

# O. R. TAMBO DISTRICT MUNICIPALITY



O.R. TAMBO  
DISTRICT MUNICIPALITY

CONTRACT NO.: ORTDM SCMU 13-23/24

DESCRIPTION: SIKWAYINI WATER SUPPLY SCHEME

OCTOBER 2023

NAME OF TENDERER:

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TENDER AMOUNT:

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CSD SUPPLIER NUMBER:

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CLOSING DATE & TIME: **14 NOVEMBER 2023 @ 12H00**

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**Prepared for:**

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

Tel. No. (047) 501 6400

**Prepared by:**

The District Engineering Services  
O. R. Tambo District Municipality  
Private Bag X6043  
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 13-23/24**

**SIKWAYINI WATER SUPPLY SCHEME**

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## **TENDERS ARE HEREBY INVITED FOR:**

### **CONTRACT NO.: ORTDM SCMU 13-23/24: SIKWAYINI WATER SUPPLY SCHEME**

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 13-23/24: SIKWAYINI WATER SUPPLY SCHEME** 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 14 November 2023.

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:

<b>Document</b>		<b>Colour of pages</b>
<b>Number</b>	<b>Heading</b>	
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

## **TENDER NOTICE AND INVITATION TO TENDER**

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

<b>Project Number</b>	<b>Name and Description</b>	<b>CIDB Grading</b>	<b>Briefing session</b>
ORTDM SCMU 13-23/24	Sikwayini Water Supply Scheme	5 CE or higher	Mhlontlo Local Municipality- Qumbu

A compulsory clarification meeting with representatives of the client will take place at **10H00** on Tuesday, **31 October 2023** at the Mhlontlo Local Municipal Offices- Qumbu, before proceeding to 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](http://www.etenders.gov.za)) alternatively on the O. R. Tambo website ([www.ortambo.gov.za](http://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 Tuesday, **14 November 2023**.

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).

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 THE BID:**

- Original or certified copy of BBBEE certificate, or sworn affidavit confirming annual total revenue and level of black ownership if bidder is an Exempted Micro Enterprise (EME) or Qualified Small Enterprise (QSE);
- Certified copies of business registration documents, as issued by CIPC;
- Certified copy of identity documents of directors/shareholders/partners/members, as the case may be.

**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.
- Attach joint Venture Agreement or Consortium Agreement signed and initialled on each page (if applicable).
- 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;
- Attach proof of latest municipal rates and taxes statement **of the bidder and each company director** indicating that rates and taxes are not in arrears for more than 3 months.
- Attach proof of latest municipal water and sanitation charges statement **of the bidder and 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.
- Attach a 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.
- Attach a copy of a valid lease agreement where the bidder does not own the property they are operating from.
- Attach proof of registration with **Construction Industry Development Board (CIDB)**

**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

<b>Item</b>	<b>Weight</b>
<b>Stage 2 of Evaluation-Minimum conditions of tender</b>	<b>100</b>
• Company Experience with respect to similar projects	60
• Qualifications and Experience of key staff assigned to the contract	40
<b>Stage 3 of Evaluation- Price &amp; Specific Goals</b>	<b>100</b>
• Specific Goal Points	20
• Price	80

**CONDITIONS OF THE TENDER WITH REGARDS TO SUB-CONTRACTING**

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

**CONTRACT NO.: ORTDM SCMU 13–23/24**

*Sikwayini Water Supply Scheme*

*T1.1 Tender Notice and Invitation to Tender*

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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](mailto:nkosiyabon@ortambodm.gov.za)

**All Supply Chain Management enquiries** may be directed to Mr. S. Hopa, telephone number 047 501 6449 or Email: [sakhiwoh@ortambodm.org.za](mailto: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-points system shall apply where 80 points is allocated for price and 20 points allocated for Specific Goal Points as follows:

<b>The specific goals allocated points in terms of this tender</b>	<b>Number of points allocated (80/20 system)</b>
The promotion of enterprises located in a specific region (O.R Tambo District): <b>The Tenderer and Directors are based in the ORTDM region and pay their municipal rates and taxes</b>	<b>10</b>
The promotion of enterprises located in a specific Municipality (Mhlontlo Local Municipality): <b>The Tenderer and Directors are based in the Mhlontlo Local Municipality and pay their municipal rates and taxes</b>	<b>10</b>

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](http://www.cidb.org.za) and/or [www.gpwonline.co.za](http://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	
<b>F.1</b>	<b>General</b>
F.1.1	The Client is: <b>O. R. Tambo District Municipality</b> Private Bag X6043 Mthatha, 5099
F.1.2	The Tender documents issued by the Client comprise: <b>Tender</b> 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
	<b>Contract</b> <b>Part 1 : Agreements and Contract data</b> 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 <b>Part 2 : Pricing Data</b> C2.1 Pricing Instructions C2.2 Bill of Quantities
	<b>Part 3 : Scope of Works</b> C3.1 Description of the Works C3.2 Engineering C3.3 Procurement C3.4 Construction C3.5 Management C3.6 Annexures (Specification) <b>Part 4: Site Information</b> C4 Site information <b>Part 5: Additional Relevant Documents</b> <b>Part 6: Contract Drawings</b>

F1.3	<b>Interpretation</b> 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	<b>Communication:</b> Communication with all stakeholders shall be through the O. R. Tambo Municipality's Engineering 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 <b>O. R. Tambo District Municipality</b> Private Bag x 6043 Mthatha 5099 Tel: (047) 501 6425  Email: <a href="mailto:nkosiyabon@ortambodm.gov.za">nkosiyabon@ortambodm.gov.za</a> Contact person: Mr. N. Noto	The employer's agent is: <b>ROMH Consulting (Pty) Ltd</b> Leadwood House, Cedar Square, Bonza Bay Road, Beacon Bay, East London, 5247 Tel: (043) 748 0018 Email: <a href="mailto:simnikiwex@romh.co.za">simnikiwex@romh.co.za</a> Contact Person: Mr S.J. Xawuka
F.1.5	<b>The employer's right to accept or reject any tender offer</b>	
F.1.5.1	<b>Reject or accept</b> 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	<b>Procurement procedures</b>	
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	<b>Tenderer's obligations</b>	
F.2.1.1	<b>Eligibility</b> 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	<b>CIDB Grading</b> The required CIDB grading for this project is <b>5 CE</b> or Higher.	
F.2.2	<b>Cost of tendering</b> 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	<b>Check documents</b> Check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission.	
F.2.4	<b>Confidentiality and copyright</b> 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	<b>Reference documents</b> 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.	

F2.6	<b>Acknowledge Addenda</b> 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 <b>compulsory clarification meeting</b> are:
	<b>Date:</b> Tuesday, 31 October 2023 <b>Starting time:</b> 10h00 <b>Location:</b> Mhlontlo Local Municipality, Qumbu Municipal Offices, then proceed to site
F.2.8	<b>Seek clarification</b> 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.
F2.10	<b>Pricing the tender</b>
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
F2.11	<b>Alterations to documents</b> 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	<b>Alternative tender offers</b> Alternative offers may be submitted only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted. The alternative tender offer is to be submitted with the main tender offer together with a schedule that compares the requirements of the tender documents with the alternative requirements the tenderer proposes.
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: <b>Location of Tender box:</b> Tender Box, Ground Floor, O. R. Tambo District Municipality Building, Nelson Mandela Drive, Myezo Park, Mthatha, Eastern Cape. <b>Physical address:</b> O. R. Tambo House, Nelson Mandela Drive, Mthatha
F.2.14	<b>Information and data to be completed in all respects</b> 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	<b>Closing time</b> The closing time for submission of Tender is <b>12H00pm Tuesday, 14 November 2023.</b>
F.2.15	Telephonic, telegraphic, telex, facsimile or e-mailed Bid offers will <b>not</b> be accepted.
F.2.16	<b>Tender offer validity</b> The Tender offer validity period is 90 Days as stated in the tender data.
F.2.17	<b>Clarification of tender offer after submission</b> 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	<b>Provide other material</b> 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.
F2.20	<b>Submit securities, bonds, policies</b> 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.
F.2.23	<b>The tenderer is required to submit with his tender:</b> (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.
F.3	<b>The employer's undertakings</b>
F.3.1	<b>Respond to requests from the tenderer</b>
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><b>Issue Addenda</b> 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	<p><b>Opening of tender submissions</b></p>
F.3.4.1	<p>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.</p>
F.3.4.2	<p>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.</p>
F.3.4.3	<p>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.</p>
F.3.6	<p><b>Non-disclosure</b> 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><b>Grounds for rejection and disqualification</b> 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	<p><b>Arithmetical errors, omissions and discrepancies</b></p>
F.3.9.1	<p>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.</p>
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: a) the gross misplacement of the decimal point in any unit rate; b) omissions made in completing the pricing schedule or bills of quantities; or c) arithmetic errors in: i) line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or ii) The summation of the prices.</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: a) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected. b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer’s addition of prices, the total of the prices shall govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.</p>
F.3.10	<p><b>Clarification of a tender offer</b> 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><b>Evaluation of tender offers</b></p> <p><i>Replace the contents of the entire sub-clause with the following:</i></p> <p>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 the right to accept the whole or part of any tender or not to consider any tender not suitably endorsed. 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 70 points for minimum conditions of tender, which will be explained in Stage 2 below. The bid will be evaluated in three stages Nevertheless; O. R. Tambo District Municipality retains the right to accept any bid.</p> <p><b>B. First stage in evaluation: Mandatory Requirements</b>                  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"> <li>• The form of Offer and Acceptance</li> <li>• Audited financial statements for any tender price over R10million</li> <li>• Certified company registration documents and ID of members</li> <li>• Form C: Compulsory Enterprise Questionnaire</li> <li>• Form D: Certificate of Authority for Signature</li> <li>• Form E: Amendments, Qualifications and Alternatives</li> <li>• Form H: Certificate of Good Standing</li> <li>• Form I: Relevant experience</li> <li>• Form J: Details of key staff and CVs</li> <li>• Form M: Preference Points Claim Form in Terms of the Preferential Procurement Regulations 2022</li> </ul> <p>Note:</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Addenda issued during the bid period, if any.</li> <li>• The pricing schedule</li> </ul> <p>Failure to supply the required information will compromise the bid</p> <p><b>C. Next Stage in Evaluation: Minimum Conditions of tender; Price &amp; Specific Goal Points</b>The next state in the evaluation process will consist of two stages, as follows:</p> <p><b>STAGE 2: MINIMUM CONDITIONS OF TENDER</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">ITEM</th> <th style="text-align: center;">WEIGHT</th> </tr> </thead> <tbody> <tr> <td>Minimum Conditions of Tender (see detailed criteria below)</td> <td style="text-align: center;"><b>100</b></td> </tr> <tr> <td>• Experience with respect to similar projects</td> <td style="text-align: center;">60</td> </tr> <tr> <td>• Qualifications and Experience of key staff assigned to the contract</td> <td style="text-align: center;">40</td> </tr> </tbody> </table> <p>Only bidders who score <b>70 points or more</b> on stage 1 will be evaluated further and therefore eligible for award.</p> <p>The maximum score shall be <b>100</b>, distributed as follows:</p>	ITEM	WEIGHT	Minimum Conditions of Tender (see detailed criteria below)	<b>100</b>	• Experience with respect to similar projects	60	• Qualifications and Experience of key staff assigned to the contract	40
ITEM	WEIGHT								
Minimum Conditions of Tender (see detailed criteria below)	<b>100</b>								
• Experience with respect to similar projects	60								
• Qualifications and Experience of key staff assigned to the contract	40								

<b>Minimum Conditions of Tender</b>		
	<b>Minimum Conditions of Tender</b>	Maximum tender evaluation points provided
<b>B1.1</b>	<b>Experience on similar projects</b>	<b>60</b>
	<b>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.</b>	<b>60</b>
	The Contractor has successfully completed at least Four (4) projects that satisfies the sub-criteria and provided evidence whose total sum of a value of R30 Million.	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 R25 Million.	40
	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 R20 Million.	20
	Contractor failed to provide evidence of experience.	0
<b>B1.2</b>	<b>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 Foreman = Minimum Grade 12/ N3 Civil Engineering/ Plumbing. Bidders must submit CV's/Resume and contactable references.</b>	<b>40</b>
	<b>Contracts Manager, Site Agent, Foreman</b>	
	Favourable previous experience in the Civil Engineering field with a minimum of 5 years; <b>Contracts Manager</b> = 20 points, 3-4 years = 15 points & 1-2 years = 8 points.	20
	Favourable previous experience in the Civil Engineering field with a minimum of 5 years; <b>Site Agent</b> = 12 points, 3-4 years = 8 points & 1-2 years = 6 points.	12
	Favourable previous experience in the Civil Engineering field with a minimum of 5 years; <b>Foreman</b> = 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 SPECIFIC GOAL (80/20)**

The procedure for Stage 3 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 bench mark price as follows**

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

Where

Ps = Points scored for price of bid under consideration

Pt = Rand value of bid under consideration

Pmin = Rand value of lowest acceptable bid

**b) Points awarded for Specific Goal Points**

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:

<b>The specific goals allocated points in terms of this tender</b>	<b>Number of points allocated (80/20 system)</b>
The promotion of enterprises located in a specific region (O.R Tambo District): <b>The Tenderer and Directors are based in the ORTDM region and pay their municipal rates and taxes</b>	<b>10</b>
The promotion of enterprises located in a specific Municipality (Mhlontlo Local Municipality): <b>The Tenderer and Directors are based in the Mhlontlo LM region and pay their municipal rates and taxes</b>	<b>10</b>

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	<b>Acceptance of tender offer</b>
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><b>Notice to unsuccessful tenderers</b></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: <a href="http://www.ortambodm.gov.za">www.ortambodm.gov.za</a>, by listing the successful tender.</p>
F.3.15	<p><b>Prepare Contract documents</b></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><b>Issue final contract</b></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:

<b>T2.2 Returnable Documents required for Tender evaluation purposes</b>		
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	Proposed Key Personnel
8	Form 2.2.8	Schedule Equipment to be used
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)

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

<b>T2.2      RETURNABLE DOCUMENTS</b>
---------------------------------------

**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 – Consultants
- 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 authorised 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 authorise 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 authorise Mr/Mrs....., authorised signatory of the company ....., acting in the capacity of lead partner, to sign all documents in connection with the tender offer for Contract.....and any other contract resulting from it on our behalf.

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

<b>NAME OF FIRM</b>	<b>ADDRESS</b>	<b>DULY AUTHORISED SIGNATORY</b>
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 authorise 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 of the 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).

Description	Value (R) VAT excluded	Year(s) work executed	Reference		
			Name	Organisation	Tel no

Name of Tenderer: .....

Date: .....

Signature: .....

Full name of signatory: .....

**FORM 2.2.4      SCHEDULE OF CURRENT PROJECTS**

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

Description	Value (R) VAT excluded	Date Appointed	Reference		
			Name	Organisation	Tel no

Name of Tenderer: ..... Date: .....

Signature: .....

Full name of signatory: .....

**FORM 2.2.5 DECLARATION OF GOOD STANDING REGARDING TAX**

Tender No: .....

Closing Date: .....

**SOUTH AFRICAN REVENUE SERVICES**

**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.

**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 authorised representative of ..... (Tenderer)

Address: .....

.....

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 satisfied with the description of the work and explanations given by the said Engineer 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 10% 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 authorise the Client/Engineer to approach all or any of the following banks for the purposes of obtaining a financial reference:

<b>BANK NAME:</b>									
<b>ACCOUNT NAME:</b> <i>(e.g. ABC Civil Construction cc)</i>									
<b>ACCOUNT TYPE:</b> <i>(e.g. Savings, Cheque etc)</i>									
<b>ACCOUNT NO:</b>									
<b>ADDRESS OF BANK:</b>									
<b>CONTACT PERSON:</b>									
<b>TEL. NO. OF BANK / CONTACT:</b>									
How long has this account been in existence:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">0-6 months</td> <td style="width: 20px; text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;">7-12 months</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;">13-24 months</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;">More than 24 months</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table> <span style="margin-left: 10px;">(Tick which is appropriate)</span>	0-6 months	<input type="checkbox"/>	7-12 months	<input type="checkbox"/>	13-24 months	<input type="checkbox"/>	More than 24 months	<input type="checkbox"/>
0-6 months	<input type="checkbox"/>								
7-12 months	<input type="checkbox"/>								
13-24 months	<input type="checkbox"/>								
More than 24 months	<input type="checkbox"/>								

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**

<b>BID NUMBER:</b>	ORTDM SCMU 13-23/24	<b>CLOSING DATE:</b>	14 NOVEMBER 2023	<b>CLOSING TIME:</b>	12h00
<b>DESCRIPTION:</b>	SIKWAYINI WATER SUPPLY SCHEME				

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

<i>TENDER BOX, GROUND FLOOR, O.R. TAMBO DISTRICT MUNICIPALITY BUILDING</i>
<i>NELSON MANDELA DRIVE</i>
<i>MYEZO PARK</i>
<i>MTHATHA</i>
<i>EASTERN CAPE</i>

SUPPLIER INFORMATION			
NAME OF BIDDER			
POSTAL ADDRESS			
STREET ADDRESS			
TELEPHONE NUMBER	CODE		NUMBER
CELLPHONE NUMBER			
FACSIMILE NUMBER	CODE		NUMBER
E-MAIL ADDRESS			
VAT REGISTRATION NUMBER			
TAX COMPLIANCE STATUS	TCS PIN:		CSD No:
STATEMENT OF RATES AND TAXES OF THE BIDDER	<input type="checkbox"/> Yes <input type="checkbox"/> No		STATEMENT OF RATES AND TAXES OF THE COMPANY <input type="checkbox"/> Yes <input type="checkbox"/> No
[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?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES ENCLOSE PROOF]		ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED? <input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES, ANSWER PART B:3 ]
TOTAL NUMBER OF ITEMS OFFERED		TOTAL BID PRICE	R
SIGNATURE OF BIDDER			DATE
CAPACITY UNDER WHICH THIS BID IS SIGNED			
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:		TECHNICAL INFORMATION MAY BE DIRECTED TO:	
DEPARTMENT	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
FACSIMILE NUMBER	N/A	E-MAIL ADDRESS	<a href="mailto:nkosiyabon@ortambodm.gov.za">nkosiyabon@ortambodm.gov.za</a>
E-MAIL ADDRESS	<a href="mailto:sakhiwoh@ortambodm.org.za">sakhiwoh@ortambodm.org.za</a>		

**PART B  
TERMS AND CONDITIONS FOR BIDDING**

<b>1. BID SUBMISSION:</b>	
1.1.	BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
<b>1.2. ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED-(NOT TO BE RE-TYPED).</b>	
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.
<b>2. TAX COMPLIANCE REQUIREMENTS</b>	
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 <a href="http://WWW.SARS.GOV.ZA">WWW.SARS.GOV.ZA</a> .
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.
<b>3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS</b>	
3.1.	IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)? <span style="float:right"><input type="checkbox"/> YES <input type="checkbox"/> NO</span>
3.2.	DOES THE ENTITY HAVE A BRANCH IN THE RSA? <span style="float:right"><input type="checkbox"/> YES <input type="checkbox"/> NO</span>
3.3.	DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA? <span style="float:right"><input type="checkbox"/> YES <input type="checkbox"/> NO</span>
3.4.	DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA? <span style="float:right"><input type="checkbox"/> YES <input type="checkbox"/> NO</span>
3.5.	IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION? <span style="float:right"><input type="checkbox"/> YES <input type="checkbox"/> NO</span>
IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 ABOVE.	

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

**SIGNATURE OF BIDDER:** .....

**CAPACITY UNDER WHICH THIS BID IS SIGNED:** .....

**DATE:** .....

**DECLARATION OF INTEREST**

1. No bid will be accepted from persons in the service of the state<sup>1</sup>.
2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority.
3. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.
  - 3.1 Full Name of bidder or his or her representative:.....
  - 3.2 Identity Number: .....
  - 3.3 Position occupied in the Company (director, trustee, shareholder<sup>2</sup>):  
.....
  - 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.....  
.....

<sup>1</sup> 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.

<sup>2</sup> 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.

<b>Full name</b>	<b>Identity number</b>	<b>State employee number</b>

.....  
**Signature**

.....  
**Date**

.....  
**Capacity**

.....  
**Name of Bidder**



**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

**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 point 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:

	<b>POINTS</b>
<b>PRICE</b>	<b>80</b>
<b>SPECIFIC GOAL POINTS</b>	<b>20</b>
<b>Total Points For Price and Specific Goal Points</b>	<b>100</b>

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:

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

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = 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 (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): <b>The Tenderer and Directors are based in the ORTDM region and pay their municipal rates and taxes</b>	10	
The promotion of enterprises located in a specific Local Municipality (Mhlontlo): <b>The Tenderer and Directors are based in the MhlontloLM Municipality and pay their municipal rates and taxes</b>	10	

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

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;
- iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –

- (a) disqualify the person from the tendering process;
- (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
- (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
- (d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
- (e) Forward the matter for criminal prosecution, if deemed necessary.

..... <b>SIGNATURE(S) OF TENDERER(S)</b>	
<b>SURNAME AND NAME:</b>	.....
<b>DATE:</b>	.....
<b>ADDRESS:</b>	..... ..... ..... .....

**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	<p>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).</p> <p><b>The Database of Restricted Suppliers now resides on the National Treasury's website (<a href="http://www.treasury.gov.za">www.treasury.gov.za</a>) and can be accessed by clicking on its link at the bottom of the home page.</b></p>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.1.1	If so, furnish particulars:		
4.2	<p>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 (<a href="http://www.treasury.gov.za">www.treasury.gov.za</a>) by clicking on its link at the bottom of the home page.</p>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.2.1	If so, furnish particulars:		
4.3	<p>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?</p>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.3.1	If so, furnish particulars:		
Item	Question	Yes	No
4.4	<p><b>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?</b></p>	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 any other 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**



**CERTIFICATE OF INDEPENDENT BID DETERMINATION**

- 1 This Municipal Bidding Document (MBD) must form part of all bids<sup>1</sup> 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).<sup>2</sup> Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
- 3 Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
  - a. take all reasonable steps to prevent such abuse;
  - b. reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
  - c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
- 4 This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
- 5 In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

<sup>1</sup> Includes price quotations, advertised competitive bids, limited bids and proposals.

<sup>2</sup> 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 13-23/24:**

**SIKWAYINI WATER SUPPLY SCHEME**

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 consortium<sup>3</sup> 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.

**MBD 9**

- 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.

<sup>3</sup> **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

<b>T2.3      RETURNABLE DOCUMENTS</b>
---------------------------------------

**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)

	<b>Date</b>	<b>Title or Details</b>
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 ORTDM 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 initialling 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 initialled 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 authorised 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. \_\_\_\_\_

<b>C1      AGREEMENTS AND CONTRACT DATA</b>
---

- 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 13-23/24: SIKWAYINI WATER SUPPLY SCHEME.**

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

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

.....  
.....  
..... Rand (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 organisation)

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 authorised 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 organisation)

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 authorised representatives signing this Schedule of Deviations, the Employer and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, as well as any confirmation, clarification or 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)

Name & Signature  
Of Witness \_\_\_\_\_ Date \_\_\_\_\_

**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)
<b>1</b>		<b>General</b>
1.1.1.13	<i>Defects Liability Period</i> is	<b>12 months</b> after the Completion Date
1.1.1.14	<i>Due Completion Date</i> is	<b>6 months</b> 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	A <i>re-measurement contract</i>
1.1.1.29	The <i>Site</i> is	All Areas within the boundaries of <b>Sikwayini, Mhlontlo LM</b>
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	<b>The Employer's delivery address is</b>	
	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 Seven days of the commencement date.
1.2.1	The <i>Employer's Agent's</i> delivery address	<b>ROMH Consulting (Pty) Ltd</b> Leadwood House, Cedar Square Drive Beacon Bay, East London, 5247 E-mail: <a href="mailto:simnikiwex@romh.co.za">simnikiwex@romh.co.za</a> Telephone: (043) 748 0018 Contact Person: S. J. Xawuka
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
<b>3</b>		<b>Employer's Agent</b>
3.2.3	The <i>Employer's Agent</i> shall first consult and obtain specific approval	from the <i>delegated Employer's Agent</i> : <b>ROMH Consulting (Pty) Ltd</b> , prior to executing any of its functions or duties, with respect to following clauses:  <ol style="list-style-type: none"> <li>1. All the <i>Employer Agent's</i> actions as contemplated in Clause 3.3.1</li> <li>2. All the <i>Employer Agent's</i> actions as contemplated in Clause 3.3.4</li> <li>3. All the <i>Employer Agent's</i> actions as contemplated in Clause 5.11.1</li> <li>4. All the <i>Employer Agent's</i> actions as contemplated in Clause 5.12.4</li> <li>5. All the <i>Employer Agent's</i> actions as contemplated in Clause 6.4.1</li> <li>6. All the <i>Employer Agent's</i> actions as contemplated in Clause 10.1.5</li> <li>7. All the <i>Employer Agent's</i> actions as contemplated in Clause 10.2.3</li> </ol>
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.
<b>5</b>		<b>Time and Related Matters</b>



5.1.1	The special non-working days set out in the <i>Contract</i> are	the following: 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: 1. Health and Safety Plan 2. OHS Agreement 3. Department of Labour (DoL) notification of Cconstruction 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: 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-end builders' holiday does not exceed 15 working days in duration

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

Where:

5.12.1 Extension of time for practical completion due to abnormal climatic conditions shall be calculated according to the requirements of the following equation.

**V** = Extension of time in calendar days in respect of the calendar month under consideration;

**Nw** = Actual number of days during the calendar month on which rainfall of 10mm or more has been recorded;

**Nn** = Average number of days in the relevant calendar month, as derived from existing rainfall records, as stated in the Site Information, on which rainfall of 10 mm or more has been recorded for the calendar month;

**Rw** = Actual rainfall in mm recorded for the calendar month under consideration; and

**Rn** = Average rainfall in mm for the calendar month as derived from existing rainfall records as stated in the Site Information.

The number of days per month on which work is expected not to be possible as a result of abnormal rainfall are as per the table below;

<b>MONTH</b>	<b>EXPECTED NUMBER OF WORKING DAYS LOST ASA RESULT OF ABNORMAL RAINFALL</b>
JANUARY	7
FEBRUARY	5
MARCH	4
APRIL	3
MAY	2
JUNE	2
JULY	2
AUGUST	2
SEPTEMBER	4
OCTOBER	5
NOVEMBER	5
DECEMBER	6

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 <b>R2 000 or 0.02% of the Contract Value (excluding VAT) per day; whichever is the higher value.</b> "
<b>6</b>		<b>Payment and related matters</b>
6.2.1	<b>The performance guarantee</b> for liability of the Contractor for claims made against the Contractor arising out of the Contractor's failure to deliver the requested Works per the standards, practices, methods and procedures conforming to applicable laws 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 circumstance is	<b>10% of the Contract Price</b>
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 Site but not yet built into the <i>Permanent Works</i> is	<b>80% of the value of the materials.</b>
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	<b>10% of the value of the Works</b>
6.10.3	The limit of retention money is	<b>05% of the value of the Works</b>
<b>8</b>		<b>Risks and related matters</b>
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 Works, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the Contractor) caused by activity in connection with this Contract for any one event is:	R5,000,000
8.6.1.5	a) The minimum limit of indemnity for insurance in respect of loss 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).
<b>10</b>		<b>Claims and disputes</b>
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( <a href="http://www.arbitrators.co.za">www.arbitrators.co.za</a> ) or its successor body.

<b>PART C1.2.3 DATA PROVIDED BY THE CONTRACTOR</b>		
<b>Notes to Tenderer:</b>		
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)
<b>1</b>		<b>General</b>
1.1.1.9	<i>The Contractor is</i>	_____
1.2.1	The Contractor's delivery address is	
	Physical Address	_____
	Postal Address	_____ _____
	Email Address	_____
4.4.2	The <i>Contractor</i> must Sub-Contract any parts of the Contract.	To which this Contract relates shall be the <b><i>minimum of 10% of the Value of the Works</i></b> that must be Sub-Contracted to a Local SMME or the Designated Groups as agreed during the Procurement of the Sub-Contractors.
<b>4</b>		<b>Contractor's General Obligations</b>
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	<i>Contractor's</i> Competent Employees are:	
	Title	<b>Construction Manager</b>
	Name	
	Qualifications	
	Tel No	
	Email	_____

	Title	<b>Site Agent</b>	
	Name		
	Qualifications		
	Tel No		
	Email	_____	
	Title	<b>Construction Site Foreman</b>	
	Name		
	Qualifications		
	Tel No		
	Email	_____	
	Title	<b>Safety Officer</b>	
	Name		
	Qualifications		
	Tel No		
	Email	_____	
	SACPMP Registration Number		
4.12.2	Contractor's Superintendence:	The Contractor's <b>Site Agent, Site Foreman</b> and <b>Safety Officer MUST</b> be on site at all times when work is being performed. No work may be performed without these persons being on site.	
<b>Should the Contractor decide to use other Personnel rather than the one's listed above, must do it inwriting, and the proposed Personnel must have the same or very similar Qualifications and experience</b>			
<b>Security</b>			
6.2.1	The security to be provided by the Contractor shall be one of the following:		
	<b>Type of security</b>		<b>Select (Tick)</b>
	1. Cash Deposit of 10% of the Contract Sum plus retention of 10% of the value of Works		
	2. Fixed Performance Guarantee of 10% of the Contract Sum plus retention of 10% of the value of Works		
	Note A The <b>Performance Guarantee</b> shall be of an Insurance Company listed on the Johannesburg StockExchange or owned by such a company, a Registered South African Bank or a recognised 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
		<b>Amendment of GCC 2015 Clauses</b>
	<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 not 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"> <li>1. the Contract Agreement</li> <li>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),</li> <li>3. the Contract Data,</li> <li>4. the Particular Conditions of the Contract</li> <li>5. the General Conditions of the Contract,</li> <li>6. the Specification,</li> <li>7. the Drawings, and</li> <li>8. the Schedules and any other document forming part of the Contract</li> </ol> <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 Contract to any person without the prior written consent of the Employer.</p>
<p><i>Access to and possession of Site</i></p>	
<p>Insertion of additional wording:</p>	<p>The Employer allows access to, possession and use of each part of the Site to the Contractor which is necessary for the work included in this contract. The Employer shall grant access and use of the Site no later than seven days after Employer's Agent's instruction to commence with the Works.</p> <p>If the Employer does not give the Contractor access to, possession and use of the Site within seven days of the Employer's Agent instruction to commence with the Works, access to, possession and use of the Site shall be as the date when Employer's Agent instructed the Contractor to commence with the Works.</p>
<p><i>Some reasons for extension of time</i></p>	
<p>Insertion of additional wording:</p>	<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 below 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>



<b>MONTH</b>	<b>EXPECTED NUMBER OF WORKING DAYS LOST AS A RESULT OF ABNORMAL RAINFALL</b>
JANUARY	7
FEBRUARY	5
MARCH	4
APRIL	3
MAY	2
JUNE	2
JULY	2
AUGUST	2
SEPTEMBER	4
OCTOBER	5
NOVEMBER	5
DECEMBER	6
<b>TOTAL</b>	<b>47</b>

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.

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.

*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 waives 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*.

<b>Joint Ventures</b>	
<p>Suppose the <i>Contractor</i> 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 <i>Employer</i> for the performance of this <i>Contract</i>.</p>	
<p>Unless already notified to the <i>Employer</i>, the persons or organisations notify the <i>Employer's Agent</i> within two weeks of the date of acceptance of the <i>Contract</i> of the key person who has the authority to bind the <i>Contractor</i> on their behalf.</p>	
<p>The <i>Contractor</i> does not alter the composition of the joint venture, consortium, or other unincorporated groupings of two or more persons without the consent of the <i>Employer</i> having been given to the <i>Contractor</i> in writing.</p>	
<p>Nothing in this <i>Contract</i> 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 <i>Contract</i></p>	
<p>The dissolution of the <i>Joint Venture</i> shall be deemed as a separation and that constitutes the <i>Contract</i> to be Terminated</p>	
<b>Illegal or Corrupt Practices</b>	
<p>Any offer, payment, consideration, or benefit of any kind made by the <i>Contractor</i>, 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 <i>Contract</i> constitutes grounds for terminating the <i>Contractor's</i> obligation to Provide the Works or taking any other action as appropriate against the <i>Contractor</i> (including civil or criminal action).</p>	
<p>The <i>Employer</i> may terminate the <i>Contractor's</i> obligation to provide the Works if the <i>Contractor</i> (or</p>	
	<p>any member of the <i>Contractor</i> where the <i>Contractor</i> 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.</p>
SCC4.3	<p>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.</p>
<b>Confidentiality</b>	
<p>The <i>Contractor</i> does not disclose or make any information arising from or in connection with this <i>Contract</i> 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 <i>Contractor</i>, enters the public domain or to information which was already in possession of the <i>Contractor</i> at the time of disclosure (evidenced by written records in existence at that time). Should the <i>Contractor</i> disclose information to Others in terms of clause 25.1, the <i>Contractor</i> ensures that the provisions of this clause are complied with by the recipient.</p>	
<p>Any information communicated by the <i>Employer</i> to the <i>Contractor</i> in connection with the <i>Contract</i> and any secret and/or confidential information of the <i>Employer</i> otherwise acquired by the <i>Contractor</i> shall be regarded by the <i>Contractor</i> as strictly confidential and shall not, without the prior written consent of the <i>Employer</i> in each instance, be published or disclosed to any other party or be used for any purpose whatsoever other than to execute the Works.</p>	
<p>If the <i>Contractor</i> is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise in writing by the <i>Employer's Agent</i>.</p>	
<p>Suppose the <i>Contractor</i> is, at any time, required by law to disclose any such information which is required to be kept confidential. In that case, the <i>Contractor</i>, to the extent permitted by law before disclosure, notifies the <i>Employer</i> 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 <i>Contractor</i> 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.</p>	

	<p>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 <i>Employer's Agent</i>. All rights in and to all such images vests exclusively in the <i>Employer</i>.</p>
	<p>The Contractor ensures that all his subcontractors abide by the undertakings in this clause.</p>
<p><b>Existing Services and Housekeeping</b></p>	
	<p>The Site may be in continuous operation and, accordingly, the <i>Contractor</i> shall assume that existing services and access ways shall be in continuous use and fully operational at all times.</p>
<p>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 <i>Contractor</i> and for any costs to the <i>Employer</i> which may arise, due to the <i>Contractor</i> preventing in any manner whatever the normal operation and use of such services and access ways.</p>	
<p>During the execution of the Works, the <i>Contractor</i> shall keep the Site reasonably free from all unnecessary obstructions and shall store or dispose of any <i>Contractor's</i> Equipment and surplus materials and without delay clear away and remove from the Site any wreckage, rubbish or temporary works no longer required.</p>	
<p>The <i>Contractor</i> 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.</p>	
<p>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 <i>Contractor</i> until the time the <i>Employer</i> requires the Site to be returned to it or otherwise when the <i>Contractor</i> demobilises from the area of the Site in question and returns to the <i>Employer</i> all of the <i>Employer's</i> property.</p>	
<p>The <i>Contractor</i> 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 <i>Contractor</i> shall promptly repair, at its cost, any damage to the Site which is attributable to the <i>Contractor</i> or its employees of sub-contractors, failing which the <i>Employer</i> shall be entitled to repair the Site and recover the cost of such repairs from the <i>Contractor</i>.</p>	
<p>Any damages suffered by the <i>Employer</i> as aforesaid shall be paid by the <i>Contractor</i> within ten business days or shall be set off against any amounts owing to the <i>Contractor</i> by the <i>Employer</i>.</p>	
<p>The <i>Contractor</i> shall not unnecessarily interfere with the operations of the <i>Employer</i> or Others at the Site. The <i>Employer</i> has the right to refuse access to the Site to any of the <i>Contractor's</i> employees, representatives and/or subcontractors whom it suspects of being a health and safety or other risk.</p>	
<p>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 <i>Employer</i>.</p>	
<p><b>Indemnity against Contractor's Design</b></p>	
<p>The <i>Contractor</i> indemnifies and keeps indemnified the <i>Employer</i> against any losses and costs, including legal costs between attorney and client, and all other expenses whatsoever that the <i>Employer</i> may incur as a result of any action, proceeding or claim made against the <i>Employer</i> 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 <i>Contractor</i> having followed in its entirety instructions stipulated by the <i>Employer</i>.</p>	
<p>The <i>Employer</i> shall give the <i>Contractor</i> 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 <i>Employer</i> may at its option decide to a) permit the Contractor at the <i>Contractor's</i> 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 <i>Contractor</i> keeps the <i>Employer</i> 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 <i>Employer</i> shall act in consultation with the <i>Contractor</i> and shall keep the <i>Contractor</i> informed of all aspects that are taken and of the outcome.</p>	

<p>The <i>Contractor</i> hereby cedes and agrees to cede all intellectual property, excluding intellectual property in respect of which the <i>Contractor</i> can demonstrate proprietorship prior to the date of signature hereof, but including intellectual property specifically developed by the <i>Contractor</i> on behalf of the <i>Employer</i> under instruction and payment by the <i>Employer</i> 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 <i>Employer</i>, to the <i>Employer</i>, its successors, assigns or legal representatives locally and / or internationally, together with the right to apply for Letters Patent in respect thereof.</p>
<p>It is further agreed that the <i>Employer</i> 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.</p>
<p>The <i>Contractor</i> hereby agrees that when requested, he shall without any charges to the <i>Employer</i>, 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 <i>Employer</i>, its successors, assign or legal representatives and the <i>Contractor</i> confirms and agrees that he shall assist the <i>Employer</i> to ensure that total and complete cession and transfer of all right, title and interest in the intellectual property takes place.</p>
<p><b>Time</b></p>
<p>The <i>Contractor</i> acknowledges that time is of the essence to the performance of its obligations in terms of this Contract.</p>
<p><b>Discovery/Reproduction of Documentation</b></p>
<p>The <i>Contractor</i> hereby authorises the <i>Employer</i> to reproduce all documentation made available by the <i>Contractor</i> to the <i>Employer</i> in connection with this <i>Contract</i>. In so far as the <i>Contractor</i> has any copyright protection in the items that are so reproduced by the <i>Employer</i>, the <i>Contractor</i> hereby grants a right and license to the <i>Employer</i> to reproduce the same for the purposes specified in this <i>Contract</i>. The <i>Contractor</i> keeps the <i>Employer</i> 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.</p>
<p><b>Damages</b></p>
<p>The <i>Employer</i> shall be entitled, in its sole discretion, to claim and recover from the <i>Contractor</i> damages <i>in lieu</i> of any penalty agreed upon in terms of this <i>Contract</i>.</p>
<p><b>Accrual</b></p>
<p>Unless otherwise provided <i>herein</i>, rights which accrue to a Party in terms of this <i>Contract</i> shall survive its termination.</p>
<p><b>Commitments and Undertakings</b></p>
<p>Neither Party shall be bound by any express, tacit or implied term, representation, warranty, promise nor the like not recorded <i>herein</i>. This <i>Contract</i> supersedes and replaces all prior commitments, undertakings or representations, whether oral or written, between the Parties in respect of the subject matter hereof.</p>
<p><b>Validity and Enforceability of Contract</b></p>
<p>If any provision of this <i>Contract</i> is found to be invalid, unlawful or unenforceable, that provision shall be severable from the remaining provisions of this <i>Contract</i>, which shall continue to be valid and enforceable.</p>
<p><b>Strategic Socio-Economic Objectives</b></p>
<p>in terms of which the <i>Contractor</i> 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 –</p>
<p>the Specific Goal Points information disclosed to the <i>Employer</i> in the bid response to the Tender Invitation</p>

	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 Specific Goal Points 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 <i>Employer's</i> CPG requirements for the empowerment of Subcontractor/s
	it shall ensure that the execution of the <i>Works</i> and the expenditure of the project costs results in the achievement of the general socio-economic and empowerment objectives
	<p>it shall keep detailed records of –</p> <p>its equity ownership and control and, where applicable, that of its duly appointed Subcontractors and/or suppliers.</p> <p>a) its total spends on targeted enterprises used to fulfil its obligations in terms of the <i>contract</i>.</p> <p>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 any public benefits and/or job opportunities created according to the fulfilment of its obligations in terms of the <i>contract</i> and provide monthly reports outlining compliance with such objectives to the <i>Employer</i>;</p>
	<b>Contractor Obligations</b>
	in terms of which the <i>Contractor</i> unconditionally warrants and undertakes that, in its performance of its obligations under the <i>Contract</i> , it shall, at all times, -
	owe a duty of care to the ORTDM and comply with the reasonable directions issued to it by the <i>Employer, Employer's Agent</i> and/or <i>Employer's Agent Representative</i> ;
	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 <i>Contract</i> ; and
	Undertake the <i>Works</i> 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: ..... ROMH Consulting (Pty) Ltd (via JTN Consulting (Pty) Ltd) .....

"Works" means: ..... SIKWAYINI WATER SUPPLY SCHEME (WSIG) .....

"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: .....(Insert Variable or Fixed)

"Expiry Date" means:..... (Give date) or any other later date set by the Contractor and/or Employer provided such instruction is received prior to the Expiry Date as indicated here.

CONTRACT DETAILS

Employer's Agent issues: Interim Payment Certificates, Final Payment Certificate, and the Certificate 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:

- 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**

- 3.1 The Guarantor hereby acknowledges that:
- 3.1.1 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
- 3.1.2 Its obligation under this Performance Guarantee is restricted to the payment of money.
- 3.2 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:
- 3.2.1 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;
- 3.2.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 3.2.1 and the sum certified has still not been paid;
- 3.2.3 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.
- 3.3 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:
- 3.3.1 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
- 3.3.2 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
- 3.3.3 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.
- 3.4 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.
- 3.5 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.

- 3.6 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.
- 3.7 Payment by the Guarantor in terms of 3.3 will only be made against the return of the original Performance Guarantee by the Employer.
- 3.8 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.
- 3.9 The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
- 3.10 This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 1.1.2 or 2.2, whereafter no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.
- 3.11 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.
- 3.12 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 .....

Date .....

Guarantor's signatory (1) .....

Capacity .....

Guarantor's signatory (2) .....

Capacity .....

Witness signatory (1) .....

Witness signatory (2) .....



## FORM C1.3 SPECIAL CONDITION

### Payment for the labour-intensive component of the Works

Payment for works identified in the Scope of Work as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the Scope of Work. Any non-payment for such works shall not relieve the Contractor in any way from his obligations 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 authorised 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, Performance Report, 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

**O. R. TAMBO DISTRICT MUNICIPALITY**

**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.

**O. R. TAMBO DISTRICT MUNICIPALITY**

**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 recognises 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.
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.
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.



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
- Nonsmoking areas on site
  - Safety exits / Emergency exits from buildings under construction
  - Stairs (temporary and permanent works)
  - Toilets
  - Firefighting 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

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- 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**

## O.R. TAMBO DISTRICT MUNICIPALITY

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.

O. R. TAMBO DISTRICT MUNICIPALITY

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.<br><br>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)    |

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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:  a) A person preparing a design. 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.	Definitions "designer"  Definitions "structure"
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.	
4.5.1	"Structure" in terms of the regulations means:	Definitions
(a)	<ul style="list-style-type: none"><li>• any building</li><li>• steel or reinforced concrete structure</li><li>• railway line</li><li>• railway siding</li><li>• bridge</li><li>• waterworks</li><li>• reservoir</li><li>• pipe or pipeline</li><li>• cable</li><li>• sewer</li><li>• sewage works</li><li>• fixed vessels</li><li>• road</li><li>• drainage works</li><li>• earthworks</li><li>• dam</li><li>• wall</li><li>• mast</li><li>• tower</li><li>• tower crane</li><li>• batching plants</li><li>• pylon</li><li>• surface and underground tanks</li><li>• earth retaining structure</li></ul> 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 access during construction (structural engineering sector).	
(c)	Fixed plant to prevent people from falling 2 meters or more.	
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.	Clause 9(2)
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>	Clause 9(2)(b)
4.5.4	The designer (in the structural engineering context) shall further furnish to the contractor in writing:	Clause 9(2)
i)	A geo-technical report.	
ii)	The loading of the structure.	
iii)	The method and sequence of the construction process.	
iv)	He should exclude inherently dangerous methods of construction in his design.	
v)	The maintenance of the structure shall be through safe procedures.	
vi)	He should carry out inspections.	
vii)	And stop the contractor from executing work dangerously.	

- 
- viii) A final inspection is necessary to ensure safety of the structure.
  - ix) Great emphasis should be given to the ergonomic design of the structure.
  - x) The engineer should also give input in the design of temporary work e.g. scaffolding.

Clause 10(c)

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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	Clause 22
	• Water environment	
	• 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

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SECTION 6

6. APPOINTMENT OF THE DESIGNER

Clause 4(5)

- |     |  |                |
|-----|--|----------------|
| 6.1 | The client appoints the consultant or designer as agent only for the particular project and also for the duration of the project.  |                |
| 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.  |                |
| 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. |                |
| 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.  |                |
| 6.5 | The following duties are not regarded as normal work of the designer of a "structure" and will therefore require an additional appointment.  |                |
| .1  | To ensure the H&S plan of the PC is implemented on site.   | Clause 4(1)(d) |
| .2  | To ensure that changes to the design are also incorporated in the H&S plan.  | Clause 4(1)(e) |
| .3  | To ensure that the principal contractor is registered and in good standing with the workmens' compensation fund.   | Clause 4(1)(f) |
| .4  | To see that the contractor registers the site as a construction site at the Department of Labour.  | Clause 4(1)(g) |
| .5  | To discuss with the contractor the H&S plan and then recommend to the client the approval thereof.   | Clause 4(2)    |
| .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)    |
| .7  | Control the following on site:   |                |
| 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)    |
| b)  | To see that the principal contractor keeps a data base of all contractors involved with the project.   | Clause 5(9)    |
| c)  | To see that the principal contractor appoints one or more construction supervisors.  |                |
| d)  | To see that this person is dedicated to the particular project only.   | Clause 6(4)    |
| e)  | To receive from the contractor his risk assessment and keep a copy of that for his and the clients records.  | Clause 7(1)    |

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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)

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SECTION 8

**8. THE ROLE OF THE PRINCIPAL CONTRACTOR**

The principal contractor should execute the following duties:

- |     |  |              |
|-----|--|--------------|
| .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.                      |              |

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SECTION 9

**9. THE PROCEDURE**

- |     |   |                     |
|-----|---|---------------------|
| 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.<br><br>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.<br><br>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<br>(ii) Loading of the structure – in other words all relevant technical data taking the definition of “structure” into account.<br>(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 believe 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 believe that such contractor is not working safely. |



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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.

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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.

<b>C2 PRICING DATA</b>
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C2.1 Pricing Instructions

C2.2 Bill of Quantities

## **FORM C2.1      PRICING INSTRUCTIONS**

1. The Tender Data, the Scope of Work and the Drawings are to be read in conjunction with the Schedule of Quantities.
2.
  - a. The Schedule comprises items covering the Consortium's profit and costs of general liabilities and of the construction of temporary and permanent Works.
  - b. Although the Tenderer is at liberty to insert a rate of his own choosing for each item in the Schedule, his attention is drawn to the fact that the tenderer has the right, under various circumstances, to payment for additional works carried out and that the Client is obliged to base his assessment of the payment to be paid for such additional work on the rates inserted in the Schedule by the tenderer.
  - c. Clause 8 of each Standardized Specification and the measurement and payment clause of each Particular Specification, read together with the relevant clause of the Project Specification, set out what ancillary or associated activities are included in the rate for the operations specified.
3. Descriptions in the Schedule of Quantities are abbreviated. The schedule has been drawn up generally in accordance with the latest issue of "Civil Engineering Quantities". Should any requirement of the measurement and payment clause of the applicable Standardized Specification, or the Project Specification, or the Particular Specification(s) conflict with the terms of the Schedule or, when relevant "Civil Engineering Quantities", the requirement of the Standardized, Project or Particular Specification, as applicable, shall prevail.
4. Unless otherwise stated, items are measured net in accordance with the Drawings, and no allowance has been made for waste.
5. The prices and rates to be inserted in the Schedule of Quantities are to be the full inclusive prices to the Employer for the work described under the several items. The prices and rates shall be exclusive of Value Added Tax. Such prices shall cover all costs and expenses that may be required in and for the construction of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based.
6. A price or rate is to be entered, in **BLACK INK**, against each item in the Schedule of Quantities.
7. In the event of the Tenderer failing to price any item it will be held that the Tenderer has made adequate allowance under other items for all labour, material and costs required for the execution, not only of the quantum of work covered by the unpriced item but also for any increase in the said quantum which may have to be undertaken during the course of the Contract.
8. An amount or rate shall be entered against each item in the Bill of Quantities, whether or not quantities are stated. An item against which no amount or rate is entered will be considered to be covered by the other amounts or rates in the Bill.
9. The Bidder shall also fill in a rate against the items where the words "rate only" appears in the amount column. Although no work is foreseen under these items and no quantities are consequently given in the quantity column, the bid rates shall apply should work under these items actually be required.
10. The quantities set out in the schedule of quantities are only approximate quantities. The quantities of work finally accepted and certified for payment, and not the quantities given in the schedule of quantities, will be used to determine payments to the contractor.

9 For the purposes of this Bill of Quantities, the following words shall have the meanings hereby assigned to them:

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

Quantity : The number of units of work for each item

Rate : The payment per unit of work at which the Bidder bids to do the work Amount:

The quantity of an item multiplied by the bid rate of the (same) item

Sum : An amount bid for an item, the extent of which is described in the Bill of Quantities, the Specifications or elsewhere, but of which the quantity of work is not measured in units

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

mm	=	millimetre
m	=	metre
km	=	kilometre
km-pass	=	kilometre-pass
m <sup>2</sup>	=	square metre
m <sup>2</sup> -pass	=	square metre-pass
ha	=	hectare
m <sup>3</sup>	=	cubic metre
m <sup>3</sup> -km	=	cubic metre-kilometre
kW	=	kilowatt
kN	=	kilonewton
kg	=	kilogram
t	=	ton (1 000 kg)
%	=	per cent
MN	=	mega Newton

12. 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

13. Descriptions in the Bill of Quantities are abbreviated and comply generally with those in the SANS 1200 Standardised Specifications.

14. 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.

15. 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](http://www.sabs.co.za) or [www.iso.org](http://www.iso.org) for information on standards).

16. 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.

17. 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**

<b>SCHEDULE</b>	<b>DESCRIPTION</b>	<b>PAGE</b>
A	PRELIMINARY AND GENERAL	C2.2.1
B	SIKWAYINI SOURCE DEVELOPMENT	C2.2.4
C	SIKWAYINI BULK GRAVITY MAIN	C2.2.6
D	SIKWAYINI BULK STORAGE (200 KL STEEL TANK)	C2.2.8
E	SIKWAYINI BULK STORAGE (100 KL STEEL TANK)	C2.2.10
F	SIKWAYINI RETICULATION	C2.2.12
	SUMMARY OF BILL OF QUANTITIES	C2.2.15
	DECLARATION	C2.2.16

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**C2.2 Bill of Quantities**

ITEM NO	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	SABS 1200A	<b><u>SECTION 1: PRELIMINARY &amp; GENERAL</u></b>				
1.1	8.3	<b>Schedule Fixed-Charge and Value-Related Items</b>				
1.1.1	8.3.1	Contractual Requirements	Sum	1		
	8.3.2	Establishment of Facilities on Site:				
	8.3.2.1	Facilities for the Engineer:				
1.1.2	(b)	Nameboards (2 No.)	Sum	1		
	8.3.2.2	Facilities for the Contractor:				
1.1.3	a)	Offices and Storage Sheds	Sum	1		
1.1.4	b)	Workshops	Sum	1		
1.1.5	c)	Laboratories	Sum	1		
1.1.6	d)	Living Accommodation	Sum	1		
1.1.7	e)	Ablution and Latrine Activities	Sum	1		
1.1.8	f)	Tools and Equipment	Sum	1		
1.1.9	g)	Water Supplies, Electric Power, and Communications	Sum	1		
1.1.10	i)	Access to Contractor Facilities	Sum	1		
1.1.11	j)	Plant	Sum	1		
	8.3.3	Other Fixed-Charge Obligations:				
1.1.12	8.3.3	Health and Safety Obligations	Sum	1		
1.1.13	8.3.3	Risk Assessments	Sum	1		
1.1.14	8.3.3	Provision for the Preparation of a Project Specific OH&S Plan	Sum	1		
1.1.15	8.3.3	Health and Safety File	Sum	1		
1.1.16	8.3.3	Training	Sum	1		
1.1.17	8.3.3	Medical Assessment of Employees	Sum	1		
1.1.18	8.3.3	Operation and maintenance of Quality Assurance System	Sum	1		
1.1.19	8.3.3	General Safety Obligations	Sum	1		
1.1.20	8.3.3	Development of Environmental File for approval by Environmental Control Officer	Sum	1		
1.1.21	8.3.3	Environmental Awareness	Sum	1		
1.1.22	8.3.3	Environmental Control Officer	Sum	1		
1.1.23	8.3.3	Accommodation for Site Personnel for the Duration of Construction	Sum	1		
<b>Carried Forward</b>						



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**C2.2 Bill of Quantities**

<b>Brought Forward</b>						
1.1.24	8.3.4	Remove Site Establishment on Completion	Sum	1		
<b>1.2</b>	<b>8.4</b>	<b>Scheduled Time-Related Items</b>				
1.2.1	8.4.1	Contractual Requirements	Sum	1		
	8.4.2	Operation and Maintenance of Facilities on Site, for Duration of Construction:				
	8.4.2.1	Facilities for the Engineer:				
1.2.2	(b)	Nameboard (1 No.)	Sum	1		
	8.4.2.2	Facilities for the Contractor:				
1.2.3	a)	Offices and Storage Sheds	Sum	1		
1.2.4	b)	Workshops	Sum	1		
1.2.5	c)	Laboratories	Sum	1		
1.2.6	d)	Living Accommodation	Sum	1		
1.2.7	e)	Ablution and Latrine Activities	Sum	1		
1.2.8	f)	Tools and Equipment	Sum	1		
1.2.9	g)	Water Supplies, Electric Power and Communications	Sum	1		
1.2.9	g)	Water Supplies, Electric Power and Communications	Sum	1		
1.2.10	i)	Access to Contractor Facilities	Sum	1		
1.2.11	j)	Plant	Sum	1		
1.2.12	8.4.3	Supervision for the Duration of Construction	Sum	1		
1.2.13	8.4.4	Company and Head Office Overhead costs for Duration of Contract	Sum	1		
1.2.14	8.4.5	Quality Control and Quality Assurance System for the Duration of the Contract	Sum	1		
1.2.15	8.4.5	Maintain Health and Safety Plan	Sum	1		
<b>1.3</b>	<b>8.5</b>	<b>Sums Stated Provisionally by Engineer</b>				
1.3.1	b) 1)	Additional Testing required by the Engineer	Prov Sum	1	R 30 000.00	R 30 000.00
1.3.2	b) 2)	Overhead, Charges, Profit etc. on Item 1.3.2	%		R 30 000.00	
<b>1.4</b>	<b>8.6</b>	<b>Prime Cost Items</b>				
1.4.1	a)	Provisional contingency allowance for miscellaneous items	PC Sum	1	R 20 000.00	R 20 000.00
1.4.2	b)	Overhead, Charges, Profit etc. on Item 1.4.1	%		R 20 000.00	
<b>Carried Forward</b>						

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Sikwayini Water Supply Scheme

**C2.2 Bill of Quantities**

						Brought Forward	
1.4.3	c)	Transport and labour to handle and install miscellaneous items as per Item 1.4.1 above	Sum	1			
1.4.4	a)	Community Liaison Officer (CLO) Remuneration	PC Sum	1	R 42 000.00	R 42 000.00	
1.4.5	b)	Overhead, Charges, Profit etc. on Item 1.3.4	%		R 42 000.00		
<b>1.5</b>	<b>8.7</b>	<b>Dayworks</b>					
1.5.1		TLB				RATE ONLY	
1.5.2		6m <sup>3</sup> Tipper Truck				RATE ONLY	
1.5.3		Roller Compactor				RATE ONLY	
1.5.4		Rammer Compactor				RATE ONLY	
1.5.5		Storage Shed / Hut				RATE ONLY	
1.5.6		Portable Ablution				RATE ONLY	
1.5.7		Generator				RATE ONLY	
1.5.8		Water Pump				RATE ONLY	
1.5.9		Survey Equipment e.g. Dumpy Level				RATE ONLY	
<b>1.6</b>	<b>8.8</b>	<b>Temporary Works</b>					
1.6.1	8.8.1	Provide, maintain, scarify as necessary access road and / or track to provide access to all sections of the pipeline route	Sum	1			
1.6.2	8.8.2	Traffic Accommodation for Pipeline Construction within the Road Reserve	Sum	1			
1.6.3	8.8.4	Supply, Detect, Expose and Protect Existing Services Intersecting and Adjoining Pipeline Route	Sum	1			
<b>Total Section 1 Carried to Summary</b>							

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Sikwayini Water Supply Scheme

C2.2 Bill of Quantities

ITEM NO	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		<b><u>SECTION 2: SIKWAYINI SOURCE DEVELOPMENT</u></b>				
2	SABS1200 C	<b><u>SITE CLEARANCE</u></b>				
2.1 LI	PSC 8.2.1	- Clear and Grub	m <sup>2</sup>	53		RATE ONLY
3	SABS 1200 DA	<b><u>EARTHWORKS (SMALL WORKS)</u></b>				
	8.3.1	Excavation				
3.1 LI	a)	Remove Topsoil to Nominal Depth of 200mm, Stockpile and Maintain	m <sup>2</sup>	53		RATE ONLY
	8.3.2	Restricted Excavation				
3.2 LI	a)	Excavate for Restricted Foundations, Footings and Trenches in all Materials and Dispose	m <sup>3</sup>	27		RATE ONLY
	b)	Extra-over for				
3.3 LI	1)	Intermediate Excavation	m <sup>3</sup>	3		
3.4 LI	2)	Hard Rock Excavation	m <sup>3</sup>	3		
4	SABS 1200 DK	<b><u>GABIONS AND PITCHING</u></b>				
4.1 LI	8.2.2	Pitching	m <sup>2</sup>	12		
5	SABS 1200 GE	<b><u>PRECAST CONCRETE (STRUCTURAL)</u></b>				
5.1 LI	8.2.1	Provide Structural Precast Drinking Trough Units	No	3		
6	SABS1200 H	<b><u>STRUCTURAL STEELWORK</u></b>				
	8.3.1	Supply and Fabrication				
6.1	8.3.1.1	Preparation of Shop Detail Drawings for Fencing	Sum	1		RATE ONLY
	PSH 8.3.1.2	Supply and Fabrication of Steelwork for Fencing	Sum	1		RATE ONLY
	8.3.2	Delivery to Site				
6.2	PSH 8.3.2.1	Normal Delivery for Fencing	Sum	1		RATE ONLY
6.3 LI	PSH 8.3.3	Erection on Site for Fencing	m	1500		RATE ONLY
<b>Carried Forward</b>						

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Sikwayini Water Supply Scheme

C2.2 Bill of Quantities

<b>Brought Forward</b>					
<b>7</b>	<b>SABS 1200 L</b>	<b><u>MEDIUM-PRESSURE PIPELINES</u></b>			
7.1 LI	8.2.5	Supply, Place and Fix Pipes, Pump, Valves, and Specials (ShortPipe runs) as shown on ROM-153-07-076-03-18	No	1	
7.2	8.2.5	Supply, Place and Fix Pipes, Pump, Valves, and Specials (ShortPipe runs) as shown on ROM-153-07-076-03-18	No	2	
7.3 LI	8.2.13	Spring Box Chamber (NO-SP4)	No	2	
7.4 LI	8.2.13	Refurbish existing Spring Box Chamber (NO-SP2 and NO-SP3)	No	2	
7.5 LI	8.2.13	Supply and Erect Borehole Pump House as shown on ROM-153-07-076-03-19	No	2	
<b>Total Section 2 Carried to Summary</b>					

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Sikwayini Water Supply Scheme

C2.2 Bill of Quantities

ITEM NO	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		<b><u>SECTION 3: SIKWAYINI BULK GRAVITY MAIN</u></b>				
8	<b>SABS 1200 DB</b>	<b><u>EARTHWORKS (PIPE TRENCHES)</u></b>				
	8.3.1	Site Clearance and Removal of Topsoil:				
8.1 LI	a)	Clear Vegetation and Trees of girth up to 1 m	m	10897		RATE ONLY
8.2 LI	c)	Remove Topsoil to a depth of 200mm below Natural GroundLevel	m <sup>2</sup>	7083		RATE ONLY
	8.3.2	Excavation				
	a)	Excavate in all Materials for Trenches, Backfill, Compact andDispose of Surplus Material:				
		<u>Over:</u> <span style="float: right;"><u>Up to and Including:</u></span>				
8.3 LI	1)	0.0m <span style="float: right;">1.5m</span>	m	10897		
8.4 LI	2)	1.5m <span style="float: right;">3.0m</span>	m	675		RATE ONLY
8.5	3)	3.0m <span style="float: right;">Above</span>	m	340		RATE ONLY
	(b)	Extra-over Item 8.3 LI to 8.5 above for:				
8.6	1)	Intermediate Excavation	m <sup>3</sup>	862		
8.7	2)	Hard Rock Excavation	m <sup>3</sup>	431		
	8.3.3.1	Make up deficiency in Backfill Material (Provisional)				
8.8 LI	b)	by Importation from designated Borrow Pits	m <sup>3</sup>	1294		
8.9 LI	c)	by Importation from Commercial or Off-site Sources selected bythe Contractor	m <sup>3</sup>	1294		RATE ONLY
8.10	8.3.3.3	Compaction in Road Reserves	m <sup>3</sup>	1294		RATE ONLY
	8.3.4	Particular Items:				
8.11	a)	Shore Trench Opposite Structure or Service	m	1015		
	8.3.5	Existing Services that Intersect or Adjoin a Pipe Trench:				
8.12	a)	Services that Intersect a Trench	No	110		
<b>Carried Forward</b>						

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Sikwayini Water Supply Scheme

**C2.2 Bill of Quantities**

<b>Brought Forward</b>						
	8.3.6	Finishing:				
	8.3.6.1	Reinstate Road Surfaces Complete with all Courses:				
8.13	a)	Gravel on Shoulders	m <sup>2</sup>	5812		RATE ONLY
8.14 LI	d)	Spread Topsoil over Construction Servitude on completion of the Works	m <sup>2</sup>	7038		
<b>9</b>	<b>SABS 1200 L</b>	<b><u>MEDIUM-PRESSURE PIPELINES</u></b>				
		Supply, Lay, and Bed HDPE Pipes Complete with Couplings:				
9.1 LI	8.2.1	50mm PN12.5 HDPE	m	10897		
		Extra-over Item 3.1 for Supplying, Fixing, and Bedding of HDPE Specials Complete with Couplings: :				
		Bends (Horizontal and Vertical):				
9.2 LI	8.2.2	90° 50mm PN16 HDPE	No	1		
		Tees (Equal):				
9.3 LI	8.2.2	50mm x 50mm PN12.5 uPVC	No	2		
		Flanged Adaptor:				
9.4 LI	8.2.2	50mm PN16 HDPE to Steel	No	72		
		Extra-over Item 3.1 for Supplying, Fixing, and Bedding of Valves as shown on DWG ROM-153-07-076-03-16:				
9.5	8.2.3	50mm PN16 Double Action Air Valve	No	24		
9.6	8.2.3	80mm PN16 Scour Valve	No	12		RATE ONLY
9.7 LI	8.2.4	Extra-over Item 3.1 for the Cutting of the Pipe and the Supplying and Fixing of the Extra Coupling	No	6		
9.8 LI	8.2.13	Valve Chambers as shown on DWG ROM-153-07-076-03-16	No	36		
<b>10</b>	<b>SABS 1200LB</b>	<b><u>BEDDING (PIPES)</u></b>				
	8.2.2	Provision of Flexible Bedding by Importation:				
	8.2.2.2	From Borrow Pits:				
10.1 LI	a)	Selected Granular Material	m <sup>3</sup>	1749		
10.2 LI	b)	Selected Fill Material	m <sup>3</sup>	1417		
	8.2.2.3	From Commercial Sources:				
10.3 LI	a)	Selected Granular Material	m <sup>3</sup>	1749		RATE ONLY
10.4 LI	b)	Selected Fill Material	m <sup>3</sup>	1417		RATE ONLY
<b>Total Section 3 Carried to Summary</b>						

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Sikwayini Water Supply Scheme

**C2.2 Bill of Quantities**

ITEM NO	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		<b><u>SECTION 4: SIKWAYINI BULK STORAGE (100 kL STEEL TANK)</u></b>				
<b>11</b>	<b>SABS 1200 D</b>	<b><u>EARTHWORKS</u></b>				
	8.3.1	- Site Preparation				
11.1 LI	8.3.1.1	Clear and Strip Site	m <sup>2</sup>	53		RATE ONLY
11.2 LI	8.3.1.2	Remove Topsoil to Nominal Depth of 200mm, Stockpile and Maintain	m <sup>2</sup>	53		RATE ONLY
	8.3.2	Bulk Excavation				
11.3 LI	a)	Excavate in all Materials and use for Embankment or Backfillor Dispose, as ordered	m <sup>3</sup>	6		
	8.3.4	Importing of Materials				
11.4 LI	a)	Extra-over for Importation of Materials from Borrow Pits	m <sup>3</sup>	6		
11.5 LI	a)	Extra-over for Importation of Materials from Commercial Sources	m <sup>3</sup>	6		RATE ONLY
11.6 LI	8.3.5	Extra Excavation in all Materials to Provide Working Spacearound Structure	m <sup>2</sup>	65		
11.7 LI	8.3.10	Topsoiling	m <sup>2</sup>	65		
11.8 LI	8.3.11	Grassing or other Vegetation Cover	m <sup>2</sup>	65		
<b>12</b>	<b>SABS 1200 DK</b>	<b><u>GABIONS AND PITCHING</u></b>				
12.1 LI	8.2.2	Pitching	m <sup>2</sup>	2		
<b>13</b>	<b>SABS 1200 GA</b>	<b><u>CONCRETE (SMALL WORKS)</u></b>				
13.1 LI	8.2.2	Smooth Formwork	m <sup>2</sup>	15		
13.2 LI	8.3.1	Y12 High Yield Steel Bars	kg	220		
13.3 LI	8.3.1	R10 Mild Steel Bars	kg	112		
13.4 LI	8.4.3	Strength Concrete, Grade 25 MPa	m <sup>3</sup>	3		
	8.4.4	Unformed Surface Finishes				
13.5 LI	b)	Steel-floated Finish	m <sup>2</sup>	9		
<b>Carried Forward</b>						

**CONTRACT NO.: ORTDM SCMU 13-23/24**

Sikwayini Water Supply Scheme

C2.2 Bill of Quantities

						Brought Forward	
<b>14</b>	<b>SABS 1200 H</b>	<b><u>STRUCTURAL STEELWORK</u></b>					
	8.3.1	Supply and Fabrication					
14.1	8.3.1.1	Preparation of Shop Detail Drawings for Reservoir	Sum	1			
14.2	8.3.1.1	Preparation of Shop Detail Drawings for Fencing	Sum	1			RATE ONLY
14.3	PSH 8.3.1.2	Supply and Fabrication of Steelwork for Reservoir	Sum	1			
14.4	PSH 8.3.1.2	Supply and Fabrication of Steelwork for Fencing	Sum	1			RATE ONLY
	8.3.2	Delivery to Site					
14.5	PSH 8.3.2.1	Normal Delivery for Reservoir	Sum	1			
14.6	PSH 8.3.2.1	Normal Delivery for Fencing	Sum	1			RATE ONLY
14.7	8.3.3	Erection on Site for Reservoir	No	1			
14.8 LI	PSH 8.3.3	Erection on Site for Fencing	m	400			RATE ONLY
14.5	8.3.10	Non-destructive Testing (Water Tightness Test) for Reservoir	No	1			
14.6	8.3.11	Commissioning (Turnkey Projects) of Reservoir	Sum	1			
<b>15</b>	<b>SABS 1200 L</b>	<b><u>MEDIUM-PRESSURE PIPELINES</u></b>					
15.1	8.2.5	Supply, Place and Fix Pipes, Pump, Valves, and Specials(Short Pipe runs) as shown on ROM-153-07-076-03-18	No	3			
15.2 LI	8.2.11	Anchor / Thrust Blocks and Pedestals and shown on ROM-153-07-076-03-19	Sum	1			
15.3 LI	8.2.13	Valve Chambers	No	3			
<b>Total Section 4 Carried to Summary</b>							



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Sikwayini Water Supply Scheme

C2.2 Bill of Quantities

ITEM NO	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		<b><u>SECTION 5: SIKWAYINI BULK STORAGE (55 kL STEEL TANK)</u></b>				
<b>16</b>	<b>SABS 1200 D</b>	<b><u>EARTHWORKS</u></b>				
	8.3.1	- Site Preparation				
16.1 LI	8.3.1.1	Clear and Strip Site	m <sup>2</sup>	24		RATE ONLY
16.2 LI	8.3.1.2	Remove Topsoil to Nominal Depth of 200mm, Stockpile and Maintain	m <sup>2</sup>	24		RATE ONLY
	8.3.2	Bulk Excavation				
16.3 LI	a)	Excavate in all Materials and use for Embankment or Backfillor Dispose, as ordered	m <sup>3</sup>	3		
	8.3.4	Importing of Materials				
16.4 LI	a)	Extra-over for Importation of Materials from Borrow Pits	m <sup>3</sup>	3		
16.5 LI	a)	Extra-over for Importation of Materials from Commercial Sources	m <sup>3</sup>	3		RATE ONLY
16.6 LI	8.3.5	Extra Excavation in all Materials to Provide Working Spacearound Structure	m <sup>2</sup>	47		
16.7 LI	8.3.10	Topsoiling	m <sup>2</sup>	47		
16.8 LI	8.3.11	Grassing or other Vegetation Cover	m <sup>2</sup>	47		
<b>17</b>	<b>SABS 1200 DK</b>	<b><u>GABIONS AND PITCHING</u></b>				
17.1 LI	8.2.2	Pitching	m <sup>2</sup>	2		
<b>18</b>	<b>SABS 1200 GA</b>	<b><u>CONCRETE (SMALL WORKS)</u></b>				
18.1 LI	8.2.2	Smooth Formwork	m <sup>2</sup>	11		
18.2 LI	8.3.1	Y12 High Yield Steel Bars	kg	77		
18.3 LI	8.3.1	R10 Mild Steel Bars	kg	40		
18.4 LI	8.4.3	Strength Concrete, Grade 25 MPa	m <sup>3</sup>	2		
	8.4.4	Unformed Surface Finishes				
18.5 LI	b)	Steel-floated Finish	m <sup>2</sup>	7		
<b>Carried Forward</b>						

**CONTRACT NO.: ORTDM SCMU 13-23/24**

Sikwayini Water Supply Scheme

C2.2 Bill of Quantities

						Brought Forward		
<b>19</b>	<b>SABS 1200 H</b>	<b><u>STRUCTURAL STEELWORK</u></b>						
	8.3.1	Supply and Fabrication						
19.1	8.3.1.1	Preparation of Shop Detail Drawings for Reservoir		Sum	1			
19.2	8.3.1.1	Preparation of Shop Detail Drawings for Fencing		Sum	1		RATE ONLY	
19.3	PSH 8.3.1.2	Supply and Fabrication of Steelwork for Reservoir		Sum	1			
19.4	PSH 8.3.1.2	Supply and Fabrication of Steelwork for Fencing		Sum	1		RATE ONLY	
	8.3.2	Delivery to Site						
19.5	PSH 8.3.2.1	Normal Delivery for Reservoir		Sum	1			
19.6	PSH 8.3.2.1	Normal Delivery for Fencing		Sum	1		RATE ONLY	
19.7	8.3.3	Erection on Site for Reservoir		No	1			
19.8 LI	PSH 8.3.3	Erection on Site for Fencing		m	400		RATE ONLY	
19.5	8.3.10	Non-destructive Testing (Water Tightness Test) for Reservoir		No	1			
19.6	8.3.11	Commissioning (Turnkey Projects) of Reservoir		Sum	1			
<b>20</b>	<b>SABS 1200 L</b>	<b><u>MEDIUM-PRESSURE PIPELINES</u></b>						
20.1	8.2.5	Supply, Place and Fix Pipes, Pump, Valves, and Specials(Short Pipe runs) as shown on ROM-153-07-076-03-18		No	2			
20.2	8.2.11	Anchor / Thrust Blocks and Pedestals and shown on ROM-153-07-076-03-19		Sum	1			
20.3	8.2.13	Valve Chambers		No	2			
<b>Total Section E Carried to Summary</b>								

**CONTRACT NO.: ORTDM SCMU 13–23/24**

Sikwayini Water Supply Scheme

C2.2 Bill of Quantities

ITEM NO	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		<b><u>SECTION 6: SIKWAYINI RETICULATION</u></b>				
21	<b>SABS 1200 DB</b>	<b><u>EARTHWORKS (PIPE TRENCHES)</u></b>				
	8.3.1	Site Clearance and Removal of Topsoil:				
21.1 LI	a)	Clear Vegetation and Trees of girth up to 1 m	m	5222		RATE ONLY
21.2 LI	c)	Remove Topsoil to a depth of 200mm below Natural GroundLevel	m <sup>2</sup>	3395		RATE ONLY
	8.3.2	Excavation				
	a)	Excavate in all Materials for Trenches, Backfill, Compact andDispose of Surplus Material:				
		<u>Over:</u> <u>Up to and</u>				
		<u>Including:</u>				
21.3 LI	1)	0.0m 1.5m	m	5222		
	(b)	Extra-over Item 21.3 LI above for:				
21.4	1)	Intermediate Excavation	m <sup>3</sup>	339		
21.5	2)	Hard Rock Excavation	m <sup>3</sup>	170		
	8.3.3.1	Make up deficiency in Backfill Material (Provisional)				
21.6 LI	b)	by Importation from designated Borrow Pits	m <sup>3</sup>	509		
21.7 LI	c)	by Importation from Commercial or Off-site Sources selectedby the Contractor	m <sup>3</sup>	509		RATE ONLY
21.8	8.3.3.3	Compaction in Road Reserves	m <sup>3</sup>	509		RATE ONLY
	8.3.5	Existing Services that Intersect or Adjoin a Pipe Trench:				
21.9	a)	Services that Intersect a Trench	No	53		
	8.3.6	Finishing:				
	8.3.6.1	Reinstate Road Surfaces Complete with all Courses:				
21.10	a)	Gravel on Shoulders	m <sup>2</sup>	3394		RATE ONLY
21.11 LI	d)	Spread Topsoil over Construction Servitude on completion ofthe Works	m <sup>2</sup>	3394		
<b>Carried Forward</b>						

**CONTRACT NO.: ORTDM SCMU 13-23/24**

Sikwayini Water Supply Scheme

C2.2 Bill of Quantities

						Brought Forward	
<b>22</b>	<b>SABS 1200 L</b>	<b><u>MEDIUM-PRESSURE PIPELINES</u></b>					
		Supply, Lay, and Bed HDPE Pipes Complete with Couplings:					
22.1 LI	8.2.1	63mm Class 9 uPVC		m	260		
22.2 LI	8.2.1	50mm PN10 HDPE		m	4962		
		Extra-over Item 3.1 for Supplying, Fixing, and Bedding of Specials Complete with Couplings:					
		Bends (Horizontal and Vertical):					
22.3 LI	8.2.2	90° 50mm PN16 HDPE		No	1		
		Tees (Equal):					
22.4 LI	8.2.2	63mm × 63mm PN16 uPVC		No	1		
22.5 LI	8.2.2	50mm × 50mm PN16 HDPE		No	8		
		Cross Tees (Equal):					
22.6 LI	8.2.2	50mm × 50mm Class 16 uPVC		No	1		
		Reducer:					
22.7 LI	8.2.2	63mm × 50mm PN16 uPVC		No	2		
		uPVC to HDPE Adaptor:					
22.8 LI	8.2.2	50mm PN16 HDPE		No	5		
22.9 LI	8.2.4	Extra-over Item 11.1 for the Cutting of the Pipe and the Supplying and Fixing of the Extra Coupling		No	2		
22.10 LI	8.2.4	Extra-over Item 11.2 for the Cutting of the Pipe and the Supplying and Fixing of the Extra Coupling		No	12		
22.11 LI	8.2.5	Supply and Place Pipe, Valves, and Specials (Short Piferuns) as shown on DWG ROM-153-07-076-03-15		No	18		
						<b>Carried Forward</b>	

**CONTRACT NO.: ORTDM SCMU 13-23/24**

Sikwayini Water Supply Scheme

C2.2 Bill of Quantities

						<i>Brought Forward</i>	
23	<b>SABS 1200LB</b>	<b><u>BEDDING (PIPES)</u></b>					
	8.2.2	Provision of Flexible Bedding by					
	8.2.2.2	Importation: From Borrow Pits:					
23.1 LI	a)	Selected Granular		m <sup>3</sup>	841		
23.2 LI	b)	Material Selected Fill		m <sup>3</sup>	680		
	8.2.2.	Material					
23.3 LI	3	From	Commercial	m <sup>3</sup>	841		RATE ONLY
23.4 LI	a)	Sources:	Selected	m <sup>3</sup>	680		RATE ONLY
	b)	Granular	Material				
		Selected Fill Material					
<b>Total Section 6 Carried to Summary</b>							

## SUMMARY OF BILL OF QUANTITIES

SUMMARY OF SECTIONS		
SECTION	DESCRIPTION	AMOUNT (RAND)
1	PRELIMINARY AND GENERAL	
2	SIKWAYINI SOURCE DEVELOPMENT	
3	SIKWAYINI BULK GRAVITY MAIN	
4	SIKWAYINI BULK STORAGE (200 KL STEEL TANK)	
5	SIKWAYINI BULK STORAGE (100 KL STEEL TANK)	
6	SIKWAYINI RETICULATION	
<b>8</b>	<b>TOTAL OF SECTIONS (VAT EXCLUDED)</b>	
9	ADD: CONTINGENCIES @ 10%	
<b>10</b>	<b>SUB TOTAL 1</b>	
11	ADD: VAT @ 15%	
<b>12</b>	<b>TOTAL PROJECT COST</b>	

**SIGNED BY/ON BEHALF OF TENDERER**

**NAME**

**SIGNATURE**

**DATE**

**COMPANY STAMP**

## **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 **CONTRACTNO.: ORTDM SCMU 13-23/24: CONSTRUCTION OF SIKWAYINI WATER SUPPLY SCHEME (WSIG)** has been based.

## **C3 SCOPE OF WORKS**

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 Client's objective is to supply water to Sikwayini village and surrounding sub-villages in Mhlontlo Local Municipality. The contractor shall use the 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 Sikwayini Water Supply Scheme, is the Reticulation of approximately 11 km in Sikwayini Village of the Mhlontlo Local Municipality within the jurisdiction of the O. R. Tambo District Municipality. This includes the construction of the reticulation networks, pressure pipeline and associated fittings, connecting to an existing pipeline as a source, associated reticulation network and communal stand pipes.

The Works to be carried out by the Contractor under this Contract:

- Construction of Spring Box at NO-SP4, complete with Precast Concrete Drinking Trough;
- Refurbishment of Spring Box and NO-SP2 and NO-SP3, complete with Precast Concrete Drinking Troughs;
- 1500m Fencing of all Protected Springs;
- Construction of 2 Borehole Pump Houses, complete with equipping of Boreholes;
- Installation of an aeration chamber (NO-AC1) after Y-junction of NO-SP4 (NO-SP1) and NO-SP2;
- Installation of a Slow Sand Filtration Box (NO-SSF1) from NO-AC1;
- Installation of an In-Line Chlorinator (NO-KIC1) at the Inlet Pipe of the proposed Command Reservoir;
- Installation of an aeration chamber (NO-AC2) at the connection from the Command Reservoir to NO-SP3;
- Installation of a Slow Sand Filtration Box (NO-SSF2) from Aeration Chamber NO-AC2; and;
- Installation of an In-line Chlorinator (NO-KIC1) at the Outlet Pipe from NO-SSF2;
- Installation of 100 kL Command Reservoir, complete with Base Platform and Inlet- and Outlet Pipework;
- Installation of the 6 750 m Bulk Gravity Main, complete with Couplings, Specials, and Fittings;
- Installation of 55 kL Distribution Reservoir, complete with Base Platform and Inlet- and Outlet Pipework;
- Installation of 5 230 m Reticulation Mains, complete with Couplings, Specials, and Fittings; and
- Installation of 18 Communal Standpipes.



## PS2 THE SITE

### PS 2.1 LOCATION

Sikwayini is a rural village within the Mhlontlo Local Municipality (MLM), one of ORTDM's local municipalities. It is located about 90 km north of Mthatha. The locality of the projectsite is show in Table 2-1 below:

**Table 2-1: Project Locality**

LOCATION	LATITUDE	LONGITUDE
Sikwayini Village	30° 57' 17.42" S	28° 50' 24.37" E

### PS 2.2 ACCESS

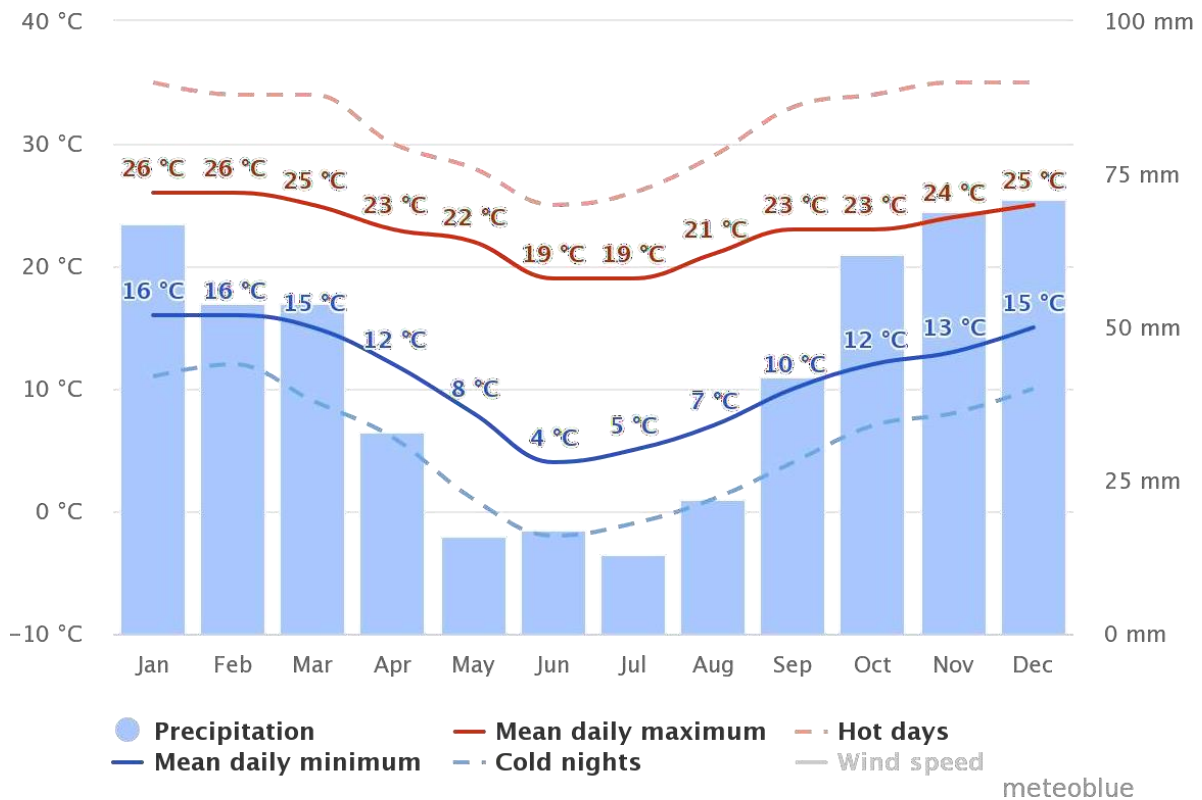
#### Sikwayini

Accessed via DR08417 from the Sulenkama (DR08022) access road and N2 towards Mount Frere. It is approximately 24 km from the N2 (Sulenkama access road).

### PS2.3 GENERAL CLIMATIC CONDITIONS

The general climatic conditions for Qumbu are as follows:

Altitude above sea level	: ~987 mASL
Maximum temperature	: 35 °C
Minimum temperature	: -2 °C
Annual Average Temperature	: 17 °C
Annual Average Rainfall	: 520 mm
Rainfall season	: Summer



**PS 2.4 NATURE OF THE GROUND AND SUBSOIL CONDITIONS**

No Geotechnical information is included in this Document.

The Tenderer is at liberty to excavate extra trial holes on site provided that he has made prior arrangement with the Employer's Agent and the Community, and provided that he accepts responsibility for any damage that may result there from.

**PS 2.5 LOCATION OF CONTRACTORS CAMP AND DEPOT**

The Contractor will find a suitable location for site camp with the help of the local Community and Authorities.

**PS 2.6 SITE FACILITIES EXISTING AND/OR PROVIDED BY THE EMPLOYER**

**PS 2.6.1 Water supply**

The O. R. Tambo District Municipality is the Water Supply Authority. The Contractor shall therefore make his own arrangements for ensuring an adequate supply of water for Construction; including provision of on-site storage of sufficient capacity to allow uninterrupted construction.

Any water required for water testing shall be provided by the Contractor and the costs will be deemed to be included in the scheduled rates.

**PS 2.6.2 Power supply**

ESKOM is the Electrical Supply Authority. The Contractor shall make his own arrangements for a Metered Offtake for the supply of Electricity for Construction purposes.

**PS 2.6.4 Ablution facilities**

There are no existing ablution facilities for the Contractors use on site. The Construction and use of temporary Septic Tanks and Soak-aways (or the like) will not be permitted.

**PS 2.6.5 Accommodation**

No accommodation for the Contractor's employees will be permitted on site. The Contractor shall make his own arrangements to house his employees and transport them to and from Site. No informal housing or squatting will be allowed.

**PS 2.7 SITE FACILITIES REQUIRED**

**PS 2.7.1 Facilities for the Employer's Agent**

The Contractor shall provide a desk for the Employer's Agent and CLO in one of his / her offices.

Survey equipment according to clause 8.3.2.2 shall be supplied and maintained for the Employer's Agent's use.

**PS 2.7.2 Nameboards**

The Contractor shall supply and erect at approved sites one nameboard at the commencement of the contract and shall maintain them for the duration of the construction period. The location of the nameboards will be confirmed by the Employer's Agent.

**PS 2.7.3 Facilities for Construction Waste**

The Contractor shall make his own provisions for the collection, storage, and disposal of all construction waste (i.e. whether it be in the camp or on the construction site); all in conformance with the Environmental Management Plan and with approval of the Employer's Agent, the Local Authority and the Environmental Officer. Payment for the clearing, loading, transport, dumping fees and any other requirement or costs incurred shall be included in the scheduled rates.

**PS 2.7.4 Sanitary Facilities**

The Contractor shall provide suitable and adequate portable chemical latrines for his employees, sub-contractors, Employer's Agent, and CLO. Latrines shall be provided at suitable positions throughout the site and shall be maintained by the Contractor in a clean and sanitary condition to the Employer's Agent's satisfaction. The use of latrines shall be enforced and fouling of the site will not be tolerated.

**PS 2.8 SECURITY**

The Contractor may be exposed to criminal actions, including theft and vandalism, and shall make all his own necessary security arrangements for the duration of the Contract. The Contractor shall be responsible for taking all reasonable measures to ensure that effective access control and integrity of the waterworks site perimeter fence is maintained for the full duration of construction.

**PS 2.9 EXISTING SERVICES**

**PS 2.9.1 General**

The proposed water supply scheme is located on a 'greenfields' site and there are no existing services within the project area. There may be culverts pipes crossing both the access road and internal streets that need to be protected under this Contract.

**PS 2.9.2 Known services**

The positions of all existing pipelines and electrical supply cables will be pointed out to the Contractor on site.

**PS 2.9.3 Treatment of existing services**

The Contractor shall ensure that none of the existing services are damaged during the implementation of this Contract.

**PS 2.9.4 Damage to services**

The Contractor shall be responsible for any damage to (known and unknown) services.

**PS 2.9.5 Proving Underground Services**

The Contractor shall take all reasonable steps to ensure that overhead LV powerlines and buried culvert pipes are identified and protected before construction of both bulk gravity mains and reticulation network commences.

Where services can reasonably be expected to exist where excavations for both bulk gravity mains and reticulation network are to take place, the Contractor shall, without instructions from the Employer's Agent, carefully excavate by hand to expose and prove their positions. Should any service be damaged by the Contractor in carrying out the works and should it be found that the procedure as laid down in this

clause has not been followed then all costs in connection with the repair of the service will be to the Contractor's account.

**PS 2.P.6 Reinstatement of services and structures damaged during construction**

The Contractor shall reinstate all damaged structures and services to their original state.

**PS 2.9.7 Temporary Works**

All excavations shall be demarcated in conformance with the requirements of the OHS specification.

As this Contract involves the construction of large structures, it is a particular requirement of this Contract that any such excavation that is to remain open for longer than 1 month and involves temporary embankments steeper than 1:2 and is deeper than 1.5 m shall be barricaded with a 1 m high barrier fence comprising, at least, 75 mm wooden fencing posts at 2.5 m centres and buried at least 500 mm deep and with 3 strands of 1.6mm high-tensile fencing wire and stayed straining posts at all changes of direction and at 20m intervals along straight runs. The costs of such barriers will be deemed to be included in the tendered rate for working space.

**PS 2.10 DEALING WITH WATER**

The Contractor shall manage and dispose of water, whatever its origin, on the site so that the works are kept sufficiently dry for their proper execution.

The Contractor shall ensure that:

- a) All earth platforms are kept free-draining;
- b) Where it is not practically possible to make deep excavations free-draining, diversion berms are constructed to divert stormwater runoff from entering the excavations and all standing water will be removed as soon as possible after each rain event. This also applies to the scour and sludge ponds;
- c) Keep all completed works properly drained;
- d) Not inhibit surface drainage; and
- e) Protect all parts of the Works against damage and erosion caused by rain and surface water

It should be noted that the soft material soil overlaying the whole site readily reduces to soft mud in wet weather and, if working areas are not temporarily covered with a layer of less-weathered mudstone from on-site excavations, it is impassable to non-4-wheel-drive vehicles in its wet state. The Contractor is at liberty to make use of excavated material classified as 'intermediate' (which otherwise is to be disposed of) for his own use to stabilise working areas. No separate payment, nor overhaul to spoil, will be measured for payment for 'own use' of intermediate material.

**PS 2.12 ACCOMMODATION OF TRAFFIC**

The Contractor will be required to make provision for the accommodation of traffic whilst upgrading the external access road.

**PS 2.13 DISPOSAL OF NON-NATURAL WASTE MATERIAL**

The Contractor shall remove all non-naturally occurring waste material generated by his construction activities from Site and dispose of same in a manner approved of by the Employer's Agent, the Local Authority, and the Environmental Officer. Payment for the clearing, loading, transport, dumping fees and any other requirement or costs incurred shall be included in the scheduled rates.

All natural excavated material to be disposed of shall be transported to the designated spoil site.

## **PS 3 COMMUNITY LIAISON**

### **PS 3.1 TERMS OF REFERENCE FOR THE COMMUNITY LIAISON OFFICER (CLO)**

The Contractor shall make allowance for the employment of a CLO in accordance with the following Terms of Reference (ToR):

- a) The Community Liaison Officer (CLO) will be responsible to the Project Steering Committee (PSC), who will be involved in the appointment of the CLO.
- b) 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 District Municipality.
- c) Inputs from ISD Consultant, PSC, Ward Councillor and selected local leadership will be instrumental in the appointment of the CLO.
- d) 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 e.g. chambers, standpipes and reservoirs. The period will end when no further work is required.
- e) The contractor will provide office space and stationery for the CLO to carry out his /her duties.
- f) Remuneration for the CLO will be R 5 000 wages plus R300 cell phone allowance per month for the period of employment.
- g) Where the CLO is engaged for part of the month, they shall be paid an equivalent daily amount. The unit for measurement shall be the man-month of CLO employment.
- h) A CLO who fails in their responsibilities may be replaced in consultation with the PSC and ISD consultants.

### **PS 3.2 CLO ROLE AND RESPONSIBILITIES**

- a) The CLO will liaise with the Contractor in performing the following activities:
  - Organise 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 conditions of temporal employment;
  - Attend all site meetings and briefing for work procedures;
  - Keep written record of interviews and community liaison which should be summarised 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 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 PSC meetings;
  - Attend site and PSC meetings to present 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 PSC; and
  - Attend weekly meetings with the contractor and make a weekly written report which shall be a prerequisite to being paid.
- b) The CLO will liaise with the Social Facilitators in performing the following activities:
- 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; and
  - Investigate and report all labour dispute matters to the PSC, advise site agent on resolution.

### **PS 3.3 CONTRACTOR – COMMUNITY ENGAGEMENT**

The residents of Sikwayini are being served by the scheme are represented by a PSC. All liaisons with the community and the committees are the responsibility of the Social Facilitator in conjunction with the O. R. Tambo District Municipality, the Employer, and the Project Steering Committee. The Contractor will be required to liaise through them for any matters to do with the community.

## **PSPS 4 CONTRACT PARTICIPATION GOALS (CPG) & THE LOCAL COMMUNITY**

### **PS 4.1 GENERAL**

The human resources of the local community are generally underdeveloped, underutilised and underemployed. The Contract Participation Goals set for Targeted (local) Labour and Targeted (local) Enterprises are to encourage both skills and economic development by requiring a minimum level of local resources participation on all construction work in the O. R. Tambo District Municipal (ORTDM) area of jurisdiction. Details are given in Part C1: Contract Data and the CPG Returnable Schedules.

It is therefore a condition of Contract that the Contract Participation Goals set for Targeted Labour and Targeted Enterprises (minimum percentages of the value of work executed) are achieved. The measure of Targeted Labour Participation comprises the sum of wages and salaries paid to all locally-based (ORTDM) South African Citizen residents for any work done on this Contract (irrespective of level of skills, race, gender or who they are employed by). The measure of Targeted Enterprise Participation comprises the sum of monies paid by the Main Contractor to all locally-based (ORTDM) enterprises irrespective of race or gender of the enterprise ownership).

### **PS 4.2 LABOUR-INTENSIVE WORKS**

Labour-intensive works shall be constructed using local workers who are temporarily employed in terms of the Scope of Work.

**Labour-Intensive Competencies of Supervisory and Management Staff Table 4-2:  
Skills Programme for Supervisory and Management Staff**

Personnel	NQF level	Unit standard titles	Skills Programme Description
Construction Supervisor	4	Implement Labour-Intensive Construction Systems and Techniques.	This unit standard must be completed, <b>and</b>
		Use Labour-Intensive Construction Methods to Construct and Maintain Roads and Stormwater Drainage	any one of these 3 Unit Standards
		Use Labour-Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
		Use Labour-Intensive Construction Methods to Construct, Repair and Maintain Structures	
Construction Manager (i.e. the Contractor's most Senior Representative that is Resident on the Site)	5	Manage Labour-Intensive Construction Processes	Skills Programme against this Single Unit Standard

- Identified subcontracting scope should be included in the Scope of Work including the minimum number of SMMEs that comply with PPPFA Treasury Regulation 17.
- Estimated number of work opportunities to be included in the tender document.

**PS 4.3 EMPLOYMENT OF THE LOCAL COMMUNITY**

It is a requirement that, at least, all unskilled labour taken on by the Main Contractor and his sub-Contractors are sourced from the local community and that such employment is arranged through the CLO and PSC.

**PS 4.4 CONDITIONS OF TEMPORARY EMPLOYMENT**

Employment of all temporary Labour, whether employed directly or through a Sub-contractor, shall comply in all respects with the National Government Department of Labour's regulations; including the minimum wage applicable to Construction Work in the Eastern Cape.

**PS 4.5 CERTIFICATE OF SERVICE**

An employee shall, upon termination of his Services, be entitled to a Certificate of Service showing the full names of his Employer (i.e. the Contractor) and the Employee, the type of Work done by the Employee, the date of commencement, a record of Training received and the date of Termination of his Services.

**PS 5 DESIGN OF THE WORKS**

**PS 5.1 DESIGN SERVICES AND ACTIVITY MATRIX**

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 Project Specifications take precedence.

The Design responsibilities are as follows:

**Table 5-3: Design Responsibilities**

<b>Design Process</b>	<b>Responsibility</b>
Concept, Feasibility and Overall Process	Employer Responsible
Basic Engineering and Detail Layout to Tender Stage	Employer / Employer's Agent Responsible
Final Design to Approved for Construction Stage	Employer / Employer's Agent Responsible
Temporary Works	Contractor Responsible
Preparation of As-Built Drawings	Contractor Responsible

The extent of the Employer's Agent's design is shown on the layout plans.

### **PS 5.2 CONTACTOR'S 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.

### **PS 5.3 DRAWINGS**

The drawings issued to Tenderers as part of the Tender Document shall NOT be used for construction.

The work shall be carried out in accordance with the latest available revision of the drawings to be issued by the Employer's Agent for construction. At commencement of the Contract, the Employer's Agent shall deliver to the Contractor three sets 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 Employer's 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 drawings issued separately for tender purposes are listed in Part C3.5: Annexures.

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 prior to issue of the Certificate of Practical Completion.

## **PS 6 MANAGEMENT OF THE WORKS**

### **PS 6.1 RIGHT OF ACCESS TO SITE**

The Contractor will be given uninterrupted access to the site for the duration of the Contract.

### **PS 6.2 OTHER CONTRACTORS ON SITE**

It must be noted that there is an adjacent project taking place in conjunction with this Contract. The intention is that the interlinking bulk gravity main (in and around Contract 2) is joined with the bulk gravity main of this Contract. If Contract 2's Contractor does not reach the tie-in point before the agreed upon date, their activities will be confined to other parts of the Works such time when Contract 2's Contractor reaches the tie-in point. The same shall apply for this Contract (vice-versa).

A payment item has been included in the Schedule of Quantities for any costs arising from shared access and cooperation.



### **PS 6.3 MEETINGS**

The Contractor shall attend the following meetings during the Contract:

- a) An inaugural site meeting at the ORTDM (Mhlontlo LM) / JTN offices or as called by the Employer's Agent;
- b) Monthly site meetings, at ORTDM (Mhlontlo LM) / JTN offices and on Site or as called by the Employer's Agent, from the commencement of the Works until the issue of the Practical Completion Certificate;
- c) Monthly technical meetings called by the Employer's Agent;
- d) Meetings during the Defects Notification Period called by the Employer's Agent; (only if warranted)
- e) The following reports shall be submitted by the Contractor before the monthly Site Meetings:
  - o Progress Report
  - o Plant & Labour returns
  - o Updated Programme vs Baseline Programme
  - o Updated cashflow projection.

### **PS 6.4 MONTHLY REPORTING TO ACCOMPANY PAYMENT CLAIMS**

It is a specific requirement of this Contract that the Contractor shall collect and record all relevant information for the completion of end-of-month documentation to be submitted with each payment claim. The Payment Certificate (prepared by the Employer's Agent) will not be accepted by the Employer unless accompanied by the following:

- Local Labour Schedule (in EPWP format; i.e. giving employee names, ID's, gender, age group and disability status if applicable);
- Contract Participation Goal expenditure to date vs target (details of labour wages and salaries paid and payments to Targeted Enterprises vs value of work certified to date);
- Monthly Progress Report (from Site Meeting).

### **PS 6.5 WORK OUTSIDE 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.

### **PS 6.7 PLANNING, PROGRAMMING AND REPORTING**

#### **PS 6.6.1 Progress Reporting**

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

#### **PS 6.6.3 Programming Restrictions**

The Contractor shall take cognisance of the following when programming his activities:

- a) Site handover will only take place once all the necessary documentation (details given in Contract Data) has been submitted and approved and an introductory meeting with the local community has been held. The latter is arranged by the Employer's Agents.
- b) As specified in the Contract Data, the Time for Completion is limited to a maximum of 6 months (extensions of time granted for whatever reason notwithstanding).

**PS 6.6.3 Programme Format**

Programmes shall be submitted in Microsoft Project format in hardcopy and softcopy.

**PS 6.6.4 Programme Content**

The Contractor's programme shall show:

- a) the various activities, related to a time scale, for each element of the Works, including those of Nominated and/or Subcontractors, in sufficient detail to be able to assess construction progress;
- b) critical path activities and their dependencies;
- c) Key dates in respect of work to be carried out by others; and
- d) Key dates in respect of information to be provided by the Employer's Agent and/or others.

**PS 6.6.5 Revised Programme**

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

Should such a revision be as a result of the Contractor falling behind with his work, the programme shall clearly show the steps to be taken in order to rectify the situation so as to enable the contract to be completed within the accepted contract period. Such a programme shall be accompanied by positive steps to increase production through increased resources, or the more efficient usage of existing resources.

**PS 6.7 DAILY RECORDS**

The Contractor shall keep daily records of their staff, equipment, weather conditions, activities in progress, any delays, requests for information, day works, plant breakdowns, etc. These daily records shall be signed by the Contractor and Employer's Agent Representatives.

**PS 6.8 RECORDING OF WEATHER**

For the purposes of this Contract, a standard rain gauge shall be installed and maintained on Site for the duration of construction. Readings shall be taken at the commencement of construction each day and submitted to the Employer's Agent at the end of each week.

**PS 6.9 EXTENSION OF TIME RESULTING FROM ABNORMAL WEATHER (GCC 2015-CLAUSE 5.12.2.2)**

Extension of time will not be considered for normal adverse weather conditions. For abnormal rainfall or saturated conditions will be calculated as follows:

- a) The Contractor shall, in his programme, allow for the expected number of working days on which work on critical path activities could be delayed – as given in the Schedule below.
- b) Extension of time will be calculated for each calendar month or part thereof over the full period for the completion of the Work, plus any approved extension thereof, as follows:
  - A delay caused by abnormal weather conditions will only be accepted for extension of time if, in the opinion of the Employer's Agent, it delays an item or items which lie on the critical path determined by the Contractor's approved programme (irrespective of actual rainfall);
  - An extension of time will be granted for the number of days, as approved, on which adverse weather conditions delay critical path activities, less the anticipated number of days given in the Schedule below;
  - The net extension of time determined for each month, which may be negative, shall accumulate algebraically to determine the net number days for extension of time due to abnormal weather conditions, but a negative total at the end of the Completion Period will not be taken into account;
  - Where a portion of a month is involved, a pro rata number of days shall be calculated;

The anticipated number of working days on which work on critical path activities will be delayed as a result of adverse weather conditions are as follows:

<b>Month</b>	<b>Days</b>	<b>Month</b>	<b>Days</b>
January	7	July	2
February	5	August	2
March	4	September	4
April	3	October	5
May	2	November	5
June	2	December	6

**PS 6.10 WAYLEAVES, PERMISSIONS AND PERMITS**

Notwithstanding that the Employer’s Agent may have obtained all the necessary wayleaves, permissions and permits applicable to working near any existing services or other infrastructure on Site, the Contractor is responsible for abiding by the safety and other conditions imposed by such wayleaves, permissions and permits.

The Contractor shall ensure that all wayleaves, permissions and permits (furnished by the Employer’s Agent) are kept on site and are available for inspection by the relevant services authorities on demand. The Contractor shall also ensure that any wayleaves in respect of electricity services are renewed timeously every three months.

**PS 7 CONSTRUCTION OF THE WORKS**

**PS 7.1 METHODS AND PROCEDURES**

**PS 7.1.1 Method Statements**

Where requested in writing by the Employer’s Agent, the Contractor shall submit Method Statements for constructing specific aspects of the Works. Such work shall not be started until the Contractor receives approval of the Method Statement in writing from the Employer’s Agent.

**PS 7.1.2 Quality Assurance System: Quality Management Plan and Quality Control Plan**

The Contractor is required to have in place, and follow, an approved Quality Assurance System for the execution of this Contract. To this end, the Contractor shall submit his proposed Quality Management Plan (QMP) to the Employer’s Agent for approval along with his up-front documentation required before the commencement of the Works. The QMP shall include the Contractor’s proposed Quality Control Plan (QCP) which shows how conformance to the QMP is to be documented.

In addition to this, the Contractor is required to follow the Employer’s Agent’s Site Quality Control procedures which entails the following:

- Contractor’s submission of Request for Inspection of Work; and
- Employer’s Agent’s signing-off of ‘hold points’ at each stage of the work (thereby authorising the Contractor to proceed with the next stage of the work). This may take several iterations should the Employer’s Agent require further work before signing-off. Work may not proceed on the next stage until the previous stage has been signed-off.

Claims for particular items of completed work for each interim Payment Certificate will not be certified for payment where the required sign-offs have not been obtained. No claims for extension of time, nor any other form of compensation, will be entertained for delays in receiving the Employer’s Agent sign-offs on ‘hold points’ where, in the opinion of the Employer’s Agent, insufficient notice has been given to inspect and approve the Works. The default notice required is 48 hours.

The Contractor shall submit copies of all his conformance documentation to the Employer's Agent on a monthly basis and proof of recent calibration of all measuring devices that are to be used.

### **PS 7.2 FINISHING AND TIDYING**

The Contractor is required to progressively and systematically finish and tidy the work as it proceeds. This will be monitored against the latest approved programme. The Employer's Agent shall have the right to not certify full payment of particular scheduled items where such items are largely complete, but finishing and tidying is deemed still outstanding.

Under no circumstances shall spoil, rubble, materials or equipment be allowed to unnecessarily accumulate on Site. If, in the opinion of the Employer's Agent, this is occurring, the Employer's Agent shall have the right to make an allowance for the estimated cost of rectifying the above by reducing particular measured quantities from claims being processed for payment.

## **PS 8 PREFERENTIAL PROCUREMENT PROCEDURES**

### **PS 8.1.1 Resource Standard Pertaining to Targeted Procurement**

SANS 1914-1:2002 Targeted Construction Procurement Part 1 – Participation of Targeted Enterprises  
SANS 1914-2:2002 Targeted Construction Procurement Part 1 – Participation of Targeted Partners in Joint Ventures

SANS 1914-3:2002 Targeted Construction Procurement Part 1 – Participation of Targeted Enterprises and Targeted Partners in Joint Ventures

SANS 1914-4:2002 Targeted Construction Procurement Part 1 – Participation of Targeted Enterprises and Targeted Labour (local resources)

SANS 1914-5:2002 Targeted Construction Procurement Part 1 – Participation of Targeted Labour

SANS 1914-6:2002 Targeted Construction Procurement Part 1 – Participation of Targeted Enterprises in Concession Contracts

## **PS 9 SAFETY ON SITE**

### **PS 9.1 OCCUPATIONAL, HEALTH AND SAFETY ACT 85 OF 1993 AS AMENDED BY THE OCCUPATIONAL HEALTH AND SAFETY AMENDMENT ACT OF 2014.**

Contractors shall comply in all respects with the provisions of the Employer's OHS Particular Specification given in Part C3.4. This is based on the above-mentioned Act and other applicable legislation.

It is specifically noted that the person officially appointed as the Contractor's Health and Safety Officer shall be properly qualified and experienced, be based full-time on Site and be dedicated solely to this Contract for the full duration of construction.

### **PS 9.2 SPECIFIC RISKS AND HAZARDS**

Please refer to the Baseline Risk Assessment given in the Employer's OHS Particular Specification. This highlights in particular the hazards associated with deep excavations for structures that need to remain open for an extended period. The Baseline Risk Assessment provided is not necessarily fully comprehensive and the Contractor is responsible for carrying out his own Baseline Risk Assessment.

### **PS 9.3 CONTRACTOR'S HEALTH AND SAFETY PLAN**

The Contractor's Health and Safety Plan, prepared in accordance with the Employer's OH&S Particular Specification, shall be submitted to the Employer for approval. The Contractor shall not commence work

before the Employer has approved the Health and Safety Plan in writing. Time lost due to delayed commencement or suspension of the work as a result of the Contractor's failure to submit the safety plan timeously, shall not be used as a reason to claim for extension of time or standing time and related costs.

## **PS 10 ENVIRONMENTAL MANAGEMENT**

The Contractor shall comply with the requirements of the Environmental Management Plan (given in Part C3.4: Particular Specifications) and the Environmental Authorisation (given in Part C3.5: Annexures).

### **C3.2 National Standard Specifications**

#### **C3.2.1 CONSTRUCTION**

The Contractor is expected to provide for him/herself the necessary standards referred to in the Particular Specification bound in this document. The latest publication shall apply.

The following specifications apply to this project but are not included in this document.

These specifications may be obtained or viewed at SA National Standards (SANS)

The latest published issue of each standard at tender closing date shall apply.

#### **South African National Standard Specifications – Civil**

- SANS 1200 A - 1986 General
- SANS 1200 D - 1988 Earthworks (As amended 1990)
- SANS 1200 DB - 1989 Earthworks (Pipe Trenches)
- SANS 1200 DK - 1996 Gabions and pitching (First Revision)
- SANS 1200 GA - 1982 Concrete (Small Works)
- SANS 1200 H - 1990 Structural Steelwork
- SANS 1200 L - 1983 Medium-Pressure Pipelines
- SANS 1200 LB - 1983 Bedding (Pipes)

#### **South African National Standard Specifications – Construction and Management**

SANS 1921-1 (2015): Construction and Management Requirements for Works Contracts Part 1: General Engineering and Construction Works

SANS 1921-2 (2015): Construction and Management Requirements for Works Contracts Part 2: Accommodation of traffic on public roads occupied by the contractor

SANS 1921-6 (2015): Construction and Management Requirements for Works Contracts Part 6: HIV / AIDS Awareness

SANS 10400 National Building Regulations

#### **Certification by recognised bodies**

Wherever possible items and materials for construction of the works shall comply with the relevant South African Bureau of Standards Specifications and with the British Standards where these are applicable in the absence of local standards.

The Contractor, when using materials conforming to a Standard Specification shall if called upon furnish the Engineer with certificates of tests showing that the materials do so conform.

**Resource standard pertaining to targeted procurement**

SANS 1914-4:2002 Targeted Construction Procurement Part 1 – Participation of Targeted Enterprises and Targeted Labour (local resources)

## **C3.3 Amendments to Standard Specifications: SANS: General, Civil and Structural Works**

### **SECTION PSA: GENERAL (APPLICABLE TO SABS 1200 A - 1986)**

#### **PSA 2 INTERPRETATIONS**

##### **PSA 2.2 Applicable edition of standards**

Add at the beginning of the first sentence of Sub-clause 2.2:

"Unless a specific edition is specified (see the List of Applicable Specifications),

##### **PSA2.3 Definitions**

"Site" -	the three reservoir sites and the routes of the related connecting pipework to the existing supply lines and local reticulation
"Task" -	a quantified activity or operation
"Daily task" -	a task that is required to be completed within a given time
"Task work" -	work paid by the completed task or job
"Daily rate" -	the remuneration of a day's work regardless of output
"Daily wage"-	see Daily rate
"Task rate" -	the remuneration for a completed Task
"Daily task rate" -	the remuneration for a completed daily Task
"GCC2015"	General Conditions of Contract (2015)
"General Conditions of Contract Works, 2015"	means General Conditions of Contract for Construction
"Engineer"	means the person named as the Employer's Agent in the Contract Data
"Engineer's Representative"	means the person appointed from time to time by the Employer's Agent
"ESCOM", "ESC" and "Electricity Supply Commission"	shall mean "Eskom"

"Labour intensive construction" - the economically efficient employment of as great a portion of labour as is technically feasible to produce as high a standard of construction as demanded by the specifications and allowed by the funding available, thus the effective substitution of labour for equipment

"Labour based construction" see labour intensive construction.

## **PSA 2.4b Abbreviations**

Add to Sub-clause 2.4(b):

"MAMDD: Modified AASHTO maximum dry density".

## **PSA 2.8.1 Principal**

In the fourth line of Sub-clause 2.8.1, after the word "specification", add: "or in the measurement and payment clause of the standard specification, particular specification or project specification".

Add the following to this clause:

Items which are designated as provisional quantities or provisional sums in the Schedule of Quantities are intended to provide for works, the need or extent of which shall be established by the Engineer during construction. Work scheduled as such shall only be undertaken on the written instruction of the Engineer and, where applicable, shall be paid for at the tendered rate or in the absence of rates shall be valued in accordance with Clause 6.6 of the General Conditions of Contract.

The Schedule of Quantities shall not be used for ordering purposes and no liability or responsibility shall be admitted by the Engineer in respect of materials ordered or procured by the Contractor on the basis of the Schedule of Quantities.

## **PSA 3 MATERIALS**

### **PSA 3.1 Quality**

Add to the Sub-Clause:

No used or recycled material may be used in the Works unless expressly authorised by the Engineer.

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

Unless otherwise specified, all proprietary material shall be used and placed in strict accordance with the published instructions of the relevant manufacturer

Add the following to this clause:

Where a material to be used in this Contract is specified to comply with the requirements of SANS Standard Specification, and such material is available with the official SANS mark, the material used shall bear the official mark.

The Contractor shall submit in good time, before any construction commences, to the Engineer 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 Engineer.

The Engineer, during construction, may 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 Engineer's office. The Contractor shall be responsible for the cost of all failures on test samples, control testing and retesting.

All pipes, fittings and materials used in the Works, must bear the official standardisation mark of Standards South Africa where applicable. The mark on a pipe shall be visible from above after the pipe is laid. Rubber articles, including pipe insertion or joint rings shall be stored in a suitable shed and kept away from sunlight, oil or grease.

Large items not normally stored in a building shall be neatly stacked or laid out on suitable cleared areas on the Site. Grass or vegetation shall not be allowed to grow long in the storage areas and the material shall be kept free of dust and mud and be protected from stormwater. Pipes shall be handled and stacked in accordance with the manufacturer's recommendations, special care being taken to avoid stacking to excessive heights and placing over hard objects. uPVC pipes and other pipes vulnerable to degradation from ultra-violet light shall be protected from direct sunlight by suitable covers.

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

Materials shall be handled with proper care at all times. Under no circumstances may materials be dropped from vehicles. Large pipes or large plant shall be lifted or lowered only by means of suitable hoisting equipment.

Where proprietary materials are specified, it is to indicate the quality or type of materials or articles required, and where the terms "or other approved" or "or approved equivalent" are used in connection with proprietary materials or articles, the Contractor is to supply with their tender the name of the manufacturer and supporting documentation that show that the materials or articles comply with the relevant specifications. It is understood that the approval shall be at the sole discretion of the Client and the Engineer.

Irrespective of any approval granted/used by the Engineer or the Employer, the Contractor shall be deemed responsible for all material quality use for construction and their specified performance.

## **PSA 4 PLANT**

### **PSA 4.2 Contractor's Office and Stores and Services (Refer SANS 1921-1 Clause 4.14)**

After the second paragraph add the following:

The suitable first aid services required in terms of Sub-clause 4.2 of SANS 1200 A shall include, inter alia, a First Aid cabinet fully equipped and maintained with at least the minimum contents as listed in Regulations of the General Safety Regulations of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), to deal with accidents and ailments which are likely to occur during the construction period.

Add to the Sub-Clause:

Neither housing nor shelters are available for the Contractor's employees, and the Contractor shall make his own arrangements to house his employees and transport them to site.

The Employer will place an area of ground at the disposal of the Contractor at construction site to enable him to erect his site offices, workshops and stores. The temporary facilities and ablution facilities shall comply with the requirements of the Local Authority.

On completion of the Works or as soon as the Contractor's facilities are no longer required the Contractor shall remove such facilities and clear away all surface indications of their presence. The site is to be rehabilitated as described in the Environmental Plan.

## **PSA 5 CONSTRUCTION**

### **PSA 5.1.1 Setting Out of the Works**

Add the following to this clause:

The Contractor shall be fully responsible for the setting out of the works, and where labour intensive work is specified, for the setting out of the daily construction tasks.

The Contractor, within two (2) weeks after the site has been handed over to him, is to ascertain the correctness of all pegs and bench marks. Any discrepancy shall immediately be reported in writing to the Engineer. Any costs or subsequent costs arising from discrepancies which had not been reported to the Engineer, within the aforementioned period, shall be the sole responsibility of the Contractor.

### **PSA 5.2 Watching, Barricading, Lighting**

Add the following to this clause:

The Contractor shall employ competent watchmen to guard the Works both by day and night.

From the time any portion of the Works commences, until the Completion of the Works and the issue of the Certificate of Completion of the Works, the Contractor shall be responsible for protecting the property of the Employer and all persons having business on the Site from anything dangerous or likely to cause damage or injury. The Contractor shall take all practical precautions to avoid nuisance or inconvenience to the owners or occupier of properties near to the Site and to the public generally whilst carrying out the Works and shall at all times keep the Site clean and in a safety and satisfactory condition.

Temporary traffic signs shall be erected when work is being done within and adjacent to roadways. The number and layout of the traffic signs shall comply with the Site Manual entitled "Safety at Roadworks in Urban Areas", as published by the Department of Transport. Traffic signs shall have a yellow background with either a red or black border.

The Contractor shall control all access to the site, for authorised persons only, and to ensure that the approved conditions of the Health and Safety Management Plan is adhered to.

#### **PSA 5.4 Protection of Overhead and Underground Services**

Add the following to this clause;

Before construction of the Works, or any phase of the Works, the Contractor shall contact all relevant parties and authority officials to establish the existence of existing services on site.

#### **PSA 5.7 Safety (Refer SANS 1921-1 Clause 4.18)**

Add the following to this clause:

Compliance with 1) OHS Act and Regulations and 2) Construction Environmental Management Plan and all relevant Environmental Authorisations.

Lump sums are provided in the Bill of Quantities to cover the contractor's cost for compliance with the requirements of the Construction Environmental Management Plan, all relevant Environmental Authorisations and the Occupational Health and Safety Act, 1993, the latest Construction Regulations and the Client's Occupational Health and Safety requirements respectively.

In addition, Sums are included under Time Related Items in the Preliminary and General Section of the Bills of Quantities. The lump sums shall include full compensation for the provision of the necessary site official, the training, PPE's, plans, audits, assessments, administration, etc. and all other costs required for compliance. Fines issued for non-compliance will be deducted from these Provisional Sums, but are not limited to the value of the Provisional Sum stated.

Add the following clauses:

#### **PSA 5.9 Existing Services**

The tendered rate shall further cover the cost of backfilling the excavation with selected material compacted to the required density, keeping the excavation safe and taking care that the services are not damaged in any way. The rate shall include for all negotiations with the authorities, notification to all affected parties and any other requirement to protect and complete the work. No additional direct payment will be made for the protection of such services.

#### **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.

All service household ends, manholes, valves, hydrants and the like shall be co-ordinated together with their invert and cover/ground levels on the as-built drawings. The Certificate of Completion shall only be issued once all the as-built information has been received and verified by the Engineer.

#### **PSA 5.11 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 sum also includes for costs such as transport, an office space, communication and any other requirement necessary. The Contractor shall ensure that the salary and other expenses such as payment to the Community Liaison Officer members are paid timeously in accordance with the payment dates of his own staff.

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

**PSA 6 TOLERANCES**

**PSA 6.2 Degrees of Accuracy**

Add to the Sub-Clauses:

Generally, Degree of Accuracy II shall be applicable to the whole of the Works (except smooth formwork), unless specified otherwise in the Project Specifications or drawings. Smooth formwork which shall be Degree I. Tolerances specified on the drawings shall take precedence over tolerances specified elsewhere.

**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 dissatisfied 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 notice 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, such as the pressure testing of a pipeline, 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 8.3.1 Contractual Requirements**

Add the following to the clause:

“The Contractor shall assess the status of construction of each reservoir and what is needed to complete them and shall allow in Items 1.1.1.1 of the BoQ for any costs involved in making this assessment”.

#### **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 (4 No.)

e) All other specified facilities (including wifi 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 (4 No.)
- g) Air time and data for cell phones for site staff at R1000 per month for each cellphone
- 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.

### **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.

## **SECTION PSAB: ENGINEER'S OFFICE (APPLICABLE TO SABS 1200 AB - 1986)**

### **PSAB 2 INTERPRETATIONS**

#### **PSAB 2.1(b) Supporting Specifications**

Delete the Sub-Clause and substitute the following:

(b) SANS 1200 A

#### **PSAB 2.3 Definitions**

Delete the first two lines and substitute the following:

For the purposes of this specification the definitions given in SANS 1200 A shall apply:

### **PSAB 3 MATERIALS**

#### **PSAB 3.1 Nameboards**

In the 3rd line delete "South African Institution of Civil Engineers" and substitute with "Consulting Engineers South Africa".

Add the following:-

One Employer's nameboard shall be erected within one month of the commencement of construction and shall be placed where ordered by the Engineer. Any damage to this board shall be repaired within 14 days of a written instruction received from the Engineer. For details of the board refer to the Standard Drawings contained in this document.

Erection of one Contractor's nameboard that comply with the drawing(s) provided are required in the area of the Works, at a positions approved by the Engineer, who may at any time order their removal if any objections are received.

The board shall be manufactured from materials specified in Clause 3.1 of SANS 1200 AB but shall conform in the painting, decorating and detail with the recommendations for the Standard Board of the South African Institution of Civil Engineers.

All nameboards shall be removed 14 days prior to the date of the Final Approval Certificate.

#### **PSAB 3.2 Office Building(s)**

Delete the first sentence and substitute the following:

The Contractor shall supply and furnish three air-conditioned "Kwikjack" (6 m x 3 m) offices, (two for the use of the Engineer and his/her staff and one for the Employers' inspectors) and one air-conditioned "Kwikjack" (9 m x 3.4 m) conference facility for conducting meetings. Minimum size of each air conditioner shall be 12000 btu.

Add to the Sub-clause:

In addition to the furnishings listed under sub-items (a) to (i), the following shall be provided and properly maintained:

- i) Electrical installation to include a light and two 15A plug points plus adequately sized airconditioning units (for heating and cooling) for each unit
- ii) One refrigerator of at least 100 litre capacity
- iii) One kettle of at least 2 litre capacity
- iv) One tea set comprising six cups and saucers, six teaspoons, one teapot, one sugar bowl and one milk jug
- v) Covered parking for four vehicles
- vi) Uncovered parking space for two vehicles
- vii) Two "Barhold" or similar wall mounted racks each with 6 clamps suitable for hanging A0 sized drawings
- viii) One large meeting table (For meeting room only)
- ix) Ten additional chairs (For meeting room only)
- x) All other specified facilities (including wifi internet connection, printer, laptop, photocopier and camera)

## **PSAB 4 PLANT**

### **PSAB 4.1 Telephone**

Delete the Sub-Clause and substitute the following:

The Contractor will be required to supply the Engineer's Representative and Site Staff with air-time for their mobile phones (three in number) as soon as the Contract has commenced in the amount of R1 500.00 per month

The Contractor shall be responsible for the cost of all calls up to a maximum of R500 per month per mobile phone, installation, rental, supplies, maintenance, etc.

Add the following new clauses:

### **PSAB 4.2 Covered Parking Bay**

The Contractor shall also supply and maintain four corrugated iron covered carports with closed sides and gravelled floor for the sole use of the Employers Agents Representative and the Employer.

### **PSAB 4.3 All other specified facilities**

The Contractor will be required to supply the Engineer's Representative and Site Staff with the following:

- i) Digital Camera
- ii) Laptop
- iii) Printer
- iv) Wi-Fi Internet Connection
- v) Access to a photocopier and associated consumables
- vi) Hired vehicles (1 No.)

The camera, laptop and printer are to be as specified by the Engineer and supplied as Prime Cost items.

The vehicles are to be hired under a Provisional Sum item. The hire agreement shall allow for fully comprehensive insurance.

## **PSAB 5 CONSTRUCTION**

### **PSAB 5.2 Engineer's Office (Refer SANS 1921-1 Clause 4.14)**

Add to the Sub-Clause:

The toilet facilities provided for the sole use of the Engineer or his representative(s), the Employer's inspectors, CLO and PSC shall be maintained in a hygienic and sanitary condition and shall be removed on completion of the Works. The facilities provided shall conform to the local health authority's requirements as applicable and the Contractor shall pay all sanitary fees and charges.

### **PSAB 5.5 Survey Assistants**

Delete the first sentence and substitute the following:

The Contractor shall make available to the Engineer two suitably educated labourers for use on and about the site on survey and other work directed by the Engineer at all reasonable times.

Add the following new clauses:

### **PSAB 5.6 Survey Equipment**

Add new Sub-Clause:

The Contractor shall provide the following survey equipment on the Site from the commencement to the completion of the Works:



- i) One automatic reading Engineer's level plus tripod
- ii) One levelling staff (5 m long, 1 cm graduations)
- iii) One staff angle bubble
- iv) One metal change-point for levelling
- v) One separate plumb-bob
- vi) One spirit level (one metre long)
- vii) One hammer (2 kg) with steel or wooden pegs as necessary
- viii) One 50 m steel or glass fibre tape
- ix) One 5,0 m (or longer) retractable steel tape

The equipment may be shared by arrangement between the Contractor and the Engineer or his representative on Site. The Contractor shall keep the equipment continuously 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 Works the survey equipment as listed above shall revert to the Contractor.

The Contractor shall maintain the equipment in good working order and keep it clean until the completion of the Works.

### **PSAB 5.7 Site Instruction books**

The Engineer shall supply a site instruction book for specific use on the Site. All instructions given by the Engineer's Representative must be confirmed and countersigned by the Engineer. The instructions shall be countersigned by the Contractor before implementation.

The Contractor shall supply a triplicate book for site correspondence and inspection requests to the Engineer's Representative. Reasonable notice shall be allowed prior to inspections. All inspection requests and approval/disapproval thereof shall be recorded by the Site staff in writing. All requests must be signed and dated by the Engineer's Representative before implementation.

The Contractor in conjunction with the Engineer must ensure that a suitable site quality record system is put in place to record that each section, or work item, complies with the relative works specification.

## **PSAB 8 MEASUREMENT AND PAYMENT**

### **PSAB 8.1 Scheduled Items**

Delete the 1st sentence and substitute the following:

Items will be scheduled in terms of Sub-Clauses 8.3.2 and 8.4.2 of SANS1200 A.

### **PSAB 8.2.1 Fixed and Time-related Charges**

Delete the 1st sentence and substitute the following:

The terms of Sub-Clause 8.2 of SANS 1200 A shall apply. Add the

following clauses:

### **PSAB 8.2.2 Furnished Office and Meeting Room**

The Contractor shall supply, erect, maintain and service for the sole use of the Engineer's staff facilities as defined in PSAB 3.2 and PSAB5.2.

Payment will be made for the supply and erection of the above facilities under the provided fixed rate.

Payment will be made for the maintaining the above facilities in a suitable condition under the provided time related rate.

### **PSAB 8.2.3 Telephone**

The Contractor shall provide air time as defined in Clause 4.1, as amended.

Payment will be made for supplying 3 x R500 monthly pre-paid airtime and data for the mobile telephone under the time related rate. The cost of making the airtime available shall be included in the tendered monthly rate rather than as a percentage mark-up (which would otherwise require invoices as proof of payment)

#### **PSAB 8.2.4 Nameboards**

The Contractor shall supply and erect nameboards in accordance with SANS 1200AB Clause 3.1. Payment will be made for the supply and erection of the nameboards under the provided fixed rate.

Payment will be made for maintaining the nameboards in a suitable condition under the relevant time related rate.

#### **PSAB 8.2.5 Survey Assistants**

Payment will be made for the employment of the survey assistants specified in Clause PSAB 5.5 under the provided fixed rate on verification of their availability by the Engineer. Should the survey assistants be removed from site during the course of the Contract then any payments made for the survey assistants will be reversed in the next interim payment certificate.

Payment will be made for the monthly cost of the survey assistants under the provided time related rate for as long as they are required to be available to assist the Engineer or his representatives.

#### **PSAB 8.2.6 Survey Equipment**

Payment will be made for the supply of the equipment specified in Clause PSAB 5.6 under the provided fixed rate on verification by the Engineer that the equipment specified is on site. Should any of this equipment be removed from site during the course of the Contract then any payments made for the supply of this equipment will be reversed in the next interim payment certificate.

Payment will be made for the maintaining of the above equipment in a suitable condition under the provided time related rate.

#### **PSAB 8.2.7 Covered Parking Bay**

Payment will be made for the supply and installation of covered parking bay specified in Clause PSAB 4.2 under the provided fixed rate on verification by the Engineer that the parking bay specified is erected on site. Should the parking bays be removed from site during the course of the contract then any payments made for the supply of this equipment will be reversed in the next interim payment certificate.

Payment will be made for the maintaining of the above parking bays in a suitable condition under the provided time related rate.

#### **PSAB 8.2.8 All other specified facilities for the Engineer**

The supply of laptops, printers and cameras are to be provided under a separate Prime Cost item with associated mark-up.

The vehicles are to be hired under a Provisional Sum item. The hire agreement shall allow for fully comprehensive insurance.

The cost of providing and maintaining all other facilities for the Engineer's Site Staff (such as cell phone airtime, access to WiFi and photocopying facilities) shall be included in the relevant fixed and time- related scheduled rates.

## **SECTION PSC: SITE CLEARANCE (APPLICABLE SABS 1200 C - 1980 AS AMENDED 1982)**

### **PSC 3 MATERIALS**

#### **PSC 3.1 Disposal of Material**

Add to this Sub-clause:

Material obtained from clearing shall be disposed of offsite by the Contractor at his expense. Disposal sites shall be appropriate for the nature of the material that is to be disposed of and have the approval of the Engineer, the Local Authority and the Environmental Officer. A disposal site for natural material only exists within 2.4km of the site. Disposal of combustible material by burning will not be permitted. The Contractor will be held responsible for observing the by-laws and regulations of the local authority.

Payment for the clearing, loading, transport, dumping fees and any other requirement or costs incurred shall be included in the rates submitted for site clearance.

### **PSC 5 CONSTRUCTION**

#### **PSC 5.1 Areas to be cleared and grubbed**

Add the following:

No trees with a trunk girth of more than 1 m shall be removed without the written permission of the Engineer.

### **PSC 8 MEASUREMENT AND PAYMENT**

#### **PSC 8.2 Scheduled Items**

##### **PSC 8.2.1 Clear and grub**

Add the following to this Clause:

The rate tendered for clearing and grubbing shall cover the cost of disposal of the material off the Site by approved means. Debris should be dealt with as per PSC 3.1.

##### **PSC 8.2.14 Perimeter Fencing**

Payment will be made per linear metre of y fencing installed in the manner specified on Drawing No. #, and the rate shall include for maintaining such fencing in good condition, including daily surveillance and repair, throughout the duration of construction.

## SECTION PSD: EARTHWORKS (APPLICABLE TO SABS 1200 D - 1988)

### PSD 2 Interpretations

#### PSD 2.3 Definitions

Amend the sentence headed "Restricted excavation" to read:

"Restricted excavation – All excavations for individual structures starting from the specified bulk excavation platform levels or, where no bulk excavation platform has been specified, from 150mm below natural ground level (i.e. excluding a nominal 150mm topsoil layer to be removed beforehand)."

### PSD 3 MATERIALS

#### PSD 3.1.2 Classes of excavation

Replace Sub-clauses 3.1.2 (a) to (e) with the following:

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

(a) Soft excavation

All material which can still be efficiently excavated (in the opinion of the Engineer) by 30t excavator fitted with 'rock bucket' (excavator bucket typically fitted with not more than 3 tines designed to loosen layered weathered solid sedimentary residual material). This includes both soft soil material and weak mudstone / siltstone.

(b) Intermediate

All mudstone and siltstone material that the Engineer agrees can be more efficiently loosened for excavation by 30t excavator fitted with Heavy Duty hydraulic breaker or by blasting (where allowed by the Engineer) rather than 'rock bucket' mentioned above.

(c) Hard Rock Excavation

- 1) Hard Rock by drilling and blasting: All unweathered sandstone and dolerite material that the Engineer agrees can be more efficiently loosened for excavation by drilling and blasting (only when allowed by the Engineer).
- 2) Hard Rock excavation by expanding grout (or any other non-explosive means): All material where Engineer disallows drilling and blasting (due to safety or social reasons) where material otherwise would have been more efficiently drilled and blasted as per (1) above but is too hard to be effectively removed by heavy duty hydraulic breaker.

Any unweathered boulders encountered shall be classified as 'Hard Rock: excavation by expanding grout (or any other non-explosive means)' where such boulders exceed 0,125m<sup>3</sup> (approx. 500 x 500 x 500mm) in volume. Boulders smaller than this size shall not be classified separately. Boulders smaller than the above shall not be classified.

#### PSD 3.3 Selection

##### PSD 3.3.1 General

Replace 3.3.1 with the following:

The Contractor is required to select, strip 150mm deep and conserve all topsoil from the following areas of Site:

- All bulk earthworks platform footprints;
- All internal road cut and fill footprints;
- The entire excavation footprint of structures (including Contractor's excavation for access and working space) where such excavation falls outside bulk earthworks platform footprints;
- Dehydrated sludge loading platform;
- Pipe trenches falling outside the excavation footprints of structures, platform footprints, and road cut and fill footprints;

- Temporary stockpile areas (except topsoil stockpile areas); and
- Any other otherwise undisturbed area used by Contractor for his own purposes.

The Contractor shall, for bulk, restricted and trench excavation, actively select-out and keep separate all materials into one of the following groups:

- Soft fully-weathered soil;
- Weak mudstone and siltstone (which is of little agricultural value, but still falls into the 'soft material' classification as defined in PSD 3.1.2 a).
- Intermediate material (as defined in PSD 3.1.2 b).
- Hard rock material (as defined in PSD 3.1.2 c).

Where the selected material is to be spoilt at the designated off-site spoil dump, the material shall be stockpiled separately at the spoil site in its respective group so that it can either be recovered later or selected by others. All material stockpiled on site for later use as backfilling or fill or landscaping shall also be stockpiled in their respective classification groups. Only material allowed by the Engineer to be spoilt to the on-site spoil platform may be mixed.

## **PSD 5 CONSTRUCTION**

### **PSD 5.1.1.1 Barricading and Lighting (Refer SANS 1921-1 Clause 4.18.2 and 4.18.3)**

Delete the Sub-Clause and substitute:

Without limiting any obligation which the Contractor may have in terms of any Act, Ordinance or other legislation, the Contractor shall ensure that all excavations which are accessible to the public or which are adjacent to a public road or thoroughfare, or by which the safety of persons may be endangered are protected as set out in Clause 13 of the General Safety Regulations of the Occupational Health and Safety Act, 1993 and that watchmen are employed to ensure that barricades, barriers and lights are effective at all times.

### **PSD 5.1.1.2 Safeguarding of excavations**

Replace Clause 5.1.1.2 (b) with the following:

The Contractor must note that the excavations for most of the structures are deep. The Contractor is responsible for ensuring that all temporary excavation faces are stable and safe at all times and shall either:-

- Provide a shoring system, designed by the Contractor and signed 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.

Add the following new Sub-Clauses:

#### **PSD 5.1.1.3a) Explosives (Refer SANS 1921-1 Clause 4.7)**

Notwithstanding Sub Clause 5.1.1.3 the Engineer shall be notified at least 48 hours beforehand of the Contractor's intention to use explosives on site

It shall be the Contractor's responsibility to make himself aware of the restrictions to blasting imposed by electric transmission or telephonic lines and other similar services. Where the presence and location of electric transmission or telephonic lines etc., are known or are shown on the Engineer's drawing at tender stage the Contractor shall make allowance in his rates and programmes for restrictions and delays which may result from restrictions imposed by the authorities.

#### **PSD 5.1.1.3b) Use of Explosives (Refer SANS 1921-1 Clause 4.7)**

Generally, the Contractor will NOT be permitted to use explosives for breaking up rock and hard material during excavations:

- (d) The Engineer or Inspector of Explosives shall have the power to prohibit the use of explosives in cases where in his opinion, the risk of injury or damage to persons, property or adjoining structures is too high.
- (e) Should blasting be necessary, the Contractor shall take every precaution to protect the Works and persons, animals and property in the vicinity of the site. The Contractor will be held responsible for any injury or damage caused by any blasting operations and shall make good such damage at his own expense.
- (f) The requirements of the Explosives Regulations Act (Act 26 of 1956) and the requirements of the Inspector of Explosives shall be complied with. In addition, where applicable, the requirements of Chapter 9 of the Regulations published in terms of the Mines and Works Act (Act 27 of 1956) and the requirements of the Government Mining Engineer shall be complied with.
- (g) A copy of each blasting permit issued to workmen, and of each permit issued to the Contractor to cover the purchase, storage and transport of explosives, shall be handed to the Engineer. The Contractor shall grant the Engineer access to all records maintained for the Inspector of Explosives or the Government Mining Engineer, as the case may be.
- (h) Before any blasting is undertaken, the Contractor, together with the Engineer and the ISD Consultant and CLO shall examine and measure up any buildings, houses or structures in the vicinity of the proposed blasting and establish and record together with the owners thereof the extent of cracking or damage that may exist before commencement of blasting operations. It is advised that a photographic record will be required of neighbouring structures before blasting commences. These structures will be pointed out by the Engineer. It shall be the responsibility of the Contractor to make good at his own expense any further damage to such houses, buildings or structures which is a result of the blasting.
- (i) Where there is reasonable danger of damage to power and telephone lines or any other property, the Contractor shall suitably adapt his methods of blasting and the size of the charges and use adequate protective measures such as cover blasting in order to limit the risk of damage as far as possible.
- (j) When blasting to specified profiles, the Contractor shall so arrange the holes and charges such that the resulting exposed surfaces are as sound as the nature of the material permits. The Contractor shall make good at his own expense any additional excavation necessitated by the shattering of rock in excess of any over break allowance specified in the Specification Data or in any other specification or given on a drawing.

#### **PSD 5.1.1.3c) Limitations for Blasting**

- a) Approval of methods and keeping of records

No blasting work may be carried out prior to the Engineer's approval being given in writing

Prior to starting any drilling for the first section of blasting, the Contractor shall submit for approval to the Engineer, details of the proposed overall methods of blasting that will be used on site, including spacing, depth and pattern of holes, charging levels (kg/m<sup>3</sup>), spacing and positioning of relays, method of blast initiation, precautions to prevent 'fly rock', maximum charge per relay, traffic arrangements during blasting, and any other details he may consider relevant. These details shall be submitted in writing and supported with sketches at least 7 days before the commencement of drilling and blasting.

The Engineer will evaluate these details in relation to the given limitations and prior to giving his approval, will indicate to the Contractor any changes that may possibly be needed to comply with the limitations.

For all subsequent blasts, the Contractor shall, at least 24 hours beforehand, notify the Engineer of the intention to blast and at the same time shall note if any changes will be made relative to the approved method.

The Engineer reserves the right to order the Contractor to modify his method of drilling and blasting, or

to employ reduced blasting, without thereby invalidating the Contract. The Contractor shall have no claim for extra payment, over and above his tendered rates, due to his being ordered to use such a different method of drilling or blasting or reduced charges, regardless of any prior approval by the Engineer of any previous method.

After every blast, the Contractor shall, within 24 hours, submit to the Engineer details of the actual total mass of explosives used, the approximate volume of material loosened and the maximum simultaneous mass of explosives detonated (maximum charge per relay).

Notwithstanding any approval given by the Engineer, the Contractor shall at all times be responsible for the safety of the Works, persons, animals and property in the vicinity of the Site during blasting operations.

b) Vibrations

Blasting vibrations are caused by the transmission of the shock wave from the explosion charge through the material being blasted. This shock wave could cause damage to structures in the vicinity of the blasting if the vibrations are not limited to acceptable levels. Damage to structures is closely associated with peak particle velocity of the ground vibrations in the vicinity of the structure. Advisable maximum levels for peak particle velocity are given in Table 2.

Table 2 - Maximum Particle Velocities (Vibration)

Maximum peak particle velocity (mm/s)	Effect on people and buildings
0,5	Threshold of human perception unlikely to cause damage of any type
5	Limit for blasting adjacent to historical monuments
25	Limit for blasting near private dwellings in order to reduce disturbance to residents to a minimum
50	Limit for blasting adjacent to residential structures on good foundations
84	Limit for property owned by concern doing the blasting (ie. minor plaster cracks acceptable)
120	Recommended maximum level for blasting adjacent to sturdy reinforced concrete structures

The peak particle velocity V is related to the distance D from the blast and the maximum mass of explosive E instantaneously detonated (maximum charge per relay) by the general equation:

$$V = \left( \frac{k}{D} \right)^m x E^n$$

where k, m and n are constants for a particular set of circumstances. V is in mm/s, D is in metres and E is in kilograms. Experimentation has shown that n = 0,5 but k and m have to be determined for each site by means of vibration measurements. However blasting can be safely conducted without vibration measurements or expert advice if the following relationship is used:

$$V = \left( \frac{1150}{D} \right) x E^{0.5}$$

Which gives the maximum charge levels for V = 50 mm/s listed in Table 3.

Table 3 - Maximum Charge Levels

Minimum distance from nearest blast hole structure (m)	Maximum charge mass per relay (kg)
10	0,19
20	0,76
30	1,7
40	3,0
50	4,7
60	6,8
70	9,3
80	12,1
90	15,3
100	18,9

Only detonating relays of at least 20 milliseconds delay interval shall be used.

The above relationship can be used to calculate charge mass for other velocity limits. However, if higher charge levels have to be used for practical reasons, expert advice and possibly vibration measurements will be required.

Notwithstanding the above blasting limits, the Contractor shall at all times be responsible for the safety of the Works, person, animals and property in the vicinity of the Site during blasting operations.

#### **PSD 5.1.1.3d) Negligence**

The Contractor shall be liable for all damages to services caused as a result of the Contractor's negligence.

#### **PSD 5.1.3 Stormwater**

Add the following to this Clause:

In that many of the excavations for structures cannot reasonably be made free-draining, it will be necessary to actively remove accumulated rain water from the excavations. The Contractor shall provide, operate and maintain sufficient pumping equipment, pipes and other equipment on site as may be necessary to keep all excavations largely free of standing water at all times.

The Contractor shall be responsible throughout the duration of the Contract, inclusive of the Defects Liability Period, for the provision of all soil erosion preventative measures necessary to protect the trenches, pipeline(s) and land utilised by the Contractor during the Contract from any adverse effects of soil erosion, settlement, scour, etc., resulting from the construction of the Works.

Cross embankments, generally extending across the full width of the working strip, consisting of low earth mounds shaped to rounded form and so oriented as to have a fall of 1% along their length, shall be constructed with compacted material having a minimum density of 90% modified AASHTO density and minimum dimensions and maximum spacings dependent on the slope of the ground along the length of the pipeline, as indicated in the following table:

Slope of Ground	Minimum Height	Minimum Base Width	Maximum Spacing
0% - 5%	No cross-embankments required		
5% - 10%	300 mm	1,2 m	40 m
10% - 15%	375 mm	1,5 m	30 m
Greater than 15%	450 mm	1,7 m	20 m

The height of the cross-embankments for a distance of 1 metre on either side of the trench centreline shall be raised 150 mm above the remainder of the cross-embankment to allow for settlement. In order to form a satisfactory drainage channel upstream of each cross-embankment (at a slope of 1%) the crown over the backfilled trench shall be removed for a distance of 0.5 m upstream of the cross-embankment.



Cross-embankments shall be constructed to the same minimum standards and dimensions indicated above wherever artificial slopes have been formed on the working strip or other areas used during construction and, with the approval of the Engineer, are permitted to be so left.

No additional payment will be made for the construction of cross-embankments which will be deemed to be included in the excavation rates.

#### **PSD 5.1.4.1 Dust nuisance**

Add the following to this Clause:

Given the very fine texture of the soil, in dry, windy weather, extremely dusty conditions can be expected on Site unless suitable mitigation measures are taken. The Contractor shall be responsible for actively implementing effective dust control measures such that dust levels do not hamper workers' health and productivity.

The Contractor shall plan his execution of the Works accordingly and shall use sufficient water (with or without approved additives) or other methods to keep the level of dust to a reasonable minimum. Water for this purpose may be abstracted from the nearby dam. This shall be done in consultation with the Engineer and to the Engineer's approval. The cost of all such mitigation measures shall be deemed to be included in the scheduled rates for excavation or Preliminary & General items.

#### **PSD 5.1.6 Road Traffic Control**

In the 4th line of Sub-Clause 5.1.6 amend "South African road traffic signs manual1)" to read: "Southern African Development Community: Road Traffic Signs Manual1) and Chapter 13: [Road works Signing] of the South African Road Traffic Signs Manual1) ", and amend the footnote to read: "1) Published by the Department of Transport, Pretoria."

Where traffic signals are required, they shall be provided and operated in accordance with the applicable requirements of the South African Road Traffic Signs Manual.

Where work is to be carried out while half of the roadway is closed to traffic, flagmen shall be provided and temporary road signs shall be erected, maintained and operated."

#### **PSD 5.2.2.1 Excavation for general earthworks and for structures (Refer SANS 1921-1 Clause 4.10)**

Regarding over-excavation and overbreak, add the following to sub-clause (e):

Where the Contractor excavates in material classified as 'soft' (in terms of PSD3.1.2) to dimensions in excess of those shown on the drawings or ordered by the Engineer 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 under structures shall be replaced, at the Contractor's expense, by imported G2 crusher run material from commercial sources compacted to 100% mod AASHTO density or, alternatively, with 15MPa/20 mass concrete.

For restricted excavation in material classified as 'intermediate' or 'hard rock' (as defined in PSD3.1.2), an allowance for an average overbreak layer of 150mm below the required founding level (ie underside of blinding layer) for all structures will be automatically added to the quantity measured for payment for restricted excavation. Similarly, measurement for replacing overbreak with compacted G2 material (as per filling of over excavation mentioned above) will be automatically measured for payment. Over-break (and G2 filling) beyond the 150mm overbreak allowance shall be deemed to be over-excavation and therefore to the Contractor's account.

Add the following new Sub-Clauses:

- (f) The Contractor shall inform the Engineer, 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 Engineer. The Contractor shall then provide the Engineer 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.

- (g) 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 Engineer or his Representative of all surfaces immediately before backfilling of any kind or casting blinding.
- (h) Where permanent concrete is to be placed against an excavated face, the excavation shall be trimmed to ensure that there is no projection greater than 20 mm protruding into the excavation profile.
- (i) The Contractor shall not spoil, waste or stockpile excavated material without approval.

### **PSD 5.2.2.3 Disposal**

Amend this Sub-Clause as follows:

A considerable volume of excavated material will need to be disposed of. A spoil site has been identified some 2,2km from the Site to the South-East (see locality inset on Bulk Earthworks drawing J31067/LAY LAY\_110). There is also a fill platform on Site for the exclusive disposal of weak mudstone material. Material placed on this platform shall be spread and compacted in 150mm layers (compaction to 93% MOD AASHTO density).

As noted in PSD 3.3.1, spoil material shall be stockpiled separately at the spoil site in its respective group so that it can either be recovered later or loaded for other use by others.

### **PSD 5.2.4.2 Topsoiling**

Add the following to Clause 5.2.4.2:

As Stage 2 of the Highbury WTW civil works will follow this Contract, topsoiling shall be limited to the cut and fill slopes of platforms and internal roads or where directed by the Engineer. It will be responsibility of the Stage 2 Contractor to topsoil all disturbed areas on completion.

### **PSD 5.2.5 Transport of**

#### **Earthworks PSD-5.2.5.1 Freehaul**

Replace with the following:

All transportation of material within the boundary of the site and within less than 0,5 km from the site boundary shall be regarded as freehaul.

All material imported from commercial sources shall be classified as freehaul.

### **PSD-5.2.5.2 Overhaul**

With the exception of material imported from commercial sources, all transportation of material beyond 0.5 km of the boundary of the site shall be classified as overhaul.

### **PSD 7 TESTING**

#### **PSD 7.2 Taking and testing of samples**

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

The Contractor shall carry out sufficient process control checks on the compaction of all fill and backfill layers in the presence of the Engineer's Representative to be able to demonstrate that the specified compaction is being achieved. The frequency of testing shall be such that tests shall be carried out for every lift of backfill material starting from 300 mm. The costs of testing shall be deemed to be included in the rates for backfilling of the platform.

### **PSD 8 MEASUREMENT AND**

#### **PAYMENT PSD 8.1 BASIC**

#### **PRINCIPALS**

Add the following Sub-clauses:

#### **PSD 8.1.4 Restricted excavation: Provision for working space and access ramps**

The tendered rates for provision of working space (see Sub-Clause 8.3.5) shall be deemed to include excavation and subsequent backfilling of any access ramps required and all measures required to render the sides of the excavation stable and the supply, installation, maintenance and removal of safety barricades.

#### **PSD 8.1.5 Recording of original ground profiles**

The tendered rate for excavation shall cover the cost of recording the original ground profiles, rock and/or foundation levels, as applicable prior to commencement of any excavation, including stripping of topsoil. This is required to allow the Engineer to check the Contractor's survey and adjust his design levels if necessary.

#### **PSD 8.1.6 Backfilling of over-excavation**

Backfilling over-excavation with compacted G2 material or mass concrete as specified in PSD5.2.2.1(e) will not be measured for payment beyond unless the over-excavation is ordered by the Engineer to remove unsuitable material, in which case the additional excavation will be measured and paid as restricted excavation in 'soft' material and the G2 or mass concrete will be measured by volume, all to the additional dimensions ordered by the Engineer.

#### **PSD 8.2.1 COMPUTATION OF QUANTITIES**

Add 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 Engineer.

As noted in PSD 5.2.2.1 e), for restricted excavation in material classified as 'intermediate' or 'hard rock' (as defined in PSD3.1.2), an allowance for an average overbreak layer of 150mm below the required founding level (i.e. underside of blinding layer) for all structures will be automatically added to the quantity measured for payment for restricted excavation; as will the volume of G2 backfill.

### **PSD 8.3 SCHEDULED ITEMS**

#### **PSD 8.3.2 Bulk Excavation**

Replace the contents of this clause with the following:

Separate scheduled items will be provided for each type of excavation material (in accordance with the selection criteria specified in PSD 3.3.1), together with its method of excavation and intended destination / use. The classification criteria specified in PSD 3.2.2.1 is intended to assist with making the distinction between 'weak' mudstone / siltstone from 'intermediate' mudstone / siltstone material and between 'intermediate' and 'hard' material (unweathered sandstone and dolerite). The distinction between 'completely-weathered soft soil material' and 'weak mudstone' is fairly obvious, but shall none-the-less be as agreed with the Engineer's Representative. In all cases, the rates tendered shall make allowance for liaising and agreeing with the Engineer's Representative as to which selection category material being excavated falls into, how it is to be excavated and where such material is to be placed.

Except for measurement of overhaul to the designated spoil site, there are no 'extra-over' excavation items.

The tendered rates for excavation shall cover all costs associated with excavating and spoiling or filling and any conditioning, gridding and compaction required to achieve the required compaction density. The tendered rates for overhaul shall cover all costs associated with selecting, loading and transporting the spoil material to the designated spoil dump and depositing the material in a way there is no mixing of the different selection types.

#### **PSD 8.3.3 Restricted Excavation**

Replace the contents of this clause with the following:

Separate scheduled items will be provided for each type of excavation material (in accordance with the selection criteria specified in PSD 3.3.1), together with its method of excavation and intended destination / use as per PSD 8.3.2 Bulk Excavation. Separate scheduled items will be provided for each type of structure.

#### **PSD 8.3.5 Extra excavation to provide working space around structures**

In addition to the provisions of clause 8.3.5, the tendered rates for 'extra excavation in all materials for working space' shall also include for:

- 1) Any lateral support (if necessary for stability) and any other measures required to render and maintain the excavation sides in a safe, stable state at all times as specified in clause 5.1.1.2 and PSD 5.1.1.2 b);
- 2) The cost of temporarily stockpiling working-space material (on or off-site), spoiling any unsuitable and excess material, processing to OMC and backfilling and compacting to 95% Mod AASHTO density in layers not exceeding 150mm.
- 3) Provision of access ramps into the excavation (or other means of providing safe access for personnel and plant to enter and exit the excavations).
- 4) Provision and maintenance of a 1m high rigid barrier fence around all excavations deeper than 1,5m and where the sides of the excavation are steeper than 1 vertical: 2 horizontals.
- 5) Provision of storm water diversion berms or ditches upstream of the excavation and maintaining a minimum of accumulated rain water in the excavations.

#### **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, and any other material within the boundary of the site and less than 0.5 km from the site boundary shall be regarded as freehaul.

Overhaul will only be paid where the transportation of material is beyond 0.5 km of the boundary of the site.

Overhaul shall not apply to imported material from commercial sources.

The overhaul distance shall be measured from the point of exit of the site perimeter to the agreed centre of the designated spoil area.

### **PSD 8.3.15 Retrieval of spoil Material**

Should spoiled material need to be retrieved from designated spoil site (only where instructed by the Engineer), this will be measured under the nearest equivalent scheduled item for excavation and also under 'extra-over for overhaul'.

## **SECTION PSDB: EARTHWORKS (PIPE TRENCHES) (APPLICABLE TO SABS 1200DB - 1989)**

### **PSDB 3 MATERIALS**

#### **PSDB 3.1 Classes of excavation**

The classification of material for excavation shall be as specified in Project Specification Clause PSD 3.1.2.

#### **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 Backfill**

Add 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 shall 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 3.6 Materials for Reinstatement of Roads and Paved Areas**

Delete the Sub-Clause and substitute:

Material used in the reinstatement of roadways shall fall into the following relevant categories:

(a) Foundation material recovered from the excavation of trenches across existing roadways which, if so instructed by the Engineer, shall be set aside and re-used as sub-base material.

(b) New material which shall conform to the requirements of:

Clause 3.2.1 of SABS 1200 ME for the Subbase

Clauses 3.2 and 3.3 of SABS 1200 MF for the Basecourse

Clause 3.2.2 of SABS 1200 ME for the Gravel Wearing Course

Clause 3 of SABS 1200 MH for the asphalt surfacing

#### **PSDB 3.7 Selection**

The selection of material for pipe trenches shall be as specified in Project Specification Clause PSD 3.3.

### **PSDB 4 PLANT**

#### **PSDB 4.1 Excavation Equipment**

In the first line delete "The Contractor" and substitute: "In sections deemed to be excavated by mechanical means, the Contractor"

Add to the Sub-Clause:

Should any portion of a pipe trench exceed the specified depth, the Contractor will be held responsible for any additional costs which may arise as a result of such over-excavation. Concrete filling or imported compacted fill may be ordered by the Engineer to be placed below the bottom of the trench.

**PSDB 5 CONSTRUCTION**

**PSDB 5.1.2 Stormwater, Seepage and Dewatering of Excavations**

**PSDB 5.1.2.1 Throughout the works**

Add the following to this Sub-clause:

In addition to the Contractor's responsibilities for dealing with water, the Engineer may order the Contractor to place a crushed stone bedding layer (minimum thickness 150 mm) on the trench bottom. Should the trench bottom conditions remain unstable due to the nature of the soil and the degree of saturation, the Engineer may order the Contractor to install a filter fabric on the trench bottom prior to the provision of the stone layer. Should the material in the trench bottom or the bedding material be of such a nature that it can penetrate the stone layer, the Engineer may instruct the Contractor to enclose the stone layer completely within a geotextile filter blanket which shall comply with the requirements below, and shall have overlaps of at least 200 mm.

The Contractor will only be paid for providing and laying the stone bedding layer and filter fabric after receipt of a written order to do so from the Engineer.

The cost of dealing with water as specified in Sub-clause PSDB 5.1.2.1, will be held to have been included in the tendered sums.

Stone bedding in water-logged conditions:

Where the use of a layer of crushed stone in the trench bottom has been authorized by the Engineer, it will be measured by volume calculated according to length multiplied by the minimum base width and specified thickness. The tendered rate shall cover the cost of preparation of the trench bottom to accommodate the layer of stone, the supply and placing of the layer of stone over at least the specified width and all related activities in order to produce a stable platform.

Geotextile filter fabric:

Where the Engineer has authorised the use of geotextile filter fabric, this shall be measured by area as: width x nett length, where the width shall be the full or half-width supplied by the manufacturer which conforms closest to the specified of plus 2 x base width plus 200mm. The tendered rate shall include the cost of supply, placing and losses as a result of overlaps and over excavated trench widths.

Geotextile to conform to the following minimum specifications:

Material:	Nonwoven, needle punched, Continuous Filament, Polyester Geotextile (minimum)
Tensile Strength:	10 kN/m (minimum)
UV Stability:	70% strength retained after 1000 hours
Permeability @ 50mm head:	$4.0\text{m/s} \times 10^{-3}$

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

Add new Sub-Clause"

**PSDB 5.1.2.4 Cross-Walls in Trenches (New Sub-Clause)**

In steeply sloping trenches (longitudinal slope > 15 %) and where otherwise ordered by the Engineer, the Contractor shall place sacks of earth as sack breakers or cross walls around and above the pipe up to ground level, prior to backfilling, as a soil erosion measure. Such sacks shall be filled with selected material free of stones in excess of 50 mm maximum dimension. One sack breaker shall consist of these sacks packed tightly against the trench bottom, pipe and actual trench sides, and against each other to form a solid cross wall at least 0.5 m thick from the bottom of the trench to the surface.

The costs of complying with this requirement including the supply, installation and maintenance of sackbreakers, will be deemed to be included in the excavation rates for trenching.

#### **PSDB 5.4 Excavation**

Add to the Sub-Clause:

Where the pipe trench crosses surfaced roads the Contractor shall neatly cut two parallel grooves into and through the "black top" before excavating between the grooves. The grooves are to be set back at least 400 mm from the edge of the excavation face to prevent raveling of the cut edge. The cost of this operation, where not scheduled separately, will be held to be covered in the general rates for excavation.

#### **PSDB 5.5 Trench Bottom**

Add to the Sub-Clause:

In waterlogged conditions and/or where so instructed by the Engineer a 150 mm thick layer (see PSLB5.2.5) of imported single sized stone (19 mm size unless otherwise instructed by the Engineer) with a geotextile filter surround (Geotextile to conform to the requirement of PSD 5.1.2.10 shall be constructed under the bedding layer specified for the pipes.

However, where the Contractor's method of working results in waterlogged conditions in the trench bottom, the Contractor shall excavate and stabilize the trench at his own cost to the approval of the Engineer.

Jointing slots shall be cut of sufficient length and depth to allow for the proper jointing of pipes and to ensure that joint collars or sleeves do not rest on the trench bottoms. After the pipework has been inspected, tested and approved by the Engineer, the jointing slots shall be refilled with selected soft material free from stone (bedding materials as specified under PSLB in the case of coated steel pipes) and then rammed to provide a continuous uniform support for the pipework. No specific payment will be made for forming and refilling slots, the cost of which will be deemed to be included in the tendered rates.

#### **PSDB 5.6.1 Backfilling – General**

Add to the Sub-Clause:

Notwithstanding the requirements of Sub-Clauses 5.6.1 and 5.6.6, no pipe joint or pipe fitting shall be covered by either blanket or backfill material prior to the successful completion of the visual inspection and pressure testing of the relevant section of the pipeline.

#### **PSDB 5.6.2 Material for Backfilling**

Delete fourth, fifth and sixth lines and substitute the following:

Hard rock material shall not be used for, or incorporated into, the backfill above the bedding layers without the Engineer's approval.

Add the following to the Sub-Clause

Unless otherwise ordered by the Engineer, all excavated material shall be kept within the pipe servitude. The toe of the bank of excavated material shall be trimmed well back from the edge of the trench so as to leave a minimum 0.6 m clearance between the toe of the bank and the edge of the trench. The Contractor shall keep this strip clear of excavated material at all times.

#### **PSDB 5.6.3 Disposal of Soft Excavation Material**

Add to the Sub-Clause:

Surplus material or unsuitable material shall be disposed of offsite by the Contractor as per the requirements of Clause PSD 5.2.2.3.

#### **PSDB 5.6.6 Completion of backfilling**

Add the following to this sub-clause:

The Contractor shall bring on to the site sufficient resources for pipe laying so that trenches do not remain open for longer than one week ahead or behind the pipe laying team.

#### **PSDB 5.6.8 Transport for Earthworks for Trenches**

Delete the Sub-Clause and substitute:

The requirements of Sub-Clause PSD5.2.5 of SABS 1200 D as applicable shall apply.



### **PSDB 5.7.2 Areas subject to Traffic Loads**

All trenches will be considered to be subject to traffic loads and the backfill material and compaction in these trenches shall comply with the requirements of Sub-clauses 3.5(b) and 5.7.2.

### **PSDB 5.9.4 Bitumen Roads, Sub-Base and Base**

Each Tenderer shall include in his tender allowances to cover the costs of reinstating all surfaces and inclusive of all layers to their conditions pertaining before the commencement of construction.

Where Items have been included in the Bill of Quantities to cover the reinstatement of certain surfaces (grassed lawns, concrete and/or asphalted/gravel driveways and/or roads) and for payment purposes, the area of those specific surfaces shall be calculated from the product of the length of the trench and the specified trench width plus 400 mm (refer PSDB 5.4).

## **PSDB 8 MEASUREMENT AND**

### **PAYMENT PSDB 8.1 BASIC PRINCIPLES**

Amend the last sentence of Sub-clause 8.1.2 (c), to read:

"The ground surface will be that existing after any bulk excavation has been carried out and before any embankment has been constructed, unless a portion of the embankment has to be constructed in order to achieve an acceptable cover over a pipe that is to be installed, in which case, measurement will be made from the level of embankment that produces an acceptable minimum cover over the pipe."

### **PSDB 8.1.4 BASIC PRINCIPLES**

Delete Sub-Clause and substitute:

Except that the volume will be computed as specified in 8.2.3, the requirements of Sub-Clause 5.2.5.1 (Freehaul) of SABS 1200 D as amended and as relevant, shall apply to freehaul.

No additional payment will be made for excavating and backfilling jointing slots as the cost of that work will be deemed to be included in the rates for trenching.

### **PSDB 8.3.2 Excavation**

Add the following to the Sub-clause:

The rates for excavation of trenches shall also cover the cost of selection as specified in PSDB 3.7 Selection, as amended.

Extra-over payment will be made for intermediate and hard rock excavation as per PSDB 3.1 provided the surface levels of the intermediate layer and hard rock have been recorded on drawings signed by the Engineer before the material is excavated.

### **PSDB 8.3.3.4 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, and any other material within the boundary of the site and less than 0.5 km from the site boundary shall be regarded as freehaul.

Overhaul will only be paid where the transportation of material is beyond 0.5 km of the boundary of the site.

Overhaul shall not apply to imported material from commercial sources.

The overhaul distance shall be measured from the point of exit of the site perimeter to the agreed centre of the designated spoil area.

## SECTION PSDK: GABIONS AND PITCHING (APPLICABLE TO SABS 1200 DK

– 1996)

### PSDK 3 MATERIALS

#### PSDK 3.1.2 Gabion Cages

Add to the Sub-Clause:

The wire used for the fabrication of wire mesh cages and for lacing and bracing operations shall be plain zinc-coated mild steel wire. No PVC coating will be required.

#### PSDK 3.1.2 Gabions

Replace Clause 3.1.2 with the following:

Gabion boxes shall consist of double twisted, hexagonal wire mesh of nominal 80 mm mesh, 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 – 2010, zinc coated by hot-dip galvanizing to SANS 675 – 2009.

Mattresses shall consist of double twisted, hexagonal wire mesh of nominal 80 mm mesh, with 4.4 mm o/d frame and 2.7 mm o/d mesh wire. Complete with partitions at 1 m centres. All wire to be mild steel to SANS 1580 – 2010, zinc coated by hot dip galvanizing to SANS 675 – 2011.

#### PSDK 3.1.3 Geotextile

Add to the Sub-Clause:

Geotextile filter fabric:

Where the Engineer has authorised the use of geotextile filter fabric, this shall be measured by area as: width x nett length, where the width shall be the full or half-width supplied by the manufacturer which conforms closest to the specified of plus 2 x base width plus 200mm. The tendered rate shall include the cost of supply, placing and losses as a result of overlaps and over excavated trench widths.

Geotextile to conform to the following minimum specifications:

Material:	Nonwoven, needle punched, Continuous Filament, Polyester Geotextile (minimum)
Tensile Strength:	14 kN/m (minimum)
UV Stability:	70% strength retained after 1000 hours
Permeability @ 50mm head:	3.6 m/sx10 <sup>-3</sup>

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

#### PSDK 3.2.1.2 Stone

Amend the Sub-Clause as follows:

In Table 2, Column 2, for extra heavy, replace 300 with 500.

#### PSDK 3.2.3 Wire netting

Add to the Sub-Clause:

Wire netting for gabion and mattress cages shall be hexagonal steel wire mesh strengthened by selvedges of heavier wire and by mesh diaphragms that divide the cases into 1 m compartments.

Nominal 80 mm mesh shall be used for gabion cages with 2.7 (Refer to PSDK 3.1.2) mm diameter galvanised steel wires.

Nominal 80 mm mesh shall be used for mattress cages with 2.7 (refer to PSDK 3.1.2) mm diameter galvanised steel wires.

Selvedge wire shall be galvanised and the diameter shall be a minimum of 4mm.

## **PSDK 5 CONSTRUCTION**

Add new Sub-Clause:

### **PSDK 5.1.3 Diaphragms**

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 Rockfilling**

Add to the Sub-Clause:

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 are 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.

## **SECTION PSL: MEDIUM PRESSURE PIPELINES (APPLICABLE TO SABS 1200L – 1983)**

### **PSL 1 SCOPE**

#### **PSL 1.1 Add the following:**

mPVC	: Modified polyvinyl chloride
GMS	: Galvanised Mild Steel
SS	: Stainless Steel
HDPE	: High-density polyethylene

### **PSL 3 MATERIALS (Clause 3.1)**

Amend Sub-Clause 3.1 as follows:

“Pipes and fittings shall be of the types specified in the schedule or in the project specification and, unless otherwise required in terms of the project specification, they and their couplings shall be capable of withstanding the applicable test pressure. All pipes and fittings shall be supplied complete with couplings and jointing material.

Satisfactory temporary end covers shall be provided for the protection of threads, flanges, and prepared ends of plain ended pipes and fittings, and to prevent damage to internal lining during transportation and during on site.

The materials and construction of all pipes, fittings, valves and specials shall comply with the appropriate SANS, BS or other appropriate specification, whether stated or not, and shall be approved by the Engineer. Only full-length pipes bearing the relevant standard’s mark will be acceptable. Cut pipes shall only be used at pipe junctions to position valves and specials as shown on the drawings, and at connections to structures. When laying the pipes the markings shall be visible from above.

The Contractor shall be responsible for the structural and hydraulic design of all bends and fittings where these are not standard off the shelf items designed and guaranteed by the manufacturer for the purpose intended.

The Engineer shall at all reasonable times have free access to the place where the goods are manufactured for the purpose of examining and sampling the materials and goods, and if necessary for supervising the testing and marking of goods. The manufacturer shall supply free of charge every facility and all labour required for such examination, sampling, inspection, testing and marking before delivery and shall provide and maintain in good order suitable, convenient and accurate apparatus for testing goods.”

#### **PSL3.1 MPVC Pipes (Clause 3.7.3)**

Add a new clause:

MPVC pipes and fittings shall be fitted with spigot and socket rubber ring joints and shall comply with the requirements of SANS 966-2: 2010 (MPVC).

#### **PSL 3.1.3 General (Fittings and Specials)**

The Contractor will be responsible for supplying all specials and fittings.

#### **PSL3.2 AC Pipes and Specials (SANS 1748-1: 1998)**

Glass reinforced pipe and fittings shall conform to ASTM D3262, ASTM3754, AWWA C950 and SANS 1748 -1 : 1998 Glass Fibre Reinforced Thermosetting Plastics (GRP) pipes Part 1 : Pipes for Water Supply , Sewerage or drainage. GRP pipe shall be jointed with Double Bell couplings. Pressure rating, stiffness and diameter as detailed in the bill of quantities and drawings.

#### **PSL3.2 AC Pipes and Specials**

Asbestos Cement or Fibre Cement production shall not be used.

**PSL3.2 Steel pipes (Clause 3.7.4)**

Steel pipes shall be groove ended galvanised carbon steel pipes with Klambon type cast galvanised SP couplings or similar approved and shall comply with the requirements of SANS 62.

**PSL3.4 Steel pipes, fittings and**

**specials PSL3.4.1 General**

Amend this sub-clause as follows:

All steel pipes and specials for reservoirs, irrespective of diameter, shall be fabricated from plain ended pipes. The use of screwed flanges and fittings shall not be permitted. All fabrication shall take place in a suitable workshop prior to galvanising, and no cutting or welding of pipes on site shall be permitted.

“The Contractor shall, if so instructed, make available to the Engineer the maker’s certificates covering the chemical analysis and physical properties of the steel used in the manufacture of pipes and specials, and shall provide written confirmation that welding has been carried out by coded welders.

The pipes shall be hydraulically tested before leaving the factory to the test pressure specified in Sub-Clause 7.3 of SANS 1200 L. The methods of sampling and testing of the manufactured pipes shall comply with Sections 6 and 7 of SANS 719.

The tests shall be carried out at the place of manufacture and at the expense of the Contractor. Upon delivery of the goods concerned the Contractor shall submit a signed certificate giving results of the tests and certifying that the goods concerned have been manufactured in accordance with this specification.”

**PSL3.4.3 Steel pipes of nominal bore over 150mm**

Steel pipes shall comply with the following material specifications:

- a) Electrical resistance welded (ERW) steel pipe API (American Petroleum Institute) 5L Grade X42 with a 290 MPa yield stress and 414 MPa minimum ultimate tensile stress (UTS).
- b) Pipe lengths delivered to site to be 18 metres long except where adjacent to specials.
- c) The main pipeline shall be joined by welding but flanges of the specified Class will be provided for future connections and for connections to fittings and valves.
- d) All welds to conform to SANS 10044 or API 1104, with dye penetration of 10%.
- e) For the internal lining, a cement mortar lining with a minimum thickness of 6 mm is to be applied.
- f) For the external coating a 2LPE system comprising a Fusion Bonded Medium Density Polyethylene coating, Sintakote or similar, in accordance with SANS 4427 with a 2.3mm minimum DFT.

**PSL 3.4.4 Fittings and Specials**

Add 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 19° to each other.

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

Bends, fittings, and specials ≥DN600 shall have the internal lining and external coating made continuous (“made good”) as specified elsewhere for welded joints on coated and lined pipes.

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**C3.4 Particular Specifications**

Bends, fittings and specials shall be manufactured and tested in accordance with the specification for straight pipe and additionally with Section 8 of BS 534. The nominal dimensions of each bend, fitting and special required are itemised in the Bill of Quantities and/or on the drawings and 'exact length' tolerances shall be adhered to. All plain ends on bends, fittings and specials shall have the plain ends prepared for butt welding except those plain ends that are to be jointed with adaptor joints.

Bends shall generally be of the segmented type except where otherwise stated or shown on the drawings.

The Contractor will be responsible for providing and fixing strengthening webs, crotch plates, gussets, etc. as shown on the drawings and as may be necessary to prevent excessive deflection or deformation of fittings and specials when subjected to hydraulic tests and the rate for the work will be deemed to include for the provision of this reinforcing wherever necessary.

Bends shall be fabricated in accordance with the Table below.

Deflection of Angle	
Up to and including 3 °	One pipe end scarfed on site
Exceeding 3 ° and up to and including 9 °	Mitre cut (two pipe ends scarfed on site)
9 ° and larger but less than 15 °	2 segment bend
15 ° and larger but less than 45 °	3 segment bend
45 ° and larger but less than 60 °	4 segment bend
60 ° and larger but less than 75 °	5 segment bend
75 ° and larger but less than 90 °	6 segment bend

Bends greater than 90° shall be fabricated from combinations of items from the table above.

Shop drawings of bends, fittings and specials shall be submitted to the Engineer for approval prior to manufacture.

All flanged bends, fittings and specials shall be hydraulically tested at the fabricator's premises to the same pressure that they will be subjected to during the hydraulic testing of the completed pipeline. No visible signs of leakage will be permitted.

**PSL 3.4.5 Puddle Collars and Anchoring Flanges (New Sub-Clause)**

Add new Sub-Clause:

Puddle collars and anchoring flanges used as pipe anchorages shall be of the same dimensions as corresponding flanges but those cast into concrete walls are to be undrilled. The collar/flange shall be capable of transmitting a longitudinal force 33% greater than the internal hydraulic pressure to be applied when testing, multiplied by the area of the bore and, under that condition, the stress in the material shall not exceed its yield stress.

Where puddle collars are shown on the drawings as being 20 mm thick, those collars are not required to transmit thrust, their purpose being to assist with the waterproofing of the concrete chambers by increasing the path that ground water might have to take to enter the chambers.

Where polyethylene pipes are cast into concrete structures, they shall be specially prepared and adapted by positioning a custom-made tight-fitting natural rubber sealing sleeve around the circumference of the pipe and in the case of structured-wall pipe creating shear keys through removing small segments of the outer wall. The rubber seal shall be 10 mm thick and 200 mm wide or 80% of the width of the wall and shall be 60-65 shore hardness, with a vulcanised joint. It shall need to be stretched over the pipe circumference to ensure a tight fit.

**PSL 3.7 OTHER TYPES OF**

**PIPES PSL3.7.1 uPVC PIPES**

uPVC pipes and fittings shall be fitted with spigot and socket rubber ring joints and shall comply with the requirements of SANS 966-1.

**PSL 3.7.2 Polyethylene Pipes**

Replace "SABS 533" in this clause with "SANS 4427".

Add the following new sub-clauses to Clause 3.7:

### **PSL3.7.3 mPVC Pipes (Clause 3.7.3)**

MPVC pipes and fittings shall be fitted with spigot and socket rubber ring joints and shall comply with the requirements of SANS 966-2: 2010 (MPVC).

### **PSL3.7.4 GRP PIPES**

Glass reinforced pipe and fittings shall conform to ASTM D3262, ASTM3754, AWWA C950 and SANS 1748 -1 : 1998 Glass Fibre Reinforced Thermosetting Plastics (GRP) pipes Part 1 : Pipes for Water Supply , Sewerage or drainage. GRP pipe shall be stiffness SN 5000 jointed with Double Bell couplings. The pressure rating and diameter as detailed in the schedule of quantities and drawings.

## **PSL 3.8 JOINTING MATERIALS**

### **PSL 3.8.2.1 Flexible Couplings**

Delete the Sub-Clause and substitute the following:

Where ordered, steel flexible couplings are to be of the "Viking Johnson"/"Klamflex"/ "Aqualok" or similar approved type without central registers, each comprising one centre collar, two special flanges, two rubber rings and hot dipped galvanised mild steel bolts.

Steel couplings shall be assembled strictly in accordance with the manufacturer's instructions and all bolts shall be torqued to the value recommended by the manufacturer. On completion of hydraulic pressure testing of the installation, the entire joint shall be protected as described in Clause PSL 3.9.3.8.

The tendered prices for laying and jointing are to include for the supply of all necessary materials, plant and labour to complete the joint.

Flexible couplings shall conform generally to Clause 15 of BS 534 for slip-on type couplings and shall be of approved manufacture. They shall be capable of being tightened and released without damaging or improperly distorting the rubber seating rings and shall be designed to prevent the rubber rings being blown out under pressure or sucked in under vacuum.

The steel used shall conform to the appropriate British Standard Specification and each coupling is to be capable of withstanding the test pressure applicable to the pipes with which they are to be used without exceeding a stress in the steel of 67% of the yield point.

Mild steel couplings shall be protected by an approved epoxy coating system such as "Cupon KSIR88" (or similar approved) within 4 hours of abrasive blast cleaning the metal surfaces of the coupling in accordance with Swedish Standard SIS 05 5900 Grade SA 2,5. Nuts, bolts and washers shall be hot dipped galvanised. The plain end of the pipe shall be properly prepared, and in the case of steel pipes before corrosion protection, so as to accept the flexible coupling.

Adaptor couplings and anchoring adaptor joints shall comply with the above specification for flexible couplings and be of a similar design, but one end shall be flanged to enable connection of plain ended pipes to flanged joints. The adaptor joints are to be complete with bolts and nuts for connecting the flanged joint to the anchoring flange situated generally 300 mm to 400 mm from the plain end of pipe. All bolts, nuts and washers are to be hot dipped galvanised. In order to anchor the plain ended pipe to the flanged joint all of the bolts for the flanged joint are to pass through the anchoring flange and are to be fitted with nuts and washers at the flanged joint and on either side of the anchoring flange.

### **PSL 3.8.3 FLANGES AND ACCESSORIES**

#### **PSL 3.8.3.1 Bolted Connections (New Sub-Clause)**

Add new Sub-Clause:

All flanges, gaskets, bolts, nuts washers and other appurtenances required for the execution of the work under this Contract shall be supplied and installed by the Contractor under this Contract.

Flanged bolted connections shall comply with the following:  
All flanges shall have a raised face.

Temporary end covers shall be provided by the Contractor for protection of flanges, and prepared plain ends of pipes and fittings to prevent damage to internal lining during transportation and during handling on site.

All piping and flanged surfaces shall be cleaned before connections are made.

The (raised) faces of flanges that are in to be in contact with gaskets shall be masked and shall not be painted or coated. The mating flange shall then receive one coat of rust inhibitor (Plascon Rustix 84 or equal approved). Care shall be exercised to ensure that after the application of all coatings there are no runs or drips on the mating surfaces of the flanges and that the flange profiling is clearly visible over the entire face. Excessive coating build up in flange bolt holes that could snag bolts will not be permitted.

Flanged joints shall be connected with the specified bolts, nuts and washers all of which are to be supplied by the Contractor.

All bolts, tie-bolts, nuts and washers shall be galvanised to SABS 121:2000 and shall comply with the relevant requirements of SABS 135 – 1985 and SABS 136 – 1985 where applicable.

The length of each bolt shall be such that after the bolt has been tightened, the end of the bolt shall project beyond the outer face of the nut, but not by more than two threads. Tie-bolts on restrained/anchoring couplings shall be fitted with “backing nuts” and washers.

Each flanged joint is to be fitted with an approved and suitably rated gasket and sealed watertight such that there will be no visible sign of leakage under the specified factory and field test pressures and under the in-service working conditions (pressures).

All bolts are to be tightened in a predetermined pattern with opposing bolts being tightened sequentially. When all bolts are tight, each bolt is to be torqued to the required/recommended torque in a predetermined pattern with opposing bolts being tightened sequentially.

All bolt threads shall be liberally coated with “Copper slip” or similar approved compound prior to assembly. Upon completion, bolt heads, washers and nuts shall be wrapped with the “Denso Mastic Blanket System” comprising of a priming solution, mastic blanket, petrolatum tape and lay-flat sheeting as described in Clause PSL 3.9.3.8.

## **PSL 3.10 VALVES**

Add the following sub-clauses to Clause 3.10:

### **PSL 3.10.1 GATE VALVES**

Unless otherwise scheduled, gate valves shall be double flanged with ductile iron bodies and stainless steel trim, and shall conform with all relevant sections of SANS 664 or BS 5163, specifications and subsequent amendments. Flanges shall be drilled to BS4504 or SANS 1123 for 25 bar or 16 bar working pressure as specified, and compatible with pipework flanges.

Gate valves shall be of the wedge gate type, VOSA or similar approved. Approval shall only be given for the specified or equivalent valves from well-established and well known manufacturers with a proven record of supply and service of equivalent products within the southern African region. Valves shall be Class 16 or 25 as specified or shown on the drawings, clockwise closing and shall have non-rising spindles of high quality high tensile manganese bronze. The direction of closing shall be cast into the handwheel (where specified) or valve casing with the words “OPEN” and “CLOSE” respectively. The gate shall be guided within the body of the valve to fit accurately onto the seat and to avoid possible buckling. Where extended spindles are required, they shall be suitably supported to prevent swaying and buckling, and to guarantee the intended use of the valve. All gate valves shall be drop tight when tested in accordance with the requirements of BS 5163. All gate valves of 600mm and larger shall be fitted with an integral bypass valve.

All gate valves shall be capable of being operated manually with a maximum applied torque of 150Nm for valves with a nominal diameter of more than 450mm and 100Nm for valves with a nominal diameter less than 450mm.

Valves shall be grit blast cleaned to S15 standard and a solvent-free sintered epoxy powder applied in one coat by the use of arc-spray machines to provide a dry film thickness of not less than 450 micron.

Flanged valves shall be complete with galvanised or titanium coated bolts and nuts, gaskets and insertion rings.

All isolating valves for air valves shall be supplied with a cast iron hand wheel. All other valves shall be provided with a cap top for use with a valve key.



### **PSL 3.10.2 AIR VALVES**

Air release and vacuum break valves shall be double orifice with anti-shock orifice mechanism, of type "Vent-O-Mat Series RBX" or similar approved with flanged inlets and rated for a minimum of 16 or 25 bar working pressure as specified.

The valve shall have an integral surge alleviation mechanism which shall operate automatically to limit transient pressure rise or shock induced by closure due to high velocity air discharge or the subsequent rejoining of separated water columns. The limitation of pressure rise must be achieved by deceleration of approaching water prior to valve closure.

The intake/discharge orifice area shall be equal to the nominal size of the valve.

The inlet shall be fitted with an isolating valve with vertical spindle, key operated from above.

Air valves shall be able to withstand twice the maximum rated pressure and must provide a positive drop tight closure from a minimum pressure of 50 kPa up to the maximum rated pressure.

### **PSL 3.10.3 NON-RETURN VALVES**

Non-return valves shall comply with the requirements of BS 5153 or the relevant SANS specification for working pressures as specified for each application. They shall be double flanged and of general construction details as specified for gate valves with anti-shock closing characteristics. Flanges shall be drilled to BS4504 or SANS 1123 for 25 bar or 16 bar working pressure as specified, and compatible with pipework flanges.

Check valves shall be RGR axial flow, Vent-O-Mat Maxiflow or similar approved. Valves shall be fast acting with short travel and designed to minimise slamming.

Add the following Clauses:

### **PSL 3.12 METERS**

#### **PSL 3.12.1 FLOW METERS**

Magnetic Flow Meters specified shall be IP68 rated Endress & Hauser or similar approved magnetic flow type meters suitable for measuring flows in the ranges specified and for installation in a pipeline of diameter specified. The unit shall be capable of link up to the existing telemetry system and shall have 2 x 4 to 20mA outputs and two relays.

Measurement accuracy shall be within 0.2%. Maximum head loss through the meter and taper sections (if any) shall not be greater than 0.3m.

The rate tendered shall include for selection, supply and fitting of the meter with all necessary fittings and specials to fit the meter in a nominal 600mm diameter pipe, linking up to power supply, link up to the existing telemetry system located within 50m, including all necessary fittings and sundries to provide a complete working installation, testing and commissioning.

Mechanical flow meters, where specified, shall be able to provide pulsed output for continuous flow rate monitoring suitable for telemetry link-up. Flanged in-line strainers shall be provided with all mechanical flow meters installed. The strainers shall have removable components to allow access for cleaning and maintenance without removing the flanged strainer body."

The rate tendered shall include for selection, supply and fitting of the mechanical meter with all necessary fittings, specials and sundries to provide a complete working installation, testing and commissioning. Supply and installation of strainers shall be measured separately.

#### **PSL 3.12.2 WATER METERS**

The meters shall be of the semi-positive rotary piston volumetric type and be to Class C specification.

Bulk water meters shall be supplied and built into the meter chambers as detailed in the drawings. Fittings and the construction of the chambers will be measured elsewhere.

Water meters must comply with the SANS Specification No. 1529-1: 2006 and must be approved in terms of Section 18 of the Trade Metrology Act, Act No. 77 of 1973, as amended by the Trade Metrology Amendment Act, Act No. 42 of 1994.

All water meters offered must be tested and sealed by an authorised official in an SANS 17025 accredited laboratory, situated within the borders of the Republic of South Africa.

## **PSL 5.5 ANCHOR/THRUST BLOCKS AND PEDESTALS**

Add to the Sub-Clause:

If the steel pipelines that to be laid under this Contract are to be continuously welded or flanged, anchor/thrust blocks will be required at tees, bends, terminal valves and end caps.

## **PSL 5.6 VALVE AND HYDRANT CHAMBERS**

Add the following sub-clause 5.6.2

The Contractor shall provide the Engineer with all relevant dimensions of valves fittings and specials for the purposes of finally sizing chambers and the designing of the reinforcement at least 40 working days prior to such sizes and reinforcement schedules being required. No extensions of time for delays resulting from failure to supply this information on time will be entertained. Any redesign costs due to supply of incorrect information will be to the Contractor's account.

## **PSL 5.10 DISINFECTION OF PIPELINE**

Replace the Sub-clause with the following:

Introduction

The price for testing, flushing out and disinfecting pipelines and fittings is included in the schedule of items for supply and installation.

On completion of construction, after pressure testing and prior to commissioning the pipeline is to be flushed out and disinfected by the Contractor in accordance with this specification.

Definitions

Within this document the term HYPOCHLORITE SOLUTION means a commercial solution of sodium hypochlorite containing 10 % to 15 % of available chlorine. Also, 10 % HYPOCHLORITE SOLUTION means hypochlorite solution diluted one in ten with water which thus has approximately 1 % of available chlorine.

Bulk supplies of sodium hypochlorite solution (Chlorox for instance), are supplied at 10 to 15% available chlorine. This fraction declines progressively as the hypochlorite decays to chloride, chlorate and oxygen. Assume in practice that there is only 10 % available chlorine.

Within this document AVAILABLE CHLORINE and all chlorine concentrations means FREE CHLORINE available to the water environment for its disinfection.

Completed installation

Ensure that all water used for disinfection purposes has a free chlorine residual of at least 20 mg/l. Refer to Table 1 and 2 in the section on dosage of chlorinating agents.

During chlorination the pipeline shall be kept full of

water. New mains

Do not connect any new main into supply until the water from designated sampling points, having stood in the main for at least 20 hrs and has met the criteria specified herein.

New mains are laid with the intention of ensuring as far as possible, the exclusion of debris and contamination, but presume at the disinfection stage that debris and contamination does exist and that this debris is resistant to disinfection, e.g. compacted soil or detritus at the joints.

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**C3.4 Site Information**

The disinfection procedure, which should follow pressure testing, includes the following: Swabbing and flushing of the main.

Soaking of the main for a minimum period of 20 hrs, using a minimum concentration of 20 mg/l of available chlorine in mains water. Removal of excess chlorine by flushing the main. Dosage rates of chlorination agents.

Tables 1 and 2 provide estimates of the minimum dose rates of sodium hypochlorite solution, chlorine gas or bleach powder, tables or granules to achieve chlorine levels of 20 mg per litre when dilute mains water which has a zero chlorine demand.

Table 1 – dosage for 1,000 m of pipeline to give 20 mg available chlorine per litre

Pipe diameter	Volume of 1000m of pipeline	Weight of bleaching powder granules or tablets to 20 mg/l	Weight of chlorine to give 20mg/l	Volume of hypochlorite solution to give 20 mg/l
mm	m <sup>3</sup>	gm	gm	litres
50	1,9	80	40	0,4
75	4,4	180	90	0,8
100	7,9	320	160	1,5
150	17,7	700	350	3,5
200	31,4	1,260	630	6,2
250	49,1	2,000	980	9,7
300	70,7	2,800	1400	14,0
350	96,2	3,800	1900	19,0
400	125,6	5,000	2500	24,6
500	196,3	7,800	3900	38,4
600	282,6	11,200	5600	55,4

Table 2 – dose rates for 20 mg available chlorine per litre

Flow rate in pipeline*		Hypochlorite solution injection rate for 20 mg/l		Cholorine injection rate for 20mg/l
litres/sec	m <sup>3</sup> /hr	litres/hr	m/sec	gm/hour
1	3,6	0,7	0,2	72
2	7,2	1,4	0,4	144
3	10,9	2,2	0,6	216
4	14,4	2,9	0,8	288
5	18,0	3,6	1,0	360
6	21,6	4,3	1,2	430
7	25,2	5,0	1,4	500
8	28,8	5,8	1,6	576
9	32,4	6,5	1,8	650

\* For flows greater than 9 litre/sec the dose rates can be calculated as follows:

e.g flow of 186 litres/sec = 100+ 80+ 6= 100x1 +10x8 + 6 litres/sec

hypochlorite solution injection rate = 100x0.7 +10x 5.8 + 4,3 =70 + 58 +4.3 = 132,3 litres/hr

Disposal of chlorinated water

When the pipeline has passed all disinfection criteria it must be drained without causing a hazard.

The following can be explored as possible methods of the disposal of the chlorinated water, and the most suitable method will be employed.

- Foul Sewer
- Overland
- Watercourse

## **PSL 7 TESTING**

### **PSL 7.1 GENERAL**

### **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. Water will be made available from the nearest operational reservoir. Additional water used due to unsuccessful hydraulic tests will be charged at the Employer's bulk rate per kilolitre. Filling of the pipeline for hydraulic testing shall be carried out slowly to enable air to escape and under the direction of the Engineer.

An item has been provided in the Bill of Quantities to cover the cost of conveying water from the supply point to the test section of pipeline.

#### **PSL 7.3.1 Test Pressure and Time of Test**

Add to the Sub-clause:

Pipeline shall be subjected to field test pressures equivalent to the heads or pressures shown on the drawings.

The sections in which a pipeline may be tested will be at the discretion of the Contractor, except that a pipeline shall not be tested in sections exceeding a maximum allowable length of 2 000 m unless otherwise agreed by the Engineer and also taking cognisance of the requirements of Clause C3.5.17 of the project specification. Notwithstanding the foregoing, all stream and river crossings that are to be encased in concrete shall be successfully pressure tested prior to the placing of the concrete encasing. 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 (flanges or bullnoses) and any other costs incurred as a result of testing the pipeline in intermediate sections.

The pipe shall not be tested until the associated structural concrete for anchorage has cured for 28 days or until such concrete has attained the specified design strength. Once filled, cement mortar lined pipe shall be left for 24 hours to permit maximum saturation of the linings.

The section to be tested shall be pressurised to the specified pressure and left for 24 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 permissible leakage for welded and flanged steel pipelines is zero (0) litres.

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 7.3.3 Permissible Leakage Rates (Sub-Clause**

**7.3.3)**Delete the title of Sub-Clause and substitute the following:

Permissible Make-up Water

Add additional paragraph to the Sub-Clause as follows:

(a) Welded steel pipelines -- Nil

#### **PSL 7.3.4 Water for Testing Purposes**

Water used for one filling of the pipeline for hydraulic testing will be provided by the Employer free of charge. Water will be made available from the nearest operational reservoir. Additional water used due to unsuccessful hydraulic tests will be charged at the Employer's bulk rate per kilolitre. Filling of the pipeline for hydraulic testing shall be carried out slowly

to enable air to escape and under the direction of the Engineer.

An item has been provided in the Bill of Quantities to cover the cost of conveying water from the supply point to the test section of pipeline.

### **PSL 7.3.5 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 and will also be monitored by ORTDM personnel. 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 7.3.6 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. For this reason, testing shall be carried out against a blank flange or bullnose end cap at these locations.

### **PSL 7.3.7 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 7.3.8 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 8 MEASUREMENT AND PAYMENT**

### **PSL 8.2 SCHEDULED ITEMS**

#### **PSL 8.2.1 Inspection, Acceptance, Loading and Transporting from Employer's pipe yard, Lay and Bed Pipes Fittings, Specials and Couplings**

Add to sub-clause:

Where pipes are supplied 'free-issue' by the Employer, the rate for 'supply, lay, bed ...etc' shall exclude the cost of supplying the pipes. A separate per meter length of pipe item will be scheduled for inspecting the pipes in the Employer's pipeyard together with Engineer, identifying and documenting any defects, acceptance of responsibility for pipes from Employer, loading, transporting to site and off-loading alongside the trench.

The tendered rate for inspection, accepting, loading, transporting and offloading on site shall cover the cost of inspecting in Employer's pipeyard, documenting any defects, formal acceptance (signing of acceptance certificate) of the pipes supplied to the Contractor by the Employer, taking full responsibility for the pipes thereafter, loading, transporting to site and off-loading and making good any damage, to the satisfaction of the Engineer, incurred in the process.

Where separate rates in respect of water for testing, disinfection and the hydraulic test itself are provided, the rate for "lay and bed pipes" excludes the cost associated with conveyance of water to fill the pipeline, the field pressure testing and disinfection of the pipeline. Separate items have been included in the Bill of Quantities for the cost associated with the conveyance of water required for testing, pressure testing, and disinfection of the pipeline. The rate shall include the cost of corrosion protection.

A maximum payment of 85 % of the tendered rate may be made for the completed section of pipeline which has not yet been hydraulically pressure tested. A further payment of 15% of the tendered rate will be made upon successful completion of the pressure testing for the relevant section of pipeline.

#### **PSL 8.2.2 Extra-over 8.2.1 for Supplying, Fixing, and Bedding of Specials Complete with Couplings**

Add the following to this payment clause:

The rates for shall include the cost of corrosion protection.

#### **PSL 8.2.3 Extra-over 8.2.1 for Supplying, Fixing, and Bedding of Valves**

Add the following to this payment clause:

The rates for shall include the cost of corrosion protection.

#### **PSL 8.2.11 Anchor/thrust blocks and**

##### **pedestals**

Add the following to this payment clause:

Notwithstanding Sub-clause 8.2.11 anchor/thrust blocks and pedestals will be measured only by volume of concrete to the net dimensions shown on the drawings or ordered. The rate shall cover the cost of excavation, concrete and formwork.

#### **PSL 8.2.13 Valve and Hydrant Chambers, etc.**

Replace this payment clause:

Separate payment items are provided for valves, fittings and the chamber components.

#### **PSL 8.2.14 Manholes**

Replace this payment clause:

Separate payment items are provided for valves, fittings and the manhole components.

**PSL 8.2.15 Special Wrapping in Corrosive Soil**

Delete the heading and substitute: Corrosion Protection

Delete the Sub-Clause and substitute the following:

The costs of making good the internal linings and external coatings on all butt welded and fillet welded joints on the pipeline are to be included in the tendered rates.

Add new items:

External corrosion protection to flanges, adaptor joints, valves..... Unit : No

Separate items will be scheduled for each item by pipe nominal diameter.

In the case of valves, the rate shall include for protection of the whole of the valve body, all flanges integral to the valve, the connecting flanges to the valve (i.e. including the two flanges of the pipework connected to either side of the valve) and the packing of mastic (without tape or sheathing) over the gland adjusting bolts and nuts.

**PSL 8.2.16 Cut Pipes (New Sub-Clause)**

Add new item:

Extra over for forming scarf joint..... Unit : No

Add new item:

Extra over for forming mitre cut joint..... Unit : No

Add new item:

Extra over for cutting pipe as closure..... Unit : No

The rates shall cover the cost of the cutting of the pipes and forming the joint and welding and making good of the internal lining and external coating, testing, and forming joint holes in trench in all materials to facilitate in-situ welding.

**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.

## **SECTION PSLB: BEDDING (PIPES) (APPLICABLE TO SABS 1200 LB - 1983)**

### **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**

All bedding used for the cradle beneath and surrounding the 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 shall be classified as silty to fine sand having a stiffness ratio of not less than 5,0 MPa. Furthermore, the materials shall, preferably, be obtained from river transported deposits 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 bedding sand requirements and complies with this specification at all times. At least one grading analysis shall be carried out for every 100 linear 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.

#### **PSLB 3.2 SELECTED FILL MATERIAL**

Not required. All material up to the underside of main fill shall be selected granular as specified in PSLB 3.1.

#### **PSLB 3.4 SELECTION**

##### **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 PSDB 5.4 and the provisions of PSDB 3.7. 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.



## **PSLB 5 CONSTRUCTION**

### **PLSB 5.1 GENERAL**

#### **PSLB 5.1.2 DETAILS OF BEDDING**

Delete and replace with:

Pipes shall be bedded and protected in accordance with the details shown on the drawings.

#### **PSLB 5.1.2 Details of Bedding)**

Add the following to Sub-Clause 5.1.2 of SANS 1200 LB:

Where indicated on the drawings, or as otherwise indicated by the Engineer, a 200 mm thick layer of 19 mm stone shall be placed beneath the bedding layer to act as a drainage channel for excessive groundwater. This layer shall be wrapped in bidim and provided with outlet pipes if and where indicated.

#### **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, 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 200 mm thickness (See PSLB 5.1.2 c) 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**

#### **Pipes PSLB 5.3 (a) Bedding Cradle**

Delete the sub-clause and substitute the following:

The pipes shall be bedded on a minimum 100mm thick layer of compacted granular bedding material on which a 50 mm

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**C3.4 Site Information**

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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.

**PSLB 5.3(b) Selected Fill Blanket**

Delete "200 mm" from title.

**PSLB 6 TOLERANCES**

**PSLB 6.1 Moisture Content and Density**

Add 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:

- (c) The volume of bedding material shall be measured net i.e. the volume of the pipe is to be deducted.
- (d) 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 of bedding material will be regarded as free haul. No overhaul will be paid for bedding under this Contract.

**C4 SITE INFORMATION**

The following is a brief description of work to be done for Sikwayini Water Supply Scheme & surrounding sub-villages.

No.	LM	TOWN	SCHEME NAME	ACTIVITY
1	Mhlontlo	Qumbu	Sikwayini Water Supply Scheme	Construction of Spring Protection, Reservoirs, reticulation gravity mains, valves and associated chambers, route markers, communal standpipes, gabions and pitching.

**TENDER DRAWINGS**