: 2 projects only:	10 6	1 project only:	4	0 Projects:	0
	2. Two or more previous projects match or exceed scope but value up to 25% less than this contract	More than 2 projects: 2 projects only:	5 3	1 project only:	1	0 Projects:	0
2. Key Staff Qualifications and Experience:	Site Agent (Construction Manager on Site)						

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<p>Assessed risk of failure due to key staff not having sufficient relevant skills, qualifications, training and previous experience (based on information given in CVs)</p> <p>4 Objectives to be scored: MAX SCORE: 25 MIN SCORE: 0</p>	1. Has been Site Agent for 2 or more previous projects that match or exceed scope and value of this contract	More than 2 projects: 2 projects only:	4 2	1 project only:	1	0 Projects:	0
	2. Has at least 5 years relevant Site Agent experience	More than 15 years: 8 to 14 years:	8 5	6 or 7 years: 5 years	4 2	Less than 5:	0
	Main Foreman (Construction Supervisor)						
	3.Has supervised 2 or more previous projects that match or exceed scope and value of this contract	More than 2 projects: 2 projects only:	5 2	1 project only:	1	0 Projects:	0
	4. Has at least 5 years relevant Supervisor experience	More than 10 years: 5 to 10 years:	8 5	Only 4 years: Only 3 years:	4 2	Only 2 years: Only 1 or no years:	1 0
3. Tendering Company's Past Performance: Assessment based on Referee's comments on how well Tenderer performed on recent (last 5 years) previous relevant (similar scope and value) contracts in terms of each of the following: skills and capacity, rate of progress, time for	1. Two or more positive Testimonials from relevant Referees on relevant previous Contracts	3 pos testimonials: 2 pos testimonials:	10 5	1 pos PLUS 1 or more marginal: 1 pos testimonial:	4 3	1 or more marginal testimonials: No positive testimonials:	1 0

completion, quality of workmanship, adequacy of plant & equipment, ability to finance the work, contract administration/paperwork. 1 Objective to be scored: MAX SCORE: 10 MIN SCORE: 0							
4. Tenderer's understanding of Scope of Works and ability to plan construction: Assessed risk of failure due to Tenderer not demonstrating sufficient understanding of the Scope of Works and how to plan and execute this contract (assessment based on submitted preliminary programme) 1 Objective to be scored: MAX SCORE: 10 MIN SCORE: 0	1. Tender's Preliminary Programme is considered realistic and adequately shows the main components, critical path activities and compliance with Time for Completion	Programme meets or exceeds objective	10	Programme demonstrates some realistic planning	2	No Programme or programme shows unrealistic or no planning or no understanding	0
5. Tendered Price: Assessed risk of financial failure due to tendered price being unrealistically low or commercial risk if price too high (based on price in relation to other responsive tenders received	1. Price within +/- 10% of Average of Prices received (average excluding outlier prices calculated as below $Q1-1.5x(Q3-Q1)$) {where Q1 etc = Quartile 1 etc} and above $Q3+1.5x(Q3-Q1)$)	within 10%	10	more than 10%, but within 12,5%	5	More than 12,5% but within 15% More than 15%	1 0

and budget) 2 Objectives to be scored: MAX SCORE: 20 MIN SCORE: 0	2. Price within +/- 10% of budget	within 10%	10	more than 10%, but within 12,5%	5	More than 12,5% but within 15% More than 15%	1 0	
6. Time for Completion: Assessed risk of failure due to inexperience and/or financial difficulty based on Time for Completion being unrealistically short or long (based on Engineer's estimate and Time for Completion in relation to other responsive tenders). Unrealistically short or long Time for Completion indicates Tenderer's inexperience and/or understanding of Scope of Work. 2 Objectives to be scored: MAX SCORE: 20 MIN SCORE: 0	1. Time for Completion not a low outlier with respect to the other Tenderers (Time for Completion longer than Q1-1.5x(Q3-Q1)) {where Q1 etc = Quartile 1 etc})	Time within Quartile 4 range (75 to 100%)	10	Time within Quartile 2 range (26% to 50%):	4	Time is a low outlier:	0	
		Time within Quartile 3 range (51 to 75%):	5	Time within Quartile 1 range (0 to 25%), but not low outlier	2			
	2. Time for Completion not lower than Engineer's estimated minimum satisfactory time for completion	More than 2 months longer than Eng's est:	10	1 month lower	2	2 months lower	1	
		1 month longer or matches Eng's estimate:	8			more than 2 months lower	0	
OVERALL RISK ASSESSMENT SCORE:		LOW RISK RANGE:	100 71	MEDIUM RISK RANGE:	70 30	HIGH RISK RANGE:	29 0	

Risk Rating							
Probability of Occurrence	Probability Rating		Consequence				
			1	2	3	4	5
			Not Significant	Minor	Moderate	Major	Severe
	1	Rare	1	2	3	4	5
	2	Unlikely	2	4	6	8	10
	3	Moderate	3	6	9	12	15
	4	Likely	4	8	12	16	20
	5	Very Likely	5	10	15	20	25

KEY:

	Low
	Medium
	High

C3.6 ANNEXURES

Number	Heading	Pages
C3.6.1	Geotechnical Information	XXX
C3.6.2	Site Information	XXX
C3.6.3		

C3.5.1. GEOTECHNICAL INFORMATION

*****TO BE ISSUED ON REQUEST*****

C5.3 SITE INFORMATION

The following is a brief description of work to be done *Arthur Homes Water Supply*.

No.	LM	TOWN	SCHEME NAME	ACTIVITY
1	IHLM	Lusikisiki	ARTHUR HOMES WATER SUPPLY	Equipping existing borehole, construction of booster pumpstation, construction of rising main, valves and associated chambers, route markers, gabions and pitching.

C5.4 TENDER DRAWINGS

C.5.6 LIST OF DRAWINGS

DRAWING NO. DRAWING TITLE

DRAWINGS BOUND INTO THIS DOCUMENT