

# O. R. TAMBO DISTRICT MUNICIPALITY



O.R. TAMBO  
DISTRICT MUNICIPALITY

PROJECT NUMBER: MIS 316 080 A

**DESCRIPTION: DUMASI REGIONAL WATER SUPPLY PHASE 1 –  
CONSTRUCTION OF A BULK PIPELINE FROM SINDAWENI TO POLINI  
AND THE POLINI ELEVATED RESERVOIR**

**CONTRACT 1**

**MUNICIPAL INFRASTRUCTURE GRANT (MIG)**

**SEPTEMBER 2023**

**NAME OF TENDERER:**

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**TENDER AMOUNT:**

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**CSD SUPPLIER NUMBER:**

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**CLOSING DATE & TIME: 24 OCTOBER 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 C6043  
MTHATHA  
5099

Tel. No. (047) 501 6425

**PLEASE CHECK**

x / √

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

## O. R. TAMBO DISTRICT MUNICIPALITY

PROJECT NUMBER: MIS 316 080 A

### DUMASI REGIONAL WATER SUPPLY PHASE 1– CONSTRUCTION OF A BULK PIPELINE FROM SINDAWENI TO POLINI AND THE POLINI ELEVATED RESERVOIR

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**Tender Drawings** Book of Drawings issued separately

**TENDERS ARE HEREBY INVITED FOR:****PROJECT NUMBER: MIS 316 080 A:****DUMASI REGIONAL WATER SUPPLY PHASE 1– CONSTRUCTION OF A BULK PIPELINE FROM SINDAWENI TO POLINI AND THE POLINI ELEVATED RESERVOIR**

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 **PROJECT NUMBER: MIS 316 080 A: DUMASI REGIONAL WATER SUPPLY PHASE 1– CONSTRUCTION OF A BULK PIPELINE FROM SINDAWENI TO POLINI AND THE POLINI ELEVATED RESERVOIR** 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 **Tuesday, 24 October 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:

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

## TENDER NOTICE AND INVITATION TO TENDER

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

Project Number	Name and Description	CIDB Grading	Briefing session
MIS 316 080 A	Dumasi Regional Water Supply Phase 1 – Construction of a Bulk Pipeline from Sindaweni to Polini and the Polini Elevated Reservoir	7CE or higher	Date: 28 September 2023 Time: 10h00 Venue: Nyandeni Local Municipal Offices, Ngqeleni

A compulsory briefing/clarification meeting with representatives of the Municipality will take place on the aforementioned date(s), time(s) and venue(s) 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.ortambodm.gov.za](http://www.ortambodm.gov.za)) at no cost.

Bids must be completed in black ink, enclosed in a sealed envelope and clearly marked with the **"Bidder's address, 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, 24 October 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).

### RETURNABLE DOCUMENTS TO BE SUBMITTED WITH BID:

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

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

### THE BID WILL BE REJECTED IF THE BIDDER FAILS TO:

- 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 CIDB

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

Bids will be evaluated in two stages, namely:

- Stage 1 – Mandatory Requirements
- Stage 2 – Minimum Conditions of Tender
- Stage 3 – Price and Specific goals

Item	Weight
<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 20% OFTHE VALUE OF THE CONTRACT TO THE DESIGNATED GROUPS AS INFICATED IN THE TENDER DOCUMENT**

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

**Enquiries:**

**Technical:** Mr. N. Noto, telephone number 047 501 6425 or email: [nkosiyabon@ortambodm.gov.za](mailto:nkosiyabon@ortambodm.gov.za).

**Supply Chain Management:** Mr. S. Hopa, telephone number 047 5016449 or Email: [sakhiwoh@ortambodm.org.za](mailto:sakhiwoh@ortambodm.org.za)

***Enquiries can be made from Monday to Friday between 08H00-13H00 and 13H30-16H30 and such enquiries will not be entertained five days before the tender closes.***

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-pointsystem shall apply where 80 points is allocated for price and 20 points allocated for Specific Goal Points as follows:

The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system)
The promotion of enterprises located in a specific province (Eastern Cape): <b>The Tenderer and Directors are based in the Eastern Cape and pay their municipal rates and taxes</b>	<b>10</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>
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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.

**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 Special Conditions 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>Tender Drawings:</b> Book of Drawing issued Separately



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>Ziinzame Consulting Engineers (Pty) Ltd</b> Address: 25 Felcon Street, Mthatha Tel: (047) 531 0269 Email: <a href="mailto:admin@ziinzame.co.za">admin@ziinzame.co.za</a> Contact Person : Mr. M. Ndabankulu
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>7 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: Thursday, 28 September 2023</b> <b>Starting time:</b> 10h00 <b>Location:</b> Nyandeni Local 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> <i>Delete the contents of <b>Clause F.2.12</b> and replace with the following:</i>  "No alternative offers will be accepted. This includes offering fixed rates in lieu of Contract Price Adjustment and/or changes to the 'as-scheduled' allowance for Contingencies and escalation."
F.2.13.5	The Client's address for delivery of Tender offers and identification details to be shown on each Tender offer package are: <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 times for submission of Tenders are <b>12H00pm Tuesday, 24 October 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	<p><b>Provide other material</b></p> <p>The tenderer shall, when requested by the Employer to do so, Provide, on request by the employer, any other material that has a bearing on the tender offer, the tenderer's commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the employer for the purpose of a full and fair risk assessment. Should the tenderer not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the employer's request, the employer may regard the tender offer as non-responsive.</p>
F2.20	<p><b>Submit securities, bonds, policies</b></p> <p>Submit to the employer before formation of the contract, certificates of insurance required in terms of the conditions of contract identified in the contract data.</p>
F.2.23	<p><b>The tenderer is required to submit with his tender:</b></p> <p>(1) a valid Tax Verification Pin issued by the South African Revenue Services; and  (2) Certified copy of the original of all the Companies / CC Registration documents.  (3) Joint Venture Agreement where applicable in CIDB format (signed and initialed on each page).  (4) Proof of registration with CIDB  (5) Certified copies of the original green bar-coded ID copies of Members of the companies.</p>
F.3	<p><b>The employer's undertakings</b></p>
F.3.1	<p><b>Respond to requests from the tenderer</b></p>
F.3.1.1	<p>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.</p>
F.3.2	<p><b>Issue Addenda</b></p> <p>If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date that tender documents are available until seven days before the tender closing time stated in the Tender Data. If, as a result a tenderer applies for an extension to the closing time stated in the Tender Data, the Employer may grant such extension and, shall then notify all tenderers who drew documents.</p>
F.3.4	<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></p> <p>The client shall not disclose to tenderers, or to any other person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation price and recommendations for the award of a contract, until after the award of the contract to the successful tenderer.</p>
F.3.7	<p><b>Grounds for rejection and disqualification</b></p> <p>Determine whether there has been any effort by a tenderer to influence the processing of tender offers and instantly disqualify a tenderer (and his tender offer) if it is established that he engaged in corrupt or fraudulent practices.</p>
F3.9	<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	Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with F.3.11 for: a) the gross misplacement of the decimal point in any unit rate; b) omissions made in completing the pricing schedule or bills of quantities; or c) arithmetic errors in: i) line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or ii) The summation of the prices.
F.3.9.3	Notify the tenderer of all errors or omissions that are identified in the tender offer and invite the tenderer to either confirm the tender offer as tendered or accept the corrected total of prices.
F.3.9.4	Where the tenderer elects to confirm the tender offer as tendered, correct the errors as follows: a) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected. b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.
F.3.10	<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.

F3.11

**Evaluation of tender offers**

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

The procedure for evaluation of responsive tender offers will be Method 2 of table F.1 of SANS 294: 2004. Financial offer & Preferences. The bid will be awarded to the bidder who has scored the highest points for price and preferences combined **BUT** the prerequisite will be to obtain at least **70 points** for quality (functionality), which will be explained in Stage 1 below.

Nevertheless, O. R. Tambo District Municipality retains the right to accept any bid.

**B. First stage in evaluation: Mandatory Requirements/ Compliance with Bid Rules and other Requirements**  
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.

- The form of Offer and Acceptance
- Audited financial statements for any tender price over R10million
- Certified company registration documents and ID of members
- Form C: Compulsory Enterprise Questionnaire
- Form D: Certificate of Authority for Signature
- Form E: Amendments, Qualifications and Alternatives
- Form H: Certificate of Good Standing
- Form I: Relevant experience
- Form J: Details of key staff and CVs
- Form M: Preference Points Claim Form in Terms of the Preferential Procurement Regulations 2022

Note:

- All information supporting the above forms such as Curricula Vitae of staff who will work on the project and their functions, details of ownership, relevant experience etc.
- Addenda issued during the bid period, if any.
- The pricing schedule

Failure to supply the required information will compromise the bid

**C. Next Stage in Evaluation: Minimum Conditions of Tender.**

**STAGE 2**

ITEM	WEIGHT
Minimum Conditions of Tender (see detailed criteria below)	<b>100</b>
<ul style="list-style-type: none"> <li>• Experience with respect to similar projects</li> </ul>	60
<ul style="list-style-type: none"> <li>• Qualifications and Experience of key staff assigned to the contract</li> </ul>	40

Only bidders who score **70 points or more** on stage 2 will be evaluated further.

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

Minimum Conditions of Tender		
	Minimum Conditions of Tender	Weight
<b>B1.1</b>	<b>Experience on similar projects</b>	<b>60</b>
	<b>Experience on similar projects: Proven experience in the construction of projects of similar scope and value i.e. water pipelines of at least 110mm diameter and a reservoir of at least 200kl storage. 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 letter or letter from the client with values.</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 at least R80 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 at least R60 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 at least R40 Million.	20
	Contractor failed to provide evidence of experience or Has not done any Similar projects	00
<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 Concrete Foreman = Minimum Grade 12/ N3 Civil Engineering/ building. 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 = 10 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 = 10 points & 1-2 years = 8 points.	12
	Favourable previous experience on construction sites in the role of Main or Assistant Water pipeline Foreman on contracts involving the construction of pipelines with a minimum of 5 years; <b>Foreman</b> = 8 points, 3-4 years = 6 points & 1-2 years = 4 points.	08
	Contractor failed to provide evidence of qualification and experience.	00

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

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

**a) PRICE..... 80**

**b) SPECIFIC GOAL POINTS CONTRIBUTION:.....20**

**a) Points Awarded for Price (Ps)**

A total of 80 points will be awarded to the Tenderer with the lowest balanced price. The **other tenders will be awarded points on the ratio to bench mark price as follows**

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

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 Goals Contribution**

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

<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 province (Eastern Cape): <b>The Tenderer and Directors are based in the Eastern Cape and pay their municipal rates and taxes</b>	<b>10</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>

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
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**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.

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

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

**D. Certificate for Sole Proprietor**

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

As Witness:

1.....  
Signature: Sole owner

2.....  
Date

**E. Certificate for Close Corporation**

We, the undersigned, being the key members in the business trading as..... hereby  
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 2.2.5 DECLARATION OF GOOD STANDING REGARDING TAX**

<b>SOUTH AFRICAN REVENUE SERVICES</b>	Tender No: ..... Closing Date: .....																
DECLARATION OF GOOD STANDING REGARDING TAX																	
PARTICULARS																	
1. Name of Taxpayer/Tenderer: .....																	
2. Trade Name: .....																	
3. Identification Number: (If applicable)	<table border="1" style="width: 100%; height: 15px;"> <tr> <td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td> </tr> </table>																
4. Company / Close Corporation registration number:	<table border="1" style="width: 100%; height: 15px;"> <tr> <td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td> </tr> </table>																
5. Income Tax reference number:	<table border="1" style="width: 100%; height: 15px;"> <tr> <td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td> </tr> </table>																
6. VAT registration number: (If applicable)	<table border="1" style="width: 100%; height: 15px;"> <tr> <td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td> </tr> </table>																
7. PAYE employer's registration number: (If applicable)	<table border="1" style="width: 100%; height: 15px;"> <tr> <td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td><td style="width: 12.5%;"></td> </tr> </table>																
8. Monetary value of Bid:	<table border="1" style="width: 100%; height: 20px;"> <tr> <td style="width: 100%;"></td> </tr> </table>																

*DECLARATION*

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

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

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

.....  
**SIGNATURE**

.....  
**CAPACITY**

.....  
**DATE**

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

**ATTACH SARS TAX COMPLIANCE PIN:**

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

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

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

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

This is to certify that I, .....(Name)

duly authorised representative of .....(Tenderer)

Address: .....

Date: .....

Visited the site on ..... (date) at ..... (Village)

in the presence of (Engineer) ..... (Name) .....(Signature)

**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 2.2.10 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: 30px; 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: 20px;">(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**

BID NUMBER:	MIS 316 080 A	CLOSING DATE:	24 OCTOBER 2023	CLOSING TIME:	12H00
DESCRIPTION:	<b>DUMASI REGIONAL WATER SUPPLY PHASE 1– CONSTRUCTION OF A BULK PIPELINE FROM SINDAWENI TO POLINI AND THE POLINI ELEVATED RESERVOIR</b>				

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

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

<b>SUPPLIER INFORMATION</b>			
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
<b>[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 ]</b>			
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			
<b>BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:</b>		<b>TECHNICAL INFORMATION MAY BE DIRECTED TO:</b>	
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.
1.2.	<b>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:

	POINTS
PRICE	80
SPECIFIC GOAL POINTS	20
<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 province (Eastern Cape): <b>The Tenderer and Directors are based in the Eastern Cape and pay their municipal rates and taxes</b>	10	
The promotion of enterprises located in a specific region (O. RTambo District): <b>The Tenderer and Directors are based in the ORTDM region 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><b>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?</b> (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>	<del>Yes</del>	<del>No</del>
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	<del>Yes</del>	<del>No</del>
4.3.1	If so, furnish particulars:		
Item	Question	Yes	No
4.4	<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>	Yes	No

4.4.1	If so, furnish particulars:		
4.5	Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes <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.



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**CERTIFICATE OF INDEPENDENT BID DETERMINATION**

I, the undersigned, in submitting the accompanying bid:

**PROJECT NO.: MIS 316 080 A**

***DUMASI REGIONAL WATER SUPPLY PHASE 1– CONSTRUCTION OF A BULK PIPELINE FROM SINDAWENI TO POLINI AND THE POLINI ELEVATED RESERVOIR***

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.
  
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)

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

Name of Tenderer: .....

Date: .....

Signature: .....

Full name of signatory: .....

**FORM 2.3.2      PROCUREMENT FORM**

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

**DEFINITIONS**

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

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

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

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

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

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

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

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

**1. Technical adjudication and General Criteria**

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

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

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

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

## 2. Size of enterprise and current workload

Evaluation of the Tenderer’s position in terms of:

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

## 3. Staffing profile

Evaluation of the Tenderer’s position in terms of:

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

**4. Financial ability to execute the contract:**

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

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

**5. Good standing with SA Revenue Services**

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

**6. Penalties**

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

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



**DECLARATION**

I/We the undersigned, who warrants that he/she is duly 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 NUMBER: MIS 316 080 A: DUMASI REGIONAL WATER SUPPLY PHASE 1- CONSTRUCTION OF A BULK PIPELINE FROM SINDAWENI TO POLINI AND THE POLINI ELEVATED RESERVOIR**

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](http://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>1 year</b> after the Practical Completion Date
1.1.1.14	<i>Due Completion Date</i> is	<b>As tendered (not to exceed 50 weeks)</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	<i>A re-measurement contract</i>
1.1.1.29	The <i>Site</i> is	Between the village of Sinandweni and the village of Polini.
1.1.1.30	The <i>Site Information</i> is	Specified in Part C4: Site Information of this document

3	<b>Employer's Agent</b>	
3.2.3	<p>1. The <i>Employer's Agent</i> shall first consult and obtain specific approval all the <i>Employer Agent's</i> actions as contemplated in Clause 6.4.1</p> <p>all the</p>	<p>from the <i>delegated Lead Consultant, Ziinzame Consulting Engineers</i> prior to executing any of its functions or duties, with respect to following clauses:</p> <ol style="list-style-type: none"> <li>2. all the <i>Employer Agent's</i> actions as contemplated in Clause 3.3.1</li> <li>3. all the <i>Employer Agent's</i> actions as contemplated in Clause 3.3.4</li> <li>4. all the <i>Employer Agent's</i> actions as contemplated in Clause 5.11.1</li> <li>5. all the <i>Employer Agent's</i> actions as contemplated in Clause 5.12.4</li> <li>6. <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 Employer's Agent 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 Employer's Agent within seven days of the commencement date.
5	<b>Time and Related Matters</b>	
5.1.1	The special non-working days set out in the <i>Contract</i> are	<p>the following:</p> <ol style="list-style-type: none"> <li>1. South African Public Holidays, and</li> <li>2. Annual builders' holiday traditionally starts on or around 15 December and ends in the second week of January.</li> </ol>
5.3.1	The <i>Engineer's Agent</i> shall issue an <i>instruction</i> to the Contractor to commence with the Work	<p>On approval of the following documentation:</p> <ol style="list-style-type: none"> <li>1. Health and Safety Plan</li> <li>2. OHS Agreement</li> <li>3. Department of Labour (DoL) notification of construction work</li> <li>4. Initial Programme</li> <li>5. Letter of Good Standing</li> <li>6. Performance Guarantee</li> <li>7. Insurance for the Works</li> <li>8. Contractor's Key Personnel</li> </ol> <p>Which will be within 07 days after the approval of the Documentation required from the Contractor</p>
5.3.2	The Contractor is to submit the documentation stipulated in clause 5.3.1	Within <b>07</b> 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.



1.1.1.33	The Works 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 Employer within Fourteen days of the commencement date.
1.2.1	The Employer's Agent's delivery address	Ziinzame Consulting Engineers (Pty) Ltd Address: 25 Falcon Street Mthatha 5100 Tel: (047) 531 0269 Email: admin@ziinzame.co.za Contact Person : Mr M. Ndabankulu
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 language of this Contract is	English

- 5.8.1 The non-working days set out in the Contract are weekends
- The special non-working days set out in the Contract are 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

- 5.12.2.2 Extension of time for practical completion due to abnormal climatic conditions.
- Add the following to the end of **Clause 5.12.2.2**:
- "Extension of time resulting from abnormal weather will be calculated as per the provisions stated in C3.1: Project Specifications Clause PS 6.9."

5.13.1	The penalty for delay or late completion is	If the Contractor fails by the Due Completion Date to complete the Works, or any specific portion thereof that is identified in the Scope of Works to the extent which entitles him in terms of Clause 5.14.2 to receive a Certificate of Practical Completion for the Works, then the Contractor shall be liable to the Employer for the sum(s) stated below as (a) penalty/ies for every day which shall elapse between the Due Completion Date for the Works or the specific portion of the Works and the actual Date of Practical Completion of the Works or of the specific portion. The penalty for delay shall be <b>R5 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 Permanent Works 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>5% of the value of the Contract Price (Including VAT)</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 of or damage to the Works, Plant and Materials	The replacement cost thereof.

	b) The minimum limit of indemnity for insurance in respect of the death of or bodily injury to employees of the <i>Contractor</i> arising out of and in the course of their employment in connection with this <i>Contract</i> for any one event is	As prescribed by the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 and the <i>Contractor's</i> common-law liability for people falling outside the scope of the Act with a limit of indemnity of not less than R1 000 000 (One Million South African Rand).
<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.

PART C1.3 DATA PROVIDED BY THE CONTRACTOR		
<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	The Contractor is	
1.2.1	The Contractor's delivery address is	
	Physical Address	
	Postal Address	
	Email Address	
<b>4</b>		<b>Contractor's General Obligations</b>
4.4.2	The Contractor must Sub-Contract any parts of the Contract.	To which this Contract relates shall be the <b>minimum of 20% of the Value of the Works</b> that must be Sub-Contracted to a Local SMME or the Designated Groups as agreed during the Procurement of the Sub-Contractors.
4.10.2	Contractor shall provide monthly reports outlining compliance with	Site progress and Employer's CPG and EPWP objectives at intervals specified in Part C3: Employer's Works Information of this document.
4.11.1	Contractor's Competent Employees are:	
	Title	<b>Construction / Contract Manager</b>
	Name	
	Qualifications	
	Tel No	
	Email	

	Title	<b>Site Agent</b>
	Name	
	Qualifications	_____
	Tel No	
	Email	_____
	Title	<b>Concrete 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, Senior Foreman and 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 5% of the value of Works	
	2. Fixed Performance Guarantee of 10% of the Contract Sum plus retention of 5% of the value of Works	
	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	

<b>Part C1.4 Special Conditions of Contract</b>		
<b>Notes to Tenderer:</b>		
<ol style="list-style-type: none"> <li>1. Particular Conditions of the Contract defines conditions that are specific to a Project.</li> <li>2. The Particular Conditions of the Contract are used for addition/ omission and change of GeneralConditions of the Contract.</li> <li>3. The number of the clause which requires the data is shown in the left-hand column for eachstatement; however, other clauses may also use the same data</li> </ol>		
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 nopermitted 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 informationprovided, 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 acceptanceof the contractor's tender and usually presents the pointin 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 ofthe Contract</li> </ol> <p>In the event of a discrepancy or ambiguity, the documentof higher priority takes precedence.</p>
	<i>Assignment</i>	
	Delete wording and replace with thefollowing:	<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 financieris 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 financiers expressly permitted. The Contractor shall, if requested thereto by the Employer and/or any such financier, sign a separate authority giving effect to the aforementioned in such form as the Employer and/or any financier of the Employer may reasonably require</p>
	<p>The Contractor shall not be entitled to cede any of its rights and/or delegate any of its obligations under this <i>Contract</i> to any person without the prior written consent of the <i>Employer</i>.</p>
<i>Access to and possession of Site</i>	
Insertion of additional wording:	<p>The Employer allows access to, possession and use of each part of the Site to the <i>Contractor</i>, which is necessary for the work included in this contract. The <i>Employer</i> shall grant access and use of the Site no later than seven days after <i>Employer's Agent's</i> instruction to commence with the Works. If the <i>Employer</i> does not give the <i>Contractor</i> access to, possession and use of the Site within seven days of the <i>Employer's Agent</i> instruction to commence with the Works, access to, possession and use of the Site shall be as the date when <i>Employer's Agent</i> instructed the <i>Contractor</i> to commence with the Works.</p>
<i>Some reasons for extension of time</i>	
Insertion of additional wording:	<p>No extension of time will be granted in respect of any delays attributed to normal climatic conditions. Normal climatic conditions shall be deemed to include normal rainfall and associated wet conditions and materials, strong winds and extremes of temperature. However, in the event that delays to critical activities exceed the number of working dates listed below for each month, then abnormal climatic conditions shall be deemed to exist, and an extension of time may be claimed in accordance with the provisions of clause 5.12</p> <p>The number of days quoted C3.1 Clause PS6.9 shall be regarded as fair estimate of the delays to be anticipated and allowed for under normal climatic conditions where inclement weather prevents or disrupts critical work</p> <p>Claims for delays for abnormal climatic conditions shall be accompanied by substantiating facts and evidence, which shall be submitted timeously as each day or half-day is experienced.</p> <p>It shall be noted that where the critical path is not affected, no extension of time for abnormal climatic conditions or for any other reason will be considered.</p>
<b>Termination by the Employer</b>	
Insertion of additional wording	
9.2.1.3.9	Has substantially broken a health or safety regulation.
9.2.1.3.10	Failure to obtain access to Site due to non – compliant documentation as stated in clause 5.3.1
9.2.1.3.11	Has failed to provide or update the required insurances within the prescribed time

- 9.2.1.4 Where the *Works* are no longer required
- 9.2.1.5 Where the funding for the *Works* is no longer available
- 9.2.1.6 An event occurs that stops the Contractor from completing the works by the date shown on the Accepted Programme and is forecast to delay Completion by more than 13 weeks
- 9.2.1.7 The Service Provider becomes insolvent or Liquidated
- 9.2.1.8 If as a result of Force Majeure, the Service provider is unable to perform part or the whole service for a period of thirty 30 days.

### Right of Retention

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

### Joint Ventures

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

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

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

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

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

### Illegal or Corrupt Practices

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

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

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



**Confidentiality**

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

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

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

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

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

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

**Existing Services and Housekeeping**

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

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

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

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

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

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

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

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

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

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

#### **Indemnity against Contractor's Design**

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

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

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

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

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

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

#### **Time**

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

#### **Discovery/Reproduction of Documentation**

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

#### **Damages**

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

**Accrual**

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

**Commitments and Undertakings**

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

**Validity and Enforceability of Contract**

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

**Strategic Socio-Economic Objectives**

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

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

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

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

it shall keep detailed records of –

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

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

**Contractor Obligations**

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

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

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

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

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

**FORM OF GUARANTEE**

**PERFORMANCE GUARANTEE**

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

**GUARANTOR DETAILS AND DEFINITIONS**

“Guarantor” means: .....

Physical address:.....

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

“Contractor” means:.....

“Employer’s Agent” means: **Ziinzame Consulting Engineers (Pty) Ltd**

“Works” means: **DUMASI REGIONAL WATER SUPPLY PHASE 1– CONSTRUCTION OF A BULK PIPELINE FROM SINDAWENI TO POLINI AND THE POLINI ELEVATED RESERVOIR**

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

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

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

Amount in words:.....

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

Amount in words:.....

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

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

**CONTRACT DETAILS**

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

**1. VARIABLE PERFORMANCE GUARANTEE**

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

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

R .....

(Amount in words )

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

R .....

(Amount in words)

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

**2. FIXED PERFORMANCE GUARANTEE**

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

**3. CONDITIONS APPLICABLE TO VARIABLE AND FIXED PERFORMANCE GUARANTEES**

- 2.1 The Guarantor hereby acknowledges that:
  - 2.1.1 Any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship
  - 2.1.2 Its obligation under this Performance Guarantee is restricted to the payment of money.
- 2.2 Subject to the Guarantor's maximum liability referred to in 1.1 or 2.1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 3.2.1 to 3.2.3:
  - 2.2.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Employer's Agent in an Interim or Final Payment certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 3.2.2;
  - 2.2.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 3.2.1 and the sum certified has still not been paid;
  - 2.2.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified 3.2.
- 2.3 Subject to the Guarantor's maximum liability referred to in 1.1 or 2.1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:
  - 2.3.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 3.3; or
  - 2.3.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 3.3; and
  - 2.3.3 the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.
- 2.4 It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 3.2 and 3.3 shall not exceed the Guarantor's maximum liability in terms of 1.1 or 2.1.
- 2.5 Where the Guarantor has made payment in terms of 3.3, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of

the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.

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

**SIGNED AT:** .....

**GUARANTOR  
(1)**

**SIGNATURE**

**DATE**

**CAPACITY**

**GUARANTOR  
(2)**

**SIGNATURE**

**DATE**

**CAPACITY**

**WITNESS  
(1)**

**SIGNATURE**

**WITNESS  
(2)**

**SIGNATURE**

## FORM C1.3 SPECIAL CONDITION

### Payment for the 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.

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- 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, etc, submitted to the Project Manager on the dates to be stipulated.

**FORM C1.4 HEALTH AND SAFETY AGREEMENT**

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

**SECTION 1**

**1. INTRODUCTION**

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

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

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

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

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

**SCHEDULE**

**1.1 Definitions**

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

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

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

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

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

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

“**Construction work**” means any work in connection with—

- (a) The erection, maintenance, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure;
- (b) The installation, erection, dismantling or maintenance of a fixed plant where such work includes the risk of a person falling;
- (c) the construction, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system or any similar civil engineering structure; or
- (d) the moving of earth, clearing of land, the making of an excavation, piling, or any similar type of work;



**“construction vehicle”** means a vehicle used for means of conveyance for transporting persons or material or both such persons and material, as the case may be, both on and off the construction site for the purposes of performing construction work;

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

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

**“Designer”** means any person who—

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**“shoring”** means a structure such as a hydraulic, mechanical or timber/steel shoring system that supports the sides of an excavation and which is intended to prevent the cave-in or the collapse of the sides of an excavation, and “shoring system” has a corresponding meaning;

**“Structure”** means—

- (a) any building, steel or reinforced concrete structure (not being a building), railway line or siding, bridge, waterworks, reservoir, pipe or pipeline, cable, sewer, sewage works, fixed vessels, road, drainage works, earthworks, dam, wall, mast,

tower, tower crane, batching plants, pylon, surface and underground tanks, earth retaining structure or any structure designed to preserve or alter any natural feature, and any other similar structure;

- (b) any formwork, false work, scaffold or other structure designed or used to provide support or means of access during construction work; or
- (c) any fixed plant in respect of work which includes the installation, commissioning, decommissioning or dismantling and where any such work involves a risk of a person falling two metres or more;

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

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

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

**HEALTH AND SAFETY SPECIFICATION**

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

**SECTION 2: DESIGNERS**

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

**HEALTH AND SAFETY SPECIFICATION**

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

**SECTION 3: PRINCIPAL CONTRACTORS (P C)**

1. All work by the P C shall be done in compliance with the provisions of the H&S regulations.
2. The Employer 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
  - Non smoking areas on site
  - Safety exits / Emergency exits from buildings under construction
  - Stairs (temporary and permanent works)
  - Toilets

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



**O. R. TAMBO DISTRICT MUNICIPALITY**

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

**SECTION 4: CLIENT**

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

**ANNEXURE A**

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

NOTIFICATION OF CONSTRUCTION WORK

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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

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

**SECTION 1 AND 2**

**1. PURPOSE OF THIS DOCUMENT**

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

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

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

**2. BACKGROUND**

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

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

The Construction Regulations endeavour to ensure that:

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

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

3. THE CLIENT

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

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

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

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

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

**SECTION 4**

**4. THE DESIGNER**

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

<p>4.1 The regulations has a comprehensive definition of the designer and this includes:</p> <p>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 &amp; build contract. h) A contractor designing temporary work. i) A interior designer, shop fitter and landscape architect.</p> <p>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.</p>	<p>Definitions "designer"</p> <p>Definitions "structure"</p>
<p>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.</p>	<p>Clause 4(5)</p>
<p>4.3 The SAACE model agreement between the client and Engineer has a different meaning of the word "agent".</p> <p>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 &amp; Safety regulations has a totally different meaning.</p>	<p>Clause 4(5)</p>
<p>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).</p>	<p>Clause 4(5)</p>
<p>4.5 The regulations are fairly quiet regarding the functions and responsibilities of the designer except when designing of a structure. It is again assumed that the client will identify certain functions to be done by the designer on his behalf.</p>	

<p>4.5.1 "Structure" in terms of the regulations means:</p> <p>(a)</p> <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> <p>or any structure designed to preserve or alter any natural feature and any other similar structure.</p> <p>(b) Any formwork, false work, scaffold or other structure designed or used to provide support or access during construction (structural engineering sector).</p> <p>(c) Fixed plant to prevent people from falling 2 meters or more.</p>	Definitions
<p>4.5.2 The designer is in fact regarded as a person delivering designs only and unless his role is defined by the client, his role is quite limited.</p>	Clause 9(2)
<p>4.5.3 The designer should inform the client and the principal contractor about anticipated dangers relating to the construction work. <u>This is in fact a Risk Assessment.</u></p>	Clause 9(2)(b)
<p>4.5.4 The designer (in the structural engineering context) shall further furnish to the contractor in writing:</p> <p>i) A geo-technical report.</p> <p>ii) The loading of the structure.</p> <p>iii) The method and sequence of the construction process.</p> <p>iv) He should exclude inherently dangerous methods of construction in his design.</p> <p>v) The maintenance of the structure shall be through safe procedures.</p> <p>vi) He should carry out inspections.</p> <p>vii) And stop the contractor from executing work dangerously.</p> <p>viii) A final inspection is necessary to ensure safety of the structure.</p> <p>ix) Great emphasis should be given to the ergonomic design of the structure.</p>	Clause 9(2)



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- 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   |                        |
|      | • Water environment  | Clause 22              |
|      | • Housekeeping on construction sites   | Clause 23              |
|      | • Stacking and storage on construction sites   | Clause 24              |
|      | • Fire precautions on construction sites   | Clause 25              |
|      | • Construction welfare facilities  | Clause 26<br>Clause 27 |

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SECTION 6

6.	<b>APPOINTMENT OF THE DESIGNER</b>	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.   |                     |

- 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 paragraph4, 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~~

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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&S 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**

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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

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

%	=	percent		m <sup>2</sup> .pass	=	square metre-pass
h	=	hour		m <sup>3</sup>	=	cubic metre
ha	=	hectare		m <sup>3</sup> .km	=	cubic metre-kilometre
kg	=	kilogram		MN	=	meganewton
kl	=	kilolitre		MN.m	=	meganewton-metre
km	=	kilometre		MPa	=	megapascal
km-pass	=	kilometre-pass		No.	=	number
kPa	=	kilopascal		Prov sum	=	Provisional sum
kW	=	kilowatt		P C sum	=	Prime Cost sum
l	=	litre		sum	=	lump sum
m	=	metre		t	=	ton (1 000 kg)
mm	=	millimetre		W/day	=	Work day
m <sup>2</sup>	=	square metre				
4. Unless otherwise stated, items are measured net in accordance with the drawings with no allowance for waste.
5. The prices and rates to be inserted in the Bill of Quantities are to be the full inclusive prices for the work described under the items. Such prices and rates shall cover all costs and expenses that may be required in accordance with the provisions of the Scope of Work, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the Contract Data, as well as overhead charges and profit. These prices shall be used as a basis for assessment of payment for additional work that may have to be carried out.
6. It will be assumed that prices included in the Bill of Quantities are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders. (Refer to [www.sabs.co.za](http://www.sabs.co.za) or [www.iso.org](http://www.iso.org) for information on standards).
7. Where the Scope of Work requires detailed drawings and designs or other information to be provided, all costs associated therewith are deemed to have been provided for and included in the unit rates and sum amount tendered for such items.
8. An item against which no price is entered will be considered to be covered by the other prices or rates in the Bill of Quantities. A single lump sum will apply should a number of items be grouped together for pricing purposes.
9. The quantities set out in the Bill of Quantities are approximate and do not necessarily represent the actual amount of work to be done. The quantities of work accepted and certified for payment will be used for determining payments due and not the quantities given in the Bills of Quantities.

10. Reasonable compensation will be received where no pay item appears in respect of work required in the Bills of Quantities in terms of the Contract and which is not covered in any other pay item.
  
11. The short descriptions of the items of payment given in the Bill of Quantities are only for the purposes of identifying the items. More details regarding the extent of the work entailed under each item appear in the Scope of Work.
  
12. Descriptions in the Bill of Quantities are abbreviated and comply generally with those in the SANS 1200 Standardised Specifications.
  
13. If there is a discrepancy in description of items between the Bill of Quantities and the Drawings, the Bill of Quantities Description shall be used.

**FORM C2.2 BILL OF QUANTITIES**

C2.2 Bill of Quantities

## SUMMARY OF BILL OF QUANTITIES

SECTION	DESCRIPTION	AMOUNT (R)
1	SCHEDULE A - PRELIMINARY AND GENERAL	
2	SCHEDULE B - SITE CLEARANCE	
3	SCHEDULE C: EARTHWORKS (PIPE ROUTE)	
4	SCHEDULE D: PIPE TRENCHES	
5	SCHEDULE E: MEDIUM-PRESSURE PIPELINES	
6	SCHEDULE F: BEDDING (PIPES)	
7	SCHEDULE G: ELEVATED STEEL TANK	
8	SCHEDULE H: BOREHOLE DEVELOPMENT	
9	SCHEDULE I: SUB CONTRACTORS SCOPE OF WORK	
	<b>NETT TOTAL OF TENDER</b>	
	<b>ALLOWANCE FOR CONTINGENCIES</b> (10% of Nett Total above) (to be spent as the Engineer may direct and to be deducted in whole or in part if not required)	
	<b>TOTAL INCLUDING CONTINGENCIES</b>	
	ALLOWANCE FOR VAT 15%	
	<b>GROSS TOTAL CARRIED TO FORM OF OFFER</b>	

**TIME FOR COMPLETION OF CONTRACT (not to exceed 50 Weeks) ..... weeks**

**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 **PROJECT NUMBER: MIS 316 080 A – DUMASI REGIONAL WATER SUPPLY PHASE 1– CONSTRUCTION OF A BULK PIPELINE FROM SINDAWENI TO POLINI AND THE POLINI ELEVATED RESERVOIR** has been based.





**O.R. TAMBO  
DISTRICT MUNICIPALITY**

**VOLUME 1**

**CONTRACT**

**SCOPE OF WORKS**

**C3.1 DESCRIPTION OF THE WORKS****C3.1.1 EMPLOYER'S OBJECTIVES**

The Employer's objectives are to deliver public infrastructure using labour-optimised methods where possible. The intention is to provide a potable water supply to the Contract 1 section of the **DUMASI REGIONAL WATER SUPPLY SCHEME PHASE1: CONSTRUCTION OF BULK PIPELINES FROM SINDAWENI TO POLINI AND THE POLINI ELEVATED RESERVOIR.**

**C3.1.2 OVERVIEW OF THE WORKS**

The work to be carried out by the **Main Contractor** includes **Site Clearance Around Working Areas, Excavations for Pipelines, Laying and Bedding of Approximately 250mm Diameter mPVC Class 16 Pipes of Approximately 2 km and 160mm Diameter mPVC Class 16 pipes of approximately 1 km, and The Construction of Valve Chambers and Assemblies, And The Associated Chambers and Assemblies.** The work includes the construction of a **750 Elevated Reservoir in Polini.** The work also includes the exploration of identified borehole sites and the construction of a pumping station and rising main of approximately 75mm Diameter mPVC Class 16, Approximately 2km to existing reservoirs. Lastly the work includes the connection of the 5ML Dumasi reservoir to the existing eThekweni water supply scheme using a 200mm diameter pipeline, chambers and valves.

Further to this the contractor will subcontract approximately 30% of the work that is being done within this project (excluded from the work stated above) to local subcontractors. The scope to be done by the subcontractor (inserted into the BOQ as a provisional sum for the subcontractor's scope) is stated in C3.3.2.1.

Labour-intensive works comprise the activities described in SANS 1921-5 and other identified activities which are to be performed by hand/Labour-Intensive Specification and its associated specification data. Such works shall be constructed using local workers who are temporarily employed in terms of this scope of work.

**C3.1.3 LOCATION OF THE WORKS**

The project is located approximately 15km South East of Mthatha CBD and is situated in the Nyandeni Local Municipality within the jurisdiction of the O. R. Tambo District Municipality in the province of the Eastern Cape. Access to the community is off DR 08030 between Mthatha and Ngqeleni towns, which joins the R61 between Mthatha and Libode towns.

The approximate central coordinates of the project area are as follows:

Latitude:	31°44' 23.53" South
Longitude:	29° 4' 19.64" East

Locality plans of the project areas are included in Annexure B of the tender document.

**C3.1.4 TEMPORARY WORKS**

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

**C3.2 ENGINEERING****C3.2.1 DESIGN SERVICES****Works designed by, per design stage:**

Concept, feasibility and overall process	Engineer
Basic engineering and detail layouts to tender stage	Engineer
Final design to approved for construction stage	Engineer
Temporary works	Contractor
Preparation of as-built drawings	Engineer

- (a) The Engineer is responsible for the design of the permanent Works as reflected in the Contract Documents unless otherwise stated.
- (b) The Contractor is responsible for the design of the temporary Works and their compatibility with the permanent Works.
- (c) The Contractor shall supply all details necessary to assist the Engineer in the compilation of the as-built drawings.

**C3.2.2 EMPLOYER'S DESIGN**

Not applicable.

**C3.2.3 DESIGN BRIEF**

Not applicable.

**C3.2.4 DRAWINGS**

The Contractor shall use only the dimensions stated in figures on the Drawings in setting out the Works, and no dimension shall be scaled from the Drawings, unless required by the Engineer. The Engineer will, on the request of the Contractor and in accordance with the provisions of the Conditions of Contract, provide such dimensions as may have been omitted from the Drawings.

The Contractor shall ensure that accurate as-built records are kept of all infrastructure installed or relocated during the Contract. The position of pipe bends and all other underground infrastructure shall be given by either co-ordinates or stake value and offset. Where necessary, levels shall also be given. A marked-up set of drawings shall also be kept and updated by the Contractor. This information shall be supplied to the Engineer's Representative on a regular basis. All information in possession of the Contractor, required by the Engineer and/or the Engineer's Representative to complete the as-built/record drawings must be submitted to the Engineer's Representative before a Certificate of Completion will be issued.

Where the Contractor is to supply the design of temporary Works he shall supply the consulting engineer for this project with full working drawings supported by a professional engineer's design certificate.

The Drawings prepared by the Engineer for the Permanent Works of this Contract are listed below and contained in Annexure B. The Engineer reserves the right to issue amended and/or additional drawings during the Contract.

**CONTRACT 1 PIPELINE**

<b>DRAWING No</b>	<b>DESCRIPTION</b>	<b>REV</b>
PRJ 040-CT1-D001	Overall Long sectional	B
PRJ-040-CT1-D100	Key plan	B
PRJ 040-CT1-D101	Plan and long section (Sheet 1 of 6)	B
PRJ 040-CT1-D102	Plan and long section (Sheet 2 of 6)	B
PRJ 040-CT1-D103	Plan and long section (Sheet 3 of 6)	B
PRJ 040-CT1-D104	Plan and long section (Sheet 4 of 6)	B
PRJ 040-CT1-D105	Plan and long section (Sheet 5 of 6)	B
PRJ 040-CT1-D106	Plan and long section (Sheet 6 of 6)	B
	<b>Standard Details</b>	
PRJ 040-CT1-C301	Air Valve Chamber Detail	B
PRJ 040-CT1-C302	Scour Valve Chamber Details	B
PRJ 040-CT1-C303	Isolation Valve Chamber Details	B
PRJ 040-CT1-C304	Typical Road River Crossing Details	B
PRJ 040-CT1-C305	Typical Directional Drilling & Pipe Bedding Detail	B
PRJ 040-CT1-C306	Typical Thrust Block Details	B
PRJ 040-CT1-C307	Typical Valve & Marker Post Details	B
PRJ 040-CT1-C308	Typical Sign Board Detail	B

**C3.2.5 DESIGN PROCEDURES**

Not applicable.

**C3.3 PROCUREMENT**

**C3.3.1 PREFERENTIAL PROCUREMENT PROCEDURES**

**C3.3.1.1 REQUIREMENTS**

All works to be completed in this contract shall be executed in accordance to the O.R. Tambo District Municipality's preferential procurement policies and procedures.

**C3.3.1.2 RESOURCE STANDARD PERTAINING TO TARGETED PROCUREMENT**

Preferential procurement will be applied as per O. R. Tambo District Municipality's preference policy.

**C3.3.2 SUBCONTRACTING**

**C3.3.2.1 SCOPE OF MANDATORY SUBCONTRACT WORKS**

Bidders are required to Sub-Contract a minimum of approximately 20% of the contract to previously disadvantaged companies, within the area of jurisdiction of the O. R. Tambo District Municipality.

The Works to be carried out by the **SUBCONTRACTOR** under this Contract is detailed below:

- Laying of approximately 4.3 km of 160mmØ mPVC class 16 pipe,
- Construction of valve chambers and assemblies

**C3.3.2.1.1** A formal tender process will be followed to appoint the Subcontractor which will be facilitated by the Employer, Employer's Agent and Main Contractor.

**C3.3.2.2 PREFERRED SUBCONTRACTORS / SUPPLIERS**

As per clause **C3.3.2.1**.

**C3.3.2.3 SUBCONTRACTING PROCEDURES**

The Employer must approve the sub-contractor(s) to be used in terms of C3.3.2.1.

**C3.3.2.4 ATTENDANCE ON SUBCONTRACTORS**

Not applicable for this Contract.

**C3.4            CONSTRUCTION****C3.4.1        WORKS SPECIFICATIONS****C3.4.1.1     APPLICABLE SANS STANDARDS**

The following SANS 1200 Standardized Specifications for Civil Engineering Construction are applicable dependent on scope:

SANS 1200 A	GENERAL
SANS 1200 AB	ENGINEER'S OFFICE
SANS 1200 C	SITE CLEARANCE
SANS 1200 D	EARTHWORKS
SANS 1200 DB	EARTHWORKS (PIPE TRENCHES)
SANS 1200 DK	GABIONS
SANS 1200 G	CONCRETE
SANS 1200 L	MEDIUM PRESSURE PIPELINES
SANS 1200 LB	BEDDING (PIPES)
SANS 1200 LD	SEWERS
SANS 1200 LE	STORMWATER DRAINAGE
SANS 1200 ME	SUBBASE
SANS 1200 MF	BASE

The term "project specification" must be replaced by "scope of works" wherever it appears in these standardized specifications. The above list is not deemed exhaustive, and other specifications listed or referenced in the document may be applicable as required. Where SABS specifications are referenced, the corresponding SANS document and applicable clauses shall apply.

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

SANS 1921 (2004):	Construction and Management Requirements for Works Contracts
Part 1:	General Engineering and Construction Works;
Part 2:	Accommodation of Traffic on Public Roads Occupied by the Contractor;
Part 4:	Third-party management requirements for works contracts;
Part 5:	Earthworks activities which are to be performed by hand;
and	
Part 6:	HIV/AIDS Awareness

**C3.4.1.2     APPLICABLE NATIONAL AND INTERNATIONAL STANDARDS**

All works to be executed in accordance to the South African National Standards.

**C3.4.1.3 PARTICULAR SPECIFICATIONS**

The following Particular Specifications for work not covered by the SANS 1200 Standardized Specifications are also included hereunder:

**ENVIRONMENTAL SPECIFICATION  
HEALTH AND SAFETY SPECIFICATION  
GENERIC LABOUR-INTENSIVE SPECIFICATION**

The above list is not deemed exhaustive, and other specifications listed or referenced in the document may be applicable as required.

**C3.4.2 PLANT AND MATERIALS**

**C3.4.2.1 PLANT AND MATERIALS SUPPLIED BY THE EMPLOYER**

Not applicable for this Contract.

**C3.4.2.2 MATERIALS, SAMPLES AND SHOP DRAWINGS**

Materials or works which do not conform to the approved samples submitted in terms of clause 7.4 of the Conditions of Contract will be rejected. The Engineer reserves the right to submit samples for testing to ensure that the material represented by the sample meets the specification requirements.

The costs of any such tests conducted by or on behalf of the Engineer, of which the results provided by the Contractor do not conform to the requirements of the Contract, shall be for the Contractor's account.

**C3.4.3 CONSTRUCTION EQUIPMENT**

**C3.4.3.1 REQUIREMENTS FOR EQUIPMENT**

The construction equipment is to be of adequate capacities and output in order to efficiently undertake the scope of works within the construction programme time frames.

The Contractor is to ensure that the equipment on site is in good working condition i.e. regularly serviced and maintained.

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

**C3.4.3.2 EQUIPMENT PROVIDED BY THE EMPLOYER**

Not applicable for this Contract.

**C3.4.4 EXISTING SERVICES**

**C3.4.4.1 KNOWN SERVICES**

The contractor shall so carry out all his operations as not to encroach on, or interfere with, trespass on, or damage adjoining lands, crops, buildings, properties, road structures, pipelines, places and services, in the vicinity of the Works and so as not to interfere in any way at any time with the smooth and continuous operation of the existing facilities.

The area does have electricity supply, watermains, Telkom and cellular network services and stormwater infrastructure in the works vicinity. The Contractor shall acquaint himself with the presence of all such services as is required.

Most known services are shown in the drawings however there may be other unknown services alongside the roadway etc. Work areas are to be proved for services prior to excavating for the works. Provision for proving of services is included in the Bill of Quantities.

When a service is not located in its expected position the Contractor shall immediately report such circumstances to the Engineer who will decide what further searching or other necessary action is to be carried out and shall instruct the Contractor accordingly. The Contractor shall make himself acquainted with the position of all existing services before any excavation or other work likely to affect the existing services is commenced. The Contractor will be held responsible for any damage to known existing services caused by or arising out of his operations and any damage shall be made good at his own expense. Damage to unknown services shall be repaired as soon as possible and liability shall be determined on site when such damage should occur.

It should be noted that 33 000 Volt and 132 000 Volt cables may only be exposed by the Electricity Service Unit's personnel. If the cables are inadvertently exposed, excavation work must stop, and the Electricity Service Authority shall be contacted immediately.

It is stressed that all services in a particular area must be proven before commencing work in that area. Proving of services shall be completed at least one week in advance of the actual programmed date for commencing work in the area. The position of these services located must be co-ordinated and levelled by the Contractor, and the information given in writing to the Engineer's representative. The requirements of this clause do not relieve the Contractor of any obligations as detailed in the Conditions of Contract or under Clause 4.17 of SANS 1921-1.

**C3.4.4.2 TREATMENT OF EXISTING SERVICES**

Existing services are to be kept live as far as practically possible. The need may arise for services such as electricity and water to be turned off for a short period of time due to construction in close proximity to these services. In this event the Contractor is to contact the relevant authorities well in advance of his programmed construction date in the affected areas so as not to incur any delays.



**C3.4.4.3 USE OF DETECTION EQUIPMENT FOR THE LOCATION OF UNDERGROUND SERVICES**

The Contractor may choose to use detection equipment for locating underground services. The costs for the use of this equipment are deemed to be included in the tendered rates.

**C3.4.4.4 DAMAGE TO SERVICES**

The Contractor will be held liable for all damages to existing services, known and unknown. Excavations and works in the proximity of services must be undertaken by hand with due care as instructed by the Engineer or Engineer's Representative.

In the event of any service being damaged or accidentally disconnected for any reason, the Contractor shall immediately contact the relevant authority for instruction and shall report the occurrence of the incident. The damage is to be repaired as soon as possible to the approval of the Engineer and the authority.

The Contractor will be held responsible for paying all costs incurred by the authority or himself as a result of each such incident, where relevant.

**C3.4.4.5 REINSTATEMENT OF SERVICES AND STRUCTURES DAMAGED DURING CONSTRUCTION**

The contractor will be held responsible for the repairs and reinstatement of all services damaged during the course of construction. The Engineer is to be notified within 24 hours of damages to services.

**C3.4.5 SITE ESTABLISHMENT****C3.4.5.1 SERVICES AND FACILITIES PROVIDED BY THE EMPLOYER**

Not applicable for this Contract.

**C3.4.5.2 FACILITIES PROVIDED BY THE CONTRACTOR**

The Contractor shall, at his own cost, be responsible for locating and making all arrangements necessary for securing an area suitable to meet his needs in respect of the erection of the Contractor's offices, stores and other facilities, including the facilities to be provided for the Engineer in accordance with the Contract.

Any potential area proposed by the Contractor shall be within reasonable proximity to the Site of the Works and its location shall be subject to the approval of the Engineer, which approval shall not be unreasonably withheld, and shall be determined in liaison with the local community. The Project Steering community will assist and negotiate such site for the Contractor.

This site/s shall be restored to its original condition by the contractor on completion of the contract. The contractor will not be permitted to house construction staff on the premises overnight.

**C3.4.5.3      STORAGE AND LABORATORY FACILITIES**

The Contractor will set up storage facilities for material, plant and equipment within the site camp or site agreed upon with the Engineer.

If the Contractor deems it necessary for a laboratory facility on site, such a facility will be set up within the confines of the site camp or site approved by the Engineer. Payment for this facility will be as per the scheduled item in the Bill of Quantities.

**C3.4.5.4      OTHER FACILITIES AND SERVICES**

The Contractor shall, at his own cost, make all arrangements necessary for the supply and distribution of water required for construction purposes as well as for use in and about his site establishment and for human consumption.

The Contractor shall provide portable chemical latrines. All latrines must, for the duration of the contract, be kept in a clean and hygienic condition to the satisfaction of the Engineer. Sufficient facilities shall be provided for the Contractor's employees in compliance with the local health department regulations.

The contractor shall make his own arrangements for all other necessary facilities during the period of the contract.

**C3.4.5.5      VEHICLES AND EQUIPMENT**

The Contractor shall, for purposes of this contract, provide suitable site offices, telephonic facilities and survey and testing equipment in accordance to the Variation to Standard and Particular Specifications PSAB 3.2.

**C3.4.5.6      ADVERTISING RIGHTS**

The Contractor shall not publish, or cause to be published, any papers, articles or information relating to this project, nor permit any advertising mentioning the subject of this Contract, nor display, or permit to be displayed, any advertisements on the Site, or elsewhere, in connection with this Contract, without the prior permission, in writing, of the Employer. The Contractor shall be responsible for the observance of this Clause by his employees and by his Sub-Contractors.

**C3.4.5.7      NOTICE BOARDS**

All notices, signs and barricades, as well as advertisements, may be used only if approved by the Engineer. The Contractor shall provide 2 no. notice boards as per issued drawings. The Contractor shall be responsible for their supply, erection, maintenance and ultimate removal and shall make provision for this in his tendered rates.

The Engineer shall have the right to instruct the Contractor to move any sign, notice or advertisement to another position, or to remove it from the Site of the Works if in his opinion it is unsatisfactory, inconvenient or dangerous.

**C3.4.6**      **SITE USAGE**

The Contractor and approved sub-contractors will be provided full access to the construction site for purposes of this contract only.

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

Access to the public shall be strictly prohibited.

**C3.4.7**      **PERMITS AND WAY LEAVES**

The following permits and wayleaves which are applicable to this contract have been submitted to the relevant authorities and are pending approval:

- (d) Construction permits
- (e) DoT road crossings, for provincial and district roads
- (f) Permission to cross Eskom servitude/s
- (g) Permission to lay pipes within 10 no. privately owned properties. (approval obtained)

The Contractor shall make all necessary arrangements with the abovementioned entities prior to any work being undertaken within the affected areas.

**C3.4.8**      **ALTERATIONS, ADDITIONS, EXTENSIONS AND MODIFICATIONS TO EXISTING WORKS**

Not applicable to this contract.

**C3.4.9**      **INSPECTION OF ADJOINING PROPERTIES**

Where the works encroach or adjoin public and private property with the potential to cause damage to existing structures and properties, the Contractor is to inspect properties with the presence of property owners and representatives of local authorities.

Photographic records and written permissions are to be obtained prior to commencing with the works and said records supplied to the Engineer or Engineer's Representative.

**C3.4.10**      **WATER FOR CONSTRUCTION PURPOSES**

The Contractor shall, at his own cost, make all arrangements necessary for the supply and distribution of water required for construction purposes.

**C3.4.11**      **SURVEY CONTROL AND SETTING OUT OF THE WORKS**

The Contractor shall take special precautions to protect all permanent survey beacons or pegs such as bench-marks, stand boundary pegs and trigonometrical beacons, regardless whether such beacons or pegs were placed before or during the execution of the Contract. If any such beacons or pegs have been disturbed by

the Contractor or his employees, the Contractor shall have them replaced by a registered land surveyor at his own cost.

The Contractor shall be responsible for all setting out to line and level. Survey control will be provided to the contractor at the start of the contract. The contractor shall satisfy himself with the accuracy thereof and immediately bring any discrepancies to the attention of the Engineer.

**C3.5 MANAGEMENT**

**C3.5.1 MANAGEMENT OF THE WORKS**

**C3.5.1.1 APPLICABLE SANS STANDARDS**

(a) The SANS 1200 Standardized Specifications listed in section C3.4.1.1.

**C3.5.1.2 PARTICULAR / GENERIC SPECIFICATIONS**

- (a) The Variations and Additions to the SANS 1200 Standardized Specifications given in section C3.7
- (b) The Particular Specifications given in sections C3.6.

**C3.5.1.3 PLANNING AND PROGRAMMING**

**C3.5.1.3.1 GENERAL**

The Contractor's Programme to be submitted in terms of Clause 5.6.1 of the General Conditions of Contract 2015, Third Edition, shall take all matters that may impact the Contractor's sequence of executing the various components of the Works and the requisite rate of progress of the Works, as may be specified in or reasonably inferred from the Contract.

**C3.5.1.3.2 FORMAT**

The Construction Programme to be submitted by the Contractor in accordance with the provisions of Clause 5.6.1 of the Conditions of Contract shall;

- (a) Be in the form of a bar chart and
- (b) Clearly indicate the start and end dates and duration of all construction activities and identify the critical path and
- (c) Take full cognizance of all the Contractor's risks and obligations in terms of the Contract.

**C3.5.1.3.3 FAILURE TO MAINTAIN CONSTRUCTION PROGRAMME**

The Construction Programme has to be revised in terms of the Conditions of Contract, if the Contractor is falling behind in the programme. The Contractor shall submit a revised programme showing how they intend to restore gain lost time to ensure completion of the Works before the Due Completion Date.

**C3.5.1.3.4 SPECIFIC PROGRAMME REQUIREMENTS**

No additional payments will be made to the Contractor in respect of any additional costs as it may incur in consequence of arranging or adjusting its programme to accommodate the said matters and the Contractor's various tendered rates and prices shall be deemed to fully be inclusive of such costs.

The contractors programme shall include ordering of all materials.

No construction activities will be permitted which require the complete shut-down of existing works and operations.

**Facilities to Other Contractors**

Pursuant to the requirements of the Conditions of Contract, the Contractor's programme shall make allowances for the presence of such other contractors on the Site as are described below. This may involve adapting the Contractor's programme to accommodate the work of such other contractors and ensuring access to their sites along prescribed routes over the Site of this Contract.

**C3.5.1.4 SEQUENCE OF THE WORKS**

The work sequence is to take into account the programme requirement contained in clause **C3.5.1.3.4**.

**C3.5.1.5 SOFTWARE APPLICATION FOR PROGRAMMING**

The Construction Programme and all revisions there to, shall be provided to the Engineer in electronic format using Microsoft Project software.

**C3.5.1.6 METHODS AND PROCEDURES**

**C3.5.1.6.1 SITE MAINTENANCE**

During progress of the work and upon completion thereof, the Site of the Works shall be kept and left in a clean and orderly condition. The Contractor shall store materials and equipment for which he is responsible in an orderly manner and shall keep the Site free from debris and obstructions.

**C3.5.1.6.2 BLASTING**

Blasting will not be permitted within 10m of any structure, pipeline or service unless the Contractor satisfies the Engineer that his proposed blasting methods and controls are such that damage will not be caused to the adjoining structure, pipeline or service. The Contractor shall assess that status of all buildings/structures within the vicinity of the works before commencing blasting. The Engineer may ask for vibro recordings to be taken and request the attendance of an expert from the explosives supplier at no additional cost to the Employer.

**C3.5.1.6.3 OPENING UP AND CLOSING DOWN OF DESIGNATED BORROW PITS**

Measurement and payment for opening up and closing down designated borrow pits, including removing and stockpiling overburden and restoring the Site, shall be made under item 8.3.4 of SABS 1200 D. This item applies to all borrow material required under this Contract. The Contractor must note that not all material from the borrow pit can be used on the project but only material which meets project specification.

The requirements of sub-clause 5.2.2.2 of SABS 1200 D regarding the opening up, maintenance and closing down of borrow pits shall be adhered to.

**C3.5.1.6.4 ACCESS TO PROPERTIES**

The Contractor shall organise the work to cause the least possible inconvenience to the public and to the property owners adjacent to or affected by the work, and except as hereunder provided, shall at all times provide and allow pedestrian and vehicular access to properties within or adjoining or affected by the area in which he is working. In this respect the Contractor's attention is drawn to Clause 8.1.2 of the Conditions of Contract.

If, as a result of restricted road reserve widths and the nature of the work, the construction of bypasses is not feasible, construction shall be carried out under traffic conditions to provide access to erven and properties.

Notwithstanding the foregoing, the Contractor may, with the prior approval of the Engineer (which approval shall not be unreasonably withheld), make arrangements with and obtain the acceptance of the occupiers of erven and properties to close off part of a street, road, footpath or entrance temporarily, provided that the Contractor duly notifies the occupiers of the intended closure and its probable duration, and reopens the route as punctually as possible. Where possible, such streets, roads, footpaths and entrances shall be made safe and reopened to traffic overnight. Such closure shall not absolve the Contractor from his obligations under the Contract to provide access at all times. Barricades, traffic signs, drums and other safety measures appropriate to the circumstances shall be provided by the Contractor to suit the specific conditions.

**C3.5.1.6.5 ACCESS ROADS TO SITE**

Access to the project area is the via the road to Ngqeleni, which branches off the R61 approximately 5 km east of Mthatha Town, toward Ngqeleni. Sections of the site can be accessed via gravel roads and tracks. The contractor will require suitable site vehicles (4x4) to access the site in the wet season.

**C3.5.1.6.6 SUBCONTRACTORS**

All matters pertaining to subcontractors (including Nominated Subcontractors) and the work executed by them shall be dealt with directly between the Engineer and the Contractor, in consultation with the Client, in the context of all subcontract work being an integral part of the Works for which the Contractor is responsible.

The Engineer will not liaise directly with any subcontractors nor will he issue instructions concerning the subcontract works directly to any subcontractor.

All matters arising from the subcontract agreements shall be dealt with directly between the Contractor and the subcontractors and the Engineer will not become involved.

**C3.5.1.6.7 MANAGEMENT OF SUB-CONTRACTORS**

The contractor shall price for the cost of managing the sub-contractors who would be appointed by the Client. The cost shall include supervision, attendance, possible training and compliance with construction regulations including health, safety and environmental regulations.

**C3.5.1.6.8 EMPLOYMENT OF LOCAL LABOUR**

It is the intention that this Contract should make maximum use of the local labour force that is presently under-employed. To this end the Contractor shall limit the utilisation on the Contract of non-local employees to that of key personnel only and to employ and train local labour to the extent necessary for the execution and completion of this Contract.

**EPWP – LIC**

**Employer's objectives**

The employer's objectives are to deliver public infrastructure using labour intensive methods

**Labour-intensive works**

Labour-intensive works comprise the activities described in SANS 1921-5, *Earthworks activities which are to be performed by hand*, and its associated specification data. Such works shall be constructed using local workers who are temporarily employed in terms of this Scope of Work.

**LABOUR INTENSIVE COMPETENCIES OF SUPERVISORY AND MANAGEMENT STAFF**

Contractors having a CIDB contractor grading designation of 5CE and higher shall only engage supervisory and management staff in labour intensive works who have either completed, or for the period 1 April 2004 to 30 June 2006, are registered for training towards, the skills programme outlined in Table 1.

The managing principal of the contractor, namely, a sole proprietor, the senior partner, the managing director or managing member of a close corporation, as relevant, having a contractor grading designation of 1CE, 2CE, 3CE and 4CE shall have personally completed, or for the period 1 April 2004 to 30 June 2006 be registered on a skills programme for the NQF level 2.

All other site supervisory staff in the employ of such contractors must have completed, or for the period 1 April 2004 to 30 June 2006 be registered on a skills programme for, the NQF level 2 unit standards or NQF level 4 unit standards.

**Table 1: Skills programme for supervisory and management staff**

Personnel	NQF level	Unit standard titles	Skills programme description
Team Leader / Supervisor	2	Apply Labour-Intensive Construction Systems and Techniques to Work Activities	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	
Foreman / 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	any one of these 3 unit standards
		Roads and Stormwater Drainage Use Labour-Intensive Construction Methods to Construct and Maintain	
		Water and Sanitation Services Use Labour-Intensive Construction Methods to Construct, Repair and Maintain Structures	
Site Agent / 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



## **EMPLOYMENT OF UNSKILLED AND SEMI-SKILLED WORKERS IN LABOUR-INTENSIVE WORKS**

### **1.1 Requirements for the sourcing and engagement of labour.**

1. Unskilled and semi-skilled labour required for the execution of all labour intensive works shall be engaged strictly in accordance with prevailing legislation and SANS 1914-5, Participation of Targeted Labour.
2. The rate of pay set for the SPWP shall be in accordance with the local rates (ie. the rate that is being used in the area for any development projects, housing etc) or in the absence thereof the rates from the Department of Labour may be used. However, the rate shall NOT be less than R 255.05 per task or per day.

Amongst other aspects, the following should be considered when setting rates of pay for workers:

- The rate set should take into account wages paid for comparable unskilled work in the local area per sector, if necessary.
- The rate should be an appropriate wage to offer an incentive for work, to reward effort provided and to ensure a reasonable quality of work. It should not be more than the average local rate to ensure people are not recruited away from other employment and jobs with longer-term prospects.
- Men, women, disabled persons and the aged must receive the same pay for work of equal value.

- 1.1.1 Tasks established by the contractor must be such that:
  - a) the average worker completes 5 tasks per week in 40 hours or less; and
  - b) the weakest worker completes 5 tasks per week in 55 hours or less.
- 1.1.2 The contractor must revise the time taken to complete a task whenever it is established that the time taken to complete a weekly task is not within the requirements of 1.1.3.
- 1.1.3 The Contractor shall, through all available community structures, inform the local community of the labour intensive works and the employment opportunities presented thereby. Preference must be given to people with previous practical experience in construction and / or who come from households:
  - (a) where the head of the household has less than a primary school education;
  - (b) that have less than one full time person earning an income;
  - (c) where subsistence agriculture is the source of income.
  - (d) those who are not in receipt of any social security pension income
- 1.1.4 The Contractor shall endeavour to ensure that the expenditure on the employment of temporary workers is in the following proportions:
  - (a) 60 % women;
  - (b) 20% youth who are between the ages of 18 and 25; and
  - (c) 2% on persons with disabilities.

**1.2 Specific provisions pertaining to SANS 1914-5**

**1.1.5 Definitions**

**Targeted labour:** Unemployed persons who are employed as local labour on the project.

**1.2.1 Contract participation goals**

- (a) There is no specified contract participation goal for the contract. The contract participation goal shall be measured in the performance of the contract to enable the employment provided to targeted labour to be quantified.
- (b) The wages and allowances used to calculate the contract participation goal shall, with respect to both time-rated and task rated workers, comprise all wages paid and any training allowance paid in respect of agreed training programmes.

**1.2.2 Terms and conditions for the engagement of targeted labour**

Further to the provisions of clause 3.3.2 of SANS 1914-5, written contracts shall be entered into with targeted labour.

**1.2.3 Variations to SANS 1914-5**

- 1.2.3.1 The definition for net amount shall be amended as follows:  
Financial value of the contract upon completion, exclusive of any value added tax or sales tax which the law requires the employer to pay the contractor.
- 1.2.3.2 The schedule referred to in 5.2 shall in addition reflect the status of targeted labour as women, youth and persons with disabilities and the number of days of formal training provided to targeted labour.

**1.3 Training of targeted labour**

- 1.3.1 The contractor shall provide all the necessary on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the contract in a manner that does not compromise worker health and safety.
- 1.3.2 The cost of the formal training of targeted labour will be funded by the provincial office of the Department of Labour. This training should take place as close to the project site as practically possible. The contractor, must access this training by informing the relevant provincial office of the Department of Labour in writing, within 14 days of being awarded the contract, of the likely number of persons that will undergo training and when such training is required. The employer must be furnished with a copy of this request.
- 1.3.3 A copy of this training request made by the contractor to the DOL provincial office must also be faxed to the EPWP Training Director in the Department of Public Works- Cinderella Makunike, Fax Number 012 328 6820 or email [cinderella.makunike@dpw.gov.za](mailto:cinderella.makunike@dpw.gov.za) Tel: 083 677 4026

- 1.3.4 The contractor shall be responsible for scheduling the training of workers and shall take all reasonable steps to ensure that each beneficiary is provided with a minimum of six (6) days of formal training if he/she is employed for 3 months or less and a minimum of ten (10) days if he she is employed for 4 months or more.
- 1.3.5 The contractors shall do nothing to dissuade targeted labour from participating in the above mentioned training programmes.
- 1.3.6 An allowance equal to 100% of the task rate or daily rate shall be paid by the contractor to workers who attend formal training, in terms of 1.3.4 above. Proof of compliance with the requirements of 1.3.2 to 1.3.6 must be provided by the Contractor to the Employer prior to submission of the final payment certificate

**C3.5.1.7 QUALITY PLANS AND CONTROL**

The onus to produce work that conforms in quality and accuracy of detail to the requirements of the Specifications and Drawings rests with the Contractor, and the Contractor shall, at his own expense, institute a quality control system and provide suitably qualified and experienced engineers, foremen, surveyors, materials technicians, other technicians and technical staff, together with all transport, instruments and equipment to ensure adequate supervision and positive control of the Works at all times.

The cost of supervision and process control, including testing carried out by the Contractor, will be deemed to be included in the rates tendered for the related items of work.

The Contractor's attention is drawn to the provisions of the various Particular Specifications, Standardized Specifications including variations/amendments thereto regarding the minimum frequency of testing required. The Contractor shall, at his own discretion, increase this frequency where necessary to ensure adequate control.

On completion and submission of every part of the work to the Engineer for examination and measurement, the Contractor shall furnish the Engineer with the results of the relevant tests, measurements and levels to demonstrate the achievement of compliance with the Specifications.

**C3.5.1.8 ENVIRONMENT**

Further to the EMPr (to be emailed) of the Particular Specifications, The Contractor shall pay special attention to the following:

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

- (a) Natural Vegetation

The Contractor shall confine his operation to the limits of the road reserve (taking into consideration existing servitude and wayleaves that may be required) for the purpose of constructing the works and where applicable detours, shall be sited in consultation with the Engineer and the local communities.

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

(b) Fires

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

(c) Environmental Management Plan

In addition to the above all requirements according to the Environmental Management Plan as detailed in the Annexures, will be adhered to.

In the event that the Contractor fails to adhere to the Environmental Management Specifications, included in the Contract Documents, the following penalties will be imposed per incident:

Unauthorized damage or removal of trees	R 2 000-00
Failure to keep soil types separate during excavation and backfilling	R 500-00
Failure to provide adequate portable chemical toilets	R1 000-00
Failure to comply with solid waste disposal requirements	R 500-00
Failure to clean up litter at the end of each working day	R 1 000-00
Failure to comply with dust prevention requirements	R 500-00
Failure to Contractor and / or materials supplier to cover vehicles	R 500-00
Failure to comply with noise, light or air pollution requirements	R 500-00
Spillage of hazardous substances	R 500-00

The Engineer will notify the Contractor of a breach of specification and supply a time period within which remedial action will need to be carried out. Should the time period elapse, then the penalty will be imposed and the sum deducted from the following month's certificate.

No natural vegetation; trees or crops may be damaged by the Contractor without the written approval of the Engineer. The contractor must keep the Site neat and free of refuse, etc. to prevent possible damage to crops or live stock.

The Contractor's construction activities shall be performed by methods that will prevent the entrance of, or accidental spillage of solid matter, debris, contaminants and other pollutants and wastes into streams and water-courses. Any dewatering for earthworks or structure foundations adjacent to or encroaching on streams or water-courses shall be conducted in a manner to prevent muddy or contaminated water from entering streams or water-courses by means of the construction of intercepting and bypassing ditches, barriers, ponds and other approved means.

Construction activities shall be performed in a manner to keep dust nuisance to a minimum by means of the application of sufficient water or other efficient measures wherever and as often as may prove necessary.

The cost for complying with the requirements regarding protection of the environment specified above shall be included in the rates tendered in the Schedule of Quantities for the various items of work and not additional payment will be made in this regard. The Engineer will be entitled to retain an amount of money, should a dispute between property owners and the Contractor arise. The balance of this money will be released as soon as the dispute is resolved. Should any of the above mentioned items not be complied with, the Engineer reserves the right to appoint another Contractor to rectify these matters. Costs for this work will be deducted from the payment of the Contractor for this Contract.

In order to reduce and control the release of airborne pollutants, the Contractor shall ensure that:

- No fires are lit on site to dispose of waste or for cooking.
- All loose materials that could be blown about or into neighbouring properties by wind is secured.
- The spraying of formwork oils, paints and other toxic substances is limited to the application area.

The Contractor will be required to submit a Construction Method Statement at the Site handover. Activities having an effect on the environment must be addressed in this Construction Method Statement. A list of possible activities is included below.

Possible activities having an effect on the environment:

- Collection, storage and disposal of solid waste.
- Protection of indigenous plant species.
- Protection of natural water sources from liquid and solid wastes.
- Control of noise and dust.

A payment item is included in the Bill of Quantities to cover the Contractor's cost for compliance with the abovementioned regulations and specifications.

#### **C3.5.1.9**

#### **ACCOMMODATION OF TRAFFIC ON PUBLIC ROADS OCCUPIED BY THE CONTRACTOR**

The Contractor shall ensure the safe and expeditious passage of traffic at all times and shall provide all necessary temporary road traffic signs, barricades, flagmen, etc. to safeguard the travelling public. Failure to maintain road signs, warning signs or flicker lights, etc. in a good condition shall constitute ample reason for the Engineer to suspend the work until the road signs, etc., have been repaired to his satisfaction. The travelling public shall have the right of way on public roads, and the Contractor shall make use of approved methods to control the movement of his equipment and vehicles so as not to constitute a hazard on the road.

The Contractor may not commence constructional activities affecting existing roads before adequate provision has been made to accommodate traffic in accordance with the requirements of this document and the South African Road Traffic Signs Manual.

Any detours or bypasses constructed by the Contractor shall be adequately signposted, as per South African Road Traffic Contractor, and maintained in such a manner as to provide safe and easy passage of traffic.

**C3.5.1.10 OTHER CONTRACTORS ON SITE**

Not applicable for this contract.

**C3.5.1.11 TESTING, COMPLETION, COMMISSIONING AND CORRECTION OF DEFECTS**

Not applicable for this contract.

**C3.5.1.12 RECORDING OF WEATHER**

If during the time for completion of the Works or any extension thereof, abnormal rainfall or wet conditions occur, the Contractor may submit a claim for an extension of time in accordance with Clause 5.12 of the General Conditions of Contract. The method whereby an extension of time due to abnormal rainfall will be determined is as follows:

- (a) Extension of Time for Abnormal rainfall for each calendar month shall be the total working days in the month under consideration during which the Contractor is unable to proceed with his operations as specified under (b) below, less the number of working days (from the table) that no work is deemed to have been possible on a critical path item as a result of normal rainfall for the month under consideration. (When drawing up his programme, the Contractor shall make provision for the expected delays shown in the table).
- (b) The claim for extension of time shall be the sum of all the positive monthly totals for the Contract Period. Negative monthly totals shall be disregarded. A day shall be considered as lost when the Engineer agrees that no work was capable of being done on any item shown on the critical path of the current construction programme. Items which are not shown on the critical path and have been affected by rainfall will not be considered for extension of time.

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RAINFALL TABLE

Month	Expected number of working days lost due to normal rainfall	Month	Expected number of working days lost due to normal rainfall
January	8	July	2
February	8	August	2
March	7	September	4
April	5	October	4
May	4	November	7
June	3	December	6

\*\*\*Above rainfall data abstracted from <https://www.worldweatheronline.com/umtata-weather-averages/eastern-cape/za.aspx> from research over a 12 year period, 2000 to 2012.

Accurate rain measurements shall be taken at a suitable point(s) on the site. Rain gauge readings must be taken in the morning and afternoon and be approved by the Engineer.

**C3.5.1.13 FORMAT OF COMMUNICATION****Site Instruction Book**

The Contractor shall supply, at his own expense an A4 size triplicate book which shall be kept in the site office. All correspondence between the Engineer's and Contractor's site staff shall be entered into this book, and each entry signed and dated by both parties. It shall be available from the first day of the contract and at all times be accessible to the Engineer.

The original shall be issued to the Contractor, the first copy is to be forwarded to the office of the Engineer and the second copy shall remain in the book. Engineer's version of the entries that have been lost will be assumed correct and binding. If the Contractor should lose the book it will be considered a grave offence on his part. In such case the Engineer's version of the entries that have been lost will be assumed correct and binding.

Further to this, written letters, faxes and/or emails will be deemed acceptable means of communication for this contract.

**C3.5.1.14 KEY PERSONNEL**

The Contractor shall fill in the form entitled Key Personnel in the Forms to be completed by the Tenderer. The data stated on the above-mentioned form will be strictly monitored during the Contract period and any deviations therefrom shall be subject to the prior approval of the Engineer, which approval shall not be unreasonably withheld.

**C3.5.1.15 MANAGEMENT MEETINGS**

Project progress meetings must be held monthly with the presence of the following parties:

1. Employer
2. Engineer and/or Engineer's Representative
3. Appointed Contractor
4. Appointed Community Liaison Officer and PSC Committee
5. Health and Safety Officer
6. Environmental Control Officer

This list is not necessarily complete and shall not limit the attendance at progress meetings.

**C3.5.1.16      FORMS FOR CONTRACT ADMINISTRATION**

Not applicable for this contract.

**C3.5.1.17      ELECTRONIC PAYMENTS**

The Contractor is to ensure correct banking details are provided to the Employer in a timeous manner.

**C3.5.1.18      DAILY RECORDS**

The Contractor shall supply, at his own expense, an A4 size triplicate book which shall be kept in the site office. Each day's activities will be filled in by the Contractor day by day and the book handed to the Engineer for signature each 14 days. It shall be available from the first day of the contract and at all-time be accessible to the Engineer. The work progress and record of plant and labour shall be entered on a daily basis. The original shall be issued to the Contractor, the first copy is to be forwarded to the office of the Engineer and the second copy shall remain in the book. Engineer's version of the entries that have been lost will be assumed correct and binding. If the Contractor should lose the book it will be considered a grave offence on his part. In such case the Engineer's version of the entries that have been lost will be assumed correct and binding.

**C3.5.1.19      PAYMENT CERTIFICATES**

Monthly statements to be submitted by the Contractor in terms of Clause 6.10 of the Conditions of Contract shall be prepared by the Contractor at his own cost, strictly in accordance with the standard payment certificate prescribed by the Engineer, in electronic format. The Contractor shall, together with a copy of the electronic file of the statement, submit two (2) A4 size paper copies of the statement.

For the purposes of the Engineer's payment certificate, the Contractor shall subsequently be responsible, at his own cost, for making such adjustments to his statement as may be required by the Engineer for the purposes of accurately reflecting the actual quantities and amounts which the Engineer deems to be due and payable to the Contractor in the payment certificate.

The Contractor shall, at his own cost, make the said adjustments to the statement and return it to the Engineer within three (3) normal working days from the date on which the Engineer communicated to the Contractor the adjustments required. The Contractor shall submit to the Engineer five (5) sets of A4 size paper copies of such adjusted statement, together with a copy of the electronic file thereof.

Any delay by the Contractor in making the said adjustments and submitting to the Engineer the requisite copies of the adjusted statement for the purposes of the Engineer's payment certificate will be added to the times allowed to the Engineer in terms of Sub-clause 6.10.4 of the Conditions of Contract to submit the signed payment certificate to the Employer and the Contractor. Any such delay will also be added to the period in which the Employer is required to make payment to the Contractor.

**C3.5.1.20      PERMITS**



The Security requirements for the Contractor's site establishment and the works shall be determined by the Contractor. The cost of this shall be borne by the Contractor. No other security related claim will be considered.

**C3.5.2 GENERAL HEALTH AND SAFETY PROVISIONS**

**C3.5.2.1 HEALTH AND SAFETY REQUIREMENTS AND PROCEDURES**

The Contractor shall be required to comply with the Occupational Health and Safety Act, 1993: Construction Regulations, 2014 (the regulations) as promulgated in Government Gazette No 37305 and Regulation Gazette No 10113 of 7 February 2014. Non-compliance with these regulations, in any way whatsoever, will be adequate reason for suspending the Works.

The proposed type of work, materials to be used and potential hazards likely to be encountered on this Contract are detailed in the Project Specifications, Bill of Quantities and Drawings, as well as in the Employers' health and safety specifications (Regulation 5(1)(b) of the Construction Regulations 2014, which are contained in the Contract document.

The Contractor shall in terms of Regulation 7(1)(a) provide a comprehensive health and safety plan detailing his proposed compliance with the regulations, for approval by the Employer.

The Contractor shall at all times be responsible for full compliance with the approved plan as well as the Construction Regulations and no extension of time will be considered for delays due to non-compliance with the abovementioned plan or regulations.

Payment items are included in the Bill of Quantities to cover the Contractor's cost for compliance with the OHS Act and the abovementioned regulations. Such items tendered and the other rates and prices tendered by the Contractor shall be deemed to include all costs for conforming to the requirements of the Act, the Construction Regulations and the Employer's Health and Safety Specification as applicable to this contract.

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

The Contractor's Health and Safety Plan will be subject to approval by the Employer, or amendment if necessary, before commencement of construction work. The Contractor will not be allowed to commence work, or his work will be suspended if he had already commenced work, before he has obtained the Employer's written approval of his Health and Safety Plan.

Time lost due to delayed commencement or suspension of the work as a result of the Contractor's failure to obtain approval for his safety plan, shall not be used as a reason to claim for extension of time or standing time and related costs.

**C3.5.2.2      PROTECTION OF THE PUBLIC**

The Contractor will ensure that all excavations are adequately barricaded to ensure public safety and prevent unauthorised access.

Refer to the Occupational Health and Safety Act, 1993 and the Construction Regulations, 2014.

**C3.5.2.3      BARRICADES AND LIGHTING**

The Contractor will ensure that barricades, as necessary to ensure public safety and protection of the works and adjacent existing services are erected as necessary.

Refer to the Occupational Health and Safety Act, 1993 and the Construction Regulations, 2014.

**C3.5.2.4      TRAFFIC CONTROL ON ROADS**

The Contractor shall accommodate any pedestrian traffic on the walkways and road past the site, as well as vehicular traffic in the roads.

Accommodation of traffic, where applicable shall comply with SANS 1921-2: 2004: Construction and Management Requirements for Works Contracts, Part 2 : Accommodation of Traffic on Public Roads occupied by the Contractor. The Contractor shall obtain this specification from Standards South Africa if accommodation of traffic will be involved on any part of the construction works.

The Contractor's tendered rates for the relevant items in the Bill of Quantities shall include full compensation for all possible additional costs which may arise from this, and no claims for extra payment due to inconvenience as a result of the modus operandi will be considered.

Refer to the Occupational Health and Safety Act, 1993 and the Construction Regulations, 2014.

**C3.5.2.5      MEASURES AGAINST DISEASE AND EPIDEMICS**

Not applicable to this contract.

**C3.5.2.6      AIDS AWARENESS**

The Contractor SHALL provide HIV/AIDS awareness training to staff employed during the construction project. A provisional amount has been allowed for in the Bill of Quantities to cover the Contractor's cost for compliance for this item.



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23. IMPORTANT LISTS AND RECORDS TO BE KEPT

## 1. PREAMBLE

In terms of Construction Regulation 5(1) (b) of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), O. R. Tambo District Municipality, as the Client and/or its Agent on its behalf, shall be responsible to prepare Health & Safety Specifications for any intended construction project and provide any Principal Contractor who is making a bid or appointed to perform construction work for the Client and/or its Agent on its behalf with the same.

The Client's further duties are as described in The Act and the Regulations made thereunder. The Principal Contractor shall be responsible for the Health & Safety Policy for the site in terms of Section 7 of the Act and in line with Construction Regulation 7(a) as well as the Health and Safety Plan for the project.

This 'Health and Safety Specifications' document is governed by the "Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), hereinafter referred to as 'The Act'. Notwithstanding this, cognisance should be taken of the fact that no single Act or its set of Regulations can be read in isolation. Furthermore, although the definition of Health and Safety Specifications stipulates 'a documented specification of all health and safety requirements pertaining to associated works on a construction site, so as to ensure the health and safety of persons', it is required that the entire scope of the Labour legislation, including the Basic Conditions of Employment Act be considered as part of the legal compliance system. With reference to this specification document this requirement is limited to all health, safety and environmental issues pertaining to the site of the project as referred to here-in. Despite the foregoing it is reiterated that environmental management shall receive due attention.

Due to the wide scope and definition of construction work, every construction activity and site will be different, and circumstances and conditions may change even on a daily basis. Therefore, due caution is to be taken by the Principal Contractor when drafting the Health and Safety Plan based on these Health and Safety Specifications. Prior to drafting the Health and Safety Plan, and in consideration of the information contained here-in, the contractor shall set up a Risk Assessment Program to identify and determine the scope and details of any risk associated with any hazard at the construction site, in order to identify the steps needed to be taken to remove, reduce or control such hazard. *This Risk Assessment and the steps identified will be the basis or point of departure for the Health and Safety Plan.* The Health and Safety Plan shall include documented 'Methods of Statement' (see definitions under Construction Regulations) detailing the key activities to be performed in order to reduce as far as practicable, the hazards identified in the Risk Assessment.

Ziinzame Consulting Engineers is tasked to implement a water project in the O. R. Tambo District. To implement the program, the appointed contractor will employ a number of

service providers including sub-contractors and labourers on site. These people are directly involved in construction and maintenance of our projects.

In this a high premium is to be placed on the health and safety of the most valuable assets of the contractor. These are its personnel, the personnel of its Clients and the physical assets of which it is the custodian and may include the public as well. The responsibilities the contractor and relevant stakeholders have toward its employees and other people present in the facilities or on the sites are captured further in this specification document. These responsibilities stem from both moral, civil and a variety of legal obligations. The Principal Contractor is to take due cognisance of the above statement.

Every effort has been made to ensure that this specification document is accurate and adequate in all respects. Should it however, contain any errors or omissions they may not be considered as grounds for claims under the contract for additional reimbursement or extension of time, or relieve the Principal Contractor from his responsibilities and accountability in respect of the project to which this specification document pertains. Any such inaccuracies, inconsistencies and/or inadequacies must immediately be brought to the attention of the Agent and/or Client.

## **2. SCOPE OF HEALTH AND SAFETY SPECIFICATION DOCUMENT**

The Health and Safety Specifications pertaining to the project; **DUMASI BULK WATER SUPPLY: PHASE 1** – see paragraph 8 on page 14), cover the subjects contained in the index and is intended to outline the normal as well as any special requirements of Talitha Training and Development pertaining to the health and safety matters (including the environment) applicable to the project in question. These Specifications should be read in conjunction with the Act, the Construction Regulations and all other Regulations and Safety Standards which were or will be promulgated under the Act or incorporated into the Act and be in force or come into force during the effective duration of the project. The stipulations in this specification, as well as those contained in all other documentation pertaining to the project, including contract documentation and technical specifications shall not be interpreted, in any way whatsoever, to countermand or nullify any stipulation of the Act, Regulations and Safety Standards which are promulgated under, or incorporated into the Act.

#### 4 3. PURPOSE

Talitha Training and Development is obligated to implement measures to ensure the health and safety of all people and properties affected under its custodianship or contractual commitments, and is further obligated to monitor that these measures are structured and applied according to the requirements of these Health and Safety Specifications. **(All references to the singular shall also be regarded as references to the plural)**

The purpose of this specification document is to provide the relevant Principal Contractor (and his /her contractor) with any information other than the standard conditions pertaining to construction sites which might affect the health and safety of persons at work and the health and safety of persons in connection with the use of plant and machinery; and to protect persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work during the carrying out of construction work for Talitha Training and Development. The Principal Contractor (and his /her contractor) is to be briefed on the significant health and safety aspects of the project and to be provided with information and requirements on inter alia:

- a) safety considerations affecting the site of the project and its environment;
- b) health and safety aspects of the associated structures and equipment;
- c) submissions on health and safety matters required from the Principal Contractor (and his /her contractor); and
- d) the Principal Contractor's (and his /her contractor) health & safety plan.

To serve to ensure that the Principal Contractor (and his /her contractor) is fully aware of what is expected from him/her with regard to the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) and the Regulations made there-under including the applicable safety standards, and in particular in terms of Section 8 of the Act.

To inform the Principal Contractor that the Occupational Health and Safety Act, 1993 (Act 85 of 1993) in its entirety shall apply to the contract to which this specification document applies. The Construction Regulations promulgated on 7 February 2014 and incorporated into the above Act by Government Notice R84, published in Government Gazette 37305 shall apply to any person involved in construction work pertaining to this project, as will the Act.

#### 5 4. DEFINITIONS -

**The most important definitions in the Act and Regulations pertaining to this specification document are hereby extracted.**

“Purpose of the Act” -

To provide for the health and safety of persons at work and the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected therewith.

“Agent” -

means a competent person who acts as a representative for a client;

“Client” -

means any person for whom construction work is performed;

“Construction Work” is defined as any work in connection with -

- (a) the erection, maintenance, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure;
- (b) the installation, erection, dismantling 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;

“Contractor” -

means an employer, as defined in Section 1 of the Act, who performs construction work and includes Principal Contractors;

“Health and Safety File” -



means a file, or other record, containing the information in writing required by the regulations;

“Health and Safety Plan” -

means a site, activity or project specific documented in accordance with the client’s health and safety specification which addresses hazards identified and includes safe work procedures to mitigate, reduce or control the hazards identified;

“Health and Safety Specification” -

means a site activity or project specific document prepared by the client pertaining to all health and safety requirements related to construction work so as to ensure the health and safety of persons;

“Method Statement” -

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

“Principal Contractor” -

means an employer, 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;

“Risk Assessment” -

means a program 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.

## **6 5. OCCUPATIONAL HEALTH & SAFETY MANAGEMENT**

### **5.1 Structure and Organization of OH&S Responsibilities**

#### **5.1.2 Overall Supervision and Responsibility for OH&S**

- \* The Client and/or its Agent on its behalf to ensure that the Principal Contractor, appointed in terms of Construction Regulation 5(1)(k), implements and maintains the agreed and approved H&S Plan. Failure on the part of the Client or Agent to comply with this requirement will not relieve the Principal Contractor from any one or more of his/her duties under the Act and Regulations.
  
- \* The Chief Executive Officer of the Principal Contractor in terms of Section 16 (1) of the Act to ensure that the Employer (as defined in the Act) complies with the Act. The pro forma Legal Compliance Audit may be used for this purpose by the Principal Contractor or his/her appointed contractor.
  
- \* All OH&S Act (85 /1993), Section 16 (2) appointee/s as detailed in his/her/their respective appointment forms to regularly, in writing, report to their principals on matters of health and safety per routine and ad hoc inspections and on any deviations as soon as observed, regardless of whether the observation was made during any routine or ad hoc inspection and to ensure that the reports are made available to the principal Contractor to become part of site records (Health & Safety File).
  
- \* The Construction Supervisor and Assistant Construction Supervisor/s appointed in terms of Construction Regulation 8 to regularly, in writing, report to their principals on matters of health and safety per routine and ad hoc inspections and on any deviations as soon as observed, regardless of whether the observation was made during any routine or ad hoc inspection and to ensure that the reports are made available to the principal Contractor to become part of site records (Health & Safety File).
  
- .
  
- \* All Health and Safety Representatives (SHE-Reps) shall act and report as per Section 18 of the Act.

## **7 5.1.2. Further (Specific) Supervision Responsibilities for OH&S**

Several appointments or designations of responsible and /or competent people in specific areas of construction work are required by the Act and Regulations. The following competent appointments, where applicable, in terms of the Construction Regulations are required to ensure compliance to the Act, Regulations and Safety Standards.

***Required appointments as per the Construction Regulations: -***

Item	Regulation	Appointment	Responsible Person
1.	5(1)(k)	Principal contractor for each phase or project	Client
2.	7(1)©	Contractor	Principal Contractor
3.	8 (1)	Construction Manager	Contractor
4.	8(2)	Assistance Construction Manager	Contractor
5.	8(5)	Health and Safety Officer	Contractor
6.	8(7)	Construction supervisor	Contractor
7.	9(1)	Person to carry out risk assessment	Contractor
8.	10(1)(a)	Fall protection planner	Contractor
9.	11(2)(a)	Structure Inspector	
10.	12(1)	Temporary Work Designer	Contractor
11.	13(1)	Excavation Supervisor	Contractor
12.	14(1)	Supervisor Demolition Work	Contractor
13.	16(1)	Scaffold Supervisor	Contractor
14.	17(1)	Suspended Platform Supervisor	Contractor
15.	18(1)(a)	Rope Access Supervisor	Contractor
16.	19(8)(a)	Material Hoist Inspector	Contractor
17.	20(1)	Batch Plant Supervisor	Contractor
18.	21(1)	Person to control and do the issuing and collection of cartridges and nails/studs	Contractor
19.	23(1)(k)	Construction Vehicle and mobile plants inspector	Contractor
32.	24 (c)	Temporary electrical installations controller	Contractor
33.	28 (a)	Stacking and storage supervisor	Contractor
34.	29 (h)	Fire equipment inspector	Contractor

This list may be used as a reference or tool to determine which components of the Act and Regulations would be applicable to a particular site, as was intended under paragraph 3 & 4 of the Chapter “Preamble” (page 4) above. This list must not be assumed to be exclusive or comprehensive.

## 8 5.2 Communication & Liaison

5.2.1 OH&S Liaison between the Employer, the Principal Contractor, the other Contractors, the Designer and other concerned parties shall be through the H&S Committee as per the procedures determined by the H&S Committee.

- 5.2.2 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.
- 5.2.3 Consultation with the workforce on OH&S matters will be through their Supervisors and H&S Representatives ('SHE - Reps')
- 5.2.4 The Principal Contractor will be responsible for the dissemination of all relevant OH&S information to the other Contractors e.g. design changes agreed with the Client and/or its Agent on its behalf 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.

## **9 6. INTERPRETATION**

- (i) The Occupational Health and Safety Act and all its Regulations, with the exception of the Construction Regulations, distinguish between the roles, responsibilities and functions of employers and employees respectively. It views consultants and contractors as employees of the "owner" of a construction or operational project, the "owner" being regarded as the employer. Only if formally agreed to by way of the written agreement in this regard between the "owner(s)" and consultant and /or between the "owner(s)" and the contractor(s), will these assumptions be relinquished in favour of the position agreed upon between the relevant parties.
- (ii) The position taken by the Construction Regulations is that the "owner", in terms of its instructions, operates (has to operate) in the role of client as per relevant definition. The contractors working for the "client" are seen to be in two categories, i.e. the Principal Contractor and Contractors. The Principal Contractor has to take full responsibility for the health and safety on the site of the relevant project / contract. This includes monitoring health and safety conditions and overseeing administrative measures required by the Construction Regulations from all contractors on the project site. (Ordinary / sub) Contractors are required to operate under the scrutiny and control (in terms of all health and safety measures which are covered in the Construction Regulations) of the Principal Contractor. Where, for the work the Principal Contractor will have to execute himself, practical health and safety measures are applicable, he will also be subject to the relevant requirements with which (ordinary / sub) Contractors have to comply. The Principal Contractor will, however, not have to actually fulfill such requirements in respect of any of the work / functions of any (ordinary / sub) Contractors on the site for which he has been appointed as Principal Contractor. However, he has to monitor / oversee such processes, ensuring that the requirements are complied with and that the required appointments / evaluations / inspections / assessments and tests are done and that the records are duly generated and kept as prescribed in the Construction Regulations. This has to feature clearly in the Principal Contractor's Health and Safety Plan.

## **10 7. RESPONSIBILITIES**

### **11 7.1 Client**

7.1.1 The Client or his appointed Agent on his behalf will appoint each Principal Contractor for this project or phase/section of the project in writing for assuming the role of Principal Contractor as intended by the Construction Regulations and determined by the Bills of Quantities.

7.1.2 The Client or his appointed Agent on his behalf shall discuss and negotiate with the Principal Contractor the contents of the health and safety plan of the both Principal Contractor and Contractor for approval.

7.1.3 The Client or his appointed Agent on his behalf, will take reasonable steps to ensure that the health and safety plan of both the Principal Contractor and Contractor is implemented and maintained. The steps taken will include periodic audits at intervals of at least once every month.

7.1.4 The Client or his appointed Agent on his behalf, will prevent the Principal Contractor and/or the Contractor from commencing or continuing with construction work should the Principal Contractor and/or the Contractor at any stage in the execution of the works be found to:

- have failed to have complied with any of the administrative measures required by the Construction Regulations in preparation for the construction project or any physical preparations necessary in terms of the Act;
- have failed to implement or maintain their health and safety plan;
- have executed construction work which is not in accordance with their health and safety plan; or
- act in any way which may pose a threat to the health and safety of any person(s) present on the site of the works or in its vicinity, irrespective of him/them being employed or legitimately on the site of the works or in its vicinity.

### **12 7.2 Principal Contractor**

7.2.1 The Principal Contractor shall accept the appointment under the terms and Conditions of Contract. The Principal Contractor shall sign and agree to those terms and

conditions and shall, before commencing work, notify the Department of Labour of the intended construction work in terms of Regulation 3 of the Construction Regulations. Annexure B of this Specification contains a "Notification of Construction Work" form. The Principal Contractor shall submit the notification in writing prior to commencement of work and inform the Client or his Agent accordingly.

7.2.2 The Principal Contractor shall ensure that he is fully conversant with the requirements of this Specification and all relevant health and safety legislation. This Specification is not intended to supersede the Act nor the Construction Regulations or any part of either. Those sections of the Act and the Construction Regulations which apply to the scope of work to be performed by the Principal Contractor in terms of this contract (entirely or in part) will continue to be legally required of the Principal Contractor to comply with. The Principal Contractor will in no manner or means be absolved from the responsibility to comply with all applicable sections of the Act, the Construction Regulations or any Regulations proclaimed under the Act or which may perceivable be applicable to this contract.

7.2.3 The Principal Contractor shall provide and demonstrate to the Client a suitable and sufficiently documented health and safety plan based on this Specification, the Act and the Construction Regulations, which shall be applied from the date of commencement of and for the duration of execution of the works. This plan shall, as appendices, include the health and safety plans of all Sub-contractors for which he has to take responsibility in terms of this contract.

7.2.4 The Principal Contractor shall provide proof of his registration and good standing with the Compensation Fund or with a licensed compensation insurer prior to commencement with the works.

7.2.5 The Potential Principal Contractor shall, in submitting his tender, demonstrate that he has made provision for the cost of compliance with the specified health and safety requirements, the Act and Construction Regulations. (Note: This shall have to be contained in the conditions of tender upon which a tenderer's offer is based.)

7.2.6 The Principal Contractor shall consistently demonstrate his competence and the adequacy of his resources to perform the duties imposed on the Principal Contractor in terms of this Specification, the Act and the Construction Regulations.

7.2.7 The Principal Contractor shall ensure that a copy of his health and safety plan is available on site and is presented upon request to the Client, an Inspector, Employee or Sub-contractor.

7.2.8 The Principal Contractor shall ensure that a health and safety file, which shall include all documentation required in terms of the provisions of this Specification, the Act and the Construction Regulations, is opened and kept on site and made available to the Client or Inspector upon request. Upon completion of the works, the Principal Contractor shall hand over a consolidated health and safety file to the Client.

7.2.9 The Principal Contractor shall, throughout execution of the contract, ensure that all conditions imposed on his Sub-contractors in terms of the Act and the Construction Regulations are complied with as if they were the Principal Contractor.

7.2.10 The Principal Contractor shall from time to time evaluate the relevance of the Health and Safety Plan and revise the same as required, following which revised plan shall be submitted to the Client and/or his/her Agent for approval.

### **13 7.3 Contractor**

Responsibilities of (**name of the contractor**) in terms of this contract and health and safety specification

As per 7.2 above, as and where applicable or as indicated in the letter of appointment.

### **14 8. SCOPE OF WORK**

*(also refer to paragraph 2 on page 5)*

These specifications are applicable to the specific scope of work pertaining to the **DUMASI BULK WATER SUPPLY: PHASE 1** (as detailed in the tender documents), this amongst all includes for example:

- Site establishment
- Access to the works area
- Excavations
- Fencing
- Pipe laying
- Slab casting
- Pipe laying

**N.B** Construction Regulation 7(1)(c)(i) determines that potential contractors submitting tenders have made provision for the cost of health and safety measures during the construction process. The Principal Contractor shall on tendering make provision for the cost of health and safety measures in terms of his/her documented Health and Safety Plan and measures based on these Health and Safety Specifications during the period of

the project. The cost shall be duly quantified and clearly identified for such identifiable purpose.

**THE HEALTH AND SAFETY PLAN IS THEREFORE TO BE INCLUDED WITH THE TENDER DOCUMENTS WHEN TENDERS ARE INVITED FOR THE PROJECT.**



## **15 9. HEALTH AND SAFETY FILE**

The Principal Contractor must, in terms of Construction Regulation 7(1)(b), keep a Health & Safety File on site at all times that must include all documentation required in terms of the Act and Regulations and must also include a list of all Contractors on site that are accountable to the Principal Contractor and the agreements between the parties and details of work being done. A more detailed list of documents and other legal requirements that must be kept in the Health and Safety File is attached as an addendum to this document. These documents must be made available on request to an inspector, client, the client's agent or a contractor.

### **IMPORTANT:**

The Health and Safety File will remain the property of the Client and/or its Agent on its behalf throughout the period of the project and shall be consolidated and handed over to the Client and/or its Agent on its behalf at the time of completion of the project.

## **16 10. OHS GOALS AND OBJECTIVES AND ARRANGEMENTS FOR MONITORING AND REVIEWING OHS PERFORMANCE**

The Principal Contractor is required to maintain an acceptable disabling incident frequency rate (DIFR) and report on this to the Client and/or its Agent on its behalf on a monthly basis.

## **17 11. IDENTIFICATION OF HAZARDS AND DEVELOPMENT OF RISK ASSESSMENTS, STANDARD WORKING PROCEDURES (SWP) AND METHOD STATEMENTS**

The Principal Contractor is required to develop Risk Assessments, Safe Working Procedures (SWP) and Method Statements for each activity executed in the contract or project (see 4. below "Project/Site Specific Requirements") and maintain compliance by supervision – task observations.

The identification of hazards is over and above the hazards identification programme and those hazards identified during the drafting of the Health and Safety Plan.

## **18 12. ARRANGEMENTS FOR MONITORING AND REVIEW**

12.1 Monthly Audit by Client and/or its Agent on its behalf

The Client and/or its Agent on its behalf will be conducting Periodic Audits at times agreed with the Principal Contractor Audit to comply with Construction Regulation 5(1)(o) to ensure that the principal Contractor has implemented, is adhering to and is maintaining the agreed and approved OH&S Plan.

#### 12.2 Other audits and inspections by client and/or its agent on its behalf.

The Client and/or its Agent on its behalf reserves the right to conduct any other ad hoc audits and inspections as it and/or its Agent on its behalf deem necessary.

A representative of the Principal Contractor and the relevant Health and Safety Representative(s) (SHE-Reps) must accompany the Client and/or its Agent on its behalf on all Audits and Inspections and may conduct their own audit/inspection at the same time. Each party will, however, take responsibility for the results of his/her own audit/inspection results. The Client and/or its Agent on its behalf may require to be handed a copy of the minutes of the previous Health and Safety Committee meeting reflecting possible recommendations made by that committee to the Employer for reference purposes.

#### 12.3 Reports

12.3.1 The Principal Contractor shall report all incidents where an employee is injured on duty to the extent that he/she:

- \* dies
- \* becomes unconscious
- \* loses a limb or part of a limb
- \* is injured or becomes ill to such a degree that he/she is likely either to die or to suffer a permanent physical defect or likely to be unable for a period of at least 14 days either to work or continue with the activity for which he/she was usually employed

OR where:

- \* a major incident occurred
- \* the health or safety of any person was endangered
- \* where a dangerous substance was spilled
- \* the uncontrolled release of any substance under pressure took place

- \* machinery or any part of machinery fractured or failed resulting in flying, falling or uncontrolled moving objects
- \* machinery ran out of control,

to the Provincial Director of the Department of Labour within seven days and at the same time to the Client and/or its Agent on its behalf.

Refer in this regard to Section 24 of the Act & General Administrative Regulation 8.

**If the incident happened where employee is fatally injured, the work must be stopped, top Management of Talitha Training and Development, Provincial Director of DoL and SAPS must be informed immediately and their representative must be on site before any remedial or corrective action is taken on site. Never move items or disturb or interfere with the evidence of the occurrence on site.**

12.3.2 The Principal Contractor is required to provide the Client and/or its Agent on its behalf with copies of all statutory reports required in terms of the Act and the Regulations.

12.3.3 The Principal Contractor is required to provide the Client and/or its Agent on its behalf with a monthly "SHE Risk Management Report".

12.3.4 The Principal Contractor is required to provide a.s.a.p. the Client and/or its Agent on its behalf with copies of all internal and external accident/incident investigation reports including the reports contemplated in 12.7, 12.8.2, 15, 16, 17, 21 and 22 below. As soon as the occurrence of any accident/incident of whatever nature comes to the notice of the Principal Contractor, it shall be reported immediately to any of the following:

- \* Details to be advised

#### 12.4 Review

The Principal Contractor is to review the Hazard Identification, Risk Assessments and Safe Work Procedures at each Production Planning and Progress Report meeting as the construction work develops and progresses and each time changes are made to the designs, plans and construction methods and processes.

The Principal Contractor must provide the Client and/or its Agent on its behalf, other Contractors and all other concerned parties with copies of any changes, alterations or amendments as contemplated in the above paragraph.

## 12.5 Site Rules and other Restrictions

### 12.5.1 Site OHS Rules

The Principal Contractor must develop a set of site-specific OH&S rules that will be applied to regulate the Health and Safety Plan and associated aspects of the construction.

When required for a site by law, visitors and non-employees upon entering the site shall be issued with the proper Personal Protective Equipment (PPE) as and when necessary.

### 12.5.2 Security Arrangements

The Principal Contractor must establish site access rules and implement and maintain these throughout the construction period. Access control must include the rule that non-employees shall at all times be provided with fulltime supervision while on site.

The Principal Contractor must develop a set of Security rules and procedures and maintain these throughout the construction period.

If not already tasked to the H&S Officer appointed in terms of Construction Regulation 8(5), the Principal Contractor must appoint a competent Emergency Controller who must develop contingency plans for any emergency that may arise on site as indicated by the risk assessments. These must include a monthly practice/testing programme for the plans e.g. January: trench collapse, February: flooding etc. and practiced/tested with all persons on site at the time, participating.

## 12.6 Training

The contents and syllabi of all training required by the Act and Regulations including any other related or relevant training as required must be included in the Principal Contractor's Health and Safety Plan and Health and Safety File.

### 12.6.1 General Induction Training

All employees of the Principal and other Contractors must be in possession of proof of General Induction training

### 12.6.2 Site Specific Induction Training

All employees of the Principal and other Contractors must be in possession of Site Specific Occupational Health and Safety Induction or other qualifying training.

### 12.6.3 Other Training

All operators, drivers and users of construction vehicles, mobile plant and other equipment must be in possession of valid proof of training.

All employees in jobs requiring training in terms of the Act and Regulations must be in possession of valid proof of training as follows:

Occupational Health and Safety Training Requirements: (as required by the Construction Regulations and as indicated by the Health and Safety Specification Document & the Risk Assessment/s and recommendations by the Health and Safety Committee):

- \* General Induction (Section 8 of the Act)
- \* Site/Job Specific Induction (also visitors) (Sections 8 & 9 of the Act)
- \* Site/Project Manager
- \* Construction Supervisor
- \* OH&S Representatives (Section 18 (3) of the Act)
- \* Training of the Appointees indicated in 12.6.1 & 12.6.2 above
- \* Operation of Cranes (Driven Machinery Regulations 18 (11))
- \* Operators & Drivers of Construction Vehicles & Mobile Plant (Construction Regulation 21)
- \* Basic Fire Prevention & Protection (Environmental Regulations 9 and Construction Regulation 27)
- \* As a minimum basic First Aid to be upgraded when necessary (General Safety Regulations 3)
- \* Storekeeping Methods & Safe Stacking (Construction Regulation 26)
- \* Emergency, Security and Fire Coordinator

## **19 12.7 Accident and Incident Investigation**

The Principal Contractor is responsible to oversee the investigation of all accidents/incidents where employees and non-employees were injured to the extent that

he/she/they had to receive first aid or be referred for medical treatment by a doctor, hospital or clinic. (General Administrative Regulation 9)

The results of the investigation to be entered into the Accident/Incident Register listed above. (General Administrative Regulation 9)

The Principal Contractor is responsible for the investigation of all 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 incidents in future.

The Principal Contractor is responsible for the investigation of all road traffic accidents relating to the construction site and keeping a record of the results of such investigations including the steps taken to prevent similar accidents in future.

Notwithstanding the requirements of Section 24 of the Act, ALL incidents shall be investigated and reported on in writing, irrespective of whether such incident gave rise to injury or damage.

## **12.8 H&S Representatives (SHE-Reps – ‘safety, health & environment’) and H&S Committees**

### **20 12.8.1 Designation of H&S Representatives (‘SHE - Reps’)**

Where the Principal Contractor employs more than 20 persons (including the employees of other Contractors (sub-contractors) he has to appoint one H&S Representatives for every 50 employees or part thereof. (Section 17 of the Act and General Administrative Regulation 6. & 7.)

H&S Representatives have to be designated in writing and the designation shall be in accordance with the Collective Agreement as concluded between the parties as is required in terms of General Administration Regulation 6.

### **21 12.8.2 Duties and Functions of the H&S Representatives**

The Principal Contractor must ensure that the designated H&S Representatives conduct at least a weekly inspection of their respective areas of responsibility using a checklist and report thereon to the Principal Contractor, after which these reports shall be consolidated for submission to the Health and Safety Committee.

H&S Representatives must be included in and be part of accident/incident investigations.

H&S Representatives shall be members of at least one H&S Committee and must attend all meetings of that H&S committee.

### **22 12.8.3 Establishment of H&S Committee(s)**

The Principal Contractor must establish H&S Committees consisting of designated H&S Representatives together with a number of Employers Representatives appointed as per Section 19(3) that are not allowed to exceed the number of H&S Representatives on the committee. The persons nominated by the employer on a H&S Committee must be designated in writing for such period as may be determined by him. The H&S Committee shall co-opt advisory (temporary) members and determine the procedures of the meetings including the chairmanship.

The H&S Committee must meet minimum monthly and consider, at least, the following Agenda for the first meeting. Thereafter the H&S Committee shall determine its own procedures as per the previous paragraph.

Agenda:

- 1) Opening and determining of chairmanship (only when necessary)
- 2) Minutes of Previous Minutes
- 3) Observations
- 4) Program and Safety considerations
- 5) Hygiene
- 6) Housekeeping improvement
- 7) Incidents & Accidents / Injuries
- 8) Registers:
  - a H&S Rep. Inspections
  - b. Matters of First Aid
  - c. Scaffolding
  - d. Ladders
  - e. Lifting Equipment
  - f. Excavations
  - g. Portable Electric Equipment

- h. Fire Equipment
  - i. Pneumatic or Hydraulic Power Tools
  - j. Power Hand tools
  - k. Incident! Report Investigation
  - l. Pressure Vessels
  - m. Personal Protective Equipment
- 9) Safety performance Evaluations
  - 10) Education & Safety promotion program
  - 11) First Aid Officials and training in First Aid
  - 12) Demarcation of work- /hazardous-/safe areas/walkways
  - 13) Posters and signage
  - 14) Environmental preservation and conservation
  - 15) Specific training programmes
  - 16) General
  - 17) Date of Next Meeting
  - 18) Closing

### **23 13. PROJECT/SITE SPECIFIC REQUIREMENTS**

The following is a list of specific activities and considerations that have been identified for the project and site and for which Risk Assessments, Safe Working Procedures (SWP), management and control measures (Task Observations) and Method Statements (where necessary) have to be developed by the Principal Contractor:

- \* Clearing & Grubbing of the Area/Site
- \* Site Establishment including:
  - o Office/s
  - o Secure/Safe Storage and storage areas for materials, plant & equipment
  - o Ablution facilities
  - o Sheltered dining area
  - o Vehicle access to the site
- \* Dealing with existing Structures.
- \* Location of existing Services
- \* Installation & Maintenance of Temporary Construction Electrical Supply, Lighting and Equipment
- \* Adjacent Land uses/Surrounding property exposures



- \* Boundary & Access control/Public Liability Exposures (Remember: the Employer is also responsible for the OH&S of 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, lightning, allergies etc.
- \* Exposure to Noise
- \* Exposure to Vibration
- \* Exposure to Odour and fumes
- \* Protection against dehydration and heat exhaustion
- \* Protection from wet & cold conditions
- \* Dealing with HIV/Aids and other diseases as per specific programme provided by the client and/or its Agent on its behalf
- \* Use of Portable Electrical Equipment including:
  - Angle grinder
  - Electrical Drilling machine
  - Skill saw
- \* Excavations including:
  - Ground/soil conditions
  - Trenching
  - Shoring
  - Drainage
  - Daily inspections
- \* Welding including:
  - Arc Welding
  - Gas welding
  - Flame Cutting
  - Use of LP Gas torches and appliances
- \* Loading & Offloading of Trucks
- \* Aggregate/Sand and other Materials Delivery
- \* Manual and Mechanical Handling
- \* Lifting and Lowering Operations
- \* Driving & Operation of Construction Vehicles and Mobile Plant including:
  - Trenching machine
  - Excavator
  - Bomag Roller
  - Plate Compactor
  - Front End Loader
  - Mobile Cranes and the ancillary lifting tackle
  - Parking of Vehicles & Mobile Plant
  - Towing of Vehicles & Mobile Plant

- \* Use and Storage of Flammable Liquids and other Hazardous Substances - the client and/or its Agent on its behalf to be informed of this prior to commencing of the project
- \* Layering and Bedding of trench floor
- \* Installation of Pipes in trenches
- \* Backfilling of Trenches
- \* Protection against Flooding
- \* Gabion work
- \* Use of Explosives - the client and/or its Agent on its behalf to be informed of this prior to commencing of the project
- \* Protection from Overhead Power Lines
- \* As discovered by the Principal Contractor's hazard identification exercise
- \* As discovered from any inspections and audits conducted by the Client and/or its Agent on its behalf or by the Principal Contractor or any other Contractor on site
- \* As discovered from any accident/incident investigation.

13.1 The following are in particular requirements depending on scope of works and will form a basis for compliance audits.

1. Administrative & Legal Requirements
2. Education, Training & Awareness / Promotion
3. Public Safety & Emergency Preparedness
4. Personal Protective Equipment
5. Housekeeping
6. Scaffolding, Formwork & Support work
7. Ladders
8. Electrical Safeguarding (Lockout System)
9. Mechanical Safeguarding (rotating part, heating part cover)
10. Emergency/Fire Prevention & Protection
11. Excavations & Demolition
12. Tools
13. Cranes
13. Personnel & Material Hoists
14. Transport & Materials Handling

15. Site Plant & Machinery  
16. Plant & Storage Yards/Site Workshops Specifics  
17. Health & Hygiene

**24 14. OUTLINED DATA, REFERENCES AND INFORMATION ON CERTAIN AND/OR SPECIFIC OBLIGATORY REQUIREMENTS TO ENSURE COMPLIANCE**

14.1 Administrative & Legal Requirements

24.1.1.1.1.24 O HS Act Section/  24.1.1.1.1.24 Re gulati on	Subject	24.1.1.1.2 Requirements
Construction. Regulation 4	<b>Notice of carrying out Construction work</b>	Department of Labour notified Copy of Notice available on Site
General Admin. Regulation 4	<b>*Copy of OH&amp;S Act (Act 85 of 1993)</b>	Updated copy of Act & Regulations on site. Readily available for perusal by employees.
COID Act Section 80	<b>*Registration with Compensation Insurer</b>	Written proof of registration/Letter of good standing available on Site
Construction. Regulation 5(b)(c)	<b>H&amp;S Specification &amp; Programme</b>	H&S Spec received from Client and/or its Agent on its behalf OH&S programme developed & Updated regularly
Section 8(2)(d) Construction. Regulation 7	<b>*Hazard Identification &amp; Risk Assessment</b>	Hazard Identification carried out/Recorded Risk Assessment and - Plan drawn up/Updated and make recommendations RA Plan available on Site Employees/Sub-Contractors informed/trained
Section 16(2)	<b>*Assigned duties (Managers)</b>	Responsibility of complying with the OH&S Act assigned to other person/s by CEO.
Construction. Regulation 6(1)	<b>Designation of Person Responsible on Site</b>	Competent person appointed in writing as Construction Supervisor with job description
Construction. Regulation 8(7)	<b>Designation of Assistant for above</b>	Competent person appointed in writing as Assistant Construction Supervisor with job description
Section 17 & 18 General	<b>*Designation of Health &amp; Safety</b>	More than 20 employees - one H&S Representative, one additional H&S Rep. for each 50 employees or part

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Administrative	<b>Representatives</b>	thereof.
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Regulations 6 & 7		Designation in writing, period and area of responsibility specified in terms of GAR 6 & 7 Meaningful H&S Rep. reports. Reports actioned by Management.
Section 19 & 20 General Administrative Regulations 5	<b>*Health &amp; Safety Committee/s</b>	H&S Committee/s established. All H&S Reps shall be members of H&S Committees Additional members are appointed in writing. Meetings held monthly, Minutes kept. Actioned by Management.
Section 37(1) & (2)	<b>*Agreement with Mandataries/ (Sub- )Contractors</b>	Written agreement with (Sub-)Contractors List of (Sub-) Contractors displayed. Proof of Registration with Compensation Insurer/Letter of Good Standing Construction Supervisor designated Written arrangements re. H&S Reps & H&S Committee Written arrangements re. First Aid
Section 24 & General Admin. Regulation 8 COID Act Sect.38, 39 & 41	<b>*Reporting of Incidents (Dept. of Labour)</b>	Incident Reporting Procedure displayed. All incidents in terms of Sect. 24 reported to the Provincial Director, Department of Labour, within 3 days. (Annexure 1?)(WCL 1 or 2) and to the Client and/or its Agent on its behalf Cases of Occupational Disease Reported Copies of Reports available on Site Record of First Aid injuries kept
General Admin. Regulation 9	<b>*Investigation and Recording of Incidents</b>	All injuries which resulted in the person receiving medical treatment other than first aid, recorded and investigated by investigator designated in writing. Copies of Reports (Annexure 1) available on Site Tabled at H&S Committee meeting Action taken by Site Management.
Construction. Regulation 10	<b>Fall Prevention &amp; Protection</b>	Competent person appointed to draw up and supervise the Fall Protection Plan Proof of appointee's competence available on Site Risk Assessment carried out for work at heights Fall Protection Plan drawn up/updated Available on Site
Construction. Regulation 10(a)	Roof work	Competent person appointed to plan & supervise Roof work. Proof of appointee's competence available on Site Risk Assessment carried out Roof work Plan drawn up/updated Roof work inspect before each shift. Inspection register kept Employees medically examined for physical & psychological fitness. Written proof on site

<p>Construction. Regulation 11</p>	<p><b>Structures</b></p>	<p>Information re. the structure being erected received from the Designer including:                  - geo-science technical report where relevant                  - the design loading of the structure                  - the methods &amp; sequence of construction                  - anticipated dangers/hazards/special measures to construct safely                  Risk Assessment carried out                  Method statement drawn up                  All above available on Site                  Structures inspected before each shift. Inspections register kept</p>
<p>Construction. Regulation 12</p>	<p><b>Temporary Works</b></p>	<p>Competent person appointed in writing to supervise erection, maintenance, use and dismantling temporary works.                  Design drawings available on site                  Risk Assessment carried out                  Temporary works inspected:                  - before use/inspection                  - before pouring of concrete                  - daily whilst in place                  - before stripping/dismantling.                  - Inspection register kept</p>
<p>Construction. Regulation 16</p>	<p><b>Scaffolding</b></p>	<p>Competent persons appointed in writing to:                  - erect scaffolding (Scaffold Erector/s)                  - act as Scaffold Team Leaders                  - inspect Scaffolding weekly and after inclement weather (Scaffold Inspector/s)                  Written Proof of Competence of above appointees available on Site                  Copy of SABS 085 available on Site                  Risk Assessment carried out                  Inspected weekly/after bad weather. Inspection register/s kept</p>
<p>Construction. Regulation 17</p>	<p><b>Suspended Platforms</b></p>	<p>Competent persons appointed in writing to:                  - control the erection of Suspended platforms                  - act as Suspended platforms Team Leaders                  - inspect Suspended Scaffolding weekly and after inclement weather                  Risk Assessment conducted                  Certificate of Authorisation issued by a registered professional engineer available on Site/copy forwarded to the Department of Labour                  The following inspections of the whole installation carried out by a competent person</p>

		<p>- after erection and before use</p> <p>- daily prior to use. Inspection register kept</p> <p>The following tests to be conducted by a competent person:</p> <p>- load test of whole installation and working parts every three months</p> <p>- hoisting ropes/hooks/load attaching devices quarterly. Tests log book kept</p> <p>Employees working on Suspended Platform medically examined for physical &amp; psychological fitness. Written proof available</p>
Construction. Regulation 13	Excavations	<p>Competent person/s appointed in writing to supervise and inspect excavation work</p> <p>Written Proof of Competence of above appointee/s available on Site</p> <p>Risk Assessment carried out</p> <p>Inspected:</p> <ul style="list-style-type: none"> <li>- before every shift</li> <li>- after any blasting</li> <li>- after an unexpected fall of ground</li> <li>- after any substantial damage to the shoring</li> <li>- after rain. Inspections register kept</li> </ul> <p>Method statement developed where explosives will be/ are used</p>
Construction. Regulation 14	Demolition Work	<p>Competent person/s appointed in writing to supervise and control Demolition work</p> <p>Written Proof of Competence of above appointee/s available on Site</p> <p>Risk Assessment carried out</p> <p>Engineering survey and Method Statement available on Site</p> <p>Inspections to prevent premature collapse carried out by competent person before each shift. Inspection register kept</p>
Construction. Regulation 19	Materials Hoist	<p>Competent person appointed in writing to inspect the Material Hoist</p> <p>Written Proof of Competence of above appointee available on Site.</p> <p>Materials Hoist to be inspected weekly by a competent person. Inspections register kept.</p>

Construction. Regulation 21	Explosive Actuated Fastening Device	Competent person appointed to control the issue of the Explosive Actuated Fastening Device & cartridges and the service, maintenance and cleaning. Register kept of above Empty cartridge cases/nails/fixing bolts returns recorded Cleaned daily after use <b>Work areas are demarcated!</b>
Construction. Regulation 20	Bulk Mixing Plant (batch plants)	Competent person appointed to control the operation of the Batch Plants and the service, maintenance and cleaning. Register kept of above Risk Assessment carried out Batch Plants to be inspected weekly by a competent person. Inspections register kept.
Construction. Regulation 22/ Driven Machinery Regulations 18 & 19	Cranes & Lifting Machines Equipment	Competent person appointed in writing to inspect Cranes, Lifting Machines & Equipment Written Proof of Competence of above appointee available on Site. Cranes & Lifting tackle identified/numbered Register kept for Lifting Tackle Log Book kept for each individual Crane Inspection: - All cranes - <b>daily by operator</b> - Tower Crane/s - <b>after erection/6monthly</b> - Other cranes - <b>annually by comp. person</b> - Lifting tackle(slings/ropes/chain slings etc.) - daily or before every new application
Construction. Regulation 24/Electrical Machinery Regulations 9 & 10/  Electrical Installation Regulations	<b>*Inspection &amp; Maintenance of Electrical Installation &amp; Equipment (including portable electrical tools)</b>	Competent person appointed in writing to inspect/test the installation and equipment. Written Proof of Competence of above appointee available on Site. Inspections: - Electrical Installation & equipment inspected after installation, after alterations and quarterly. Inspection Registers kept Portable electric tools, electric lights and extension leads must be uniquely identified/numbered. Daily visual inspection by user and Weekly visual inspection by Issuer/Storeman. Register kept.
Construction. Regulation 28/ General Safety Regulation 8(1)(a)	<b>*Designation of Stacking &amp; Storage Supervisor.</b>	Competent Person/s with specific knowledge and experience designated to supervise all Stacking & Storage Written Proof of Competence of above appointee available on Site
Construction. Regulation 29/ Environmental	*Designation of a Person to	Person/s with specific knowledge and experience designated to co-ordinate emergency contingency planning and execution and fire prevention measures



Regulation 9	Co-ordinate Emergency Planning And Fire Protection	Emergency Evacuation Plan developed: - Drilled/Practiced - Plan & Records of Drills/Practices available on Site Fire Risk Assessment carried out All Fire Extinguishing Equipment identified and on <b>register</b> . Inspected weekly. Inspection Register kept Serviced annually
General Safety Regulation 3	<b>*First Aid</b>	Every workplace provided with sufficient number of First Aid boxes. (Required where 5 persons or more are employed) First Aid freely available Equipment as per the list in the OH&S Act. One qualified First Aider appointed for every 50 employees. (Required where more than 10 persons are employed) List of First Aid Officials and Certificates Name of person/s in charge of First Aid box/es displayed. Location of First Aid box/es clearly indicated. Signs instructing employees to report all Injuries/illness including first aid injuries
General Safety Regulation 2	<b>Personal Safety Equipment (PSE)</b>	PSE Risk Assessment carried out Items of PSE prescribed/use enforced Records of Issue kept Undertaking by Employee to use/wear PSE PSE remain property of Employer, not to be removed from premises GSR 2(4)
General Safety Regulation 9	<b>*Inspection &amp; Use of Welding/Flame Cutting Equipment</b>	Competent Person/s with specific knowledge and experience designated to Inspect Electric Arc, Gas Welding and Flame Cutting Equipment Written Proof of Competence of above appointee available on Site All new vessels checked for leaks, leaking vessels NOT taken into stock but returned to supplier immediately Equipment identified/numbered and entered into a register Equipment inspected weekly. Inspection Register kept Separate, purpose made storage available for full and empty vessels
Hazardous Chemical Substances <b>(HCS)</b> Regulations	<b>*Control of Storage &amp; Usage of HCS and Flammables</b>	Competent Person/s with specific knowledge and experience designated to Control the Storage & Usage of <b>HCS</b> (including Flammables) Written Proof of Competence of above appointee available on Site

Construction Regulation 23		Risk Assessment carried out Register of HCS kept/used on Site Separate, purpose made storage available for full and empty containers
Pressure Equipment Regulations 11	<b>Vessels under Pressure (VUP)</b>	Competent Person/s with specific knowledge and experience designated to supervise the use, storage, maintenance, statutory inspections & testing of VUP's Written Proof of Competence of above appointee available on Site Risk Assessment carried out Certificates of Manufacture available on Site Register of VUP's on Site Inspections & Testing by Approved Inspection Authority (AIA): <ul style="list-style-type: none"> <li>- after installation/re-erection or repairs</li> <li>- every 36 months.</li> <li>- Register/Log kept of inspections, tests. Modifications &amp; repair</li> </ul>
Construction. Regulation 23	<b>Construction Vehicles &amp; Earth Moving Equipment</b>	Operators/Drivers appointed to: <ul style="list-style-type: none"> <li>- Carry out a daily inspection prior to use</li> <li>- Drive the vehicle/plant that he/she is competent to operate/drive</li> </ul> Written Proof of Competence of above appointee available on Site. Record of Daily inspections kept
General Safety Regulation 13A	<b>*Inspection of Ladders</b>	Competent person appointed in writing to inspect Ladders Ladders inspected at arrival on site and weekly there after. Inspections register kept Application of the types of ladders (wooden, aluminium etc.) regulated by training and inspections and noted in register
General Safety regulation 13B	Ramps	Competent person appointed in writing to Supervise the erection & inspection of Ramps. Inspection register kept. Daily inspected and noted in register



*Security Measures	Access control measures/register in operation Security patrols after hours during weekends and holidays Sufficient lighting after dark Guard has access to telephone/ mobile/other means of emergency communication
*Emergency Preparedness	Emergency contact numbers displayed and made available to Security & Guard Emergency Evacuation instructions posted up on all notice boards (including employees' notice boards) Emergency contingency plan available on site/in yard Doors open outwards/unobstructed Emergency alarm audible all over (including in toilets)
*Emergency Drill & Evacuation	Adequate No. of employees trained to use Fire Fighting Equipment. Emergency Evacuation Plan available, displayed and practiced. <b>(See Section 1 for Designation &amp; Register)</b>

14.4 Personal Protective Equipment

24.1.1.5 Subject	24.1.1.6 Requirement
*PPE needs analysis	Need for PPE identified and prescribed in writing. PPE remain property of Employer, not to be removed from premises GSR 2(4)
*Head Protection	All persons on site wearing Safety Helmets including Sub-contractors and Visitors (where prescribed)
*Foot Protection	All employees on site wearing Safety Footwear including Gumboots for concrete / wet work and non-slip shoes for roof work. Visitors to wear same upon request or where prescribed
*Eye and Face Protection	<u>Eye and Face (also Hand and Body) Protection</u> (Goggles, Face Shields, Welding Helmets etc.) used when operating the following: * Jack/ Kango Hammers * Angle / Bench Grinders * Electric Drills (Overhead work into concrete / cement / bricks * Explosive Powered tools * Concrete Vibrators / Pokers * Hammers & Chisels * Cutting / Welding Torches * Cutting Tools and Equipment * Guillotines and Benders * Shears * Sanders and Sanding Machines * CO2 and Arc Welding Equipment * Skill / Bench Saws * Spray Painting Equipment etc.
*Hearing Protection	<u>Hearing Protectors</u> (Muffs, Plugs etc.) used when operating the following: * Jack / Kango Hammers * Explosive Powered Tools * Wood/Aluminium Working Machines e.g. saws, planers, routers
*Hand Protection	<u>Protective Gloves</u> worn by employees handling / using:

	<ul style="list-style-type: none"> <li>* Cement / Bricks / Steel / Chemicals</li> <li>* Welding Equipment</li> <li>* Hammers &amp; Chisels</li> <li>* Jack / Kango Hammers etc.</li> </ul>
*Respiratory Protection	<p>Suitable/efficient prescribed <u>Respirators</u> worn correctly by employees handling / using:</p> <ul style="list-style-type: none"> <li>* Dry cement</li> <li>* Dusty areas</li> <li>* Hazardous chemicals</li> <li>* Angle Grinders</li> <li>* Spray Painting etc.</li> </ul>
*Fall Prevention Equipment	<p>Suitable <u>Safety Belts</u> / Fall Arrest Equipment correctly used by persons working on / in unguarded, elevated positions e.g.:</p> <ul style="list-style-type: none"> <li>* Scaffolding</li> <li>* Riggers</li> <li>* Lift shafts</li> <li>* Edge work</li> <li>* Ring beam edges etc.</li> </ul> <p>Other methods of fall prevention applied e.g. catch nets</p>
*Protective Clothing	<p>All jobs requiring protective clothing (Overalls, Rain Wear, Welding Aprons etc.) Identified and clothing worn.</p>
*PPE Issue & Control	<p>Identified Equipment issued free of charge.                  All PPE maintained in good condition. (Regular checks).                  Workers instructed in the proper use &amp; maintenance of PPE.                  Commitment obtained from wearer accepting conditions and to wear the PPE.                  Record of PPE issued kept on H&amp;S File.                  PPE remain property of Employer, not to be removed from premises GSR 2(4)</p>

14.5 Housekeeping

Subject	Requirement
*Scrap Removal System	<p>All items of Scrap/Unusable Off-cuts/Rubble and redundant material removed from working areas on a regular basis. (Daily)</p> <p>Scrap/Waste removal from heights by chute/hoist/crane.                  Nothing thrown/swept over sides.                  Scrap disposed of in designated containers/areas                  Removal from site/yard on a regular basis.</p>
Stacking & Storage	<p><u>Stacking:</u></p> <ul style="list-style-type: none"> <li>* Stable, on firm level surface/base.</li> <li>* Prevent leaning/collapsing</li> <li>* Irregular shapes bonded</li> <li>* Not exceeding 3x the base</li> <li>* Stacks accessible</li> <li>* Removal from top only.</li> </ul> <p><u>Storage:</u></p> <ul style="list-style-type: none"> <li>* Adequate storage areas provided.</li> </ul>

<p><b>(See Section 1 for Designation &amp; Register)</b></p>	<ul style="list-style-type: none"> <li>* Functional - e.g. demarcated storage areas/racks/bins etc.</li> <li>* Special areas identified and demarcated e.g. flammable gas, cement etc.</li> <li>* Neat, safe, stable and square.</li> <li>* Store/storage areas clear of superfluous material.</li> <li>* Storage behind sheds etc. neat/under control.</li> <li>* Storage areas free from weeds, litter etc.</li> </ul>
<p>*Waste Control/Reclamation</p>	<p>Re-usable off-cuts and other re-usable material removed daily and kept to a minimum in the work areas. All re-usable materials neatly stacked/stored in designated areas. (Nails removed/bent over in re-usable timber). Issue of hardware/nails/screws/cartridges etc. controlled and return of unused items monitored.</p>
<p>Sub-contractors (Housekeeping)</p>	<p>Sub-contractors required to comply with Housekeeping requirements.</p>

14.6 Working at Heights (including roof work)

24.1.1.7 Subject	24.1.1.8 Requirement
<p>Openings</p>	<p>Unprotected openings adequately guarded/fenced/barricaded/catch nets installed</p>
	<p>Roof work discontinued when bad/hazardous weather Fall protection measures (including warning notices) when working close to edges or on fragile roofing material Covers over openings in roof of robust construction/secured against displacement</p>

14.7 Scaffolding / Formwork / Support Work

24.1.1.9 Subject	24.1.1.10 Requirement
<p>Access/System Scaffolding</p>	<p>Foundation firm / stable Sufficient bracing. Tied to Structure/prevented from side or cross movement Platform boards in good condition/sufficient/secured. Handrails and toe boards provided. Access ladders / stairs provided. Area/s under scaffolding tidy. Safe/unsafe for use signs Complying with OH&amp;S Act/SABS 085</p>
<p>Free Standing Scaffolding</p>	<p>Foundation firm / stable Sufficient bracing. Platform boards in good condition/sufficient/secured. Handrails and toe boards provided. Access ladders / stairs provided. Area/s under scaffolding tidy. Safe/unsafe for use signs Height to base ratio correct</p>

	Outriggers used /tied to structure where necessary Complying with OH&S Act/SABS 085
*Mobile Scaffolding	Foundation firm / stable Sufficient bracing. Platform boards in good condition/sufficient/secured. Handrails and toe boards provided. Access ladders / stairs provided. Area/s under scaffolding tidy. Safe/unsafe for use signs
*Mobile Scaffolding	Wheels / swivels in good condition Brakes working and applied. Height to base ratio correct. Outriggers used where necessary Complying with OH&S Act/SABS 085
Suspended Scaffolding	Outriggers securely supported and anchored. Correct No. of steel wire ropes used. Platform as close as possible to the structure. Handrails on all sides All winches / ropes / cables / brakes inspected regularly and replaced as prescribed Scaffolding complies with OHS Act (Act 85/93) Winch(es) maintained by competent person(s)
Formwork / Support Work	All components in good condition. Foundation firm / stable. Adequate bracing / stability ensured. Good workmanship / uprights straight and plumb. Good cantilever construction. Safe access provided. Areas under support work tidy. Same standards as for system scaffolding.
Special Scaffolding	Special Scaffolding e.g. Cantilever, Jib and Truss-out scaffolds erected to an acceptable standard and inspected by specialists.
Edges & Openings	Edges barricaded to acceptable standards. Manhole openings covered / barricaded. Openings in floor / other openings covered, barricaded/fenced. Stairs provided with handrails. Lift shafts barricaded / fenced off.

14.8 Ladders

24.1.1.11 Subject	24.1.1.12 Requirement
*Physical Condition / Use & Storage	Stepladders - hinges/stays/braces/stiles in order. Extension ladders - ropes/rungs/stiles/safety latch/hook in order. Extension / Straight ladders secured or tied at the bottom / top. No joined ladders used

	<p>Wooden ladders are never painted except with varnish                  Aluminium ladders NOT to be used with electrical work                  All ladders stored on hooks / racks and not on ground.                  Ladders protrude 900 mm above landings / platforms / roof.                  Fixed ladders higher than 5 m have cages/Fall arrest system</p>
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14.9 Electricity

(as part of, or additional to the manual “Safety & Switching Procedures for Electrical Installations”- see attached document)

24.1.1.13 Su bject	24.1.1.14 Requirement
*Electrical Distribution Boards & Earth Leakage	<p>Colour coded / numbered / symbolic sign displayed.                  Area in front kept clear and unobstructed.                  Fitted with inside cover plate / openings blanked off / no exposed “live” conductors / terminals/Door kept close                  Switches / circuit breakers identified.                  Earth leakage protection unit fitted and operating.                  Tested with instrument: Test results within 15 - 30 milliamps                  Aperture/Opening/s provided for the plugging in and removal of extension leads without the need to open the door                  Apertures and openings used for extension leads to be protected against the elements and especially rain</p>
*Electrical Installations & Wiring	<p>Temporary wiring / extension leads in good condition / no bare or exposed wires.                  Earthing continuity / polarity correct:  <b>Looking at the open connectors to connect the wiring, the word “Brown” has the letter ‘R’ in it, so the <u>b’R’own</u> wire connects to the ‘<u>R</u>’ight hand connector. “Blue” has the letter ‘L’ in it, so the <u>b’L’ue</u> wire connects to the ‘<u>L</u>’eft hand connector.</b>                  Cables protected from mechanical damage and moisture.                  Correct loading observed e.g. no heating appliance used from lighting circuit etc.                  Light fittings/lamps protected from mechanical damage/moisture.                  Cable arrestors in place and used inside plugs</p>
*Physical condition of Electrical Appliances & Tools	<p><u>Electrical Equipment and Tools:</u> (includes all items plugging in to a 16 Amp supply socket)                  Insulation / casing in good condition.                  Earth wire connected/intact where not of double insulated design                  Double insulation mark indicates that no earth wire is to be connected.                  Cord in good condition/no bare wires/secured to machine &amp; plug.                  Plug in good condition, connected correctly and correct polarity.</p>



14.10 Emergency and Fire Prevention and Protection

24.1.1.15 Subject	24.1.1.16 Requirement
*Fire Extinguishing Equipment	Fire Risks Identified and on record <u>The correct and adequate Fire Extinguishing Equipment available for:</u> * Offices * General Stores * Flammable Store * Fuel Storage Tank/s and catchment well * Gas Welding / Cutting operations * Where flammable substances are being used / applied. * Equipment Easily Accessible
*Maintenance	Fire equipment checked minimum monthly, serviced yearly
*Location & Signs	<u>Fire Extinguishing Equipment:</u> * Clearly visible * Unobstructed * Signs posted including “No Smoking” / “No Naked Lights” where required. (Flammable store, Gas store, Fuel tanks etc.)
* Storage Issue & Control of Flammables (incl. Gas cylinders)	Storage Area provided for flammables with suitable doors, ventilation, bund etc. Flammable store neat / tidy and no Class A combustibles. Decanting of flammable substances carried out in ignition free and adequately ventilated area. Container bonding principles applied Only sufficient quantities issued for one task or one day’s usage Separate, special gas cylinder store/storage area. Gas Cylinders stored / used / transported upright and secured in trolley/cradle/structure and ventilated. Types of Gas Cylinders clearly identified as well as the storage area and stored separately. Full cylinders stored separately from empty cylinders. All valves, gauges, connections, threads of all vessels to be checked regularly for leaks. Leaking acetylene vessels to be returned to the supplier <b>IMMEDIATELY</b> .
*Storage, Issue & Control of Hazardous Chemical Substances (HCS)	HCS storage principles applied: products segregated Only approved, non-expired HCS to be used Only the prescribed PPE shall be used as the minimum protection Provision made for leakage/spillage containment and ventilation Emergency showers/eye wash facilities provided HCS under lock & key controlled by designated person Decanted/issued in containers as prescribed with information/warning labels Disposal of unwanted HCS by accredited disposal agent No dumping or disposal of any HCS on or inside the storage area or anywhere else on the project site All vessels or containers to be regularly checked for leaks

## 14.11 Excavations

24.1.1.17 Subject	24.1.1.18 Requirement
Excavations deeper than 1.5 m.	Shored / Braced to prevent caving / falling in. Provided with an access ladder. Excavations guarded/barricaded/lighted after dark in public areas Soil dumped at least 1 m away from edge of excavation On sloping ground soil dumped on lower side of excavation All excavations are subject to daily inspections

## 14.12 Tools

24.1.1.19 Subject	24.1.1.20 Requirement
*Hand Tools	<u>Shovels / Spades / Picks:</u> * Handles free from cracks and splinters * Handles fit securely * Working end sharp and true <u>Hammers:</u> * Good quality handles, no pipe or reinforcing steel handles. * Handles free from cracks and splinters Handles fit securely <u>Chisels:</u> * No mushroomed heads / heads chamfered * Not hardened * Cutting edge sharp and square <u>Saws:</u> * Teeth sharp and set correctly * Correct saw used for the job
*Explosive Powered Tools.	Only used by trained / authorised personnel. Prescribed warning signs placed / displayed where tool is in use. Work area must be properly isolated/demarcated during use of tool. Inspected at least monthly by competent person and results recorded. Issue and return recorded including cartridges / nails and unused cartridges / nails / empty shells recorded. Cleaned daily after use.

## 14.13 Cranes

24.1.1.21 Subject	24.1.1.22 Requirement
Tower Crane	Only operated by trained authorised operator with valid certificate of training Structure - no visible defects Electrical installation good/safe Crane hook: Throat pop marked/safety latch fitted/functional

	<p>SWL/MML displayed                  Limit switches with backup switches fitted/operational                  Access Ladder fitted with backrests/Fall arrest system installed                  Lifting tackle in good condition/inspection colour coding                  Lifting tackle checked daily</p>
*Mobile Crane	<p>Only operated by trained authorised operator with valid certificate of training                  Rear view mirrors                  Windscreen visibility good                  Windscreen wipers operating effectively                  Indicators operational                  Hooter working                  Tyres safe/sufficient tread/pressure visibly sufficient                  No missing Wheel nuts                  Headlights, taillights operational                  Reverse alarm working and audible and known by all employees</p>
*Mobile Crane continued	<p>Grease nipples and grease on all joints                  No Oil leaks                  Hydraulic pipes visibly sound/no leaks                  No corrosion on Battery terminals                  Boom visibly in good condition/no apparent damage                  Cable/sheaves greased/no visible damage/split wires/corrosion and checked daily                  Brakes working properly                  Crane hook: Throat pop marked/safety latch fitted/functional                  SWL/MML displayed                  By-pass valves operational                  Deflection chart displayed/visible to operator/driver                  Outriggers functional used</p>
*Gantry Crane	<p>Only operated by trained authorised persons                  Correct slinging techniques used                  Recognised/displayed on chart signals used                  Log book kept/up to date                  Prescribed inspections conducted on crane &amp; lifting tackle and checked daily                  "Crane overhead" signage, where applicable                  Crane hook: Throat pop marked/safety latch fitted/functional                  SWL/MML displayed/load limiting switches fitted/operational</p>

14.14 Builder's Hoist

24.1.1.23 Subject	24.1.1.24 Requirement
Builder's Hoist	<p><b>"Hoist In Operation"</b> - sign displayed.                  General construction strong and free from patent defects.  <u>Tower:</u> * Adequately secured / braced.                  * At least 900 mm available for over travel.                  * Barricaded at least 2 100 mm high at ground level and floors.</p>

	<ul style="list-style-type: none"> <li>* Landing place provided with gate at least 1 800 high.</li> <li><u>Platform:</u> * No persons conveyed on platform</li> <li>* Steel wire ropes with breaking strength of six times max. load.</li> <li>* Signal systems used which may include two way radio connection.</li> <li>* Goods prevented from moving / falling off.</li> <li>* Effective brake capable of stopping and holding max. load.</li> </ul>
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14.15 Transport & Materials Handling Equipment

24.1.1.25 Subject	24.1.1.26 Requirement
*Site Vehicles	All Site Vehicles, Dumpers, Bobcats, Loaders etc; checked daily before use by driver / operator. Inventory of vehicles used/operated on site Inspection by means of a checklist / results recorded. No persons riding on equipment not designed or designated for passengers. Site speed limit posted, enforced and not exceeded. Drivers / Operators trained / licensed and carrying proof. No unauthorised persons allowed to drive / operate equipment.
Conveyors	Conveyor belt nip points and drive gear guarded. Emergency stop/lever/brake fitted, clearly marked & accessible and tested to be functional under full load.

14.16 Site Plant and Machinery

24.1.1.27 Subject	24.1.1.28 Requirement
Brick Cutting Machine	Operator Trained. Only authorised persons use the machine. Emergency stop switch clearly marked and accessible. Area around the machine dry and slip/trip free/clear of off-cuts All moving drive parts guarded/electrical supply cable protected Operator using correct PPE - eye/face/hearing/foot/hands/body.
*Electric Arc Welder	Welder Trained. Only authorised / trained persons use welder. Earth cable adequately earthed to work. Electrode holder in good condition/safe Cables, clamps & lugs/connectors in good condition. Area in which welding machine is used is dry/protected from wet. Welder using correct PPE - eye/ face/foot/body/respirator. Correct transparent screens & warning signs placed
*Woodworking Machines	Operators Trained. Only authorised persons use machines. Provided with guards. Guards used.

	<p>Operators using correct PPE - eye/face/feet/hearing</p> <p>Circular saws strictly operated according to prescribed methods and settings</p> <p>Only prescribed saw blades (cross-cut, ripping blade, smooth cut, aluminium) shall be used for various applications</p>
*Compressors	<p>Relief valves correctly set and locked / sealed.</p> <p>Maximum Safe Working Pressure (MSWP) indicated on face of pressure gauge: not on glass cover.</p> <p>All drives adequately guarded.</p> <p>Receiver/lines drained daily</p> <p>Hoses good condition/clamped, not wired</p> <p>Compressed air NEITHER used to dust off clothing/PPE/ and work areas NOR on bare skin</p>
Concrete Mixer / Batch Plant	<p>Top platform provided with guardrails.</p> <p>Dust abatement methods in use.</p> <p>Operators using correct PPE - eye / hands / respirators.</p> <p>All moving drive parts guarded.</p> <p>Emergency stops identified / indicated and accessible.</p> <p>Area kept clean/dry/and free from tripping and slipping hazards.</p> <p>Operators overseer identified and crane signals displayed and used.</p>
*Gas Welding / Flame Cutting Equipment	<p>Only authorised/trained persons use the equipment.</p> <p>Torches and gauges in good condition.</p> <p>Flashback arrestors fitted at cylinders and gauges.</p> <p>Hoses in good condition/correct type/all connections with clamps</p> <p>Cylinders stored, used and transported in upright position, secured in trolley / cradle / to structure.</p> <p>All cylinders regularly checked for leaks, leaking cylinders returned immediately</p> <p>Fire prevention/control methods applied/hot work permits</p>

14.17 Plant & Storage Yards/Site Workshops Specifics

24.1.1.28.1.1.1.1.1	Subject	24.1.1.28.1.1.1.1.2	Requirements
Section 8(2)(1)	General Machinery Regulation 2(1): <b>Supervision of the Use &amp; Maintenance of Machinery</b>	Person/s with specific knowledge and experience designated in writing to Supervise the Use & Maintenance of Machinery	Critical items of Machinery identified/numbered/placed on register/inventory Inspection/maintenance schedules for abovementioned Inspections/maintenance carried out to above schedules Results recorded
	General Machinery Regulation 9(2): <b>Notices re. Operation of Machinery</b>	Schedule D Notice posted in Work areas	
Pressure Equipment Regulation 13(1)(b): <b>Supervision of the Use &amp; Maintenance of Vessels under Pressure (VuP)</b>		Person/s with specific knowledge and experience designated in writing to Supervise the Use & Maintenance of VuP's	VuP's identified/numbered/placed on register/Manufacturers plate intact Inspection/maintenance schedules for abovementioned

	Inspections/maintenance carried out to above schedules Results recorded/Test certificates available
Lock-out Procedure	Lock-out procedure in operation
Ergonomics	Ergonomics survey conducted - results on record Survey results applied
Demarcation & Colour Coding	Demarcation principles applied All services, pipes, electrical installation, stop-start controls, emergency controls etc. colour coded to own published or SABS standard Employees trained to identify colour coding
Portable & Bench Grinders	Area around grinder clear/trip/slip free Bench grinders mounted securely/grinder generally in good condition/No excessive vibration On/Off switch/button clearly demarcated/accessible Adequate guards in place Tool rest - secure/square/max. 2 mm gap, perpendicular to drive shaft Stone/disk - correct type and size/mounted correctly/dressed Use of Eye protection enforced
Battery Storage & Charging	Adequately ventilated, ignition free room/area/no smoking sign/s Batteries placed on rubber/wooden surface Emergency shower/eye wash provided No acid storage in area Prescribed methods in place and adhered to when charging batteries
Ancillary Lifting Equipment	Chain Blocks/Tirfors/jacks/mobile gantries etc. identified/ numbered on register Chains in good condition/links no excessive wear/checked daily Lifting hooks - throat pop marked/safety latch fitted SWL/MML marked/displayed
Presses/Guillotines/Shears	Only operated by trained/authorised persons Interlocks/lock-outs fitted/PPE worn or used at all times

14.18 Workplace Environment, Health and Hygiene

24.1.1.29 Subject	24.1.1.30 Requirement
*Lighting	Adequate lighting in places where work is being executed e.g. stairwells and basements. Light fittings placed / installed causing no irritating/blinding glare. Stroboscopic effect eliminated (not only reduced) where moving objects or machinery is used
*Ventilation	Adequate ventilation / extraction / exhausting in hazardous areas e.g. chemicals / adhesives / welding / petrol or diesel/ motors running and in confined spaces / basements.
*Noise	Tasks identified where noise levels exceeds 85 dB at any one time. All reasonable steps taken to reduce noise levels at the source.

	Hearing protection used where noise levels could not be reduced to below 85 dB.
*Heat Stress	Measures in place to prevent heat exhaustion in heat stress problem areas e.g. steel decks, when the WBGT index reaches 30. (See Environmental Regulation 4) Cold drinking water readily available at all times.
*Ablutions	Sufficient hygiene facilities provided - 1 toilet per 30 employees (National Building Regulations prescribe chemical toilets for Construction sites) Toilet paper available. Sufficient showers provided. Facilities for washing hands provided Soap/cleaning agent available for washing hands Means of drying hands available Lock-up changing facilities / area provided. Ablution facilities kept hygienic and clean.
*Eating / Cooking Facilities	Adequate storage facilities provided. Weather protected eating area provided, separate from changing area Refuse bins with lids provided. Facilities kept clean and hygienic.
*Pollution of Environment	Measures in place to minimize dust generation. Accumulation or littering of empty cement pockets, plastic wrapping / bags, packing materials etc. prevented. Spillage / discarding of oil, chemicals and diesel into storm water and other drains or into existing or newly dug holes/cavities on site expressly prohibited.
*Hazardous Chemical Substances	All substances identified and list available e.g. acids, flammables, poisons etc. Material Safety Data Sheets (MSDS) indicating hazardous properties and emergency procedures in case of incident on file and readily available. Substances stored safely. Expiry dates meticulously checked where applicable

## 25 15. THE PRINCIPAL CONTRACTOR'S GENERAL DUTIES

The Principal Contractor shall at all times ensure his status of an "employer" as referred to in the Act, and will abide by his/her responsibilities, duties and functions as per the requirements of the Act and Regulations with specific reference to Section 8 of the Act.

The Principal Contractor shall keep, and on demand make available, a copy of the Act on site at all times and in addition to that he/she will introduce and maintain a file titled "Health and Safety File", or other record in permanent form, which shall contain all relevant aspects and information as contemplated in the Construction Regulations. He/she will make this file available to the client or his representative whenever necessary or on request to an interested party.

## **26 16. THE PRINCIPAL CONTRACTOR'S SPECIFIC DUTIES**

The Principal Contractor's specific duties in terms of these specifications are detailed in the Construction Regulations as published under government notice No.R84 in GG 37305 of 7 February 2014.

The Principal Contractor is specifically referred to the following elements of the Construction Regulations:

Regulation No. 1	- Definitions
Regulation No. 2	- Scope of application
Regulation No. 4	- Notification of construction work
Regulation No. 7	- Principal Contractor and Contractor
Regulation No. 8	- Supervision of construction work
Regulation No. 9	- Risk Assessment
Regulation No. 28	- Stacking & Storage on construction sites
Regulation No. 30	- Construction welfare facilities
Regulation No. 32	- Approved Inspection authorities
Regulation No. 33	- Offences and penalties

This list must not be taken to be exclusive or exhaustive!

The Principal Contractor shall ensure compliance to the Act and its Regulations and specifically to the above regulations, and document each record in the Health and Safety File.

## **27 17. THE PRINCIPAL CONTRACTOR'S SPECIFIC RESPONSIBILITIES WITH**

### **28 REGARD TO HAZARDOUS ACTIVITIES**

The following activities are identifiable as hazardous in terms of the Construction Regulations.

The contractor shall execute the activities in accordance with the following Construction Regulations and other applicable regulations of the Act:

Regulation No. 10	- Fall protection
Regulation No. 11	- Structures
Regulation No. 12	- Formwork and support work



- |                   |  |
|-------------------|--|
| Regulation No. 13 | - Excavation work  |
| Regulation No. 14 | - Demolition work  |
| Regulation No. 15 | - Tunneling  |
| Regulation No. 16 | - Scaffolding  |
| Regulation No. 17 | - Suspended platforms  |
| Regulation No. 18 | - Rope Access Work   |
| Regulation No. 19 | - Material hoists  |
| Regulation No. 20 | - Batch plants   |
| Regulation No. 21 | - Explosive powered tools  |
| Regulation No. 22 | - Cranes   |
| Regulation No. 23 | - Construction vehicles & mobile plant.                                |
| Regulation No. 24 | - Electrical installations and machinery on construction sites         |
| Regulation No. 25 | - Use and temporary storage of flammable liquids on construction sites |
| Regulation No. 26 | - Water environments   |
| Regulation No. 27 | - Housekeeping on construction sites                                   |
| Regulation No. 29 | - Fire precautions on construction sites.                              |

This list must not be taken to be exclusive or exhaustive!

All of the above requirements will be read in conjunction with the relevant regulations and health and safety standards as required by the Act. All documents and records required by the Construction Regulations will be kept in the Health and Safety File and will be made available at any time when required by the client or his representative, or on request to an interested party.

## **29 18. GENERAL NOTES TO THE PRINCIPAL CONTRACTOR**

### **Legal Framework**

Part of legal obligations

The more important Acts and relevant subordinate/secondary legislation as well as other (inter alia Local Government) legislation that also apply to the State as well as to State owned buildings and premises: -

- (i) The latest issue of SABS 0142: "Code of Practice for the Wiring of Premises"
- (ii) The Local Government Ordinance 1939 (Ordinance 17 of 1939) as amended and the municipal by-laws and any special requirements of the local supply authority
- (iii) The Fire Brigade Services Act 1987, Act 99 of 1987 as amended
- (iv) The National Building Regulations and Building Standards Act 1977 (Act 103 of 1977) as amended and relevant proclaimed Regulations (SABS 0400)
- (v) The Post Office Act 1958 (Act 44 of 1958) as amended
- (vi) The Electricity Act 1984, Act 41 of 1984
- (vii) The Regulations of Local Gas Board(s), including Publications of the SABS Standards and Codes of Practice, with specific reference to GNR 17468 dated 4<sup>th</sup> October 1997
- (viii) Legislation pertaining to water usage and the environment
- (ix) Legislation governing the use of equipment, which may emit radiation (e.g. X-Rays etc.)
- (x) Common Law

### **Legal Liabilities**

Common Law and Legislation

Based on two main criteria -

- Would the reasonable person have foreseen the hazard?  
**That is a reasonable person in that specific position, taking experience, qualifications, authority, position in the organization etc. into consideration**
- Would the reasonable person have taken precautionary measures (action) to prevent or limit the hazard?

Negligence can be proven on failure on **any** or **both** of the above criteria  
(There may not necessarily be a relationship between criminal and civil liability!)

### **30 19. HOUSE KEEPING**

Good housekeeping will be maintained at all times as per Construction Regulation No. 27. Poor housekeeping contributes to three major problems, namely, costly or increased accidents, fire or fire hazards and reduction in production. Good housekeeping will enhance production time.

Particular emphasis is to be placed on the following crucial elements of a construction site:

- Phase priorities and production/plant layout
- Enclosures
- Pits, openings and shoring
- Storage facilities
- Effective, sufficient and maintained lighting or illumination
- Principal sources of injuries e.g. stairways, runways, ramps, loose building material
- Oil, grease, water, waste, rubble, glass, storm water
- Colour coding
- Demarcations
- Pollution
- Waste disposal
- Ablution and hygiene facilities
- First aid

This list must not be taken to be exclusive or exhaustive!

In promotion of environmental control all waste, rubble, scrap etc, will be disposed of at a registered dump site and records will be maintained. Where it is found to be impractical to use a registered dump site or it is not available, the Principal Contractor will ensure that the matter is brought to record with the client or his representative, after which suitable, acceptable alternatives will be sought and applied.

Dross and refuse from metals, and waste matters or by-products whose nature is such that they are poisonous or capable of fermentation, putrefaction or constituting a nuisance shall be treated or disposed of by methods approved of by an inspector.

NOTE: No employer (Principal Contractor) shall require or permit any person to work at night or after hours unless there is adequate, suitable artificial lighting including support services in respect of Health and Safety.

### **31 20. LOCKOUT SYSTEMS - ELECTRICAL!**

A system of control shall be established in order that no unauthorized person can energize a circuit, open a valve, or activate a machine on which people are working or doing maintenance, even if equipment, plant or machinery is out of commission for any period, thus eliminating injuries and damage to people and equipment as far as is reasonably practicable.

Physical/mechanical lock-out systems shall be part of the safety system and included in training. Lockouts shall be tagged and the system tested before commencing with any work or repairs.

**32 21. INCIDENT INVESTIGATION**

Inspection and reporting is the best way in which a responsible contractor can control his area of responsibility. All incidents therefore, irrespective of whether it gave rise to loss, injury, damage or not, shall be investigated and the results recorded in the Health and Safety File. (GAR 9)

**33 22. GENERAL**

The project under control of the Principal Contractor shall be subject to periodic health and safety audits that will be conducted by the client at intervals agreed upon between the Principal Contractor and the client, provided such intervals will not exceed periods of one month. The Principal Contractor is to ensure that he/she and all persons under his control on the construction site shall adhere to the above specifications, as non-conformance will lead to the client taking action as directed by Construction Regulation 5.1(q). The Principal Contractor should note that he/she shall be held liable for any anomalies including costs and resulting deficiencies due to delays caused by non-conformance and/or non-compliance to the above Health and Safety Specifications and the Health and Safety Plan based on these specifications.

**34 23. IMPORTANT LISTS AND RECORDS TO BE KEPT**

The following are lists of several records that are to be kept in terms of the Construction Regulations. The lists are:

- 1 List of appointments
- 2 List of record keeping responsibilities
- 3 Inspection checklist

These lists and documents are to be used as a point of reference to determine which components of the Act would be applicable to a particular site or task or project, as was intended under paragraph 1 (“Preamble”) above.

**LIST OF APPOINTMENTS**

<b>Item</b>	<b>Regulation</b>	<b>Appointment</b>	<b>Responsible Person</b>
1.	5(1)(k)	Principal contractor for each phase or project	Client
2.	7(1)©	Contractor	Principal Contractor

3.	8 (1)	Construction Manager	Contractor
4.	8(2)	Assistance Construction Manager	Contractor
5.	8(5)	Health and Safety Officer	Contractor
6.	8(7)	Construction supervisor	Contractor
7.	9(1)	Person to carry out risk assessment	Contractor
8.	10(1)(a)	Fall protection planner	Contractor
9.	11(2)(a)	Structure Inspector	
10.	12(1)	Temporary Work Designer	Contractor
11.	13(1)	Excavation Supervisor	Contractor
12.	14(1)	Supervisor Demolition Work	Contractor
13.	16(1)	Scaffold Supervisor	Contractor
14.	17(1)	Suspended Platform Supervisor	Contractor
15.	18(1)(a)	Rope Access Supervisor	Contractor
16.	19(8)(a)	Material Hoist Inspector	Contractor
17.	20(1)	Batch Plant Supervisor	Contractor
18.	21(1)	Person to control and do the issuing and collection of cartridges and nails/studs	Contractor
19.	23(1)(k)	Construction Vehicle and mobile plants inspector	Contractor
32.	24 (c)	Temporary electrical installations controller	Contractor
33.	28 (a)	Stacking and storage supervisor	Contractor
34.	29 (h)	Fire equipment inspector	Contractor

## 23.2 LIST OF RECORD KEEPING RESPONSIBILITIES

34.1.1.1.1ITEM	34.1.1.1.2 CR	34.1.1.1.3RECORD TO BE KEPT	RESPONSIBLE PERSON
1.	4(1)	Notification to Provincial Director - Annexure A Available on site	Principal Contractor
2.	7(1)	Copy of Principal Contractor's Health & Safety Plan Available on request	Client
3.	7(1)	Copy of Principal Contractor's Health & Safety Plan As well as each Contractor's Health & Safety Plan Available on request	Principal Contractor

4.	7(1)(b)	Health and Safety File opened and kept on site (including all documentation required in the. OHS & Regulations Available on request	Every Contractor
5.	7(1)(b)	Consolidated Health and Safety File handed to Client on completion of Construction work. To include all documentation required i.t.o. OHS & Regulations and records of all drawings, designs, materials used and similar information on the structure	Principal Contractor
6.	7(1)(i-g)	Comprehensive and Updated List of all Contractors on site, the agreements between the parties and the work being done Included in Health and Safety file and available on request	Principal Contractor
7.	7(1)(b)	Keep record on the Health and Safety File of the input by Construction Safety Officer [CR 8 (5)(a)] at design stage or on the Health and Safety Plan	Contractor
8.	9(1)	Risk Assessment - Available on site for inspection	Contractor
9.	7 (7 )	Proof of Health and Safety Induction Training	Every Employee on site
10.	10(3)	Construction Supervisor [CR 8(7)] has latest updated version of Fall Protection Plan [CR 10(b)]	Contractor
11.	6(1)(d)	Inform client and contractor in writing of dangers and hazards relating to construction work	Designer of Structure
12.	11(1)©	All drawings pertaining to the design of structure On site available for inspection	Contractor
13.	11(2)(b)	Record of inspections of the structure [First 2 years - once every 6 months, thereafter yearly] - Available on request	Owner of Structure
14.	11(2)(d)	Maintenance records - safety of structure - Available on request	Owner of Structure
15.	12(d)	Drawings pertaining to the design of temporary work - Kept on site, available on request	Contractor
16.	13(2)(h)	Record of excavation inspection - On site available on request	Contractor
17.	17(11)	Suspended Platform inspection and performance test records	Contractor

		Kept on site available, on request	
18.	19(8)(a)	Material Hoist daily inspection entered and signed in record book kept on the premises	Contractor
19.	19(8)(d)	Maintenance records for Material Hoist - Available on site	Contractor
20.	21(8)	Records of Bulk Mixing Plant maintenance and repairs On site available for inspection	Contractor
21.	21(2)(g)(ii)	Issuing and collection of cartridges and nails or studs (Explosive Powered Tools) recorded in register - recipient signed for receipt as well as return	Contractor
22.	23(1)(k)	Findings of daily inspections (prior to use) of Construction Vehicles and Mobile Plant	Contractor
23.	24(e)	Record of temporary electrical installation inspections [once a week] and electrical machinery [daily before use] in a register and kept on site	Contractor
24.	29(l)	Fire Evacuation Plan	Contractor

## 23.3 INSPECTION CHECKLIST

## 35

<b>Employer Particulars</b>	
Employer:	
Registered Name of Enterprise:	
Trade Name of Enterprise:	
Company Registration No.:	
SARS Registration No.:	
UIF Registration No.:	
COIDA Registration No.:	
Relevant SETA for EEA purposes:	
Industry Sector:	
Bargaining Council:	
Contact Person:	
Address of Premises:	
Postal Address:	
Telephone Number:	
Fax Number:	
E-mail Address:	
Chief Executive Officer:	
Chief Executive Officer Address:	
Competent Person:	

Maximum power demand: in KW	
Health and Safety Representatives:	
Activities, products manufactured and/ services rendered:	
Raw materials, materials and chemical/ biological substances:	
Total Number of Employees:	Male: Female:

<b>Contractor Particulars</b>	
Contractors:	
Site Address:	
Contracts Manager:	
Managing Director:	
Competent Persons:	
CR16(1): SCAFFOLDING:	
CR17(1): SUSPENDED SCAFFOLDING:	
CR19(8)(a): MATERIAL HOIST (S):	
CR20(1): BATCH PLANT:	
CR10(1)(a): FALL PROTECTION:	
CR13(1)(a): EXCAVATION WORK:	
CR14(1): DEMOLITION WORK:	
CR21(1)(g)(i): EXPLOSIVE ACTUATED FASTENING DEVICE	
CR28(a): STACKING	

INSPECTION		N/A	YES	NO
SECTION/REGS	ITEM CHECKED			
	<b>APPOINTMENTS</b>			
CR8(1)	Supervisor:			
CR8(2)	Assistant Supervisor:			
S17(1)	Health & Safety Representative: (ratio)			
S19(1)	Health & Safety Committees			
CR 14(1)	Demolition Director			
	<b>DOCUMENTS</b>			
GAR 9(1)	Records of Incidents			
GAR 4	Copy of the Act			



GAR 7	Safety Reps Report			
GAR 8	Safety Committee Minutes			
DMR 18(7)	Lifting Machinery Log (Crane)			
CR 4(3)	Notification of Construction Work			
CR 7(2)	Risk Assessment			
CR 7(7)	Proof of the Health & Safety Induction Training			
CR 13(h)	Inspection of Excavation (Records)			
CR 22(f)	Crane Operator Medical Certificate			
CR 23(1)(d)(ii)	Mobile Plant Operator Medical Certificate			
CR 20(8)	Batch Plant Repairs & Maintenance Records			
CR24(c)	Temporary Electrical Installation Record			
CR 7(2)(b)	Health & Safety File			
CR 17(11)	Suspended Platforms' Performance Records			
CR 19 (c )	Material Hoists Record Book			
IMPROV NOTICE	Scaffolding Log Book			
CR 23(1)(d)(ii)	Medical Certificate of Fitness			
CR 23(1)(k)	Construction Vehicle & Mobile Plant Register			
CR 24(e)	Electrical Installation & Machinery Register			
	<b>INCIDENTS</b>			
GAR 8(1) S24	Reported			
GAR 9(1)	Recorded Investigated Action Taken			
	<b>PUBLIC SITE</b>			
FR 2(1)	Sanitary Facilities			
CR 30(1) (c)	Changing Facilities for each sex			
CR 27(f)	Perimeter fence & no admittance			
CR 27(d)	Overhead protection netting/falling objects			
NB Notice	Pedestrian warning			
	<b>PERSONAL SAFETY EQUIPMENT</b>			
	Items Issued:			
GSR 2(3)	Items Required:			
S23	(What is the payment on each item?)			
	<b>SAFETY PLANS</b>			
	FIRST AID			
GSR 3(6)	Name(s) of First Aider(s):			
CR 5(1)(b)	Client's Health & Safety Specification			
CR7(1)	Principal's contractor H&S Plan			
	<b>FIRE HAZARD &amp; PRECAUTIONS</b>			
GSR 4	Flammables used, waste, hot work, diesel, fuel, gas			

ER 9(1)	Portable Extinguishers			
	<b>ELECTRICAL INSTALLATIONS &amp; MACHINERY</b>			
CR22	Guarding & PPE to Electrical Installations			
	<b>ILLUMINATION</b>			
ER 3(6)	Dangerous Places and signage as well			
	Housekeeping			
ER6(2)(b),(c),(d)	Clear space storage			
ER6(3)	Disposal of waste			
	<b>EXCAVATIONS</b>			
CR 13(2)(i)	Barricades (plus illumination!)			
CR 13(2)(d)	Safe Depth Shoring/Bracing			
CR 13(2)(h)	Monitored			
CR 13(2)(h)	Excavation Inspection Record			
	<b>GUARDING</b>			
ER 6(2)(f)	Floor Openings (plus illumination!)			
	Floor slab sides, Shafts (plus illumination!)			
	<b>SITE EQUIPMENT</b>			
GSR 13A(a)	Ladders condition, secured			
IMPROV	Scaffold condition, secured			
	Platforms no. of boards condition Support 1.25. Toe Boards			
IMPROV	Hand Rails			
	<b>SITE MACHINES</b>			
DMR 3(2)(3)	Circulars, guards, riving knives			
DMR 2(a)	Mixers guarded			
	<b>ELECTRIC POWER</b>			
EMR 6(1)	Supply Board, condition E.L Relay Test			
GMR 3(1)	Condition of Tools, Leads, Plugs, etc			
	<b>LIFTING MACHINE/TACKLE</b>			
DMR 18(8)	Lifting of persons			
DMR 18(8)	Condition, Securing of Load			
	<b>EXPLOSIVE POWERED TOOLS</b>			
CR 19(1)	Safe Use and Storage			
IMPROV	Warning Notice			
	<b>ROOF WORK</b>			
CR 10(5)(f)	Safety equipment & precautions			
CR 10(2)	Fall protection plan			
CR 10(3)	Updated fall protection plan			
	<b>ASBESTOS CEMENT</b>			
AR 10(a)	Suitable Tools			

**WARNING: Under no circumstances shall any work of any nature whatsoever on any ASBESTOS material be undertaken unless the work is entrusted and mandated to a “REGISTERED ASBESTOS CONTRACTOR” in terms of the Asbestos Regulations. [CR 12(9)] (Contact the Regional Manager’s Office)**

**NOTE:**

The guidelines and conditions provided in this attached document form an integral constituent of the Health and Safety Specifications. It is therefore a condition of acceptance that no Health and Safety Plan shall be complete unless all relevant elements of this document applicable to the above project have been included in the Health and Safety Plan.

*I hereby certify that I fully understand the contents of this Health and Safety Specification and the consequences of no-compliance.*

Signed at .....on the ..... Day of  
.....20.....

Name

.....Signature.....

..

**B: ENVIRONMENTAL MANAGEMENT PROGRAMME**

Refer to Annexure D (to be emailed).

**C3.7 VARIATIONS AND ADDITIONS TO SABS 1200 STANDARDIZED SPECIFICATIONS AND PARTICULAR SPECIFICATIONS**

Note: The below lists are not deemed exhaustive, and other specifications listed or referenced in the document may be applicable as required.

**STANDARD SPECIFICATIONS**

SANS 1200 A	GENERAL
SANS 1200 AB	ENGINEER'S OFFICE
SANS 1200 C	SITE CLEARANCE
SANS 1200 D	EARTHWORKS
SANS 1200 DB	EARTHWORKS (PIPE TRENCHES)
SANS 1200 G	CONCRETE
SANS 1200 L	MEDIUM PRESSURE PIPELINES
SANS 1200 LE	STORMWATER DRAINAGE

*PSA : GENERAL*  
(Applicable to SABS 1200 A - 1986)

**PSA 3: MATERIALS**

**Add the following new sub-clause:**

**PSA 3.3: ORDERING OF MATERIALS**

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

Any reliance placed by the Contractor on the estimated quantities stated in the Schedule of Quantities issued for tendering purposes, or measurements made by the Contractor from Drawings issued for tendering purposes only, shall be entirely at the Contractor’s risk and the Employer accepts no liability whatsoever in respect of materials ordered by the Contractor for construction purposes.”

The Contractor shall ensure that the work is not delayed, due to the lack of materials on the site of the works, by placing orders with suppliers for the materials required under this contract timeously.

The Contractor shall, by producing copies of written orders or written enquires for supplies, prove to the satisfaction of the Engineer that any delay occasioned by non-availability of materials has been caused by the inability of suppliers to supply and not by his own lack of timely ordering or lack of exhaustive enquiry for supplies, before any extensions of the contract time will be allowed due to such delays.

**PSA 4: PLANT**

**PSA 4.2: CONTRACTOR’S OFFICES, STORES AND SERVICES**

Add the following:

“No housing is available for the Contractor's employees, and the Contractor shall, at his own cost, make arrangements with Local Authorities regarding the housing of his employees.”

**Add the following new sub-clauses:**

**PSA 4.3 PLANT FOR CONSTRUCTION PURPOSES**

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

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

**PSA 5: CONSTRUCTION**

**Add the following new sub-clauses:**

**PSA 5.9: DAYWORKS:**

**PSA 5.9.1: SCOPE**

“Dayworks is to be understood to be work and/or material, the provision of which cannot, in terms of the Contract be measured in the normal items of the Schedule of Quantities and has to be measured in terms of time and cost.”

**PSA 5.10: SITE MEETINGS**

The contractor will be required to attend site meetings, normally held once a month, to discuss general progress, quality of work, problems, claims, payments, etc.

**PSA 7: TESTING**

**PSA 7.2: APPROVED LABORATORIES**

Add the following:

“The independent laboratory used by the Contractor, if approved by the Engineer, shall be deemed to be an approved laboratory.”

**PSA 8: MEASUREMENT AND PAYMENT**

**PSA 8.1: MEASUREMENT**

**PSA 8.1.2: PRELIMINARY AND GENERAL ITEM OR SECTION**

**PSA 8.1.2.3: CONTRACTOR TO PRICE ALL ITEMS**

Add the following:

“Where the Contractor inserts ‘NIL’, “included”, or omits to insert a rate in the ‘Rate’ column, this shall be interpreted as a rate or price of zero.”

**PSA 8.3.5 Provision of Materials Guarantee** Unit: Sum

This shall include the cost of acquiring and maintaining an on-demand materials guarantee for the construction duration.

**PSA 8.4: SCHEDULED TIME-RELATED ITEMS**

**Add the following new payment items:**

**PSA 8.4.6: COMPLIANCE WITH OHS ACT (1993, AS AMENDED), THE CONSTRUCTION REGULATIONS (2014) AND THE PARTICULAR SAFETY SPECIFICATION:**  
Unit: Sum

“The rates and prices tendered by the Contractor shall be deemed to include all costs for conforming to the requirements of the Act, the Construction Regulations and the Employer’s Health and Safety Specification as applicable to this contract. (See Particular Specification C3.6)

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

**PSA 8.4.7: COMPLIANCE WITH ENVIRONMENTAL MANAGEMENT**

**PLAN**

Unit: Sum

“The rates and prices tendered by the Contractor shall be deemed to include all costs for conforming to the requirements of the Environmental Management Plan as well as the EMPr as applicable to this contract. (See Particular Specification C3.5.1 and EMPr (Annexure D)

Should the Contractor fail to comply with the provisions of the Environmental Management Plan, he will be liable for penalties as provided in the Environmental Management Specification.”

**PSA 8.4.8: SUPERVISION OF SUBCONTRACTOR**

Unit: Sum

The rates shall cover the cost of supervising the Subcontractor including overheads, charges and profit for the duration of construction.

**PSA 8.7: DAYWORK**

Add the following:

“Payment for work on a daywork basis will only be made if:

- a) It is agreed by the Engineer to be outside the specified scope of a measured item in the Contract.
- b) It is carried out in response to a written instruction by the Engineer.
- c) The records of plant, labour and material are submitted daily for the consideration of the Engineer and duly approved.

The rates submitted for daywork are to be approved by the engineer prior to any work being undertaken.

**PSA 8.8: TEMPORARY WORKS****PSA 8.8.2: DEALING WITH TRAFFIC (OR ACCOMMODATION OF TRAFFIC)**

Unit: Sum

Add the following:

“The rate shall cover all costs pertaining to the provision, erection, moving, re-erection and maintenance of all temporary barricades, road signs, lights, flagmen, etc. as required for the guarding and protection of the Works as well as all other costs to accommodate the traffic during construction.

All signs provided by the Contractor shall be in accordance with the latest issue of the South African signs manual.”

Add new payment item :

**PSA 8.8.7: CONTRACTOR TO PROVIDE "CONSTRUCTION RECORD" INFORMATION**

Unit: Sum

The tendered rate for this item to include for the surveying of the pipeline route, including pipe invert levels as laid, the position of all valve chambers, reservoir inlet, outlet and bulk meter chambers, reservoir positions and perimeter fencing by an independent Surveyor. The information supplied to the Engineer is to be in the form coordinated Autocad drawings and Model Maker “tot” survey files.



**PSAB : ENGINEER'S OFFICE**  
(Applicable to SABS 1200 AB - 1986)

**PSAB 3: MATERIALS**

**PSAB 3.1: NAMEBOARDS**

Add the following to sub-clause:

The Contractor shall supply and install and include in his rates for the standard applicable infrastructure grant name board provided in the drawings. 2 No. name boards. The board shall be erected prior to any execution of work. The name board shall also comply with the EPWP requirements.

The boards shall be placed in a position designated by the Engineer for the full duration of the contract.

**PSAB 3.2: OFFICE BUILDING**

Replace sub-clause with the following:

"The Contractor shall provide and maintain a single office (one room) with a floor area of at least 12 m<sup>2</sup> and a ceiling height of at least 2,5 m. The office shall be lockable and waterproof. Ablution facilities for the sole use of the Engineer and his site staff shall also be provided.

The office furnishings shall include:

- a) Three office desks each with lockable drawers
- b) Three high swivel chairs
- c) Meeting facilities with a table and chairs to seat at least 12-15 people (for purposes of site meetings).
- d) Acceptable lighting
- e) Internet Facilities (uncapped)
- f) Engineer's laptop
- g) Air-conditioning in Engineers office
- h) A facility to store / hang drawings
- i) Printing facilities
- j) Drawing rack
- k) 5 No. shade cloth covered parking
- l) Engineer's vehicle

On completion of the Works, ownership of the building and the furnishings shall revert to the Contractor who shall remove them from site."

**PSAB 4: PLANT**

**PSAB 4.1: TELEPHONE**

Delete this clause in its entirety and replace with the following:

"Telephone facilities are required by the Engineer. A cellphone with a prepaid sim card to the value of R5000 per month will be required for the Engineer's Representative."

**PSC : SITE CLEARANCE**  
(Applicable to SABS 1200 C - 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 shall be within the free-haul distance unless confirmed and approved by the Engineer, Local Authority and/or Environmental Officer for the project. 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 8.2 SCHEDULED ITEMS**

**PSC 8: MEASUREMENT AND PAYMENT**

**PSC 8.2.5: TAKE DOWN EXISTING FENCES**

Unit: km

Add the following:

“The unit rate tendered for removal and re-erection of fences and gates shall cover the cost of reinstatement of the fence to its original condition.”

*PSD : EARTHWORKS*  
(Applicable to SABS 1200 D - 1988)

**PSD 5: CONSTRUCTION**

**PSD 5.2: METHODS AND PROCEDURES**

**PSD 5.2.3: PLACING AND COMPACTION**

**Add the following new sub-clauses:**

**PSD 5.2.3.3: EROSION CONTROL BERMS**

“Where instructed by the Engineer, earth berms shall be constructed to the dimensions shown on the drawings or to the detail instructed by the Engineer. The berms shall comprise excess fill material from the trench, shall be hauled by wheelbarrow, placed and shall be hand stamped in layers not exceeding 150mm. The berms shall be slightly overfilled before being shaped to the detail shown on the drawings. The material shall wherever possible be sourced within the freehaul distance of 0.5 km. After completion, the Engineer may instruct the Contractor to construct un-grouted, handpicked and packed stone pitching along the upstream edge of the berm.”

**PSD 5.2.3.4: SANDBAG PROTECTION TO PIPE TRENCH**

“Where instructed by the Engineer, 25kg sandbags made from woven polypropylene shall be filled with selected fill material as specified in SABS 1200 LB and placed in a stretcher bond pattern around the pipe. The bags shall be firmly packed and hand stamped into place and shall be keyed a minimum of 500mm into the side wall of the trench. Where specified, the selected fill material shall first be brought to optimum moisture and then stabilized by the addition of 1% cement.”

**PSD 8: MEASUREMENT AND PAYMENT**

**PSD 8.3: SCHEDULED ITEMS**

**PSD 8.3.1.2: REMOVE TOPSOIL TO NOMINAL DEPTH 150mm (OR OTHER STATED), STOCKPILE AND MAINTAIN** Unit: m<sup>2</sup>

Add the following:

“The top 150mm of material in the reservoir and chamber sites shall, unless otherwise indicated by the Engineer, be deemed to be topsoil and shall be stripped and stockpiled separately along the route of the pipeline. The stockpile shall not be more than 1,5m in height and shall not be covered by other material or be used for an access road.

The soil on top of which the top soil will be reinstated shall be scarified to a depth of 50mm.”

**Add the following new payment items:**

**PSD 8.3.13: EROSION CONTROL BERMS** Unit: m<sup>3</sup>

“The rate shall include for all costs to source the material, remove any oversized material, load, haul within the freehaul, offload, spread, overfill, compact and trim to the finished dimensions shown on the drawings.”

**PSD 8.3.14: SANDBAG PROTECTION TO PIPE TRENCH** Unit: No.

“The rate shall include for all costs to supply the 25kg bags, select material, fill bags and place in restricted areas and hand stamp.”

**PSD 8.3.15: EXTRA-OVER SANDBAG PROTECTION FOR STABILIZATION** Unit: No.

“The rates shall include all extra costs to ensure that the material is at optimum and to supply and mix cement at 1%.”

**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 8.3.6 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.

PSDB : EARTHWORKS (PIPE TRENCHES)  
(Applicable to SABS 1200 DB - 1989)

**PSDB 3: MATERIALS**

**PSDB 3.5: BACKFILL MATERIAL**

Add the following new sub-clause

**PSDB 3.5(C): STABILISED BACKFILL**

"Any pipe laid down on a slopes steeper than 1:6 is to be backfilled with 4% cement stabilisation by mass at 5 metre intervals in lengths of 2 metres.

**PSDB 5: CONSTRUCTION**

**PSDB 5.1: PRECAUTIONS**

Add the following new sub-clause:

**PSDB 5.1.5: BARRICADING, WATCHING AND LIGHTING**

"While the responsibility for the efficient barricading, lightning and watching of all trenches, excavations and stocks of material shall rest upon the contractor, he shall make every effort to comply with requirements of the local traffic Authority.

The cost of all chevron taping, supports, steel plate bridges, temporary road warning signs, drums, safety lamps, shall be deemed to be included in the Contractors price rates for excavation."

**PSDB 5.4: EXCAVATION**

Add the following:

"The total length of any section of open or partially open trench in advance of the backfilling (i.e. to ground level) shall not exceed 1000 m unless otherwise instructed by the Engineer."

**PSDB 5.6: BACKFILLING**

**PSDB 5.6.3: DISPOSAL OF SOFT EXCAVATION MATERIAL**

Add the following:

"Surplus material shall be spread evenly and neatly alongside the trench excavation, unless otherwise directed by the Engineer."

**PSDB 5.6.6: COMPLETION OF BACKFILLING**

Add the following:

"The Contractor shall bear all costs associated with the remedy of defects in trenches caused by lengthy exposure as instructed by the Engineer."

**PSDB 8: MEASUREMENT AND PAYMENT**

**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 8.3.1: SITE CLEARANCE AND (IF SPECIFIED) REMOVAL OF TOPSOIL**

**PSDB 8.3.1.C: REMOVE TOPSOIL**

Unit: m<sup>2</sup>

Add the following:

“The top 150mm of material in the pipe trench shall, unless otherwise indicated by the Engineer, be deemed to be topsoil and shall be stripped and stockpiled separately along the route of the pipeline. The stockpile shall not be more than 1,5m in height and shall not be covered by other material or be used for an access road.

The soil on top of which the top soil will be reinstated shall be scarified to a depth of 50mm.”

**Add the following new payment item**

**PSDB 8.3.3.1(D) STABILISED BACKFILL (4% CEMENT)**

Unit: m<sup>3</sup>

“The rate shall include the cost of material, delivery to site and the mixing in of the stabiliser as per clause PSDB 3.5 (c)

**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.

**PSG : CONCRETE FOR WATER RETAINING STRUCTURES**  
(Applicable to SABS 1200 G - 1982)

**PSG 2: INTERPRETATIONS**

**PSG 2.4.2 Strength concrete**

Add the following to this Sub-clause:

With the exception of mixes weaker than 15 MPa, all concrete for the Works shall be considered to be strength concrete.

Unless otherwise specified on the drawings or in the Schedule of Quantities, all structural concrete shall be Grade 35 MPa/19.

**PSG 3: MATERIALS**

**PSG 3.2 Cement**

Add the following to this Sub-clause:

CEM1 42.5 as specified in SABS EN 197-1 common cements, a 75% CEM1 42.5 and 25% PFA blend or 50% slagment and 50% CEM1 shall be used as specified in the relevant sections of SANS 1491 and SANS EN 197-1. Any variations to these are subject to the Engineer's approval.

For non-structural concrete CEMI 32.5 is acceptable.

**PSG 3.2.3 Storage**

Add the following to this Sub-clause:

Cement shall be used in the order in which it is received (first in, first out basis)

Cement kept in storage for longer than 6 weeks shall be removed from site and not used in the Works.

Any cement that shows signs of hydration, such as the formation of lumps, may not be used and is to be immediately removed from site.

**PSG 3.3 Water**

Replace the contents of this clause with the following:

Only potable quality water from an approved source may be used for mixing concrete. Water from a river or stream may only be used for curing.

**PSG 3.4 Aggregates**

**PSG 3.4.1 Applicable Specification**

Add the following to this Sub-clause:

The maximum aggregate size shall be 25 mm. Any aggregate may be used provided the free sodium alkali content in the concrete mix does not cause an alkali-aggregate reaction.

Coarse aggregate may be obtained from the nearest available commercial sources, and shall be subject to the Engineer's approval.

Fine aggregate may be obtained from local sources subject to testing of its suitability by an approved laboratory and approval by the Engineer.

Aggregates shall be tested periodically for reactivity, the costs of which shall be deemed included in the rate tendered for concrete. A design mix will have to be made and the results submitted to the Engineer for approval before construction begins.

Coarse and fine dolomitic aggregate may be used. When tested in accordance with the method specified in Appendix C of SANS 677, not more than 25% by mass of the dolomitic aggregate shall be insoluble in hydrochloric acid.

At least one month before commencement of concrete work the Contractor shall supply at his own representative samples to the Engineer of the aggregates he intends using, together with certificates from an approved laboratory indicating that the aggregates comply with the specifications. Approximately 50 kg of each sample of aggregate shall be supplied.

After approval, these samples shall be taken as standard for the agreed aggregates to be used in the Works. If at any time during the course of the Contract the Engineer considers that there has been any deviation from the approved standard the Contractor shall submit further tested samples of material to the Engineer for approval.

#### Aggregates for grouting

Notwithstanding the requirements of Sub-clause 3.4.1, the grading of the fine aggregate (sand) and coarse aggregate (stone or pea gravel) to be used for grouting shall conform to the grading given in Tables 1 and 2 respectively, below.

TABLE 1 - SAND		TABLE 2 - STONE OR PEA GRAVEL	
Test sieve nominal aperture size, mm	% Passing (by mass)	Test sieve nominal aperture size, mm	% Passing (by mass)
9,5	100	9,5	100
4,75	95 - 100	4,74	95 - 100
1,18	45 - 65	2,36	0 - 5
0,3	5 - 15		
0,15	0 - 5		

#### Dolomitic Aggregate

Coarse and fine dolomitic aggregate may be used. When tested in accordance with the method specified in Appendix C of SANS 677, not more than 25% by mass of the dolomitic aggregate shall be insoluble in hydrochloric acid.

### PSG 3.5 Admixtures

Add the following Sub-clause to clause 3.5:

#### PSG 3.5.3 Pulverized fly ash (PFA)

##### PSG 3.5.3.1 General

Concrete containing a percentage of FA shall be termed FA concrete. Pulverized fly ash (PFA) shall conform to the requirement of SANS 1491-2.

All concrete used shall consist of FA in the concrete unless otherwise shown on the drawings or ordered by the Engineer.



FA concrete shall conform to the requirements of SANS 1200 G for concrete and the additional requirements specified below.

**PSG 3.5.3.2 Source and quality**

Fly Ash shall be procured from an approved source and shall be of a consistent quality conforming to SANS 1491-2. In particular it shall be tested for and shall conform to the following:

the loss on ignition shall not exceed 5%

the percentage by mass retained on 45 micron screen shall not exceed 12.5%

**PSG 3.5.3.3 Cementitious material**

The cementitious material used for FA concrete shall consist of a mixture of between 75% and 80% by mass of ordinary Portland cement and of between 25% and 20% by mass of FA.

Add the following Clauses:

**PSG 3.9 Granolithic screed**

Granolithic screed shall consist of:

Cement	1 part by mass
Sand	1,25 parts by mass
Coarse aggregate	2 parts by mass

The coarse aggregate shall consist of granite or other approved chips which shall pass a 10 mm sieve and be retained on a 5 mm sieve.

The cement/water ratio of the mix shall be at least 2,0.

**PSG 3.10 Bond breaker**

The bond breaker where specified under floor slabs shall be 250 micrometre polythene sheet complying with SANS 952, Type D.

**PSG 3.11 Materials for movement joints**

**PSG 3.11.1 General**

The various jointing materials, the manufacturers of the materials and the methods of application shall be as approved by the Engineer. Materials shall be stored and protected to avoid damage, degradation, distortion or contamination.

The joint materials shall be resistant to ultraviolet light and to biological degradation.

**PSG 3.11.2 Waterstops**

Waterstops shall be of approved manufacture and of the pattern and the material and widths scheduled and specified and shown on the drawings. They shall comply with the tolerances specified in Clause 6.1 of SANS 1200G. They shall conform to Specifications CKS 388 or 389, for natural rubber or PVC respectively, and have the appropriate physical properties as set out below:

PVC	Rubber		
Tensile strength (@ 25oC)	12,2 MPa	20,7 MPa	
Elongation at break (@ 25oC)	250%	500%	

Hardness BS degrees (IRHD @ 25oC) - 60 to 65o  
Softness (BS) 28 to 52o -

All intersections between waterstops shall be prepared by mitring and welding/vulcanising intersection pieces in the factory in accordance with the manufacturer's instructions and to approval of the Engineer. Only straight lengths of waterstop may be field welded using the appropriate jigs and tools.

Where required, waterstops shall have eyelets so that they may be tied securely to the adjacent reinforcement. "Rearguard"-type waterstops shall have flanges or cleats that grip effectively.

**PSG 3.11.3 Fillers**

Closed cell expanded polyethylene fillers shall comply with the following:

Property	Unit	Value Test Method
Density	kg/m <sup>3</sup>	110 DIN 53420
Compression Stress at compression strains of	kPa	175 DIN 53577
10%	kPa	210 DIN 53577
25%	kPa	340 DIN 53577
50%		
Compression set after 24 hours recovery	%	14
Tensile Strength	kPa	680 DIN 53571
Elongation at Break	%	49 DIN 53571
Max. water absorption after 24 hours by volume	%	0,1 ASTM C-177

Fillers shall be pre-cut to suit the application with a tear-out strip for forming the specified recess for the sealant. If so required the filler shall be glued into position with approved epoxy glue.

**PSG 3.11.4 Bond breakers, primers and sealants**

The bond breaker (if specified) shall be self-adhesive PVC tape (or equal, approved material) with a width the same as the joint recess into which it is to be applied.

The primer, if required for the sealant, shall be fully compatible with the sealing compound that is to be used.

The elastomeric sealant shall be either a two-component polysulphide liquid polymer base complying with the requirements of SANS 110 or a polyethylene based polyurethane "pouring grade" for horizontal or near horizontal joints or "gun grade" for vertical/overhead joints and joints steeper than 1 in 10 to the horizontal. All elastomeric sealants shall comply with BS 4254 Type A1 and shall have a movement tolerance of 25%.

**PSG 3.12 Precast paving slabs**

The paving slabs shall comply with the requirements of SANS 541, shall be as scheduled and with patterned surface, or equal approved. Samples of the types which the Contractor proposes to use shall be submitted for approval prior to construction.

**PSG 4: PLANT**

**PSG 4.3 Mixing plant**

**PSG 4.3.1 General Requirement for Mixing Plant**

Add the following to this Sub-clause:

Stand-by mixers of adequate capacity and with an independent power unit shall be maintained on site for immediate use in the event of breakdown of the regular mixers failure of the power supply.

**PSG 4.4 Vibrators**

Add the following to this Sub-clause:

Stand-by vibrators of adequate capacity and with an independent power unit shall be maintained on site for immediate use in the event of breakdown of the regular vibrator failure of the power supply.

Vibrators for in-situ concrete shall be of the internal or immersion type.

**PSG 4.5 Formwork**

**PSG 4.5.3 Ties**

Add the following to this Sub-clause:

The use of sleeves for formwork ties through the walls of water retaining structures will not be permitted. Ties, when cast in, shall have some form of positive anchorage to prevent any rotation when loosening formwork and some form of water bar to restrict seepage along the tie.

For Watertight concrete structures the shutters shall be fastened using an approved imbedded fastening system. Open ferrules will not be permitted.

Add the following Clause:

**PSG 4.6 Water-bath**

A temperature-controlled water-bath with a capacity to cure two hundred cubes shall be provided on site. The water-bath shall be located under cover.

**PSG 5 CONSTRUCTION**

**PSG 5.1 Reinforcing**

**PSG 5.1.2 Fixing**

Add the following to this Sub-clause:

Fixing of reinforcing bars by welding and heating of bars will not be permitted. Fixing

blocks for the attachment of fixtures may be embedded in concrete provided that the strength or any other desirable feature (such as appearance of the member) is not, in the opinion of the Engineer, impaired thereby.

Supports shall be of approved precast concrete blocks properly shaped to maintain position or proprietary supports of an approved type. Concrete blocks shall be adequately cured as specified. Wooden supports shall not be used nor shall bars be placed in succeeding layers of fresh concrete nor shall bars be adjusted during the placing of concrete. Tie-wire shall point away from the nearest formwork face.

Where clips, stools and other supports are not shown on the drawings and are structurally not required, the Contractor shall provide those supports he deems necessary to ensure the correct positioning of the reinforcement, to the satisfaction of the Engineer. The cost of such steel, labour, and other fixing materials shall be inclusive in the rate for the scheduled reinforcement and no additional payment shall be made.

**PSG 5.2 Formwork**

**PSG 5.2.1 Classification of finishes**

Add the following to this Sub-clause:

Rough formwork Degree of Accuracy III may be used on the outside faces where the concrete is more than 500 mm below the final ground level.

Smooth formwork Degree of Accuracy II will be used elsewhere.

Where specified special finishes shall be to Degree of Accuracy I

**PSG 5.2.2 Preparation of formwork**

Add the following to this Sub-clause:

All exposed external angles in concrete work shall have 20 mm x 20 mm chamfers unless otherwise specified or ordered, but the top edge of a slab that is to receive an applied finish shall not be chamfered.

**PSG 5.5 Concrete**

**PSG 5.5.1 Quality**

Add the following to this clause:

35 MPa concrete with the minimum and maximum cement contents of 325 kg/m<sup>3</sup> and 450 kg/m<sup>3</sup> respectively shall be used. For concrete containing extenders the maximum cement content shall be 450 kg/m<sup>3</sup>. The water to cement ratio shall not exceed 0.50. All concrete mix designs shall be approved by the Engineer in advance.

The mix design and casting procedure shall be approved by the Engineer prior to casting.

All Water Retaining structures and all manholes shall be constructed using watertight concrete. The Contractor shall abide by all conditions set out in sub-clause 5.5.11 as amended of SABS 1200 G, and pay particular attention to this aspect of the works.

Cubes shall be taken on all pours in accordance with SABS 1200 G. Payment shall be included in the rate tendered for the supply of concrete. No payment shall be made for concrete pours on which no cube tests have been performed. A single cube test comprises the mean crushing strength of 3 cubes taken from the same batch of concrete and cubes must be taken at the frequency specified SANS 1200 G

The concrete shall be tested for water sorptivity, oxygen permeability, chloride conductivity, depth of cover and shrinkage; the details of the tests are given on the specification.

**PSG 5.5.1.4 Chloride content**

Add the following to this Sub-clause:

Efflorescence will not be acceptable on any exposed concrete surface

**PSG 5.5.1.5 Durability**

Add to this Sub-clause the following:

The water/cement ratio, as specified in Table 5, but shall not exceeding 0.5.

**PSG 5.5.1.6 Prescribed mix concrete**

Add the following to this Sub-clause:

Notwithstanding the requirements of Sub-clause 5.5.1.6, samples of aggregates will not be made available by the Engineer. The Contractor shall supply aggregates from commercial sources located by him, complying with the requirements of Sub-clause 3.4.1, as amended, for the production of prescribed mix concrete.

"No-fines" concrete:

A nominal aggregate size of 19 mm shall be used in the manufacture of "no-fines" concrete.

No-fines concrete shall be laid under where specified and shall consist of coarse aggregate, cement and water only. No fine aggregate shall be used. Sandwiching or layering of pours will not be permitted. The Contractor shall cast to the profile depth in one pour.

The mixing of the cement and water paste shall have the consistency of paint capable of coating each coarse aggregate particle uniformly and sufficiently to form a small fillet at all the contact points of each stone in the aggregate.

Between 24 and 48 hours after the no-fines layer has been laid it shall be covered with 1:4 cement: sand mortar layer 20 mm thick. The mix shall be comparatively dry to ensure that it does not penetrate and block the cavities in the no-fines concrete. The surface shall be steel floated to form a plane surface.

The mortar skim shall be cured in the same manner as concrete for a period of not less than 2 days.

Payment shall be per cubic metre of no-fines concrete placed. The rate shall include compaction and skimming to the approval of the Engineer.

**PSG 5.5.1.7 Strength Concrete**

Add the following to this Sub-clause:

The concrete mix design for strength concrete must be prepared in an approved laboratory and the results of actual test mixes must be submitted for approval together with 7-day and 28-day strength test results. Special attention is drawn to the fact that the concrete mix must provide a very dense and impervious concrete.

The Contractor shall submit details of the proposed concrete aggregates and design mix to the Engineer for approval, after which he shall be required to make a trial mix and obtain cube test results to validate the proposed mix. Only after receipt of satisfactory cube test results, the Contractor shall be permitted to use the mix in the construction of water retaining structures. The cost of designing and proving the proposed concrete mix shall be deemed to be included in the tendered rates.

The Engineer may call for revised mix designs at any stage during the Contract.

Where blinding layers are specified, the concrete shall be grade 15 MPa/19 placed and finished off to the final level.

In order to facilitate or increase the workability of concrete in the fresh/plastic state, to ensure watertightness without increasing the water/cement ratio, the Engineer may approve the use of an additive.

The workability of concrete shall be assessed by means of the slump test. The slump shall be between  $75 \pm 25$ mm.

#### Curing

Curing shall be done using a curing compound to the Engineer's approval and frequency or, in addition to water curing, well-secured plastic sheeting, shall be used. Water curing alone shall not be permitted. Where the Contractor fails to cure for a minimum of 7 days, no payment shall be made for the relevant pour of concrete.

#### **PSG 5.5.2      Batching**

Add the following to this Sub-clause:

Batching of all strength concrete shall be by mass. Prescribed concrete may be batched by volume. Batching shall not be done by wheelbarrow.

All concrete shall be mechanically mixed.

Stand-by mixers of adequate capacity and with an independent power unit shall be maintained on site for immediate use in the event of breakdown of the regular mixers failure of the power supply.

#### **PSG 5.5.3.2    Ready-mixed concrete**

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

Concrete from a central concrete production facility other than on the construction site will be permitted if the facility is within a 40 km radius of the site and, apart from test results in terms of Sub-clauses 7.3.1, 7.3.2 and/or 7.3.3, test results obtained by such a production facility as part of its quality control system will be accepted for evaluation in terms of Sub-clause 7.3.4, provided the cubes are stored and cured on site.

#### **PSG 5.5.5      Placing**

Add the following Sub-clause:

##### **PSG 5.5.5.10   Casting of concrete in excavation**

Structural concrete shall not be cast directly against the side of any excavation without the use of formwork unless prior approval has been obtained in writing from the Engineer.

Concrete used in pipe trenches for encasement and for the thrust / anchor blocks may be cast directly against the side of the excavation.

After vibration, the concrete shall be spaded in corners, in angles and against forms to release air bubbles which may have been trapped in these positions.

#### **PSG 5.5.7      Construction joints**

Add the following to these Sub-clauses:

**PSG 5.5.7.1 General**

The edge of joints, exposed to view in the finished structure, shall be formed with suitable beads to provide a straight edge true to line and level.

All joints, other than expansion, contraction and other movement joints shall be treated as follows:

As soon as practical, but not before 15 hours after placing, the construction joint surface shall be prepared to receive fresh concrete. This preparation, as specified in Sub-clauses 5.5.7.3(a) to (d), shall be such as to remove all laitance or inert and strengthless material which may have formed and the specified chipping or sand blasting shall be such as to produce a roughened surface all over.

When concreting is interrupted concrete surfaces shall be protected from the sun as specified in Sub-clause 5.5.8(d) or by means of hessian kept damp until concreting is resumed.

All constructional joints shall be dealt with as specified in Sub-clause 5.5.7.3, as amended.

Unless construction joints between designated joints shown on the drawings are authorized by the Engineer in writing, concrete in the floor and wall shall be cast continuously between the designated joints shown on the drawings.

**PSG 5.5.7.2 Formed joints (generally vertical or near vertical)**

Formed joints will be considered to be designated joints as defined in Sub-clause 2.4.3. (The forming of a straight edge to a construction joint as specified in PSG 5.5.7.1, as amended, General does not constitute a formed joint).

Each joint shall be formed as shown on the drawings., complete with shear key rebates, waffle formwork, V-feature, waterstops, "Flexcell" or equal, approved joint filler, dowel bars and their PVC tubes, etc. as indicated.

**PSG 5.5.7.3 Non-designated joints**

Any non-designated joints shall be identical to designated joints, as shown on the drawings, which would be used in similar positions and shall perform the same function.

Add the following Sub-clauses:

**PSG 5.5.7.4 Joints between footings or floors and walls or columns**

Construction joints between foundations, footings or floors and walls, columns or piers connected to them, shall not be made flush with the supporting surface, but shall be made at a distance above the footing or floor shown as on the drawings or approved by the Engineer. The "kicker" shall be cast as an integral part of the foundation, footing or floor.

**PSG 5.5.7.5 Construction Joints In Circular Reservoirs****Construction Joints In Walls Or Footings**

Construction joints may only be placed where shown on the drawings or to the approval of the Engineer. Vertical joints in the walls of the reservoir are permitted only in the pre-stressed reservoir. These joints shall only be permitted radially on each side of stressing buttresses. No vertical joints shall be permitted in the reinforced concrete reservoir.



The entire contact surface along the joint in the concrete already cast shall be chipped or water jetted to expose the coarse aggregate to 5 mm beyond the surrounding matrix. Care shall be taken to ensure that the concrete structure is not damaged and that all loose material is removed. The surface must be thoroughly cleaned and wetted before casting against the joint.

All construction joints in the reservoir walls and footing shall be cast with water stops. Water stops shall be as per detail drawings. No construction joints will be permitted in the floor.

Payment shall be per linear meter. The rate shall include supply and casting in of the water stop as per detail drawings.

#### Construction Joints In Roof Slabs

Construction joints in the roof slab are permitted. The position of these joints shall be approved by the Engineer.

These joints shall be cast against a vertical shutter leaving a 15 mm deep by 20 mm wide recess which is sealed with a one part poly-sulphide sealer on completion. The sealer used and method of application shall be to the Engineer's approval. No water stops are required; however, the completed roof shall be tested for water tightness in accordance with Sub-clause PSG 7.2.5(b), as amended. No additional payment shall be made for these joints.

#### Expansion and Contraction Joints

Expansion and contraction joints shall be constructed as detailed on drawings using PVC or rubber water stops.

Water stops extruded from recycled material shall not be permitted.

Prior to bandaging, concrete surfaces shall be scabbled with a mechanical scabbler and water jetted with a 200 bar water jet. All joints shall be butt jointed and patched over.

The waterproofing bandage shall comprise of two elements:

- (i) A 2 mm thick Hypalon or Combiflex strip
- (ii) (For Expansion joints) A 2 mm x 60 mm stainless steel strip with polythene backing bond breaker to the detail shown on the drawing.

The bandage shall be applied by coating the concrete and underside of the hyperlon bandage with an epoxy adhesive. The stainless steel strip is first positioned over the joint and the bandage with epoxy adhesive placed over the stainless steel strip. All trapped air shall be eliminated by hand rolling the bandage until the epoxy is fully cured.

Payment shall be per linear meter. The rate shall cover all costs for the supply and application of water stops and bandaging including the installation of the stainless steel strip.

#### **PSG 5.5.7.6 Application of primers and adhesives**

The concrete to which the primer or adhesive is to be applied shall be dry and shall be cleaned of all dust, grit, grease, surface laitance and foreign matter by compressed air and/or water, solvents, or other suitable approved means. The Contractor shall provide on Site an approved moisture meter to measure the degree

of dryness of the joint. This meter shall be made available to the Engineer for testing. The joint shall be approved for the application of the primer and adhesive if the moisture content of the concrete is less than or equal to 5%. It may be necessary to dry the concrete surfaces locally to reduce the moisture content to 5% or less.

**PSG 5.5.7.7 Contraction and expansion joints**

Contraction and expansion joints shall be formed true to line in smooth formwork.

All surfaces shall be thoroughly cleaned of all accretions of concrete or other foreign matter by scraping or other approved means.

Particular care shall be taken to compact the concrete around waterstops, edges, etc.

Rebates for seals shall be formed to required dimensions and lines, or cut true to line and size after floating the surface and before the final set of the cement has taken place. All rebates, etc., shall be adequately protected against damage until the completion of the work; accidental damage which in the opinion of the Engineer will impair the performance or appearance of the joint shall be made good by reconstructing the work as directed by the Engineer. Rebates for seals shall be grit blasted or wire brushed on all faces to remove surface laitance and thoroughly cleaned with soft brushes and/or compressed air jets, and, if necessary, dried by blow-lamp or other approved means before priming.

**PSG 5.5.7.8 Installation of waterstops in joints**

Waterstops shall be held in the formwork so as to prevent air pockets forming underneath them. Special precautions shall be taken, to the approval of the Engineer, to ensure that all flexible waterstops are in perfect contact with well compacted void-free concrete.

**PSG 5.5.7.9 Installation of joint filler in expansion joints**

Joints in the filler shall be neatly butted so as to exclude mortar from the joint. Edges of filler strip against waterstops, concrete, formwork, projections, etc., shall also be closely fitted to exclude mortar, so that there is no resistance (other than the compression of the filler) to the expansion movement for which the joint is designed.

Joint filler shall be fixed to the first cast of concrete with an approved adhesive and as directed by the Engineer.

**PSG 5.5.7.10 Application of joint seals**

Rebates shall be cleaned as required by PSG 5.5.7.6 Application of primers and adhesives and shall be inspected and approved by the Engineer's Representative before filling.

Joint sealants and primers shall be applied strictly in accordance with the manufacturer's instructions. Flow and non-slumping grades shall be used for horizontal and vertical joints respectively.

Immediately after the compound is applied the joint shall be protected against damage until completion of the Contract.

**PSG 5.5.8 Curing and protection**

Add the following to this Sub-clause:

**PSG 5.5.8.1 Horizontal surfaces**

Surfaces of the concrete shall be treated with a curing compound complying with Sub-clause PSG 5.5.8.3 Post-Crystallization (Concentrate & Modified) slurry coat and curing.

**PSG 5.5.8.2 Formed surfaces**

In order to improve the effectiveness of the crystallization treatment, the specified minimum time for the removal of the formwork shall be three days. All surfaces shall be pressure cleaned in accordance to the product manufacturer's requirement.

**PSG 5.5.8.3 Post-Crystallization (Concentrate & Modified) slurry coat and curing**

The Concrete surfaces to receive a concentrate slurry coat treatment shall have an open capillary system to provide 'tooth and suction', and shall be free from scale, excess form oil, laitance, curing compounds and foreign matter.

Surfaces shall be smooth and uncovered from excess form oil, laitance and foreign matter. The concrete should be lightly water blasted to remove such material for surface preparation.

Concrete surfaces must be thoroughly saturated with clean water prior to application in order to ensure the growth of the crystalline formation deep within the pores of the concrete. Wetting to be done must be at least 1hr before application. If concrete surface dries out before application, it must be re-wetted.

The concentrate slurry is applied at a coverage rate of 1kg/m<sup>2</sup> using a semi-stiff nylon bristle block brush – work slurry well into the surface, filling surface pores and hairline cracks. The coating must be uniformly applied at approximately 1.25 mm thickness. The second modified slurry coat with the same application rate must be applied within 48 hours of the first coat. Light pre-watering between coats may be required when drying out signs appear. Detail coating applications shall be confirmed by the manufacturing.

Cure by spray for minimum of 3 days must be established once the final coat has been applied. Protect from rainfall, puddling of water, wind & frost for at least 48 hours after application. When plastic sheeting is used as protection allowance must be made for the coating to breathe.

**PSG 5.5.8.4 Curing for normal concrete surfaces**

The use of membrane curing compounds will be allowed on vertical faces or steeply inclined faces (i.e. steeper than 45° to the horizontal) of cast in situ members of the structures subject to the Contractor producing sufficient, satisfactory cube crushing strength test results where the crushing strength of cubes which have been cured with the proposed curing membrane and left exposed to the elements are compared with those of an equal number of water cured cubes. The crushing strength of cubes cured with the proposed membrane shall be at least 85% of the crushing strength of the water cured cubes.

Before any membrane curing compound is used, each batch shall be tested on a trial surface to ensure that it forms a satisfactory membrane, and any compound which is unsatisfactory in the opinion of the Engineer, shall be rejected. Curing membranes will be disallowed if permanent discolouration of the concrete takes place. Surfaces where curing membranes are used shall be treated in such a manner that the final concrete texture and colour blends in with the rest of the concrete work. Furthermore, the Engineer shall, at his discretion, require the Contractor immediately to adopt an effective alternative means of curing any area

of the structure to which a membrane has been applied which, in the opinion of the Engineer, is unsatisfactory. The curing compound used shall be to the approval of the Engineer. Wax based curing compounds will not be permitted.

The curing compound shall be applied immediately as formwork is progressively stripped or, in the case of unformed surfaces, when the concrete has taken its initial set. It shall preferably be applied by spraying and the rate of application shall be strictly in accordance with the manufacturer's recommendations. A method of monitoring the area to which curing compound has been applied and the application rate shall be as approved by the Engineer and rigidly applied by the Contractor.

Surfaces of joint rebates, where elastomeric sealant is to be applied, shall be protected from contamination by curing compound by the use of masking tape.

**PSG 5.5.9 Adverse Weather Condition**

Replace the contents of Sub-clause 5.5.9.2 with the following:

No placing of concrete shall take place if the ambient temperature exceeds 32oC, or is likely to rise to above 32oC during the casting period or within eight hours after casting is completed.

If concrete is to be cast during times of high ambient temperature or hot drying winds, the Contractor shall be responsible for taking the necessary steps to keep the placement temperature as low as possible. Such steps include the spraying of the coarse aggregate with water, the painting of silos with a reflecting aluminium paint, the insulation of tanks and pipelines, and the protection of concrete ingredients against the direct rays of the sun. The area of the pour shall be shaded before and during concreting and the concrete shall be shaded from the time of mixing until eight hours after placing.

Windbreaks shall be erected if necessary.

**PSG 5.5.10 Concrete surfaces**

Replace the contents of this Clause with the following:

**PSG 5.5.10.1 Screeded finish**

After placing and compacting the concrete on a top (unformed) surface shall be struck off with a template to the designated grades and tamped with a tamping board to compact the surface thoroughly and to bring mortar to the surface, leaving the surface slightly ridged but generally at the required elevation. No mortar shall be added, and noticeable surface irregularities caused by the displacement of coarse aggregate shall be made good by re-screeding after the interfering aggregate has been removed or tamped.

**PSG 5.5.10.2 Wood-floated finish**

Where wood-floating is ordered or scheduled, the surface shall first be given a finish as specified in Sub-clause PSG 5.10.1, as amended, Screeded finish and, after the concrete has hardened sufficiently, it shall be wood-floated, either by hand or machine, only sufficiently to produce a uniform surface free from screeding marks.

**PSG 5.5.10.3 Steel-floated finish**

Where steel-floating is specified or scheduled, the surface shall be treated as specified in Sub-clause PSG 5.5.10.1, as amended, Screeded finish except that,

when the moisture film has disappeared and the concrete has hardened sufficiently to prevent laitance from being worked to the surface, the screeded surface shall be steel-trowelled under firm pressure to produce a dense, smooth, uniform surface free from trowel marks.

**PSG 5.5.10.4 Granolithic screeds****PSG 5.5.10.4.1 General**

Before placing any granolithic screeds the base concrete shall be chipped to expose the aggregate over 100% of the area to be screeded and soaked with water for at least 24 hours.

The base concrete shall be thoroughly cleaned by scrubbing and all standing water removed after soaking. A 1:2 cement/sand grout shall then be brushed into the prepared surface followed by the granolithic screed before the grout sets. The granolithic screed shall be of the driest feasible consistency with a slump not exceeding 50 mm and shall be formed true to profile and shape as required and shown on drawings. Before placing granolithic screed against an adjacent band of granolithic screed the edge of the latter shall be prepared by chipping back to firm material, wire brushing and brushing with grout as for the base concrete.

Granolithic screed shall be compacted to remove all air and shall be screeded and finished with a steel trowel to Degree of Accuracy 1.

The trowelling shall be carried out in the following stages:

- a) First - as soon as the granolithic screed has been compacted and screeded.
- b) Second - after 2 hours to close the surface and remove laitance.
- c) Third - after a further 4 hours.

The time intervals are estimated as appropriate to normal temperature conditions and shall be varied by the Contractor to ensure a smooth dense finish.

Granolithic screed shall be cured as specified in Sub-clause 5.5.8(b), as amended, but shall additionally be protected from direct sunlight and drying winds as it is being placed.

All screeding necessary to accommodate mechanical equipment shall be done under the equipment supplier's supervision and in strict accordance with his instructions. It shall be commenced as soon as the equipment supplier gives notice on completion of erection and shall be finished expeditiously.

**PSG 5.5.10.4.2 Screed to floor (Where Specified)**

Where screed is specified it shall be approximately 50 mm thickness is required to each floor.

The screed shall be formed from granolithic concrete as specified in Sub-clause PSG 5.5.10.4 Granolithic screed. The screed shall be applied after the mechanical equipment has been erected by the mechanical plant contractor and shall be laid in alternate concentric rings not greater than 2,00 m in width. A period of 24 hours shall elapse before the intervening rings are laid.

The Contractor shall supply and fit a plywood template to the clarifier mechanism to act as a guide in determining the finished screed level. He shall not use the template to physically form the screed surface nor shall he place an excessive load on the scraper mechanism.

The Contractor shall only operate the scraper mechanism in strict accordance with the instructions of the manufacturer and the Engineer, and he shall make good any damage resulting from the use of the machinery.

Granolithic concrete shall be placed in position for a distance of approximately 3,0 m in front of the template and consolidated and roughly trimmed to level. The surface of the screed shall then be trimmed off to the level of the template which shall be moved as required by hand operation of the mechanism.

The trimmed surface shall be steel float finished and the edges of the ring left in a rough vertical condition to provide a key for the adjoining ring.

The preparation of the base concrete shall be done in accordance with Sub-clause PSG 5.5.10.1, as amended, Screeded finish. Before placing granolithic concrete against an adjacent band of granolithic concrete the edge of the latter shall be prepared by chipping back to firm material, wire brushing, and brushing with grout as for the base concrete.

Concrete to manholes shall be watertight concrete.

#### **PSG 5.5.11 Watertight Concrete**

Add the following to this Sub-clause:

The water-tightness of the reservoirs, all liquid retaining structures and concrete chambers shall be tested as indicated below:

On completion the structure shall be cleaned and shall be filled with water at an approved rate. After allowing a period of absorption of 3 days, the depth of water shall be recorded and the water allowed to stand for a further 7 days during which the total permissible drop in water level after allowing for evaporation should not exceed 10 mm.

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

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

The floors, walls and roofs of all water retaining structures shall be considered to be watertight concrete structures.

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

The cost of the above tests will be deemed to be included in the rates for the relative concrete to be provided by the contractor.

**PSG 5.5.14 Defects**

Add the following to this Sub-clause:

All defects shall be repaired as soon as possible after the formwork has been removed and the Engineer has inspected the concrete. A statement of the method to be used for each repair shall be submitted to the Engineer for his approval before any work is carried out. The Engineer may prohibit the further placing of concrete in the particular area concerned until he is satisfied that the repair has been satisfactorily executed.

Add the following sub-clauses:

**PSG 5.5.16 Casting pipes and specials in concrete**

Where the pipe or special is supplied by others the Contractor may elect to provide a box-out in the wall and cast the unit in at a later stage. When constructing such box-outs reinforcement shall not be cut but shall run through the opening. Reinforcement shall be cut and/or bent out at a later stage to suit the item being cast in. After installation of the item the remaining reinforcement shall be bent back in position.

Where entry holes for pipes/specials have been provided in the walls, the Contractor shall be responsible for the concreting in of such pipes/specials regardless of whether or not these have been supplied by himself.

Before commencing the positioning in holes of any pipes/specials the Contractor shall:

remove all formwork and boxing remaining in the holes;

make any alternations required to the position and shape of the holes and cut reinforcement to suit the item, as directed by the Engineer; and

thoroughly scabble the sides of the holes so as to obtain a satisfactory bond surface for the new concrete and treat the surface as specified in Sub-clause 5.5.7.3, as amended.

Immediately prior to the placing of mortar and concrete around the pipes, the surface of the existing concrete shall be saturated with water. All surplus water shall be removed and the surface covered with a layer, approximately 12 mm thick, of mortar made of the same mix as the concrete in which the pipes/specials are to be placed.

The concrete ingredients shall be mixed and placed as dry as possible to obtain a dense, waterproof concrete. The concrete shall be carefully worked around the puddle flange, if any, and the pipe barrel or body of the special, and shall be vibrated in layers so as to obviate a falling away from pipe/special surfaces of the concrete already placed. The whole shall, when set, form a dense, homogeneous, and waterproof mass.

**PSG 5.5.17 Precast paving slabs**

The area to be paved shall be compacted to a minimum of 93% Mod AASSHTO density (100% for sand), trimmed and then treated with an approved weedkiller, with care being taken to avoid contaminating surrounding areas. The paving slabs shall be laid on a sand bed approximately 25 mm thick, which shall be graded to the required levels and slopes as approved by the Engineer. The joints between the slabs shall be 2 mm to 6 mm wide and shall be grouted with cement mortar. Gaps

in the pattern of slabs shall be filled with Grade 15MPa/19 concrete and given a wood floated finish.

### PSG 5.5.18 Items to be cast in or grouted into concrete

#### PSG 5.5.18.1 Fixings for equipment supplied under separate contract

- a) The Contractor will be responsible for the forming of pockets to the details shown on the drawings to accommodate holding down bolts for equipment supplied under a separate contract. Holding down bolts will be supplied by and positioned by others.
- b) After casting of the concrete all shuttering shall be removed and the sides of the bolt holes and surface on which the machine base is to be placed shall be scabbled to remove all defective concrete, laitance, dirt, oil, grease and loose material.
- c) Upon completion of the positioning and alignment of equipment and when instructed by the Engineer the Contractor shall in collaboration with the mechanical contractor, grout up pockets and baseplates by filling pockets and voids under the baseplates with an approved non-shrink grout.

#### PSG 5.5.18.2 Fixings for items supplied under this Contract

Holding down bolts or other fixings required for the installation of items supplied under this Contract shall be provided by the Contractor. These fixings shall be cast in or grouted into pockets or installed by other means as approved by the Engineer.

Where anchor bolts are used which are installed into holes drilled into concrete or masonry these shall be of a type approved by the Engineer. All such bolts used shall be manufactured from stainless steel or a metal with a resistance to corrosion equal to that of grade 304 stainless steel. The metal used for bolts shall be compatible with galvanized mild steel.

Anchor bolts shall have minimum pull-out forces and minimum ultimate lateral loads at least equal to those specified below:

Specified Anchor Size	Minimum Pull-out Force (kN)	Minimum Lateral Load (kN)	Ultimate
M6	10,35	7,60	
M8	13,70	11,15	
M10	19,44	15,95	
M12	31,85	26,90	
M16	50,45	45,80	
M20	60,50	71,20	

#### PSG 5.5.18.3 Plastic puddle pipe items supplied under this Contract

Plastic puddle pipe cast-in fittings as indicated per drawing required for the installation of items supplied under this Contract shall be provided by the Contractor. These fittings shall be cast in or grouted into pockets or installed by other means as approved by the Engineer.

All such fittings shall be manufactured from uPVC CLASS 16 according to the drawings in accordance with SANS 966. The welded puddle shall be governed in accordance with standards DVS 2207 and SANS 10268. All welded items shall be issued with an accredited quality certificate from an accredited manufacturer.



**PSG 5.5.18.3 Supervision**

The Contractor shall be responsible for ensuring that the erection of the concrete work is carried out under the supervision of a person with adequate knowledge of the mixing, transporting, placing and curing of concrete.

Programme and Plant

Prior to carrying out any concrete work, the Contractor shall obtain the approval of the Engineer in respect of:

Structural programme,  
Concrete plant details,  
Materials to be used in concrete,  
Details of concrete,  
Construction joints

**PSG7 TESTS**

**PSG 7.1.2 Frequency of sampling**

Add the following to this clause:

One sample shall consist of three concrete test cubes.

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

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

"A minimum of 4 samples per day of each grade of concrete placed or 6 samples for pours in excess of 10 m<sup>3</sup> shall be taken."

**PSG 7.2 Testing**

Add the following Sub-clauses:

**PSG 7.2.5 Testing Watertight Concrete**

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

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

The floor of the structure shall then be flooded to a depth of 300 mm with purified water, with calcium hypochlorite solution being added gradually to mix thoroughly as the water enters. The water shall be dosed with calcium hypochlorite at a rate of 150 grams per cubic meter of water entering the structure. The entire inside surface shall again be scrubbed using this water. The workers engaged in this operation shall wear clean rubber boots. On completion the water is to be run to waste once the free chlorine is reduced to an acceptable level, and the floor of the structure shall be swept clean.

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

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

The structure shall be tested for water tightness in accordance with BS 8007 1987 Section 9.

Testing of the Structure:

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

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

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

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

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

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

Testing of the Roof of water retaining structures

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

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

**PSG 7.2.6 Durability Testing:**

Concrete shall comply with the durability parameters defined below:

Water Sorptivity:

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

Oxygen Permeability:

Permeability is sensitive to changes in the coarse pore fraction and is thus a means of assessing the degree of compaction of concrete. It may be used to quantify the microstructure of the concrete and is sensitive to macro-defects such as voids and cracks. Permeability shall be tested in a manner approved by the Engineer.

**Chloride Conductivity:**

Chloride conductivity provides a method of characterisation of concrete in the marine environment and may be used to assess the chloride resistance of concrete.

Unlike oxygen permeability and water sorptivity, chloride conductivity is not really a measure of construction quality, but it shall be used for materials selection and design of mixes in aggressive chloride conditions. It will therefore only be used as a check on mix designs during the initial stages of construction.

**Concrete Cover:**

Concrete cover is a dimensional indicator of cover concrete depth. Cover concrete is the outer concrete layer which protects the internal reinforcing steel, and its depth varies according to the requirements of the different environmental exposure classes.

Test for cover shall be conducted using an approved calibrated electromagnetic cover meter.

This test shall be conducted when instructed by the Engineer to confirm that the specified depth of concrete cover has been achieved. The cover meter tests shall cover at least 1 m<sup>2</sup> for every 10 m<sup>2</sup> exposed. The average cover of the 1 m<sup>2</sup> subjected to the test shall be used to determine the payment, unless the Contractor chooses to carry out additional tests as detailed under clause PSG 7.3.8. The cover meter must be calibrated for each project by drilling and measuring actual cover in at least 3 locations to validate the readings.

Minimum cover to reinforcing for the utility building and guard house shall be as indicated on the drawings.

**General**

:

Durability predictions will be based on the following tests that shall be arranged by the contractor. The durability testing shall be carried out by a laboratory approved by the Engineer.

For testing, water sorptivity, oxygen permeability and chlorine conductivity, cores of 68 mm diameter shall be extracted from the structure when the concrete reaches the age of at least 28 days and tested for the durability criteria set out in PSG 7.3.7. The frequency of the testing at the start of the contract shall be such that there is at least one test (consisting of 2 cores) per discrete concrete element, or per 15 m<sup>3</sup> poured (whichever is the lesser), until such time that the Engineer is satisfied that the specified criteria are consistently achievable. Hereafter testing shall be limited to one test per discrete concrete element or maximum concrete pour of 40 m<sup>3</sup> (whichever is the lesser), or as directed by the Engineer. Depending on access requirements, the frequency and locations of the tests may be changed to suit site requirements as directed by the Engineer. Note that for decks and walls, the cores shall be taken on the exposed faces of the concrete i.e. the soffit and side wall face, taking care not to cut the reinforcing bars. Where the cores do contain pieces of reinforcing steel, they shall not be used for the tests, particularly in the chloride conductivity test or where bleeding cavities may have formed.

The cores shall be extracted through the cover concrete from the constructed concrete element and a slice (25 mm thick) shall then be cut from the outer surface of this core such that the slice is representative of the middle layer of the cover concrete, i.e. the middle layer being a 25 mm thick slice of concrete, 5 mm from the exposed outer surface extending in towards the reinforcement, and tested. The positions at which the cores shall be extracted shall be as indicated by the Engineer.

Filling of the holes left by the drilling of the cores shall be the responsibility of the contractor and shall be carried out using an approved proprietary non-shrink repair mortar so as to restore structural integrity and durability of the structural element tested. The cost of drilling and filling of the holes shall be included in the rate make-up of pay items for durability testing

**PSG 7.2.7 Depth Of Concrete Cover**

The procedure for testing for depth of reinforcement from concrete surface shall be in accordance with the manufacturer's requirements for the relevant electromagnetic cover meter. The number of readings taken to each 1 m<sup>2</sup> to be tested shall be such that an accurate average cover can be determined for the tested area.

**PSG 7.2.8 Shrinkage**

The dry shrinkage tests shall be conducted in accordance with SABS 1085. The drying shrinkage shall not exceed 0.04%.

**PSG 7.3 Acceptance Criteria for Strength Concrete**

Add the following Sub-clauses:

**PSG 7.3.6 Durability Parameters Acceptance Ranges**

When tested in accordance with the test procedures described below for each potential durability parameter, the concrete shall meet the limits given in the tables below:

**PSG 7.3.6.1 Water Sorptivity And Oxygen Permeability**

Table PSG 7.3.6.1 Water Sorptivity and Oxygen Permeability		
Acceptance Category	Test No. / Description / Unit	
	Water Sorptivity (mm/h)	Oxygen Permeability (log scale)
Concrete made, cured and tested in laboratory	6	> 10.0
Full acceptance of in-situ cast concrete	< 8	> 9.15
Conditional acceptance of in-situ cast concrete (with remedial measures)	8 - 15	8.75 - 9.15
Rejection	> 15	< 8.75

**PSG 7.3.6.2 Chloride Conductivity**

Table PSG 7.3.6.2 Chloride Conductivity (severe to very severe conditions)									
Concrete	100% PC		10% CSF		30% FA		50% GGBS		
Curing Period	28d	90d	28d	90d	28d	90d	28d	90d	
Full wet cured	1.25	1.00	0.50	0.45	1.50	0.40	1.25	1.00	
Moist cured (3 - 7d)	1.75	1.60	0.60	0.55	2.25	1.25	2.25	2.00	

**PSG 7.3.6.3 Concrete Cover**

Table PSG 7.3.6.3 Concrete Cover				
Test Description	Specified Cover (mm)	Acceptance Range		
		Minimum		Maximum
Concrete cover to reinforcement	20 - 30	As specified		As specified + 5 mm
	30 - 80	As specified		As specified + 10 mm

**PSG 7.3.6 Durability Index Tests**

Testing for durability shall be carried out using test panels which are constructed with the same concrete mix, formwork type, and compaction and curing methods as it actually used in the liquid retaining structure. The test panel shall be 150 mm thick, and of at least 0.5 m sides. Samples for testing shall be obtained from the face of the test panel that mimics the cast face of its intended use in the structure, after a period of 28 days curing. The following test panels shall be constructed and tested:

- a) One test as part of trial mixes
- b) One test for the first 50m<sup>3</sup> batch of concrete.
- c) Thereafter 1 set for every discreet element namely floor slabs, sloped floor slabs, walls and columns (4 No. total) upon instruction by the Engineer.

Any additional durability tests will be paid for as extras. The durability tests are to be carried out by an accredited laboratory approved by the supplier in terms his Quality Management System. Each test as quantified in the Bill of Quantities shall include each of the following tests:

- a) Oxygen permeability index test (OPI)
- b) Water sorptivity index test (including porosity)
- c) Chloride conductivity index test

(e.g. One No. durability test includes permeability testing, water sorptivity testing and chloride conductivity testing).

The test procedures for these tests are obtained from the University of Cape Town Durability Index Test Manual.

Two sets of four cores each (70 mm Dia.) are required from a test panel: four cores for the oxygen permeability and water sorptivity tests; four cores for the chloride conductivity test. The required target values for the tests are summarized in the table below. (These are the average values for the four core specimens used for the testing on each occasion). These values are required to be met Simultaneously.

#### PSG 7.3.6.1 Durability Test Parameters

DURABILITY INDEX TEST	TARGET VALUE
Oxygen permeability index	≥ 10 (log scale)
Chloride conductivity index	≤ 0.6 m.sec/cm
Water Sorptivity	≤ 8 mm / hr <sup>0.5</sup>

In the case that the results do not comply with the above values in the above table, another set of cores shall be drilled from the test panel. Where the second set of cores fails to comply with target values, a drum from that batch of concrete shall be sampled by way of drilling four cores for each of the oxygen permeability test and the chloride conductivity test. If these sets of cores fail any of the target values as stated above, the results will be reviewed by the Engineer who will assess them in accordance with the required durability parameters. If these results are still not found to be satisfactory by

the Engineer, the Contractor shall propose alternative methods to improve the durability of the mix and/or any items cast. The contractor shall keep records of all tests results relating to the samples tested.

The contractor shall ensure that site testing is carried out by a trained person. The contractor shall ensure that all off-site laboratory testing is performed in an approved laboratory approved in terms of their Quality Management System.

#### PSG 7.3.7 Criteria for the Compliance with the Requirements

No extra payment shall be made for cube strength testing. The cost of cube strength testing shall be included in the rates tendered for concrete.

Water used for testing shall be free of charge except for failed tests when water will be charged at standard municipal rates.

In the event that the actual achieved average cube strengths of an element are less than 85% of the target mean strength, the Engineer may instruct the taking of cores for additional strength testing. The cost of taking the cores and repairing the holes in the structures shall be for the Contractor's account.

The Engineer will conduct routine tests for the durability parameters on cores taken from the completed elements during the construction, the costs for which shall be to the Employer's account unless the parameters are not met.

The test results shall be accepted or rejected based on the criteria as set out in PSG 7.3.6.1 based on the following categories:

Full Acceptance:

Concrete shall be accepted unconditionally and full payment shall be made.

Conditional Acceptance:

Concrete may be accepted at the Engineer's discretion with a warning that construction methods be examined to improve the durability criteria. A reduced payment shall be applied to all the relevant pay items under SABS 1200 G for the non-conforming element or concrete pour. Alternatively, the Contractor may elect to carry out remedial work to improve the durability of the concrete to the criterion of "Full Acceptance" to the satisfaction of the Engineer, and receive full payment. All proposed remedial measures shall be subject to the approval of the Engineer. The cost of all such remedial work shall be for the Contractor's account.

Rejection:

The concrete shall be removed and replaced with fresh concrete at the expense of the Contractor, as directed by the Engineer.

Should the test result(s) indicate conditional acceptance or rejection of the item tested, the Contractor shall have the option of carrying out additional tests on that item, at his own expense, to confirm or disapprove the original test result(s). Not more than two such additional tests shall be carried out.

**PSG 7.3.8 Procedure in the Event of Non-Compliance with the Requirements**

Structural concrete elements or concrete pours shall be represented by test cubes and extracted cores, which shall be tested for strengths and the appropriate durability parameters.

If the durability parameters have been proved acceptable, the costs for such testing shall be borne by the Employer. However, where non-compliance to the specified parameters has been identified, the assessed element shall be rejected and at the Engineer's sole discretion any of the following measures may be considered at the Contractor's expense:

Coating with an approved product specifically designed to improve the non-conforming parameter depending on the severity of the test results.  
Acceptance at reduced payment.  
Demolition and rebuilding.

**PSG 7.3.9 Tests Ordered By the Engineer**

One concrete cube strength test shall comprise the results of tests carried out on three standard test cubes made from concrete sampled from one batch of concrete in accordance with these specifications.

Percentage payment for concrete cover shall be based on the average result of the total number of cover meter tests performed on a particular concrete element.

The overall percentage payment applied to a concrete member shall be based on the average of the percentage payments applicable to each durability parameter, together with the percentage payment based on the strength requirements described in the project specifications.

The reduced payments shall apply to the relevant payment items scheduled in the Schedule of Quantities.

**PSG 7.3.10 Determination Of Reduced Payment**

Payments for all durability concrete shall be based on the test results. The durability parameters are calculated according to Tables PSG 7.3.10.1, PSG 7.3.10.2 and PSG 7.3.10.3 below.

**Table PSG 7.3.10.1 Water Sorptivity**

TEST	Coastal ( $\leq 5$ km from coast and up to 15 km up river valleys/estuaries)		Inland ( $> 1$ km from coast)	
Water sorptivity (mm/h)	TEST RESULT	% PAYMENT	TEST RESULT	% PAYMENT
	$< 8$	100%	$< 8$	100%
	$8 < 12$	90%	$\geq 8 < 12$	90%
	$12 < 15$	85%	$\geq 12 < 15$	85%
	$\geq 15$	0%	$\geq 15$	0%

**Table PSG 7.3.10.2 Oxygen Permeability**

TEST	Coastal ( $\leq 5$ km from coast and up to 15 km up river valleys/estuaries)		Inland ( $> 1$ km from coast)	
Oxygen Permeability Index (log scale)	TEST RESULT	% PAYMENT	TEST RESULT	% PAYMENT
	$> 9.15$	100%	$> 9.5$	100%
	$> 9.0 \leq 9.15$	90%	$> 9.25 \leq 9.5$	90%
	$> 8.75 \leq 9.0$	85%	$> 9.0 \leq 9.25$	85%
	$\leq 8.75$	0%	$\leq 9.0$	0%

**Table PSG 7.3.10.3 Concrete Cover**

TEST	Coastal ( $\leq 5$ km from coast and up to 15 km up river valleys/estuaries)		Inland ( $> 1$ km from coast)	
	TEST RESULT	% PAYMENT	TEST RESULT	% PAYMENT
30 mm specified	$\geq 30 \leq 40$	100 %	$\geq 30 \leq 40$	100 %
	$\geq 25 < 30$	40 %	$\geq 20 < 30$	40 %
	$< 25$ or $> 40$	0 %	$< 20$ or $> 40$	0 %
40 mm specified	$\geq 40 \leq 50$	100 %	$\geq 40 \leq 50$	100 %
	$\geq 35 < 40$	40 %	$\geq 30 < 40$	40 %
	$< 35$ or $> 50$	0 %	$< 30$ or $> 50$	0 %
50 mm specified	$\geq 50 \leq 60$	100 %	$\geq 50 \leq 60$	100 %
	$\geq 45 < 50$	40 %	$\geq 40 < 50$	40 %
	$< 45$ or $> 60$	0 %	$< 40$ or $> 60$	0 %
60 mm specified	$\geq 60 \leq 70$	100 %	$\geq 60 \leq 70$	100 %
	$\geq 55 < 60$	40 %	$\geq 50 < 60$	40 %
	$< 55$ or $> 70$	0 %	$< 50$ or $> 70$	0 %
65 mm specified	$\geq 65 \leq 75$	100 %	$\geq 65 \leq 75$	100 %
	$\geq 60 < 65$	40 %	$\geq 55 < 65$	40 %
	$< 60$ or $> 75$	0 %	$< 55$ or $> 75$	0 %
75 mm specified	$\geq 75 \leq 85$	100 %	$\geq 75 \leq 85$	100 %
	$\geq 70 < 75$	40 %	$\geq 65 < 75$	40 %
	$< 70$ or $> 85$	0 %	$< 65$ or $> 85$	0 %
80 mm specified	$\geq 80 \leq 90$	100 %	$\geq 80 \leq 90$	100 %
	$\geq 75 < 80$	40 %	$\geq 70 < 80$	40 %
	$< 75$ or $> 90$	0 %	$< 70$ or $> 90$	0 %



Percentage payment for concrete cover shall be based on the average result of the total number of cover meter tests performed on a particular concrete element.

The overall percentage payment applied to a concrete member shall be based on the average of the percentage payments applicable to each durability parameter, together with the percentage payment based on the strength requirements described in the project specifications.

The reduced payments shall apply to the relevant payment items scheduled in the Schedule of Quantities.

**PSG 7.3.11 Grouting**

The Contractor shall, where so ordered, carry out a site test for each grouting procedure. The tests shall be carried out on a dummy bedplate similar in configuration to that which is to be grouted, but not exceeding 1 m<sup>2</sup> in area unless otherwise ordered. When the dummy bedplate is dismantled, the underside shall show a minimum grout contact area of 80% with reasonably even distribution of the grout over the surface grouted except that, in the case of expanding grout, the minimum grout contact area shall be 95%. The test shall show evidence of good workmanship and materials and the results shall be to the satisfaction of the Engineer.

The Contractor shall, when so ordered, make standard test cubes from various grout mixtures and also subject them to compression tests to determine whether the specified strength has been achieved. Test procedures shall comply with the relevant requirements of Sub-clauses 7.2.1 to 7.2.3.

**PSG 8 MEASUREMENT AND PAYMENT**

**PSG 8.1.1 Formwork**

Add the following Sub-clause:

**PSG 8.1.1.7 Edges of blinding layer**

No separate payment will be made for formwork to the edge of the blinding layer. The rates tendered for concrete to the blinding layer shall cover the cost of such formwork.

**PSG 8.1.1.8 Chamfers and fillets**

No additional payment will be made for chamfers and fillets up to 40 mm wide. Larger fillets and chamfers will be measured by length in accordance with Sub-clause 8.2.5.

**PSG 8.1.2 Reinforcement**

Add the following to Sub-clauses 8.1.2.2 and 8.1.2.3:

Notwithstanding the method of measuring and paying for reinforcement specified in Sub-clauses 8.1.2.2 and 8.1.2.3, reinforcement will be measured and paid for as scheduled.

**PSG 8.1.3 Concrete**

Add the following to Sub-clauses 8.1.3.3:

The rates for concrete shall also cover:

the use of dolomitic aggregate where prescribed,  
the cost of the preparation of design mixes by an approved laboratory and  
submission for approval by the Engineer,  
screeded finish of unformed surface as specified in PSG 5.5.10.1, as amended,  
Screeded finish, and  
inclusion of admixtures where specified.

**PSG 8.2 Scheduled Formwork Items**

Add the following payment item to this clause:

**PSG 8.2.7 Kickers Unit: m<sup>2</sup>**

Formwork to the edges of kickers will be measured as plane (or circular) vertical (not as narrow widths).

**PSG 8.2.8 Edges of blinding layer**

No separate payment will be made for formwork to the edge of the blinding layer. The rates tendered for concrete to the blinding layer shall cover the cost of such formwork.

**PSG 8.2.9 Chamfers and fillets Unit: m<sup>2</sup>**

No additional payment will be made for chamfers and fillets up to 40 mm wide. Larger fillets and chamfers will be measured by length in accordance with Sub clause 8.2.5.

**PSG 8.4 Concrete**

**PSG 8.4.4 Unformed surface finishes Unit: m<sup>2</sup>**

Add the following to this Sub-clause:

The rates for unformed surface finishes shall cover the cost of providing the respective surface finish as specified in PSG 5.5.10, as amended, Concrete Surfaces.

**PSG 8.5 Joints**

Add the following to this clause:

Only designated joints as shown on the drawings will be measured for payment according to the length of each type of joint constructed. The rate shall cover the cost of all materials, labour and plant required to construct each type of joint specified on the drawings, including the cost of all shuttering, treatment of the joint as specified in Sub-clause 5.5.7.3, as amended, the provision of chamfers as specified where concrete is exposed, as well as testing and repairing where necessary.

Non-designated joints will not be measured for payment.

Add the following Sub-clause to this payment clause:

**PSG 8.5.1 Formed joints Unit: m**

Formed joints will be measured by the length of the joint.



certification and all as detailed on the drawings. Repairs for leaking cast in items will not be paid for.

**PSG 8.12 Granolithic screeds Unit: m<sup>2</sup>**

Special floor finish will be measured by area. The rate shall cover the cost of the supply and application of the specified material, complete as specified by the manufacturer and to the approval of the Engineer. Repairs to unsatisfactory work will not be paid for.

Measurement of granolithic screeds will be by the surface area covered.

The unit rate or lump sum shall cover the cost of all materials, labour and equipment required to provide the screed as specified in Sub-clause PSG 5.5.10.4, as amended, Granolithic screeds. The rate shall include the steel float finish.

**PSG 8.13 Precast paving slabs Unit: m<sup>2</sup>**

Precast paving slabs will be measured by the area paved.

The rate shall cover the cost of compacting the area, application of weed-killer, supplying, laying and bedding the slabs, grouting the joints and filling any gaps, all as specified.

**PSG 8.14 PFA concrete Unit: m<sup>3</sup>**

Measurement and payment for PFA concrete shall be as specified in Sub-clause 8.1.3 as amended.

The tendered rate shall cover all costs in connection with the supply, storage, handling on site and mixing in of PFA.

**PSG 8.15 Watertightness test Unit: No.**

The watertightness test will be paid by a lump sum separately for each structure.

The sum shall cover the cost of all labour, equipment and materials to carry out the tests, as specified in Sub-clause PSG 5.5.11, as amended, Watertightness test, to rectify faults and to achieve a test result to the satisfaction of the Engineer.

The sum shall include for all water required over and above that required for one filling of the water retaining structure based on the assumption that water will be available.

A provisional item is provided for an extra payment to the above to allow for the water not being available in time and the Contractor has to make his own other arrangements for providing water for testing. Such an arrangement shall only come into effect on the Engineer's instruction.

**PSG 8.16 Miscellaneous Metalwork Unit: No.**

Payment shall be by number. Separate items shall be scheduled for the following where required:

Manhole covers

The manhole cover in the reservoir roof shall be installed to the details shown on the drawings. The rate shall include supply, bitumen coating, installation and casting of the frame into the supporting concrete.

## Reservoir ventilators

The reservoir ventilators in the reservoir roof shall be installed to the details shown on the drawings. The rate shall include fabrication, galvanising, shuttering, grouting and installation.

## Step irons

Cast iron step irons shall be cast into the side of the reservoir wall, sump and manholes as detailed. The rate shall include for the supply and installation of the step irons.

**PSG 8.17      Black Plastic Bond Breaker      Unit: m<sup>2</sup>**

A 500 micron black plastic continuous layer is to be laid over the no-fines concrete under the reservoir floor. The side and end laps shall not be less than 100mm. Just before casting the sheeting shall be perforated in a grid pattern at 1 m centres.

Payment shall be by the square meter laid. Care shall be taken not to rip or tear the sheeting. All repairs shall be at the Contractor's expense.

**PSG 8.18      Teflon Sliding Bearings      Unit: m**

Neoprene (Kilcher or similarly approved) Teflon sliding bearings shall be placed on the top of the reservoir wall prior to casting the roof slab. A 3T50/75 bearing shall be used for the reinforced concrete reservoir, while a 3T50/100 bearing shall be used for the prestressed concrete reservoir. The top of the wall shall be cast to a smooth steel float finish.

Payment shall be per linear metre for the preparing and placing of the bearings. The rate shall include the supply, laying, jointing and masking of the bearings to the polystyrene strip.

**PSG 8.19      Polyurethane sealants      Unit: m**

A polyurethane sealant (UV-resistant) shall be used on the outside joint between the reservoir roof and walls to the details shown and shall be finished off neatly leaving a smooth regular finish.

Payment shall be per linear metre. The rate shall include the supply, preparation, sealing and finishing.

**PSG 8.20      Commercial Laboratory      Unit: Prov Sum**

A Provisional Sum for the services of a commercial laboratory has been included in the Bill of Quantities for the Engineer's Acceptance Testing. The use of this laboratory is for additional testing required over and above the testing specified in SANS 1200 G and the variations to SANS 1200 G specified above. Testing shall only be paid on written instruction for additional testing from the Engineer.

The procedure for sampling and manufacturing, storing, curing and testing test cubes shall be in accordance with SABS 863.

PSL : MEDIUM PRESSURE PIPELINE  
(Applicable to SABS 1200 L - 1983)

**PSL 3: MATERIALS**

**PSL 3.7: OTHER TYPES OF PIPES**

**Add the following new sub-clause:**

**PSL 3.7.3: GALVANISED RESTRAINED STEEL PIPES**

The piping system shall have a spigot and socketed and fittings that shall comply with SANS 966-2. All pipes shall be supplied in 6m lengths with the length tolerance as per SANS 966-2

**PSL 7.3: STANDARD HYDRAULIC PIPE TEST**

**PSL 7.3.1: HYDRAULIC TESTING**

**Add the following sub-clauses:**

**PSL 7.3.1.6: GENERAL REQUIREMENTS**

“The Contractor shall make his own arrangements for the procurement of water and for filling of sections of the pipelines for hydraulic testing purposes.

The Contractor shall test the pipeline in short sections of pipeline so as to allow timeous backfilling of the trenches. On the completion of a pipeline, a test of the full length will be required as part of the commissioning of pipeline, and as the acceptance test.

The cost of all hydraulic tests is for the Contractor’s cost.”

**PSL 7.3.1.7: PIPE SECTION ACCEPTANCE TESTING**

“The test pressure varies with the position of the measuring gauge. The measuring gauge should always be positioned at the lowest elevation of the section being tested with the test pressure not exceeding the pipe class at any point along the pipeline.”

**PSL 7.3.1.8: FILLING OF PIPELINES FOR TESTING**

“Prior to the commencement of filling, the Contractor shall ensure that all scour valves, air valve isolating valves and in-line isolating valves are in the open position, man all temporarily blanked off ends are firmly anchored against thrust blocks.

The Contractor’s proposed methodology for filling shall be submitted to the Engineer for approval. No filling shall commence until the Engineer’s approval to do so has been obtained.

The filling process shall be carried out slowly and scour valves are to be continuously monitored to ensure no erosion or damage to property occurs. Scours shall be closed once they begin to discharge water. Blank flanges/end caps shall be installed on the downstream flange after the water in the pipeline has been left to stand for 24 hours. Once the flange has been installed, scour valves are to be re-opened for the duration of the hydraulic test. The Contractor is to ensure that air is vented out of the pipeline as the filling proceeds. It is essential that all air is expelled.

No separate payment will be made for the Contractor’s attendance during filling, the

Contractor will be deemed to have included for such in his rates.

No scour valve shall be opened without the prior approval of the Engineer.”

**PSL 8: MEASUREMENT AND PAYMENT**

**Add the following new payment items:**

**PSL 8.2.16: PIPE MARKERS** Unit: No.

“The Contractor shall allow an all-inclusive rate for excavation and installing pipe markers complete as per supplied drawings.”

**PSL 8.2.17: VALVE MARKERS** Unit: No.

“The Contractor shall allow an all-inclusive rate for excavation and installing valve markers complete as per supplied drawings.”

**PSL 8.2.18: TIE INTO EXISTING PIPELINE/CHAMBERS ALL INCLUSIVE** Unit: Sum

“The rate tendered for this item is to include for the at the existing valve chamber, all fittings, couplings and jointing materials, etc. necessary for the connection from the existing main. Demolishing of the concrete anchor block is also to be included.”

**C3.8      GENERIC LABOUR-INTENSIVE SPECIFICATION**

The Generic Labour-intensive specification below is the same as SANS 1921-5, Construction and management requirement for works contracts- Part 5: Earthworks activities which are to be performed by hand and should be included in the scope of works without amendment or modification as set out below.

**C3.8.1      Scope**

This specification establishes general requirements for activities which are to be executed by hand involving the following:

- a) trenches having a depth of less than 1.5 metres
- b) stormwater drainage
- c) low-volume roads and sidewalks

**Precedence**

Where this specification is in conflict with any other standard or specification referred to in the Scope of Works to this Contract, the requirements of this specification shall prevail.

**C3.8.2      Hand excavateable material**

Hand excavateable material is material:

**a) granular materials:**

- (i) whose consistency when profiled may in terms of table 1 be classified as very loose, loose, medium dense, or dense; or ii) where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 15 blows of a dynamic cone penetrometer is required to penetrate 100mm;

**b) cohesive materials:**

- (i) whose consistency when profiled may in terms of table 1 be classified as very soft, soft, firm, stiff and stiff / very stiff; or ii) where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 8 blows of a dynamic cone penetrometer is required to penetrate 100mm;

**Note:**

- 1) A boulder, a cobble and gravel is material with a particle size greater than 200mm, between 60 and 200mm.
- 2) A dynamic cone penetrometer is an instrument used to measure the insitu shear resistance of a soil comprising a drop weight of approximately 10 kg which falls through a height of 400mm and drives a cone having a maximum diameter of 20mm (cone angle of 60° with respect to the horizontal) into the material being used.

**Table 2: Consistency of materials when profiled**

GRANULAR MATERIALS		COHESIVE MATERIALS	
CONSISTENCY	DESCRIPTION	CONSISTENCY	DESCRIPTION
Very loose	Crumbles very easily when scraped with a geological pick.	Very soft	Geological pick head can easily be pushed in as far as the shaft of the handle.
Loose	Small resistance to penetration by sharp end of a geological pick.	Soft	Easily dented by thumb; sharp end of a geological pick can be pushed in 30-40 mm; can be moulded by fingers with some pressure.



Medium dense	Considerable resistance to penetration by sharp end of a geological pick.	Firm	Indented by thumb with effort; sharp end of geological pick can be pushed in up to 10 mm; very difficult to mould with fingers; can just be penetrated with an ordinary hand spade.
Dense	Very high resistance to penetration by the sharp end of geological pick; requires many blows for excavation.	Stiff	Can be indented by thumb-nail; slight indentation produced by pushing geological pick point into soil; cannot be moulded by fingers.
Very dense	High resistance to repeated blows of a geological pick.	Very stiff	Indented by thumb-nail with difficulty; slight indentation produced by blow of a geological pick point.

**C3.8.3 Trench excavation**

All hand excavateable material in trenches having a depth of less than 1.5 metres shall be excavated by hand.

**Compaction of backfilling to trenches (areas not subject to traffic)**

Backfilling to trenches shall be placed in layers of thickness (before compaction) not exceeding 100mm. Each layer shall be compacted using hand stampers

- a) to 90% Proctor density;
- b) such that in excess of 5 blows of a dynamic come penetrometer (DCP) is required to penetrate 100 mm of the backfill, provided that backfill does not comprise more than 10% gravel of size less than 10mm and contains no isolated boulders, or
- c) such that the density of the compacted trench backfill is not less than that of the surrounding undisturbed soil when tested comparatively with a DCP.

**C3.8.4 Excavation**

All hand excavateable material including topsoil classified as hand excavateable shall be excavated by hand. Harder material may be loosened by mechanical means prior to excavation by hand.

The excavation of any material which presents the possibility of danger or injury to workers shall not be excavated by hand.

**C3.8.5 Clearing and grubbing**

Grass and small bushes shall be cleared by hand.

**C3.8.6 Shaping**

All shaping shall be undertaken by hand.

**C3.8.7 Loading**

All loading shall be done by hand, regardless of the method of haulage.

**C3.8.8 Haul**

Excavation material shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150 m.

**C3.8.9 Offloading**

All material, however transported, is to be off-loaded by hand, unless tipper-trucks are utilised for haulage

**C3.8.10 Spreading**

All material shall be spread by hand.

**C3.8.11 Compaction**

Small areas may be compacted by hand provided that the specified compaction is achieved.

**C3.8.12 Grassing**

All grassing shall be undertaken by sprigging, sodding, or seeding by hand.

**C3.8.13 Stone pitching and rubble concrete masonry**

All stone required for stone pitching and rubble concrete masonry, whether grouted or dry, must to be collected, loaded, off loaded and placed by hand.

Sand and stone shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150m. Grout shall be mixed and placed by hand.

**C3.8.14 Manufactured Elements**

Elements manufactured or designed by the Contractor, such as manhole rings and cover slabs, precast concrete planks and pipes, masonry units and edge beams shall not individually, have a mass of more than 320kg. In addition the items shall be large enough so that four workers can conveniently and simultaneously acquire a proper hand hold on them.

## ENVIRONMENTAL SPECIFICATION



**O.R. TAMBO  
DISTRICT MUNICIPALITY**

**VOLUME 1**

**CONTRACT**

**SITE INFORMATION**

**C4**            **SITE INFORMATION**

**C4.1**           **CONDITIONS ON SITE**

The Contractor will not have exclusive use of the site.

The geotechnical reports for the investigations undertaken for the project sites will be emailed to all contractors on Request and fall into Annexure C.