



**TENDER DOCUMENT  
FOR**

**REPAIRS AND RESTORATION OF THE KOWIE RIVER  
RETAINING WALL - PORT ALFRED**

**TENDER NUMBER: 10/FY/21**

**NAME OF A TENDERER:**

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**CLOSING DATE:**

**08 December 2020 at 11h00 am**

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**NON-COMPULSORY BRIEFING:  
GPS Coordinates:**

**16 November 2020 @ 10:00am  
Opposite Kidd's beach on Kowie River  
= 33 35'49.6" S and 26 53'32.1" E**

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**TOTAL TENDER PRICE:**

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**CSD NUMBER:**

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**CIDB REGISTRATION GRADE:**

**3CE or 3CE PE Registered Contractors ONLY**

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**CIDB CRS NUMBER:**

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# TENDER DOCUMENT CHECKLIST

Tenderers must complete this document checklist to ensure that all information is completed in the Tender Document.

Page	Ref	Description	Included
		<b>All pages requiring signatures signed by the Tenderer</b>	
	<b>SBD1</b>	<b>Invitation to Bid</b>	
	<b>C1.1</b>	<b>Form of Offer duly completed</b>	
	<b>C1.2</b>	<b>Contract Data: Part 2 – Data provided by Contractor</b>	
	<b>C2.2</b>	<b>Bill of Quantities</b>	
		Sign and date Final Summary	
		Completed in <b>BLACK INK</b> only	
		Corrections crossed out and initialed	
	<b>T2.1</b>	<b>All Returnable Documents and Schedules submitted</b>	
	<b>1A.</b>	Joint Venture Disclosure Form.	
	<b>1B.</b>	Compulsory Enterprise Questionnaire.	
	<b>1C.</b>	Record of Addenda to Tender Documents.	
	<b>1D.</b>	Proposed Amendments and Qualifications.	
	<b>1E.</b>	Schedule of Subcontractors.	
	<b>1F.</b>	Schedule of Plant and Equipment.	
	<b>1G.</b>	Schedule of the Tenderer's Experience (work undertaken).	
	<b>1H.</b>	Schedule of work undertaken for the Department.	
	<b>2A.</b>	Certificate of Contractor Registration issued by the Construction Industry Development Board.	
	<b>2B.</b>	Tax Clearance Certificate ( <b>SBD 2</b> ).	
	<b>2C.</b>	Certificate of Tenderer's visit to the site.	
	<b>2D.</b>	Certificate of Authority for Signature.	
	<b>2E.</b>	Alterations by Tenderer.	
	<b>2F.</b>	Surety and Bank Details.	
	<b>2G.</b>	Company Composition.	
	<b>2H.</b>	Declaration of Interests	
	<b>2I.</b>	Declaration of Interest (In the Service of the State) ( <b>SBD 4</b> ).	
	<b>2J.</b>	Declaration of Past SCM Management Practices ( <b>SBD 8</b> )	
	<b>2K.</b>	Declaration (Validity of Information Provided).	
	<b>2L.</b>	Declaration for Procurement above R10 million( <b>SBD 5</b> )	
	<b>2M.</b>	Certificate of Independent Bid Determination ( <b>SBD 9</b> )	
	<b>3A</b>	Preference Points Claim Form – ( <b>SBD 6.1</b> )	
	<b>3B</b>	Local Production and Content – ( <b>SBD 6.2</b> )	
	<b>3C</b>	Tender Declaration	

# THE TENDER

**PART T1 TENDERING PROCEDURE**

**T1.1 TENDER NOTICE AND INVITATION TO TENDER****BID NOTICE****Eastern Cape Parks and Tourism Agency****CONTRACT: 10/FY/21****REPAIRS AND RESTORATION OF THE KOWIE RIVER  
RETAINING WALL, PORT ALFRED*****TENDER NOTICE AND INVITATION TO TENDER***

<b>CONTRACT NO.</b>	:	<b>10/FY/21</b>
<b>DESCRIPTION</b>	:	<b>REPAIRS AND RESTORATION OF THE KOWIE RIVER RETAINING WALL, PORT ALFRED</b>
<b>DOCUMENTS MUST BE DOWNLOADED ON</b>	:	<a href="http://www.visiteasterncape.co.za/procurement/tenders">www.visiteasterncape.co.za/procurement/tenders</a> ; OR <a href="http://www.ectreasury.gov.za">www.ectreasury.gov.za</a> ;
<b>CLOSING DATE</b>	:	<b>08 December 2020</b>
<b>NON-COMPULSORY SITE INSPECTION</b>		
<b>DATE</b>	:	<b>16 November 2020</b>
<b>TIME &amp; VENUE</b>	:	<b>10:00am Kowie River (Site), Port Alfred</b>
<b>GPS CO-ORDINATES</b>		<b>Opposite Kidd's beach on Kowie river = 33 35'49.6" S and 26 53'32.1" E</b>
<b>TECHNICAL QUERIES</b>	:	<b>Ms. Mandilakhe Lawana (Technical enquiries) Mr. Mcebisi Sandl (Procurement enquiries)</b>
<b>TELEPHONE</b>	:	<b>(043) 705 4400</b>
<b>CIDB GRADING</b>	:	<b>3 CE or 3CE PE Only</b>

**Tenderers should have a CIDB contractor grading designation 3CE or 3CE PE Only. Contractors with grading designation of 4 CE or higher will not be considered.**

Tenderers will be evaluated on three stages. In Stage 1 bids will be evaluated on pre-requisites, Stage 2 (Price and B-BBEE) 80/20 Preference Point System will be applied in Stage 2. In Stage 3 bids will be assessed for risk.

The Tender documents will only be obtainable as from the **06 November 2020** and should be downloaded from the following websites: [www.visiteasterncape.co.za/procurement/tenders](http://www.visiteasterncape.co.za/procurement/tenders); [www.ectreasury.gov.za](http://www.ectreasury.gov.za);

**A NON-COMPULSORY TENDER CLARIFICATION MEETING** will be held in respect of this tender on **16<sup>th</sup> of November 2020 at 10:00am at Opposite Kidd's beach on Kowie River, GPS Coordinates = 33 35'49.6" S and 26 53'32.1" E.** Tenderers should already be in possession of the tender document and be familiar with the contents thereof.

The lowest or any tender will not necessarily be accepted, and the agency reserves the right to accept the Tender as a whole or in part. Bids must remain valid for a period of **120 days** after the closing date for the submission of bids, during which period a tender may not be amended or withdrawn and may be accepted at any time by the Department.

The closing date and time for receipt of bids is **08 December 2020 at 11:00am**. Bids must be enclosed in a sealed envelope bearing the name of the Tenderer as well as the applicable tender heading, reference number, closing time and due date and must be addressed to, **The Chief Executive Officer**, and must be submitted in the tender box located at, 17-25 Oxford Street, Corner Oxford and Fleet Street East London, before the closing time and date.

### Evaluation of Tender Offers

Before evaluating Tender offers, the Bids will be in accordance with Method 2 of the CIDB Standard Tender Evaluation in three stages, namely:

- Stage 1: Pre-requisites
- Stage 2: Financial Offer and Preference Evaluation
- Stage 3: Risk Assessment

#### **Stage 1: Pre-requisites**

Over and above the test for responsiveness as described under F3.8 of the Standard Conditions of Tender, failure of the Tenderer to submit the following will result in immediate disqualification:

- (i) **CIDB Grading:** Proof of CIDB contractor grading designation equal to **3 CE / 3CE PE only**
- (ii) **Locality of the Bidder:** Bidders **MUST** reside within the Ndlambe Local Municipality. **Proof of company address MUST be provided In ANY of the following documents:**
  - Valid and signed Lease Agreement
  - Utility Bill not older than 3 months
  - Municipal Account not older than 3 months
  - Stamped address confirmation letter from Ward Councillor not older than 3 months
- (iii) **Company Experience:** Bidders **MUST** provide evidence of execution or completion of at least **two (2)** Civil Engineering projects (CE). Only projects with a rand value of **R800 000** and above will be considered.

**NB: Proof of experience must be on the client's letterhead and can be submitted in ANY of the following documents:**

- Written reference letters,
- Letter of awards,
- Copies of purchase orders,
- Service Level Agreements,
- Completion certificates

**NB: Failure to comply with any of the above requirements will lead to immediate rejection of the bid.**

#### **Stage 2: Financial Offer and Preference Evaluation**

Bids will be evaluated based on 80/20 principle, in which a maximum of 80 points will be awarded to price based on the following formulae:

The 80/20 preference point system for acquisition of services, works or goods up to Rand value of R50 million 4(a)(i) The following formula must be used to calculate the points for price in respect of bids (including price quotation) with a rand value equal to, or above R 30 000 and up to Rand value of R 50 000 000 (all applicable taxes included):

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

Where  $P_s$  = Points scored for comparative price of tender or offer under consideration;  $P_t$  = Comparative price of tender or offer under consideration; and

$P_{\min}$  = Comparative price of lowest acceptable tender or offer.

4(a)(ii) An employer of state may apply the formula in paragraph (i) for price quotations with a value less than R30 000, if and when appropriate:

4(b) Subject to subparagraph (4) (c), points must be awarded to a tender for attaining the B-BBEE status level of contributor in accordance with the table below:



B-BBEE Status Level of Contributor	Number of points (80/20 of system)
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

4(c) A maximum of 20 points may be allocated in accordance with subparagraph (4)(b)

4(d) The points scored by tender in respect of B-BBEE contribution contemplated in subparagraph (4) (b) must be added to the points scored for price as calculated in accordance with subparagraph (4)(a).

(4)(e) Subject to paragraph 4.3.8 the contract must be awarded to the tender who scores the highest total number of points.

### **Stage 3: Risk Analysis**

In addition to the evaluation of Responsiveness, a risk analysis will be performed on the Tenderers having the highest ranking / number of points to ascertain if any of the following, as relevant, present an unacceptable commercial risk to the employer in terms of:

- a) Clause F.3.13 of the Standard Conditions of Tender below (Annexure F);
- b) Unduly high or unduly low Tendered rates or amounts in the Tender offer. In this regard, a financial risk analysis will be performed to verify that the rates entered in the Bill of Quantities are reasonable and balanced. Bids may be disqualified if Tendered rates are found to be distorted. Such evaluation will include "Rate Only" items;
- c) Contract data provided by the contractor; and
- d) The contents of the Tender Returnables which are to be included in the contract.

### **Special Bid Conditions**

- The ECPTA does not bind itself to accept the highest bid or any other bid and reserves the right to accept the whole or part of the bid.
- A service level agreement shall be signed with the successful service provider.

**SBD 1 INVITATION TO BID****PART A**

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (NAME OF DEPARTMENT/ PUBLIC ENTITY)					
BID NUMBER:	10/FY/21	CLOSING DATE:	08 DECEMBER 2020	CLOSING TIME:	11h00am
DESCRIPTION	REPAIRS AND RESTORATION OF THE KOWIE RIVER RETAINING WALL - PORT ALFRED				
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT (STREET ADDRESS)					
17-25 Oxford Street, Crn. Oxford and Fleet Street, East London					
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO			TECHNICAL ENQUIRIES MAY BE DIRECTED TO:		
CONTACT PERSON	Mr Mcebisi Sandi		CONTACT PERSON	Ms Mandilakhe Lawana	
TELEPHONE NUMBER	043 492 0685		TELEPHONE NUMBER	043 492 0845	
FACSIMILE NUMBER	086 205 0595		FACSIMILE NUMBER		
E-MAIL ADDRESS	mcebisi.sandi@ecpta.co.za		E-MAIL ADDRESS	Mandilakhe.lawana@ecpta.co.za	
SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:		OR	CENTRAL SUPPLIER DATABASE No:	MAAA
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE	TICK APPLICABLE BOX] <input type="checkbox"/> Yes <input type="checkbox"/> No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT	[TICK APPLICABLE BOX] <input type="checkbox"/> Yes <input type="checkbox"/> No	
[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]					
1 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]		2 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]	
QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS					
IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?				<input type="checkbox"/> YES <input type="checkbox"/> NO	
DOES THE ENTITY HAVE A BRANCH IN THE RSA?				<input type="checkbox"/> YES <input type="checkbox"/> NO	
DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?				<input type="checkbox"/> YES <input type="checkbox"/> NO	

DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?

YES  NO

IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?

YES  NO

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

**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.	ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED-(NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.
1.3.	THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.
1.4.	THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (SBD7).
<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 VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.
2.3	APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.
2.4	BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
2.5	IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
2.6	WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
2.7	NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE."

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

SIGNATURE OF BIDDER: .....

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

DATE: .....

## T1.2 TENDER DATA

The conditions of tender are the Standard Conditions of Tender as contained in Annex F of Board Notice 86 of 2010 in Government Gazette No. 33239 of 28 May 2010, Construction Industry Development Board (CIDB) Standard for Uniformity in Construction Procurement as is available from the CIDB website (see [www.cidb.co.za](http://www.cidb.co.za)).

The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this 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.

**The following variations, amendments and additions to the Standard Conditions of Tender as set out in the Tender Data below shall apply to this tender:**

**The additional conditions of tender are:**

Clause number	Tender Data
<b>F.1</b>	<b>GENERAL</b>
F.1.1	The employer is <b>DEPARTMENT OF PUBLIC WORKS</b> , represented by the Head of Infrastructure Services.
F.1.2	The tender documents issued by the employer comprise: T1.1 Tender notice and invitation to tender T1.2 Tender data T2.1 List of returnable documents T2.2 Returnable schedules <b>Part 1: Agreements and contract data</b> C1.1 Form of offer and acceptance C1.2 Contract data C1.3 Form of Guarantee C1.4 Adjudicator's Contract <b>Part 2: Pricing data</b> C2.1 Pricing instructions C2.2 Activity schedules / Bills of Quantities <b>Part 3: Scope of work</b> C3 Scope of work <b>Part 4: Site information</b> C4 Site information <b>Part 5: Drawing schedule</b>
F.1.4	The employer's agent is: Name: <b>Songo Design Lab (Principal Agent)</b> Tel: (043) 748 1800 E-mail: <a href="mailto:George@songodesignlab.co.za">George@songodesignlab.co.za</a>
<b>F.2</b>	<b>TENDERER'S OBLIGATION</b>
F.2.1	Only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a 3CE or 3CE PE Only class of construction work, are eligible to submit tenders. The final grading shall be in accordance with the price tendered and the CIDB regulations. Joint ventures are eligible to submit tenders provided that: 1. Every member of the joint venture is registered with the CIDB and their joint ranking satisfies the CIDB requirements.

F.2.1	<p>The following tenderers who are registered with the CIDB, or are capable of being so registered prior to the evaluation of submissions, are eligible to submit tenders:</p> <ul style="list-style-type: none"> <li>a) contractors who have a contractor grading designation equal to a contractor grading designation determined in accordance with the sum tendered for a <b>3CE or 3CE PE Only class of construction work</b>; and</li> <li>b) contractors registered as potentially emerging enterprises with the CIDB who are registered in one contractor grading designation lower than that required in terms of a) above and who satisfy the following criteria: <ul style="list-style-type: none"> <li>i) The Employer, following an interview with the management of the enterprise, is satisfied that the enterprise has the potential to develop and qualify to be registered in a higher contractor grading designation; and</li> <li>ii) The Employer, following a risk assessment, is able to provide the necessary supportive measures required to enable the enterprise to successfully execute the contract.</li> </ul> </li> </ul> <p>Joint ventures are eligible to submit tenders provided that:</p> <ol style="list-style-type: none"> <li>1. Every member of the joint venture is registered with the CIDB and their joint ranking satisfies the CIDB requirements.</li> </ol>
F.2.1	<p>Only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a 3CE or 3CE PE Only class of construction work and are registered with the CIDB as having a track record, are eligible to submit tenders.</p>
F.2.7	<p>The arrangements for a compulsory site meeting are as stated in the Tender Notice and Invitation to Tender.</p> <p>Tenderers must sign the attendance list in the name of the tendering entity. Addenda will be issued to and tenders will be received only from those tendering entities appearing on the attendance list.</p>
F.2.9	<p>The employer does not provide insurance. The contractor is responsible for providing full insurance cover for the contract.</p>
F.2.12	<p>If tenderer wishes to submit an alternative tender offer, the only criteria permitted for such alternative tender offer is that it demonstrably satisfies the Employer's standards and requirements, the details of which may be obtained from the Employer's Agent.</p> <p>Calculations, drawings and all other pertinent technical information and characteristics as well as modified or proposed Pricing Data must be submitted with the alternative tender offer to enable the Employer to evaluate the efficacy of the alternative and its principal elements, to take a view on the degree to which the alternative complies with the Employer's standards and requirements and to evaluate the acceptability of the pricing proposals. Calculations must be set out in a clear and logical sequence and must clearly reflect all design assumptions. Pricing Data must reflect all assumptions in the development of the pricing proposal.</p> <p>Acceptance of an alternative tender offer will mean acceptance in principle of the offer. It will be an obligation of the contract for the tenderer in the event that the alternative is accepted, to accept full responsibility and liability that the alternative offer complies in all respects with the Employer's standards and requirements.</p> <p>The modified Pricing Data must include an amount equal to 5% of the amount tendered for the alternative offer to cover the Employer's costs of confirming the acceptability of the detailed design before it is constructed.</p>
F.2.13.3	<p>Parts of each tender offer communicated on paper shall be submitted as original, plus 0 copies.</p>

F.2.13.5 F.2.15.1	The employer's address for delivery of tender offers and identification details to be shown on each tender offer package are: <b>Tender Box at the Eastern Cape Parks &amp; Tourism 17-25 Oxford Street EAST LONDON 5200</b>
F.2.13 F.3.5	A two-envelope procedure will not be followed.
F.2.15	The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender.
F.2.15	Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted.
F.2.16	The tender offer validity period is 120 days.
F.2.17	A tender will be rejected as non-responsive if the tenderer fails to provide any clarification requested by the employer within the time for submission stated in the employer's written request for such clarification. A tender will also be rejected as non-responsive if the tenderer fails, within the time stated in writing by the Employer, to comply with the requirements of F.4.4.
F.2.18	The tenderer shall, when requested by the Employer to do so, submit the names of all management and supervisory staff that will be employed to supervise the labour-intensive portion of the works together with satisfactory evidence that such staff members satisfy the eligibility requirements.
F.2.23	The tenderer is required to submit with his tender:  1) A Certificate of Contractor Registration issued by the Construction Industry Development Board. 2) where the tendered amount inclusive of VAT exceeds R 10 million: <ul style="list-style-type: none"> <li>• audited annual financial statement for 3 years, or for the period since establishment if established during the last 3 years, if required by law to prepare annual financial statements for auditing;</li> <li>• a certificate certifying that the tenderer has no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days;</li> <li>• particulars of any contracts awarded to the tenderer 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;</li> <li>• a statement indicating whether any portion of the goods or services are expected to be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality or municipal entity is expected to be transferred out of the Republic.</li> </ul> <p>Where a tenderer satisfies CIDB contractor grading designation requirements through joint venture formation, such tenderers must submit the Certificates of Contractor Registration in respect of each partner.</p>
<b>F.3</b>	<b>THE EMPLOYERS UNDERTAKINGS</b>
F.3.4	Tenders will be opened immediately after the closing time for tenders at <b>EASTERN CAPE PARKS &amp; TOURISM, 17-25 OXFORD STREET, EAST LONDON, 5200.</b>
F.3.4.1	Notwithstanding any requests for confirmation of receipt of Addenda issued, the tenderer shall be deemed to have received such addenda if the employer can show proof of transmission thereof (or a notice in respect thereof) via electronic mail, facsimile or registered post.

F.3.11.10	<p><b>Risk Analysis (Additional sub-clause)</b></p> <p>Notwithstanding compliance with regard to CIDB registration or any other requirements of the tender, the employer will perform a risk analysis in respect of the following:</p> <ol style="list-style-type: none"> <li>1. reasonableness of the financial offer</li> <li>2. reasonableness of unit rates and prices</li> <li>3. reasonableness of the Contract Participation Goals tendered</li> <li>4. the tenderers ability to fulfil its obligations in terms of the tender document, that is, that the tenderer can demonstrate that he/she possesses the necessary professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience, reputation, personnel to perform the contract, etc.</li> </ol> <p>No tenderer will be recommended for an award unless the tenderer has demonstrated that he/she has the resources and skills required.</p>
F.3.12	<p>Full insurance to be provided by the Contractor. The contractor must provide the employer with the insurance policy information and certificates prior to the commencement of the contract.</p>
F3.13.1	<p>Tender offers will only be accepted if:</p> <ol style="list-style-type: none"> <li>a) the tenderer's tax matters have been declared by the South African Revenue Service to be in order;</li> <li>b) the tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation;</li> <li>c) the tenderer or any of its directors is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;</li> <li>d) the tenderer has not: <ol style="list-style-type: none"> <li>i) abused the Employer's Supply Chain Management System; or</li> <li>ii) failed to perform on any previous contract and has been given a written notice to this effect; and</li> </ol> </li> <li>e) has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process.</li> </ol>
F.3.18	<p>The number of paper copies of the signed contract to be provided by the employer is one.</p>
F.4	<p><b>ADDITIONAL CONDITIONS OF TENDER</b></p> <p><b>The additional conditions of tender are:</b></p>
F.4.1	<p><b>Compliance with Occupational Health and Safety Act 1993</b></p> <p>Tenderers are to note the requirements of the Occupational Health and Safety Act No. 85 of 1993 and the Construction Regulations 2003 issued in terms of Section 43 of the Act. The tenderer shall be deemed to have read and fully understood the requirements of the above Act and Regulations and to have allowed for all costs in compliance therewith.</p> <p>In this regard the Tenderer shall submit with his tender,; Health and Safety Plan in T2.2 : Returnable Schedules, a detailed Health and Safety Plan in respect of the Works in order to demonstrate the necessary competencies and resources to perform the construction work all in accordance with the Act and Regulations. Such Health and Safety Plan shall cover inter-alia the following details:</p> <ol style="list-style-type: none"> <li>(1) Management Structure, Site Supervision and Responsible Persons including a succession plan.</li> <li>(2) Contractor's induction training programme for employees, sub-contractors and visitors to the Site.</li> <li>(3) Health and safety precautions and procedures to be adhered to in order to ensure compliance with the Act, Regulations and Safety Specifications.</li> </ol>



	<p>(4) Regular monitoring procedures to be performed.  (5) Regular liaison, consultation and review meetings with all parties.  (6) Site security, welfare facilities and first aid.  (7) Site rules and fire and emergency procedures.</p> <p>Tenderers are to note that the Contractor is required to ensure that all sub-contractors or others engaged in the performance of the contract also comply with the above requirements.</p> <p>The Contractor shall prepare and maintain a Health and Safety File in respect of the project, which shall be available for inspection on Site at all times and handed over to the Employer on Final Completion of the project.</p> <p>The Contractor is required to submit to the Employer the Occupational Health and Safety Agreement (included in C1.4 of the Contract Document) and a letter of good standing from the Compensation Commissioner, or a licensed compensation insurer, within 14 days after the Commencement Date of the contract.</p>
F.4.2	<p><b>Eligibility with respect to expanded public works programme</b></p> <p>This Contract does qualify for consideration as an Expanded Public Works Programme project.</p>
F.4.3	<p><b>Claims arising after submission of tender</b></p> <p>No claim for any extras arising out of any doubt or obscurity as to the true intent and meaning of anything shown on the Contract Drawings or contained in the Conditions of Contract, Scope of Work and Pricing Data, will be admitted by the Employer/Employer's Agent after the submission of any tender and the Tenderer shall be deemed to have:</p> <ol style="list-style-type: none"> <li>1) inspected the Contract Drawings and read and fully understood the Conditions of Contract.</li> <li>2) read and fully understood the whole text of the Scope of Work and Pricing Data and thoroughly acquainted himself with the nature of the works proposed and generally of all matters which may influence the Contract.</li> <li>3) visited the site of the proposed works, carefully examined existing conditions, the means of access to the site, the conditions under which the work is to be done, and acquainted himself with any limitations or restrictions that may be imposed by the Client or other Authorities in regard to access and transport of materials, plant and equipment to and from the site and made the necessary provisions for any additional costs involved thereby.</li> <li>4) requested the Employer or his duly authorised agent to make clear the actual requirements of anything shown on the Contract Drawings or anything contained in the Scope of Work and Pricing Data, the exact meaning or interpretation of which is not clearly intelligible to the Tenderer.</li> </ol> <p>Before submission of any tender, the Tenderer should check the number of pages, and if any are found to be missing or duplicated, or the figures or writing indistinct, or if the Pricing Data contain any obvious errors, the tenderer must apply to the Employer/Employer's Agent at once to have the same rectified, as no liability will be admitted by the Employer/Employer's Agent in respect of errors in any tender due to the foregoing.</p> <ol style="list-style-type: none"> <li>5) received any Addenda to the tender documents which have been issued in accordance with the Employer's Supply Chain Management Policy.</li> </ol>
F.4.4	<p><b>Imbalance in tendered rates</b></p> <p>In the event of tendered rates or lump sums being declared by the Employer to be</p>

	<p>unacceptable to it because they are either excessively low or high or not in proper balance with other rates or lump sums, the Tenderer may be required to produce evidence and advance arguments in support of the tendered rates or lump sums objected to. If, after submission of such evidence and any further evidence requested, the Employer is still not satisfied with the tendered rates or lump sums objected to, it may request the tenderer to amend these rates and lump sums along the lines indicated by it.</p> <p>The Tenderer will then have the option to alter and/or amend the rates and lump sums objected to and such other related amounts as are agreed on by the Employer, but this shall be done without altering the tender offer as tendered or, if applicable, the corrected total of prices in accordance with F.3.9.3.</p> <p>Should the Tenderer fail to amend his Tender in a manner acceptable to the Employer, the Employer may reject the Tender.</p>
F.4.5	<p><b>Community Liaison Officer</b></p> <p>The contractor shall in his dealings with the communities affected by the project, work with the Project Steering Committee (PSC) which has been elected by the ISD Consultant / Social Facilitator appointed by the Employer. The PSC acts as a communication structure between the project and the community. The process of appointing the Community Liaison Officer (CLO) is also facilitated by the Social Facilitator together with the PSC. The CLO acts as a link between the contractor and the labourers and the PSC, and attends to all labour related issues. The CLO facilitates labour recruitment through the PSC.</p> <p>The CLO and the Executive structure of the PSC (Chairperson, Vice-Chairperson and the Secretary) attend monthly project progress report meetings (site) besides the PSC meetings attended by the full PSC. The contractor must include in his rates the costs of attending an average of one meeting each month. The CLO is appointed for the period of physical construction, plus a period of 14 days prior to this period. The contractor will provide office and stationery to the CLO to be able to perform his or her duties.</p> <p>The ISD Consultant shall prepare and facilitate the signing of the contract between the CLO and the contractor. Remuneration of the CLO will be <b>communicated upon award</b> per month for the period of employment and will change in accordance with change in rates from the Department of Labour. A CLO who fails in the responsibilities he/she is given will be replaced following the procedures as stipulated in his or her contract with the contractor. The Terms of reference for the CLO shall be provided by the ISD Consultant.</p>
F.4.6	<p><b>Labour intensive construction/use of local labour</b></p> <p>It is a requirement of the Contract that the work be executed in such a manner as to maximise the use of labour intensive construction systems in order to provide the local community with employment opportunities.</p>
F.4.7	<p><b>Invalid tenders</b></p> <p>Tenders shall be considered invalid and shall be endorsed and recorded as such in the tender opening record, by the responsible official who opened the tender, in the following circumstances:</p> <ol style="list-style-type: none"> <li>if the tender offer (the tender price/amount) is not submitted on the Form of Offer and Acceptance bound into this tender document (form C1.1, Part C1: Agreements and Contract Data);</li> <li>if the tender is not completed in non-erasable ink;</li> <li>if the Form of Offer and Acceptance has not been signed;</li> <li>if the Form of Offer and Acceptance is signed, but the name of the tenderer is not stated or is indecipherable.</li> </ol>
F.4.8	<p><b>Requests for contract documents, or parts thereof, in electronic format</b></p>

	<p>The Employer shall not formally issue tender documents in electronic format as contemplated in F.2.13.2 and F.2.13.3 and shall only issue tender documents in hardcopy. An electronic version of the issued tender documents may be made available to the tenderer, upon written request in terms of this clause, subject to the following:</p> <ul style="list-style-type: none"> <li>- Electronic copies of the contract document, or parts thereof, will only be provided to tenderers who have been issued with the tender documents as contemplated in F.1.2 in hardcopy.</li> <li>- The electronic version shall not be regarded as a substitute for the issued tender documents.</li> <li>- The Employer shall not accept tenders submitted in electronic format. Tenderers may not complete and submit a printed copy of the electronic version of the tender document or part thereof. Only those tenders that have been completed on the issued hard copy tender document shall be considered.</li> <li>- The Employer accepts no responsibility or liability arising from any reliance on or use of the electronic version provided in terms of this clause. The Employer further does not guarantee that the electronic version corresponds with the issued tender documents in all respects. Tenderers are alerted to the fact that electronic versions of the tender documents may not reflect any notices or addenda that amend the tender document.</li> <li>- Any non-compliance with these provisions, including effecting any unauthorised alterations to the tender document as contemplated in F.2.11, shall render the tender invalid. The Employer reserves the right to take any action against such tenderer allowed in law including, in circumstances where the tender had already been awarded, the right to cancel the contract.</li> <li>- In requesting the electronic version of the tender document or parts thereof, the tenderer is deemed to have read, understood and accepted all of the above conditions.</li> </ul>
<p><b>F.4.9</b></p>	<p><b>Price variations</b></p> <p>The Contract Price shall not be subject to any contract price adjustment, the rates and prices tendered in the bills of quantities shall be final and binding throughout the period of the contract.</p>

**STANDARD CONDITIONS OF TENDER**

*(As contained in Annexure F of Board Notice No 86 of 2010 in Government Gazette No 33239 of 28 May 2010, CIDB Standard for Uniformity in Construction Procurement.*

<b>F.1</b>	<b>GENERAL</b>
<b>F.1.1</b>	<b>Actions</b>
<b>F.1.1.1</b>	The employer and each tenderer submitting a tender offer shall comply with these conditions of tender. In their dealings with each other, they shall discharge their duties and obligations as set out in F.2 and F.3, timeously and with integrity, and behave equitably, honestly and transparently, comply with all legal obligations and not engage in anticompetitive practices.
<b>F.1.1.2</b>	<p>The employer and the tenderer and all their agents and employees involved in the tender Process shall avoid conflicts of interest and where a conflict of interest is perceived or known, declare any such conflict of interest, indicating the nature of such conflict. Tenderers shall declare any potential conflict of interest in their tender submissions. Employees, agents and advisors of the employer shall declare any conflict of interest to whoever is responsible for overseeing the procurement process at the start of any deliberations relating to the procurement process or as soon as they become aware of such conflict, and abstain from any decisions where such conflict exists or recuse themselves from the procurement process, as appropriate.</p> <p>Note:</p> <ul style="list-style-type: none"> <li>• A conflict of interest may arise due to a conflict of roles which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his or her position even if no improper acts result.</li> <li>• Conflicts of interest in respect of those engaged in the procurement process include direct, indirect or family interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance or loyalty which would in any way affect any decisions taken.</li> </ul>
<b>F.1.1.3</b>	The employer shall not seek and a tenderer shall not submit a tender without having a firm intention and the capacity to proceed with the contract.
<b>F.1.2</b>	<b>Tender Documents</b> The documents issued by the employer for the purpose of a tender offer are listed in the tender data.
<b>F.1.3</b>	<b>Interpretation</b>
<b>F.1.3.1</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 conditions of tender.
<b>F.1.3.2</b>	These conditions of tender, the tender data and tender schedules which are only required for tender evaluation purposes, shall not form part of any contract arising from the invitation to tender.
<b>F.1.3.3</b>	<p>For the purposes of these conditions of tender, the following definitions apply:</p> <ul style="list-style-type: none"> <li>a) <b>conflict of interest</b> means any situation in which: <ul style="list-style-type: none"> <li>i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfil his or her duties impartially;</li> <li>ii) an individual or organisation is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or</li> <li>iii) incompatibility or contradictory interests exist between an employee and the organisation which employs that employee.</li> </ul> </li> <li>b) <b>comparative offer</b> means the tenderer's financial offer after all tendered</li> </ul>

	<p>parameters that will affect the value of the financial offer have been taken into consideration in order to enable comparisons to be made between offers on a comparative basis;</p> <p>c) <b>corrupt practice</b> means the offering, giving, receiving or soliciting of anything of value to influence the action of the employer or his staff or agents in the tender process;</p> <p>d) <b>fraudulent practice</b> means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels;</p> <p>e) <b>organization</b> means a company, firm, enterprise, association or other legal entity, whether incorporated or not, or a public body;</p> <p>f) <b>quality (functionality)</b> means the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs.</p>
<b>F.1.4</b>	<p><b>Communication and employer's agent</b> Each communication between the employer and a tenderer shall be to or from the employer's agent only, and in a form that can be readily read, copied and recorded. Communications shall be in the English language. The employer shall not take any responsibility for non-receipt of communications from or by a tenderer. The name and contact details of the employer's agent are stated in the tender data.</p>
<b>F.1.5</b>	<b>The employer's right to accept or reject any tender offer</b>
<b>F.1.5.1</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 cancellation and rejection, but will give written reasons for such action upon written request to do so.
<b>F.1.5.2</b>	The employer may not subsequent to the cancellation or abandonment of a tender process or the rejection of all responsive tender offers re-issue a tender covering substantially the same scope of work within a period of six months unless only one tender was received and such tender was returned unopened to the tenderer.
<b>F.1.6</b>	<b>Procurement procedures</b>
<b>F.1.6.1</b>	<p><b>General</b> Unless otherwise stated in the tender data, a contract will, subject to F.3.13, be concluded with the tenderer who in terms of F.3.11 is the highest ranked or the tenderer scoring the highest number of tender evaluation points, as relevant, based on the tender submissions that are received at the closing time for tenders.</p>
<b>F.1.6.2</b>	<b>Competitive negotiation procedure</b>
<b>F.1.6.2.1</b>	Where the tender data require that the competitive negotiation procedure is to be followed, tenderers shall submit tender offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of F.3.4, the employer shall announce only the names of the tenderers who make a submission. The requirements of F.3.8 relating to the material deviations or qualifications which affect the competitive position of tenderers shall not apply.
<b>F.1.6.2.2</b>	All responsive tenderers, or not less than three responsive tenderers that are highest ranked in terms of the evaluation method and evaluation criteria stated in the tender data, shall be invited in each round to enter into competitive negotiations, based on the principle of equal treatment and keeping confidential the proposed solutions and associated information. Notwithstanding the provisions of F.2.17, the employer may request that tenders be clarified, specified and fine-tuned in order to improve a tenderer's competitive position provided that such clarification, specification, fine-tuning or additional information does not alter any fundamental aspects of the offers or impose substantial new requirements which restrict or distort competition or have a discriminatory effect.
<b>F.1.6.2.3</b>	At the conclusion of each round of negotiations, tenderers shall be invited by the employer to make a fresh tender offer, based on the same evaluation criteria, with or without adjusted

	weightings. Tenderers shall be advised when they are to submit their best and final offer.
<b>F.1.6.2.4</b>	The contract shall be awarded in accordance with the provisions of F.3.11 and F.3.13 after tenderers have been requested to submit their best and final offer.
<b>F.1.6.3</b>	Proposal procedure using the two stage-system.
<b>F.1.6.3.1</b>	<b>Option 1</b> Tenderers shall in the first stage submit technical proposals and, if required, cost parameters around which a contract may be negotiated. The employer shall evaluate each responsive submission in terms of the method of evaluation stated in the tender data, and in the second stage negotiate a contract with the tenderer scoring the highest number of evaluation points and award the contract in terms of these conditions of tender.
<b>F.1.6.3.2</b>	<b>Option 2</b>
<b>F.1.6.3.2.1</b>	F.1.6.3.2.1 Tenderers shall submit in the first stage only technical proposals. The employer shall invite all responsive tenderers to submit tender offers in the second stage, following the issuing of procurement documents.
<b>F.1.6.3.2.2</b>	The employer shall evaluate tenders received during the second stage in terms of the method of evaluation stated in the tender data, and award the contract in terms of these conditions of tender.
<b>F.2</b>	<b>Tenderer's obligations</b>
<b>F.2.1</b>	<b>Eligibility</b>
<b>F.2.1.1</b>	Submit a tender offer only if the tenderer satisfies the criteria stated in the tender data and the tenderer, or any of his principals, is not under any restriction to do business with employer.
<b>F.2.1.2</b>	Notify the employer of any proposed material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used by the employer as the basis in a prior process to invite the tenderer to submit a tender offer and obtain the employer's written approval to do so prior to the closing time for tenders.
<b>F.2.2</b>	<b>Cost of tendering</b> Accept that, unless otherwise stated in the tender data, the employer will not compensate the tenderer for any costs incurred in the preparation and submission of a tender offer, including the costs of any testing necessary to demonstrate that aspects of the offer complies with requirements.
<b>F.2.3</b>	<b>Check documents</b> Check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission.
<b>F.2.4</b>	<b>Confidentiality and copyright of documents</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.
<b>F.2.5</b>	<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.
<b>F.2.6</b>	<b>Acknowledge addenda</b> Acknowledge receipt of addenda to the tender documents, which the employer may issue, and if necessary apply for an extension to the closing time stated in the tender data, in order to take the addenda into account.
<b>F.2.7</b>	<b>Clarification meeting</b> Attend, where required, a clarification meeting at which tenderers may familiarize

	themselves with aspects of the proposed work, services or supply and raise questions. Details of the meeting(s) are stated in the tender data.
<b>F.2.8</b>	<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.
<b>F.2.9</b>	<b>Insurance</b> Be aware that the extent of insurance to be provided by the employer (if any) might not be for the full cover required in terms of the conditions of contract identified in the contract data. The tenderer is advised to seek qualified advice regarding insurance.
<b>F.2.10</b>	<b>Pricing the tender offer</b>
<b>F.2.10.1</b>	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.
<b>F.2.10.2</b>	Show VAT payable by the employer separately as an addition to the tendered total of the prices.
<b>F.2.10.3</b>	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.
<b>F.2.10.4</b>	State the rates and prices in Rand unless instructed otherwise in the tender data. The conditions of contract identified in the contract data may provide for part payment in other currencies.
<b>F.2.11</b>	<b>Alterations to documents</b> Do not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the tenderer. All signatories to the tender offer shall initial all such alterations. Erasures and the use of masking fluid are prohibited.
<b>F.2.12</b>	<b>Alternative tender offers</b>
<b>F.2.12.1</b>	Unless otherwise stated in the tender data, submit alternative tender offers only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted as well as a schedule that compares the requirements of the tender documents with the alternative requirements that are proposed.
<b>F.2.12.2</b>	Accept that an alternative tender offer may be based only on the criteria stated in the tender data or criteria otherwise acceptable to the employer.
<b>F.2.13</b>	<b>Submitting a tender offer</b>
<b>F.2.13.1</b>	Submit one tender offer only, either as a single tendering entity or as a member in a joint venture to provide the whole of the works, services or supply identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.
<b>F.2.13.2</b>	Return all returnable documents to the employer after completing them in their entirety, either electronically (if they were issued in electronic format) or by writing legibly in non-erasable ink.
<b>F.2.13.3</b>	Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the employer.
<b>F.2.13.4</b>	Sign the original and all copies of the tender offer where required in terms of the tender data. The employer will hold all authorized signatories liable on behalf of the tenderer. Signatories for tenderers proposing to contract as joint ventures shall state which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer.

<b>F.2.13.5</b>	Seal the original copy of the tender offer as separate packages marking the packages as "ORIGINAL". Each package shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.
<b>F.2.13.6</b>	Where a two-envelope system is required in terms of the tender data, place and seal the returnable documents listed in the tender data in an envelope marked "financial proposal" and place the remaining returnable documents in an envelope marked "technical proposal". Each envelope shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.
<b>F.2.13.7</b>	Seal the original tender offer and copy packages together in an outer package that states on the outside only the employer's address and identification details as stated in the tender data.
<b>F.2.13.8</b>	Accept that the employer will not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.
<b>F.2.13.9</b>	Accept that tender offers submitted by facsimile or e-mail will be rejected by the employer, unless stated otherwise in the tender data.
<b>F.2.14</b>	<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.
<b>F.2.15</b>	<b>Closing time: 11h00am on the 08 December 2020</b>
<b>F.2.15.1</b>	Ensure that the employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Accept that proof of posting shall not be accepted as proof of delivery.
<b>F.2.15.2</b>	Accept that, if the employer extends the closing time stated in the tender data for any reason, the requirements of these conditions of tender apply equally to the extended deadline.
<b>F.2.16</b>	<b>Tender offer validity</b>
<b>F.2.16.1</b>	Hold the tender offer(s) valid for acceptance by the employer at any time during the validity period stated in the tender data after the closing time stated in the tender data.
<b>F.2.16.2</b>	If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period with or without any conditions attached to such extension.
<b>F.2.16.3</b>	Accept that a tender submission that has been submitted to the employer may only be withdrawn or substituted by giving the employer's agent written notice before the closing time for tenders that a tender is to be withdrawn or substituted.
<b>F.2.16.4</b>	Where a tender submission is to be substituted, submit a substitute tender in accordance with the requirements of F.2.13 with the packages clearly marked as "SUBSTITUTE".
<b>F.2.17</b>	<b>Clarification of tender offer after submission</b> 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.  <b>Note:</b> Sub-clause F.2.17 does not preclude the negotiation of the final terms of the contract with a preferred tenderer following a competitive selection process, should the Employer elect to do so.
<b>F.2.18</b>	<b>Provide other material</b>
<b>F.2.18.1</b>	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), referencing 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.
<b>F.2.18.2</b>	Dispose of samples of materials provided for evaluation by the employer, where required.
<b>F.2.19</b>	<b>Inspections, tests and analysis</b> Provide access during working hours to premises for inspections, tests and analysis as provided for in the tender data.
<b>F.2.20</b>	<b>Submit securities, bonds, policies, etc.</b> If requested, submit for the employer's acceptance before formation of the contract, all securities, bonds, guarantees, policies and certificates of insurance required in terms of the conditions of contract identified in the contract data.
<b>F.2.21</b>	<b>Check final draft</b> Check the final draft of the contract provided by the employer within the time available for the employer to issue the contract.
<b>F.2.22</b>	<b>Return of other tender documents</b> If so instructed by the employer, return all retained tender documents within 28 days after the expiry of the validity period stated in the tender data.
<b>F.2.23</b>	<b>Certificates</b> Include in the tender submission or provide the employer with any certificates as stated in the tender data.
<b>F.3</b>	<b>The employer's undertakings</b>
<b>F.3.1</b>	<b>Respond to requests from the tenderer</b>
<b>F.3.1.1</b>	Unless otherwise stated in the tender Data, respond to a request for clarification received up to five working days before the tender closing time stated in the Tender Data and notify all tenderers who drew procurement documents.
<b>F.3.1.2</b>	Consider any request to make a material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used to prequalify a tenderer to submit a tender offer in terms of a previous procurement process and deny any such request if as a consequence: <ul style="list-style-type: none"> <li>a) an individual firm, or a joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements;</li> <li>b) the new partners to a joint venture were not prequalified in the first instance, either as individual firms or as another joint venture; or</li> <li>c) in the opinion of the Employer, acceptance of the material change would compromise the outcome of the prequalification process.</li> </ul>
<b>F.3.2</b>	<b>Issue Addenda</b> If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date that tender documents are available until three days before the tender closing time stated in the Tender Data. If, as a result a tenderer applies for an extension to the closing time stated in the Tender Data, the Employer may grant such extension and, shall then notify all tenderers who drew documents.
<b>F.3.3</b>	<b>Return late tender offers</b> Return tender offers received after the closing time stated in the Tender Data, unopened, (unless it is necessary to open a tender submission to obtain a forwarding address), to the tenderer concerned.
<b>F.3.4</b>	<b>Opening of tender submissions</b>

<b>F.3.4.1</b>	Unless the two-envelope system is to be followed, open valid tender submissions in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data. Tender submissions for which acceptable reasons for withdrawal have been submitted will not be opened.
<b>F.3.4.2</b>	Announce at the meeting held immediately after the opening of tender submissions, at 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.
<b>F.3.4.3</b>	Make available the record outlined in F.3.4.2 to all interested persons upon request.
<b>F.3.5</b>	<b>Two-envelope system</b>
<b>F.3.5.1</b>	Where stated in the tender data that a two-envelope system is to be followed, open only the technical proposal of valid tenders in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data and announce the name of each tenderer whose technical proposal is opened.
<b>F.3.5.2</b>	Evaluate the quality of the technical proposals offered by tenderers, then advise tenderers who remain in contention for the award of the contract of the time and place when the financial proposals will be opened. Open only the financial proposals of tenderers, who score in the quality evaluation more than the minimum number of points for quality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any preferences claimed. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for quality.
<b>F.3.6</b>	<b>Non-disclosure</b> 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.
<b>F.3.7</b>	<b>Grounds for rejection and disqualification</b> Determine whether there has been any effort by a tenderer to influence the processing of tender offers and instantly disqualify a tenderer (and his tender offer) if it is established that he engaged in corrupt or fraudulent practices.
<b>F.3.8</b>	<b>Test for responsiveness</b>
<b>F.3.8.1</b>	Determine, after opening and before detailed evaluation, whether each tender offer properly received: <ul style="list-style-type: none"> <li>a) complies with the requirements of these Conditions of Tender,</li> <li>b) has been properly and fully completed and signed, and</li> <li>c) is responsive to the other requirements of the tender documents.</li> </ul>
<b>F.3.8.2</b>	A responsive tender is one that conforms to all the terms, conditions, and specifications of the tender documents without material deviation or qualification. A material deviation or qualification is one which, in the Employer's opinion, would: <ul style="list-style-type: none"> <li>a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,</li> <li>b) significantly change the Employer's or the tenderer's risks and responsibilities under the contract,</li> <li>c) or affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified.</li> </ul> <p>Reject a non-responsive tender offer, and not allow it to be subsequently made responsive by correction or withdrawal of the non-conforming deviation or reservation.</p>
<b>F.3.9</b>	<b>Arithmetical errors, omissions and discrepancies</b>
<b>F.3.9.1</b>	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.
<b>F.3.9.2</b>	<p>Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with F.3.11 for:</p> <ul style="list-style-type: none"> <li>a) the gross misplacement of the decimal point in any unit rate;</li> <li>b) omissions made in completing the pricing schedule or bills of quantities; or</li> <li>c) arithmetic errors in: <ul style="list-style-type: none"> <li>i) line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or</li> <li>ii) the summation of the prices.</li> </ul> </li> </ul>
<b>F.3.9.3</b>	Notify the tenderer of all errors or omissions that are identified in the tender offer and either confirm the tender offer as tendered or accept the corrected total of prices.
<b>F.3.9.4</b>	<p>Where the tenderer elects to confirm the tender offer as tendered, correct the errors as follows:</p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>
<b>F.3.10</b>	<p><b>Clarification of a tender offer</b> Obtain clarification from a tenderer on any matter that could give rise to ambiguity in a contract arising from the tender offer.</p>
<b>F.3.11</b>	<b>Evaluation of tender offers</b>
<b>F.3.11.1</b>	<p><b>General</b> Appoint an evaluation panel of not less than three persons. Reduce each responsive tender offer to a comparative offer and evaluate them using the tender evaluation methods and associated evaluation criteria and weightings that are specified in the tender data.</p>
<b>F.3.11.2</b>	<p><b>Method 1: Financial offer</b></p> <p>In the case of a financial offer:</p> <ul style="list-style-type: none"> <li>a) Rank tender offers from the most favourable to the least favourable comparative offer.</li> <li>b) Recommend the highest ranked tenderer for the award of the contract, unless there are compelling and justifiable reasons not to do so.</li> <li>c) Re-rank all tenderers should there be compelling and justifiable reasons not to recommend the highest ranked tenderer and recommend the highest ranked tenderer, unless there are compelling and justifiable reasons not to do so and the process set out in this sub-clause is repeated.</li> </ul>
<b>F.3.11.3</b>	<p><b>Methods 2: Financial offer and preference</b></p> <p>In the case of a financial offer and preferences:</p> <ul style="list-style-type: none"> <li>a) Score each tender in respect of the financial offer made and preferences claimed, if any, in accordance with the provisions of F.3.11.7 and F.3.11.8.</li> <li>b) Calculate the total number of tender evaluation points (<math>T_{EV}</math>) in accordance with the following formula:</li> </ul> $T_{EV} = N_{FO} + NP$ <p>where:</p>

	<ul style="list-style-type: none"> <li>• <math>N_{FO}</math> is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;</li> <li>• <math>N_P</math> is the number of tender evaluation points awarded for preferences claimed in accordance with F.3.11.8.</li> </ul> <p>c) Rank tender offers from the highest number of tender evaluation points to the lowest.</p> <p>d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.</p> <p>e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points, and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this sub-clause is repeated.</p>
<p><b>F.3.11.4</b></p>	<p><b>Method 3: Financial offer and quality</b></p> <p>In the case of a financial offer and quality:</p> <p>a) Score each tender in respect of the financial offer made and the quality offered in accordance with the provisions of F.3.11.7 and F.3.11.9, rejecting all tender offers that fail to score the minimum number of points for quality stated in the tender data, if any.</p> <p>b) Calculate the total number of tender evaluation points (<math>T_{EV}</math>) in accordance with the following formula:</p> $T_{EV} = N_{FO} + N_Q$ <p>where:</p> <ul style="list-style-type: none"> <li>• <math>N_{FO}</math> is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;</li> <li>• <math>N_Q</math> is the number of tender evaluation points awarded for quality offered in accordance with F.3.11.9</li> </ul> <p>c) Rank tender offers from the highest number of tender evaluation points to the lowest.</p> <p>d) Recommend tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.</p> <p>e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this sub-clause is repeated.</p>
<p><b>F.3.11.5</b></p>	<p><b>Method 4: Financial offer, quality and preferences</b></p> <p>In the case of a financial offer, quality and preferences:</p> <p>a) Score each tender in respect of the financial offer made, preference claimed, if any, and the quality offered in accordance with the provisions of F.3.11.7 to F.3.11.9, rejecting all tender offers that fail to score the minimum number of points for quality stated in the tender data, if any.</p> <p>b) Calculate the total number of tender evaluation points (<math>T_{EV}</math>) in accordance with the following formula, unless otherwise stated in the Tender Data:</p> $T_{EV} = N_{FO} + N_P + N_Q$ <p>where:</p> <ul style="list-style-type: none"> <li>• <math>N_{FO}</math> is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;</li> </ul>

	<ul style="list-style-type: none"> <li>• <math>N_P</math> is the number of tender evaluation points awarded for preferences claimed in accordance with F.3.11.8.</li> <li>• <math>N_Q</math> is the number of tender evaluation points awarded for quality offered in accordance with F.3.11.9.</li> </ul> <p>c) Rank tender offers from the highest number of tender evaluation points to the lowest.</p> <p>d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.</p> <p>e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this sub-clause is repeated.</p>												
<b>F.3.11.6</b>	<p><b>Decimal places</b> Score financial offers, preferences and quality, as relevant, to two decimal places.</p>												
<b>F.3.11.7</b>	<p><b>F.3.11.7 Scoring Financial Offers</b></p> <p>Score the financial offers of remaining responsive tender offers using the following formula:</p> $N_{FO} = W_1 \times A$ <p>where:</p> <ul style="list-style-type: none"> <li>• <math>N_{FO}</math> is the number of tender evaluation points awarded for the financial offer.</li> <li>• <math>W_1</math> is the maximum possible number of tender evaluation points awarded for the financial offer as stated in the Tender Data.</li> <li>• <math>A</math> is a number calculated using the formula and option described in Table F.1 as stated in the Tender Data.</li> </ul> <p>Table F.1: Formulae for calculating the value of A:</p> <table border="1"> <thead> <tr> <th>Formula</th> <th>Comparison aimed at achieving</th> <th>Option 1<sup>a</sup></th> <th>Option 2<sup>a</sup></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Highest price or discount</td> <td><math>A = \left[ 1 + \left( \frac{P - P_m}{P_m} \right) \right]</math></td> <td><math>A = \frac{P}{P_m}</math></td> </tr> <tr> <td>2</td> <td>Lowest price or percentage commission / fee</td> <td><math>A = \left[ 1 - \left( \frac{P - P_m}{P_m} \right) \right]</math></td> <td><math>A = \frac{P}{P_m}</math></td> </tr> </tbody> </table> <p>where:</p> <ul style="list-style-type: none"> <li>• <math>P_m</math> is the comparative offer of the most favourable comparative offer.</li> <li>• <math>P</math> is the comparative offer of the tender offer under consideration.</li> </ul>	Formula	Comparison aimed at achieving	Option 1 <sup>a</sup>	Option 2 <sup>a</sup>	1	Highest price or discount	$A = \left[ 1 + \left( \frac{P - P_m}{P_m} \right) \right]$	$A = \frac{P}{P_m}$	2	Lowest price or percentage commission / fee	$A = \left[ 1 - \left( \frac{P - P_m}{P_m} \right) \right]$	$A = \frac{P}{P_m}$
Formula	Comparison aimed at achieving	Option 1 <sup>a</sup>	Option 2 <sup>a</sup>										
1	Highest price or discount	$A = \left[ 1 + \left( \frac{P - P_m}{P_m} \right) \right]$	$A = \frac{P}{P_m}$										
2	Lowest price or percentage commission / fee	$A = \left[ 1 - \left( \frac{P - P_m}{P_m} \right) \right]$	$A = \frac{P}{P_m}$										
<b>F.3.11.8</b>	<p><b>Scoring preferences</b> Confirm that tenderers are eligible for the preferences claimed in accordance with the provisions of the tender data and reject all claims for preferences where tenderers are not eligible for such preferences. Calculate the total number of tender evaluation points for preferences claimed in accordance with the provisions of the tender data.</p>												
<b>F.3.11.9</b>	<p><b>Scoring quality</b> Score each of the criteria and sub-criteria for quality in accordance with the provisions of the Tender Data.</p> <p>Calculate the total number of tender evaluation points for quality using the following formula:</p> $N_Q = W_2 \times S_Q / M_S$ <p>where:</p>												

	<ul style="list-style-type: none"> <li>• So is the score for quality allocated to the submission under consideration;</li> <li>• Ms is the maximum possible score for quality in respect of a submission; and</li> <li>• W<sub>2</sub> is the maximum possible number of tender evaluation points awarded for the quality as stated in the tender data</li> </ul>
<b>F.3.12</b>	<p><b>Insurance provided by the employer</b> If requested by the proposed successful tenderer, submit for the tenderer's information the policies and / or certificates of insurance which the conditions of contract identified in the contract data, require the employer to provide.</p>
<b>F.3.13</b>	<p><b>Acceptance of tender offer</b> 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> <ol style="list-style-type: none"> <li>a) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement,</li> <li>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,</li> <li>c) has the legal capacity to enter into the contract,</li> <li>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,</li> <li>e) complies with the legal requirements, if any, stated in the tender data, and</li> <li>f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest.</li> </ol>
<b>F.3.14</b>	<b>Prepare contract documents</b>
<b>F.3.14.1</b>	<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> <ol style="list-style-type: none"> <li>a) addenda issued during the tender period,</li> <li>b) inclusion of some of the returnable documents, and</li> <li>c) other revisions agreed between the employer and the successful tenderer.</li> </ol>
<b>F.3.14.2</b>	Complete the schedule of deviations attached to the form of offer and acceptance, if any.
<b>F.3.15</b>	<p><b>Complete adjudicator's contract</b> Unless alternative arrangements have been agreed or otherwise provided for in the contract, arrange for both parties to complete formalities for appointing the selected adjudicator at the same time as the main contract is signed.</p>
<b>F.3.16</b>	<b>Notice to unsuccessful tenderers</b>
<b>F.3.16.1</b>	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.
<b>F.3.16.2</b>	After the successful tenderer has been notified of the employer's acceptance of the tender, notify other tenderers that their tender offers have not been accepted.
<b>F.3.17</b>	<p><b>Provide copies of the contracts</b> Provide to the successful tenderer the number of copies stated in the Tender Data of the signed copy of the contract as soon as possible after completion and signing of the form of offer and acceptance.</p>
<b>F.3.18</b>	<p><b>Provide written reasons for actions taken</b> Provide upon request written reasons to tenderers for any action that is taken in applying these conditions of tender, but withhold information which is not in the public interest to be divulged, which is considered to prejudice the legitimate commercial interests of tenderers</p>

	or might prejudice fair competition between tenderers.
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**PART T2    RETURNABLE DOCUMENTS**



## T2.1 LIST OF RETURNABLE DOCUMENTS

The tenderer must complete the following returnable documents:

### 1. RETURNABLE SCHEDULES REQUIRED ONLY FOR TENDER EVALUATION PURPOSES

- A. Joint Venture Disclosure Form.
- B. Compulsory Enterprise Questionnaire.
- C. Record of Addenda to Tender Documents.
- D. Proposed Amendments and Qualifications.
- E. Schedule of Subcontractors.
- F. Schedule of Plant and Equipment.
- G. Schedule of the Tenderer's Experience (work undertaken for other institutions).
- H. Schedule of work undertaken for the Department of Public Works.
- I. Health and Safety Plan

### 2. OTHER DOCUMENTS REQUIRED ONLY FOR TENDER EVALUATION PURPOSES

- A. Certificate of Contractor Registration issued by the Construction Industry Development Board.
- B. Tax Clearance Certificate (SBD 2).
- C. Certificate of Tenderer's visit to the site.
- D. Certificate of Authority for Signature.
- E. Alterations by Tenderer.
- F. Surety and Bank Details.
- G. Company Composition.
- H. Declaration of Interests.
- I. Declaration of Interest (in the Service of the State) (SBD 4).
- J. Declaration of past SCM Management Practices.
- K. Declaration (Validity of Information Provided).
- L. Declaration of Procurement above R 10 million.
- M. Certificate of Independent Bid Determination.

### 3. RETURNABLE SCHEDULES THAT WILL BE INCORPORATED INTO THE CONTRACT

- A. Preference Points Claim Form
- B. Tender Declaration

### 4. OTHER DOCUMENTS THAT WILL BE INCORPORATED INTO THE CONTRACT

- A. Offer and Acceptance
- B. Contract Data (Part 2)
- C. Agreement in Terms of the Occupational Health and Safety Act (No. 85 of 1993)
- D. Bill of Quantities

## T2.2 RETURNABLE SCEDULES

### 1A. JOINT VENTURE DISCLOSURE FORM

#### GENERAL

- i) All the information requested must be filled in the spaces provided. If additional space is required, additional sheets may be used and attached to the original documents.
- ii) A copy of the joint venture agreement must be attached to this form, in order to demonstrate the Affirmable, Joint Venture Partner's share in the ownership, control, management responsibilities, risks and profits of the joint venture, the proposed joint venture agreement must include specific details relating to:
  - a) The contributions of capital and equipment
  - b) Work items to be performed by the Affirmable Joint Venture Partner's own forces
  - c) Work items to be performed under the supervision of the Affirmable Joint Venture Partner.
- iii) Copies of all written agreements between partners concerning the contract must be attached to this form including those, which relate to ownership options and to restrictions/limits regarding ownership and control.
- iv) ABE partners must complete ABE Declaration Affidavits.
- v) The joint venture must be formalised. All pages of the joint venture agreement must be signed by all the parties concerned. A letter/ notice of intention to formalise a joint venture once the contract has been awarded will not be considered.
- vi) Should any of the above not be complied with, the joint venture will be deemed null and void and will be considered non-responsive.

#### 1. JOINT VENTURE PARTICULARS

- a) Name .....
- b) Postal address .....  
.....  
.....
- c) Physical address .....  
.....  
.....
- d) Telephone .....
- e) Fax .....

**2. IDENTITY OF EACH NON-AFFIRMABLE JOINT VENTURE PARTNER**

2.1(a) Name of Firm .....

Postal Address.....

Physical Address .....

Telephone .....

Fax.....

Contact person for matters pertaining to Joint Venture Participation Goal requirements:  
 .....

2.2(a) Name of Firm .....

Postal Address.....

Physical Address .....

Telephone .....

Fax.....

Contact person for matters pertaining to Joint Venture Participation Goal requirements:  
 .....

*(Continue as required for further non-Affirmable Joint Venture Partners)*

**3. IDENTITY OF EACH AFFIRMABLE JOINT VENTURE PARTNER**

3.1(a) Name of Firm .....

Postal Address.....

Physical Address .....

Telephone.....

Fax.....

Contact person for matters pertaining to Joint Venture Participation Goal requirements:  
 .....

3.2(a) Name of Firm.....

Postal Address.....

Physical Address .....

Telephone.....

Fax.....

Contact person for matters pertaining to Joint Venture Participation Goal requirements:

.....

3.3(a) Name of Firm .....

Postal Address.....

Physical Address .....

Telephone .....

Fax.....

Contact person for matters pertaining to Joint Venture Participation Goal requirements:

.....

4. **BRIEF DESCRIPTION OF THE ROLES OF THE AFFIRMABLE JOINT VENTURE PARTNERS IN THE JOINT VENTURE**

.....  
.....  
.....

5. **OWNERSHIP OF THE JOINT VENTURE**

a) Affirmable Joint Venture Partner ownership percentage(s) .....%

b) Non-Affirmable Joint Venture Partner ownership percentage(s) .....%

c) Affirmable Joint Venture Partner percentages in respect of : \*

(i) Profit and loss sharing .....

(ii) Initial capital contribution in Rands .....

(\*Brief descriptions and further particulars should be provided to clarify percentages).

(iii) Anticipated on-going capital contributions in Rands .....

(iv) Contributions of equipment (specify types, quality, and quantities of equipment) to be provided by each partner.

.....  
.....

6. **RECENT CONTRACTS EXECUTED BY PARTNERS IN THEIR OWN RIGHT AS PRIME CONTRACTORS OR AS PARTNERS IN OTHER JOINT VENTURES**

	<b>NON-AFFIRMABLE JOINT VENTURE PARTNERS</b>	<b>PARTNER NAME</b>
a)		
b)		
c)		
d)		
e)		

	<b>AFFIRMABLE JOINT VENTURE PARTNERS</b>	<b>PARTNER NAME</b>
a)		
b)		
c)		
d)		
e)		

7. **CONTROL AND PARTICIPATION IN THE JOINT VENTURE**

(Identify by name and firm those individuals who are, or will be, responsible for, and have authority to engage in the relevant management functions and policy and decision making, indicating any limitations in their authority e.g. co-signature requirements and Rand limits).

(a) Joint Venture cheque signing

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 .....  
 .....

(b) Authority to enter into contracts on behalf of the Joint Venture

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 .....  
 .....

(c) Signing, co-signing and/or collateralising of loans

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 .....  
 .....

(d) Acquisition of lines of credit

.....  
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.....

(e) Acquisition of performance bonds

.....  
.....  
.....

(f) Negotiating and signing labour agreements

.....  
.....  
.....

8. **MANAGEMENT OF CONTRACT PERFORMANCE**  
(Fill in the name and firm of the responsible person).

(a) Supervision of field operations

.....

(b) Major purchasing

.....

(c) Estimating

.....

(d) Technical management

.....

9. **MANAGEMENT AND CONTROL OF JOINT VENTURE**

(a) Identify the "managing partner", if any,

.....  
.....

(b) What authority does each partner have to commit or obligate the other to financial institutions, insurance companies, suppliers, subcontractors and/or other parties participating in the execution of the contemplated works?

.....  
.....  
.....

- .....
- (c) Describe the management structure for the Joint Venture's work under the contract

MANAGEMENT FUNCTION / DESIGNATION	NAME	PARTNER*

(Fill in "ex Affirmable Joint Venture Partner" or "ex non-Affirmable Joint Venture Partner".

**10. PERSONNEL**

- (a) State the approximate number of operative personnel (by trade/function/discipline) needed to perform the Joint Venture work under the Contract.

TRADE/FUNCTION/ DISCIPLINE	NUMBER EX AFFIRMABLE JOINT VENTURE PARTNERS	NUMBER EX NON-AFFIRMABLE JOINT VENTURE PARTNERS

(Fill in "ex Affirmable Joint Venture Partner" or "ex non-Affirmable Joint Venture Partner").

- (b) Number of operative personnel to be employed on the Contract who are currently in the employ of partners.

- (i) Number currently employed by Affirmable Joint Venture Partners

.....

- (ii) Number currently employed by the Joint Venture

.....

- (c) Number of operative personnel who are not currently in the employ of the respective partner and will be engaged on the project by the Joint Venture

.....

(d) Name of individual(s) who will be responsible for hiring Joint Venture employees

.....  
.....

(e) Name of partner who will be responsible for the preparation of Joint Venture payrolls

.....  
.....

**11. CONTROL AND STRUCTURE OF THE JOINT VENTURE**

Briefly describe the manner in which the Joint Venture is structured and controlled.

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.....  
.....  
.....  
.....

The undersigned warrants that he/she is duly authorised to sign this Joint Venture Disclosure Form and affirms that the foregoing statements are true and correct and include all material information necessary to identify and explain the terms and operations of the Joint Venture and the intended participation of each partner in the undertaking.

The undersigned further covenants and agrees to provide the Employer with complete and accurate information regarding actual Joint Venture work and the payment therefore, and any proposed changes in any provisions of the Joint Venture agreement, and to permit the audit and examination of the books, records and files of the Joint Venture, or those of each partner relevant to the Joint Venture, by duly authorised representatives of the Employer.

**Signature** .....

Duly authorised to sign on behalf of .....

Name.....

Address.....

Telephone.....

Date.....

**Signature** .....

Duly authorised to sign on behalf of .....

Name.....

Address.....



Telephone.....

Date.....

**Signature.** .....

Duly authorised to sign on behalf of .....

Name.....

Address.....

Telephone.....

Date.....

---

**Signature.** .....

Duly authorised to sign on behalf of .....

Name.....

Address.....

Telephone.....

Date.....

---

**Signature.** .....

Duly authorised to sign on behalf of .....

Name.....

Address.....

Telephone.....

Date.....

---

**Signature.** .....

Duly authorised to sign on behalf of .....

Name.....

Address.....

Telephone.....

Date.....

---

(Continue as necessary)

### 1B. COMPULSORY ENTERPRISE QUESTIONNAIRE

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

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

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

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

**Section 4: Particulars of sole proprietors and partners in partnerships**

Name*	Identity number*	Personal income tax number*

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

**Section 5: Particulars of companies and close corporations**

Company registration number .....

Close corporation number .....

Tax reference number .....

**Section 6: Record in the service of the state**

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

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

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

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

\*insert separate page if necessary

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

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

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

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

\*insert separate page if necessary

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise:

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

Signed \_\_\_\_\_ Date \_\_\_\_\_

Name \_\_\_\_\_ Position \_\_\_\_\_

Enterprise name \_\_\_\_\_

**1C. RECORD OF ADDENDA TO TENDER DOCUMENTS**

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

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

Attach additional pages if more space is required.

Signed \_\_\_\_\_ Date \_\_\_\_\_

Name \_\_\_\_\_ Position \_\_\_\_\_

Enterprise name \_\_\_\_\_

**1D. PROPOSED AMENDMENTS AND QUALIFICATIONS**

The Tenderer should record any deviations or qualifications he may wish to make to the tender documents in this Returnable Schedule. Alternatively, a tenderer may state such deviations and qualifications in a covering letter to his tender and reference such letter in this schedule.

The Tenderer’s attention is drawn to clause F.3.8 of the Standard Conditions of Tender referenced in the Tender Data regarding the employer’s handling of material deviations and qualifications.

Page	Clause or Item	Proposal

Signed \_\_\_\_\_

Date \_\_\_\_\_

Name \_\_\_\_\_

Position \_\_\_\_\_

*Enterprisena*  
*me* \_\_\_\_\_

**1E. SCHEDULE OF SUBCONTRACTORS**

We notify you that it is our intention to employ the following Subcontractors for work in this contract.  
 If we are awarded a contract we agree that this notification does not change the requirement for us to submit the names of proposed Subcontractors in accordance with requirements in the contract for such appointments. If there are no such requirements in the contract, then your written acceptance of this list shall be binding between us.  
 We confirm that all Subcontractors who are contracted to construct a house are registered as home builders with the National Home Builders Registration Council.

	<b>Name and address of proposed Subcontractor</b>	<b>Nature and extent of work</b>	<b>Previous experience with Subcontractor.</b>
1.			
2.			
3.			
4.			
5.			

Signed \_\_\_\_\_ Date \_\_\_\_\_

Name \_\_\_\_\_ Position \_\_\_\_\_

Enterprise name \_\_\_\_\_

**1F. SCHEDULE OF PLANT AND EQUIPMENT**

The Tenderer shall insert in the Schedule hereunder, a list of the major plant and equipment he proposes to use on this Contract. Failure to complete this schedule will be taken to indicate that Tenderer does not have access to adequate plant and equipment.

DESCRIPTION OF MODEL	OWNER	WHEN AVAILABLE

Equipment not owned by the Tenderer must be qualified as hire, on loan, etc.

Signature of Tenderer:.....

Date: .....

**1G. PREVIOUS PROJECT EXPERIENCE**

Tenderers must furnish hereunder details of similar works/service, which they have satisfactorily completed in the past. The information shall include a description of the Works, the Contract value and name of Employer.

PREVIOUS AND/OR CURRENT PROJECTS UNDERTAKEN				
EMPLOYER	NATURE OF WORK	VALUE OF WORK	DURATION AND COMPLETION DATE	EMPLOYER CONTACT NO.

Signature of Tenderer: .....

Date: .....



## 1H. PREVIOUS WORK UNDERTAKEN

Tenderers must furnish hereunder details of similar works/service, which they have satisfactorily completed in the past. The information shall include a description of the Works, the Contract value and name of Employer.

<b>PREVIOUS AND/OR CURRENT PROJECTS UNDERTAKEN FOR DEPARTMENT OF PUBLIC WORKS</b>			
<b>PROJECT NAME</b>	<b>AWARDED AMOUNT</b>	<b>CONTRACT START DATE</b>	<b>ANTICIPATED / ACTUAL COMPLETION DATE</b>

Signature of Tenderer: .....

Date: .....

## 11. HEALTH AND SAFETY PLAN

Tenderers are to note the requirements of the Occupational Health and Safety Act No. 85 of 1993 and the Construction Regulations 2003 issued in terms of Section 43 of the Act. The tenderer shall be deemed to have read and fully understood the requirements of the above Act and Regulations and to have allowed for all costs in compliance therewith.

In this regard the tenderer shall prepare and attach a Health and Safety Plan in respect of the Works in order to demonstrate the necessary competencies and resources to perform the construction work all in accordance with the Act and Regulations. Such Health and Safety Plan shall cover inter-alia the following details:

- (1) Management Structure, Site Supervision and Responsible Persons including a succession plan.
- (2) Contractor's induction training programme for employees, sub-contractors and visitors to the Site.
- (3) Health and safety precautions and procedures to be adhered to in order to ensure compliance with the Act, Regulations and Safety Specifications.
- (4) Regular monitoring procedures to be performed.
- (5) Regular liaison, consultation and review meetings with all parties.
- (6) Site security, welfare facilities and first aid.
- (7) Site rules and fire and emergency procedures.

Tenderers are to note that the Contractor is required to ensure that all sub-contractors or others engaged in the performance of the contract also comply with the above requirements.

The tenderer shall also take into account the additional requirements stated in the Scope of Work when drawing up the Health and Safety Plan for the contract.

**Details of the Health and Safety Plan shall be appended to this Schedule.**

Number of sheets, appended by the tenderer to this Schedule ..... (If nil, enter NIL).

## **T2.3 OTHER DOCUMENTS REQUIRED FOR TENDER EVALUATION**

### **2A. CERTIFICATE OF CONTRACTOR REGISTRATION ISSUED BY THE CONSTRUCTION INDUSTRY BOARD**

Please affix copy of CIDB Certificate to this page.

## 2B. TAX CLEARANCE REQUIREMENTS (SBD 2)

**It is a condition of Tender that the taxes of the successful Tenderer must be in order, or that satisfactory arrangements have been made with South African Revenue Service (SARS) to meet the Tenderer's tax obligations.**

1. In order to meet this requirement Tenderers are required to complete in full the attached form TCC 001 "Application for a Tax Clearance Certificate" and submit it to any SARS branch office nationally. The Tax Clearance Certificate Requirements are also applicable to foreign Tenderers / individuals who wish to submit Tenders.
2. SARS will then furnish the Tenderer with a Tax Clearance Certificate that will be valid for a period of 1 (one) year from the date of approval.
3. The original Tax Clearance Certificate must be submitted together with the Tender. Failure to submit the original and valid Tax Clearance Certificate will result in the invalidation of the Tender. Certified copies of the Tax Clearance Certificate will not be acceptable.
4. In Tenders where Consortia / Joint Ventures / Sub-contractors are involved, each party must submit a separate Tax Clearance Certificate.
5. Copies of the TCC 001 "Application for a Tax Clearance Certificate" form are available from any SARS branch office nationally or on the website [www.sars.gov.za](http://www.sars.gov.za).
6. Applications for the Tax Clearance Certificates may also be made via eFiling. In order to use this provision, taxpayers will need to register for this service with SARS through the website [www.sarsefiling.co.za](http://www.sarsefiling.co.za).



TAX CLEARANCE

TCC 001

Application for a Tax Clearance Certificate

Purpose

Select the applicable option ..... Tenders  Good standing

If "Good standing", please state the purpose of this application

Empty text box for purpose of application

Particulars of applicant

Grid-based form for applicant details including Name, Trading name, ID/Passport no, Income Tax ref no, VAT registration no, Customs code, Telephone no, E-mail address, Physical address, Postal address, and Number of copies of certificates required.

Particulars of representative

Grid-based form for representative details including Surname, First names, ID/Passport no, Telephone no, E-mail address, Physical address, and Income Tax ref no.

**Particulars of tender (if applicable)**

Tender number

Tender amount R ,

Expected duration of the tender  year(s)

Particulars of the 3 largest tenders previously dealt with

Date started	Date finalised	Company	Contact person	Telephone number	Amount
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

**Audit**

Are you currently aware of any Audit investigation against you/the company?..... YES NO  
 If "YES" provide details

**Declaration**

I declare that the information furnished in this application as well as the supporting documents is true and correct in every respect.

**Appointment of representative/agent**

I the undersigned confirm that I require a Tax Clearance Certificate in respect of  Tenders or  Goodstanding.

I hereby authorise and instruct  to apply to and receive from SARS the applicable Tax Clearance Certificate on my/our behalf.

--

Signature of representative/agent Date

Name of representative/agent

--

Signature of applicant Date

Name of applicant

**Notes:**

- It is a serious offence to make a false declaration.
- Section 75 of the Income Tax Act, 1962, states: Any person who
  - fails or neglects to furnish, file or submit any return or document as and when required by or under this Act; or
  - without just cause shown by him, refuses or neglects to-
    - furnish, produce or make available any information, documents or things;
    - reply to or answer truly and fully, any questions put to him ...
 As and when required in terms of this Act ... shall be guilty of an offence ...
- SARS will, under no circumstances, issue a Tax Clearance Certificate unless this form is completed in full.

**2C. CERTIFICATE OF TENDERER'S VISIT TO THE SITE**

This is to certify that, I .....  
representative of (Tenderer) .....

.....  
.....

of (address) .....

.....  
.....

Telephone number: .....

Fax number: .....

in the company of (Engineer's representative) .....

visited and examined the site on (date) .....

**I further certify that I have made myself familiar with all local conditions likely to influence the work and the cost thereof, that I am satisfied with the description of the work and the explanations given by the said Engineer's Representative and that I understand perfectly the work to be done, as specified and implied, in the execution of this contract.**

**TENDERER'S REPRESENTATIVE:** (Signature).....

(Name).....

**ENGINEER'S REPRESENTATIVE:** (Signature).....

(Name).....

**2D. CERTIFICATE OF AUTHORITY FOR SIGNATORY**

Signatory for companies shall confirm their authority thereto by attaching a duly signed and dated copy of the relevant resolution of the boards of directors to this form.

An example is given below:

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

Mr/Mrs....., whose signature appears below, has been duly authorised

to sign all documents in connection with the Tender for Contract No. .... and any Contract that may arise there from on behalf of (name of Tenderer in block capitals) .....

.....

**SIGNED ON BEHALF OF THE COMPANY:**

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

**DATE:**

**SIGNATURE OF SIGNATORY:** .....

- WITNESSES:**
- 1. ....
  - 2. ....



**2E. ALTERATIONS BY TENDERER**

Should the Tenderer desire to make any departure or modification to the General Conditions of Contract, Special Conditions of Contract, Specifications, Schedule of Quantities or Drawings, or to qualify his Tender in any way, he shall set out his proposals clearly hereunder, or alternatively, state them in a covering letter attached to his Tender and referred to hereunder, failing which the Tender will be deemed to be unqualified.

PAGE	CLAUSE OR ITEM	DESCRIPTION

Signature of Tenderer: .....

Date: .....

## 2F. SURETY AND BANK DETAILS

### SURETY DETAILS

The Surety we intend providing is from .....

Contact Person .....

Contact Telephone numbers .....

Type of Surety .....

### BANK DETAILS

Bank Name .....

Account Number .....

Account Type .....

Contact Person .....

Tel No. ...

Fax No. ...

Address .....

.....

Signature of Tenderer: .....

Date: .....

## 2G. COMPANY COMPOSITION

### GENERAL

All information **must** be filled in spaces provided. If additional space is required, additional sheets may be attached. The onus is on the Tenderer to fill in all the information. Failure to do so will result in points being lost under equity. The full company composition is required including HDI and Non-HDI status. The ownership must accumulate to 100%.

NAME	ID NUMBER	CITIZENSHIP	NO FRANCHISE IN ELECTION PRIOR 1994 (Y/N)	DISABILITY	FEMALE	DATE OF OWNERSHIP	% OWNED	VOTING %

Signature of Tenderer: .....

Date: .....

## 2H. DECLARATION OF INTERESTS

In terms of the Supply Chain Management Regulations, no person or persons employed by the State may be awarded a Tender by any organ of the State.

Any legal person, or persons having a kinship with persons employed by the State including a blood relationship, may make an offer in terms of this Tender invitation. In view of possible allegations of favouritism, should the resulting Tender or part thereof be awarded to persons connected with or related to an employee of CHDM, it is required that the Tenderer or his/her authorized representative declare his position vis-à-vis the evaluating authority and/or take an oath declaring his/her interest, where—

- the legal person on who's behalf the Tender document is signed, has a relationship with persons/a person who are/is involved with the evaluation of the Tender(s), or where it is known that such a relationship exists between the person or persons for or on who's behalf the declarer acts and persons who are involved with the evaluation of the Tender.

In order to give effect to the above, the following questionnaire shall be completed and submitted with the Tender.

Do you, or any person have any relationship (family, friend, other) with a person employed with the CHDM or its Administration and who may be involved with the evaluation, preparation and/or adjudication of this Tender?

Yes/No

If so, state particulars

.....

.....

.....

Are you or any other person connected with the Tender, employed by any organ of State?

Yes/No

If so, state particulars

.....

.....

.....

Signature of Declarer ..... Date.....

Position of Declarer.....

Name of Company or Tenderer.....

**2I. DECLARATION OF INTEREST (IN THE SERVICE OF THE STATE)  
(SBD 4)**

1. In terms of the Supply Chain Management Regulations any person employed by the state, or persons having a kinship with persons employed by the state cannot make an offer in terms of this invitation to Tender.

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

2.1 Are you or any person connected with the Tenderer, employed by the state? **YES / NO**

i. If so, state particulars.

.....  
.....  
.....

**DECLARATION**

I, the undersigned

(name).....

certify that the information furnished in paragraphs 2.1 to 2.3.1 above is correct. I accept that the state may act against me in terms of paragraph 23 of the general conditions of contract should this declaration prove to be false.

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

Position .....

Name of Tenderer .....

## 2J: 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	i) Is the bidder or any of its directors listed on the National Treasury's database as a company or person prohibited from doing business with the public sector? <b>persons who are listed on this database were informed in writing of this restriction by the National Treasury after the <i>audialterampartemrule</i> was applied).</b>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? <b>Register enter the National Treasury's website, <a href="http://www.treasury.gov.za">www.treasury.gov.za</a>, click on the icon "Register for Tender Defaulters" or submit your written request for a hard copy of the Register to facsimile number (012) 3265445).</b>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Item	Question	Yes	No
4.3.1	If so, furnish particulars:		
4.4	Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.4.1	If so, furnish particulars:		
4.5	Was any contract between the bidder and the municipality / municipal entity or 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 .....

**2K. DECLARATION (VALIDITY OF INFORMATION PROVIDED)**

I.....declare that the information provided is true and correct, the signature to the Tender document is duly authorised and documentary proof regarding any tendering issue will, when required, be submitted to the satisfaction of the Chris Hani District Municipality.

Signature of Declarer ..... Date .....

Position of Declarer .....

Name of Company of Tenderer .....

Should the Tenderer have, in the opinion of the CHDM, acted fraudulently illegally, in bad faith or in any improper manner, misrepresented itself with regard to the Tender, then the CHDM may, in its sole discretion:

- \* Ignore any Tenders without advising the Tenderer thereof
- \* Cancel the contract without prejudice to any legal rights the CHDM may have

**Should the Tenderer disregard this or conduct affairs in a way that transgresses from good business practices, this could seriously impair future business relations between the ECPT and such Tenderer.**



## **2L WHERE THE RENDERED AMOUNT INCLUSIVE OF VAT EXCEEDS R10 MILLION**

Tenderer to supply the following information:

- a) audited annual financial statement for 3 years, or for the period since establishment if established during the last 3 years, if required by law to prepare annual financial statements for auditing;
- b) a certificate certifying that the tenderer has no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days;
- c) particulars of any contracts awarded to the tenderer 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;
- d) a statement indicating whether any portion of the goods or services are expected to be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality or municipal entity is expected to be transferred out of the Republic.

## T2.4 RETURNABLE SCHEDULES THAT WILL BE INCORPORATED INTO THE CONTRACT

### ADJUDICATION OF BIDS ON POINTS BASIS

---

Information provided should be as comprehensive as possible as the Bidder's approach to this subject will be an important criterion in the Bid adjudication process. Failure to provide the information could prejudice a Bid.

Responsive Bids will be adjudicated by ECPTA using a system which awards points on the following basis:

- Cost of work
- B-BBEE Status level of contribution
- Pre-requisites
- Use of local labour and personnel

The Bid obtaining the highest amount of points will be awarded the Contract unless extenuating circumstances dictate otherwise. Points scored will be rounded off to one decimal place.

In the event of equal points scored, the Bid will be awarded to the Bidder scoring the highest points for Equity Shareholding and Joint Venture.

**3A: PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2017**

This preference form must form part of all bids invited. It contains general information and serves as a claim form for preference points for Broad-Based Black Economic Empowerment (B-BBEE) status Level of Contribution.

**NB: BEFORE COMPLETING THIS FORM, BIDDERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF B-BBEE AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2018.**

---

**1. GENERAL CONDITIONS**

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

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

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

1.3 Preference points for this bid shall be awarded for:

- (a) Price;
- (b) B-BBEE status Level of Contribution

1.3.1	The maximum points for this bid are allocated as follows:	<b>POINTS</b>
1.3.1.1	<b>PRICE</b>	80
1.3.1.2	<b>B-BBEE STATUS LEVEL OF CONTRIBUTION</b>	<u>20</u>
	<b>Total points for Price and B-BBEE must not exceed</b>	<b>100</b>
1.4	Failure on the part of a bidder to fill in and/or to sign this form and submit a B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS) or a Sword Affidavit, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.	
1.5.	The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.	
<b>2.</b>	<b>DEFINITIONS</b>	
2.1	“ <b>all acceptable taxes</b> ” indicates value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies.	
2.2	“ <b>B-BBEE</b> ” means broad-based economic empowerment as defined in section 1 of the Broad Based Economic Empowerment Act;	
2.3	“ <b>B-BBEE status level contributor</b> ” means the B-BBEE status received by measured entity based on its overall performance using the relevant scorecard contained in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;	
2.4	“ <b>bid</b> ” means a written offer in a prescribed or stipulated form in a response to an invitation by an organ of state for the provision of services, works or goods, through price quotations, advertised competitive bidding processes or proposals;	
2.5	“ <b>Broad-Based Black Economic Empowerment Act</b> ” means the Broad-Based Economic Empowerment Act, 2003 (Act No. 53 of 2003);	
2.6	“ <b>comparative price</b> ” means the price after the factors of non-firm price and all unconditional discounts that can be utilised have been taken into consideration.	
2.7	“ <b>consortium or joint venture</b> ” 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 contract;	
2.8	“ <b>contract</b> ” means the agreement that results from the acceptance of a bid by an organ of state;	
2.9	“ <b>EME</b> ” means any enterprise with annual total revenue of R5 million or less.	
2.10	“ <b>Firm price</b> ” means the price that is only subject to adjustments in accordance with the actual with the actual increase or decrease resulting from the change, imposition, or abolition of customs or excise duty and other duty, levy, or tax, which, in terms of the law or regulation, is binding on the contractor and demonstrability has an influence on the price of any suppliers, or the rendering costs of any service, for the execution of the contract;	
2.11	“ <b>functionality</b> ” means the measurement according to predetermined norms, as set out in the bid documents, of a service or community that is designed to be practical and useful, working or operating, taking into account, among other factors, the quality, reliability, viability and durability of a service and the technical capacity and ability of a bidder;	
2.12	“ <b>non-firm prices</b> ” means all prices other than “firm” prices;	
2.13	“ <b>person</b> ” includes a juristic person;	

- 2.14 “**rand value**” means the total estimated value of a contract in South African currency, calculated at the of bid invitations, and includes all applicable taxes and excise duties;
- 2.15 “**sub-contract**” means the primary contractors assigning, leasing, making out work to, or employing, another person to support such primary contractor in the execution of part of a project in terms of the contract;
- 2.16 “**total revenue**” bears the same meaning assigned to this expression in the Codes of Good Practice on Black Economic Empowerment Act and promulgated in the *Government Gazette* on 9 February 2007;
- 2.17 “**trust**” means the arrangements through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person.
- 2.18 “**trustee**” means any person, including the founder of a trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.

### 3. ADJUDICATION USING A POINT SYSTEM

- 3.1 The bidder obtaining the highest number total points will be awarded the contract.
- 3.2 Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts;
- 3.3 Points scored must be rounded off to the nearest 2 decimal places.
- 3.4 in the event that two or more bids have scored equal total points, the successful bid must be the one scoring the highest number of preference points for B-BBEE.
- 3.5 However, when functionality is part of the evaluation process and two or more bids have scored equal points including equal preference points for B-BBEE, the successful bid must be the one scoring the highest score for functionality.
- 3.6 Should two or more bids be equal in all respects, the award shall be decided by the drawing of lots.

### 4. POINTS AWARDED FOR PRICE

- 4.1 A maximum of 80 points is allocated for Price on the following basis:

#### PRICE (80 POINTS)

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

Where

$P_s$	=	Points scored for price of bid under construction
$P_t$	=	Rand value of bid under consideration
$P_{min}$	=	Rand value of lowest acceptable bid

## 6. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTION

- 6.1 In terms of Regulation 5(2) and 6(2) of the Preferential Regulations, preference points must be allocated to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

<b>B-BBEE Status Level of Contributor</b>	<b>Number of points (80/20 system)</b>
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

- 6.2 Bidders who qualify as EMEs in terms of the B-BBEE Act must submit a certificate issued by an Accounting Officer as contemplated in the CCA or a Verification Agency accredited by SANAS or a Registered Auditor. Registered auditors do not need to meet the prerequisite for IRBA's approval for the purpose of conducting verification and issuing EME's with B-BBEE Status Level Certificates.
- 6.3 Bidders other than EME's must submit their original and valid B-BBEE status level verification certificate of certified copy thereof, substantiating their B-BBEE rating issued by a Registered Auditor approved by IRBA or a verification Agency accredited by SANAS.
- 6.4 A trust, consortium or joint venture, will qualify for points for their B-BBEE status level as a legal entity provided that the entity submits their B-BBEE status level certificate.
- 6.5 A trust, consortium or joint venture will qualify for points for their B-BBEE status level as an unincorporated entity, provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such a consolidated B-BBEE scorecard is prepared for every separate bid.
- 6.6 Tertiary institutions and public entities will be required to submit their B-BBEE status level certificates level in terms of specialised scorecard contained in the B-BBEE Codes of Good Practice.
- 6.7 A person will not be awarded points for B-BBEE status level if it is indicated in the bid documents that such a bidder intends sub-contracting more than 25% of the value of the contract to any other enterprise that does not qualify for at least the that such a bidder qualifies for, unless the intended sub-contractor is an EME that has the capacity and ability to execute the sub-contract.
- 6.8 A person awarded a contract may not sub-contract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an EME that has the capacity and ability to execute the sub-contract.

**7. BID DECLARATION**

7.1 Bidders who claim points in respect of B-BBEE Status Level of Contribution must complete the following:

**B-BBEE STATUS LEVEL OF CONTRIBUTION CLAIMED IN TERMS OF PARAGRAPHS 1.3.1.2 AND 6.1**

B-BBEE Status Level of Contribution ..... = .....(maximum of 20 points)

(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 6.1 and must be substantiated by means of a B-BBEE certificate issued by a Verification Agency accredited by SANAS or a Registered Auditor approved by IRBA or an Accounting Officer as contemplated in the CCA).

**8 SUB-CONTRACTING**

8.1 Will any portion of the contract be sub-contracted? YES/NO  
(delete which is not applicable)

8.2 If yes, indicate:

(i) what percentage of the sub-contract?.....%

(ii) the name of the sub-contractor?.....

(iii) the B-BBEE status level of the sub-contractor?.....

(iv) whether the sub-contractor is an EME? YES/NO  
(delete which is not applicable)

**9 DECLARATION WITH REGARD TO COMPANY/FIRM**

9.1 Name of firm .....

9.2 Vat registration number .....

9.3 Company registration number.....

**9.4 TYPE OF FIRM**

- Partnership
- One person business/sole trader
- Close corporation
- Company
- (Pty) Limited

[TICK APPLICABLE BOX]

**9.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES (Attach copy of Company Profile)**

.....  
.....  
.....

**9.6 COMPANY CLASSIFICATION**

- Manufacturer
- Supplier
- Professional service provider
- Other service providers, e.g. transporter, etc.

[TICK APPLICABLE BOX]

9.7 TOTAL NUMBER OF YEARS THE FIRM HAS BEEN IN BUSINESS? .....

I/we, the undersigned, who warrants that he/she is duly authorised to do so on behalf of the enterprise certify that the enterprise is entitled to the points allocated in paragraph 2 of this form and I/we 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, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claim is correct.
- (iv) If the B-BBEE status level of contribution has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have-
  - a) disqualify the person from the bidding process;
  - b) recover all 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) restrict the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, from obtaining business from any organ of state for a period not exceeding 10 years, after the audialterampartem (hear the other side) rule as been applied; and
  - e) forward the matter for criminal prosecution.

<p>.....</p> <p><b>SIGNATURE(S) OF TENDERER(S)</b></p>	<p>.....</p> <p><b>DATE</b></p>
--	---------------------------------

**WITNESSES:**

1. .... DATE:.....

ADDRESS:.....  
.....  
.....

2. .... DATE:.....



ADDRESS:.....

.....

.....

### 3B TENDER DECLARATION

Tenderers who wish to claim points in respect of this specific goal must complete the declaration part of this form.

#### DECLARATION WITH REGARD TO TENDER

I/we, the undersigned, who warrants that he/she is duly authorised to do so on behalf of the enterprise certify that the enterprise is entitled to the points allocated in paragraph 2 of this form and I/we acknowledge that:

- (i) The information furnished is true and correct.
- (ii) In the event of a contract being awarded as a result of points claimed the contractor may be required to furnish documentary proof to the satisfaction of the EASTERN CAPE PARKS & TOURISM that the claims are correct.
- (iii) If the claim is found to be incorrect, the EASTERN CAPE PARKS & TOURISM may, in addition to any other remedy it may have –
  - (a) recover costs, losses or damages it has incurred or suffered as a result of that person’s conduct; and
  - (b) 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;

**WITNESSES:**

1. ....

2. ....

DATE: .....

<p>..... SIGNATURE(S) OF BIDDER (S)</p>
---

# THE CONTRACT

**PART C1: AGREEMENT AND CONTRACT DATA**

# C1.1FORM OF OFFER AND ACCEPTANCE

## Offer

The employer, identified in the acceptance signature block, has solicited offers to enter into a contract for the procurement of:

**TENDER NO: 10/FY/21**

### **REPAIRS AND RESTORATION OF THE KOWIE RIVER RETAINING WALL, PORT ALFRED**

The tenderer, identified in the offer signature block, has examined the documents listed in the tender data and addenda thereto as listed in the returnable schedules, and by submitting this offer has accepted the conditions of tender.

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

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

Rand. ....  
..... (in words);

R..... (in figures)

This offer may be accepted by the employer by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the tenderer before the end of the period of validity stated in the tender data, whereupon the tenderer becomes the party named as the contractor in the conditions of contract identified in the contract data.

Signature(s) .....

Name(s) .....

Capacity .....

#### **for the tenderer**

(Name and address of organization/ tenderer .....

Name and signature of witness .....

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

and drawings and documents or parts thereof, which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as listed in the returnable 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 form of offer and acceptance. No amendments to or deviations from said documents are valid unless contained in this schedule.

The tenderer shall within two weeks after receiving a completed copy of this agreement, including the schedule of deviations (if any), contact the employer's agent (whose details are given in the contract data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of contract identified in the contract data. Failure to fulfill any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy of this document, including the schedule of deviations (if any). Unless the tenderer (now contractor) within five working days of the date of such receipt notifies the employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties.

Signature(s) .....

Name(s) .....

Capacity .....

for the  
Employer Eastern Cape Parks & Tourism  
17-24 Oxford Street  
East London  
5200

Name and Signature of Witness

Signatures(s) .....

Name(s) ..... 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, become the subject of Agreements reached during the process of offer and acceptance, the outcome of such Agreement shall be recorded here,
3. Any other matter arising from the process of offer and acceptance either as a confirmation, clarification or change to the tender documents and which it is agreed by the Parties becomes an obligation of the contract shall also be recorded here,
4. Any change or addition to the tender documents arising from the above Agreements and recorded here, shall also be incorporated into the final draft of the Contract,

1 Subject .....

Details .....

2 Subject .....

Details .....

3 Subject .....

Details .....

4 Subject .....

Details .....

By the duly authorised representatives signing this agreement, the Employer and the Tenderer agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the returnable schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this agreement.

**For the Tenderer:**

Signature(s)

Name(s)

Capacity

\_\_\_\_\_  
*(Insert name and address of organisation)*

Name &  
signature of  
witness

\_\_\_\_\_  
Date

**For the Employer:**

Signature(s)

Name(s)

Capacity

(Name and  
address of  
organization)

Eastern Cape Parks & Tourism  
17-24 Oxford Street  
East London  
5200

Name &  
signature of  
witness

\_\_\_\_\_  
Date



### Confirmation of Receipt

The Tenderer, (now Contractor), identified in the Offer part of this Agreement hereby confirms receipt from the Employer, identified in the Acceptance part of this Agreement, of one fully completed original copy of this Agreement, including the Schedule of Deviations (if any) today:

the.....(day)

of .....(month)

20.....(year)

at .....(place)

For the Contractor:

.....  
Signature

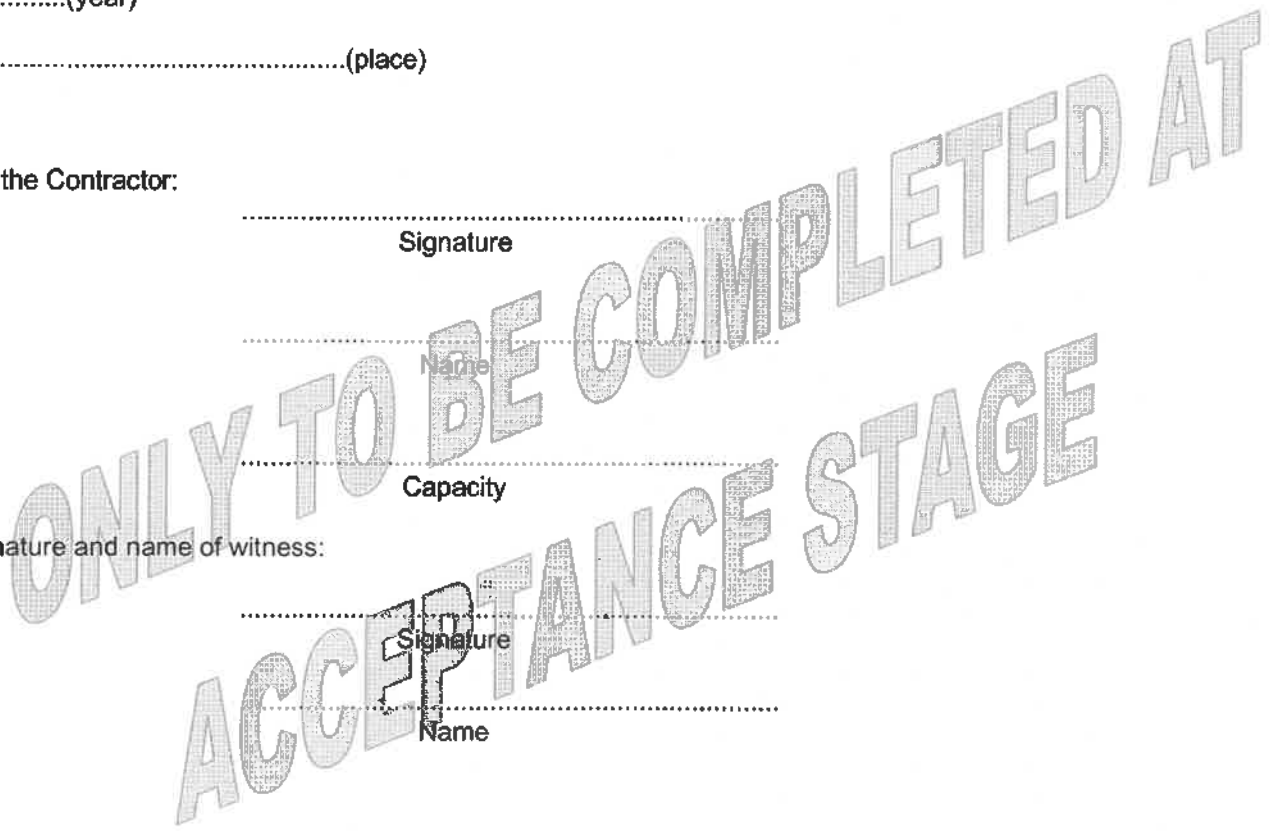
.....  
Name

.....  
Capacity

Signature and name of witness:

.....  
Signature

.....  
Name



## C1.2 CONTRACT DATA

### Part 1: Data provided by the Employer

#### General Conditions of Contract

The following standardised General Conditions of Contract:

#### **General Conditions of Contract for Construction Works (Second Edition) 2015**

prepared by the South African Institution of Civil Engineering (SAICE) shall apply to and form the General Conditions of Contract for this contract. Copies of these conditions of contract are obtainable from the South African Institution of Civil Engineering (SAICE), Private Bag X200, Halfway House 1685, Tel: (011) 805 5947, Fax: (011) 805 5971, e-mail: [civilinfo@saice.org.za](mailto:civilinfo@saice.org.za).

The General Conditions of Contract shall be read in conjunction with the variations, amendments and additions set out in the Contract Specific 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.

The General Conditions of Contract 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.

The Contract Data and General Conditions of Contract shall have precedence over the Drawings, Scope of Work and Standardised Specifications in the interpretation of any ambiguity or ink

#### **Contract Specific Data**

The following contract specific data, referring to the General Conditions of Contract for Construction Works , Second Edition, 2015, are applicable to this Contract:

Clause	Data
1.1.1.13	The Defects Liability Period is <b>6 months</b>
1.1.1.14	The time for achieving Practical Completion is <b>3 months</b> , inclusive of the 14 day period referred to in Clause 5.3.2 below, and inclusive of non-working days referred to in Clause 5.8.1 below, but exclusive of special non-working days (Clause 5.8.1).
1.1.1.15	The name of the Employer is <b>EASTERN CAPE PARKS &amp; TOURISM</b>
1.1.1.16	The name of the Engineer is ZNM Consulting Engineers.
1.1.1.27	The Pricing Strategy is Re-measurement.
1.1.1.35	<b>"Drawings"</b> means all drawings, calculations and technical information forming part of the Contract Documents and any modifications thereof or additions thereto from time to time approved in writing by the Engineer or delivered to the Contractor by the Engineer.
1.1.1.36	<b>Letter of Notification</b> " means the letters of formal notification, signed by the Employer, of the decision of the Supply Chain Management Bid Adjudication Committee sent to all tenderers. The notification of the decision does not form part of the Employer's Acceptance of the successful tenderer's Offer and no rights shall accrue.

1.2.1	<b>DELIVERY OF NOTICES</b> The following three additional sub-clauses, covering alternative methods of communication, apply:
1.2.1.3	Sent by facsimile or any like communication irrespective of it being during office hours or otherwise.
1.2.1.4	Posted to the addressee for certified delivery by the postal Authorities.
1.2.1.5	Delivered by a courier service and signed by addressee.
1.2.1.2	The Employer's address for receipt of communications is: Physical address: Eastern Cape Parks & Tourism 17-24 Oxford Street East London 5200 Tel: (043) 705 4400 Postal address:
1.2.1.2	The Principal Agent's address for receipt of communications is: Physical address: Songo Design Lab Tel: (043) 748 1800 Postal address:
3.1.3	The Engineer shall obtain the specific approval of the Employer before executing any of his functions or duties according to the following Clauses of the General Conditions of Contract:  1. Clause 3.2.1 Nomination of Engineer's Representative 2. Clause 3.2.4 Engineer's authority to delegate 3. Clause 5.8.1 Non-working times 4. Clause 5.11.1 Suspension of the Works 5. Clause 5.12.4 Acceleration instead of extension of time
4.3.3	The Employer and the Contractor shall enter into an agreement to complete the work required for the construction of the works in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act (Act 85 of 1993) and the Construction Regulations promulgated thereunder.  An agreement is included in the Contract Document (C1.4 of Contract Data) and shall be completed and submitted to the Employer together with a letter of good standing from the Compensation Commissioner (if not insured with a Licenced Compensation Insurer) within fourteen (14) days after the Commencement Date. The Contractor shall ensure that any letter of good standing shall be timeously renewed in order that it remains in full force for the duration of the Contract.
5.3.1	The documentation required before commencement with the Works execution are:  1 Health and Safety Plan (Refer to Clause 4.3) 2 Initial programme (Refer to Clause 5.6) 3 Security (Refer to Clause 6.2) 4 Insurance (Refer to Clause 8.6) 5 Letter of Good Standing from the Compensation Commissioner (if not insured with a Licensed 6 Compensation Insurer)
5.3.2	The time to submit the documentation required before commencement with the Works execution is 14 days

5.4.3	The Contractor shall bear all costs and charges for special and temporary rights of way required by him in connection with access to the Site.
5.8.1	The non-working days are Sundays.  The special non-working days are:  (1) All gazetted public holidays falling outside the year end break. (2) The year end break commencing on 18 December and ending on 6 January
5.12.2.2	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 days 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.  The number of days quoted in <b>PS9 – Extension of Time from Abnormal Climatic Conditions</b> shall be regarded as a fair estimate of the delays to be anticipated and allowed for under normal climatic conditions where inclement weather prevents or disrupts critical work.  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 delay is experienced.  It shall be further noted that where the critical path is not affected, no extension of time for <u>abnormal</u> climatic conditions or for any other reason will be entertained.
5.13.1	The penalty for failing to complete the Works is <b>0.01% of the contract value</b> per day per day.
5.16.3	The latent defect period is 2 years.
6.2.1	The security to be provided by the Contractor shall be a performance guarantee of <b>10%</b> of the Contract Sum. The performance guarantee shall contain the wording of the document included in C1.3.
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is 80%
6.10.3	The limit on retention is: 5% of the Contract Price, if a Performance Guarantee is provided, and 10 % of the Contract Price, if a Performance Guarantee is not provided.
6.10.4	<i>Add the following to clause 6.10.4:</i>  Notwithstanding the above, the Engineer shall be empowered to withhold the delivery of the payment certificate until the Contractor has complied with his obligations to report in terms of Clause 4.10.2 and as described in the Scope of Work.
8.6.1.1.2	The value of plant and materials supplied by the Employer to be included in the insurance sum is NIL
8.6.1.1.3	The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is R Nil
8.6.1.3	The limit of indemnity for liability insurance is R 2000 000.00
9.2.1.3.8	The Contractor committed a corrupt or fraudulent act during the procurement process or the execution of the contract.
9.2.1.3.9	An official or other role player committed any corrupt or fraudulent act during the procurement process or in the execution of the contract that benefited the Contractor.
10.4.1	The parties may at time agree to settle disputes with the help of an impartial third party
10.5.3	The number of Adjudication Board Members to be appointed is one.

8.6.1.1.3	The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is NIL.
6.8.2	Contract Price Adjustment: Is <b>not</b> applicable
5.5.1	The Works shall be completed within Six Months.

## Part 2: Data provided by the Contractor

The contractor is advised to read the *general conditions of contract for construction works, second edition, 2015* published by the South African institution of civil engineering, private bag x200, halfway house, 1685, in order to understand the implications of this data which is required to be completed. Copies of these conditions of contract may be obtained from [www.saice.org.za](http://www.saice.org.za).

Each item of data given below is cross-referenced to the clause in the Conditions of Contract to which it mainly applies.

Clause	Data								
1.1.1.9	The name of the Contractor is: .....								
1.2.1.2	The address of the Contractor is: Address (physical): ..... ..... Address (postal): ..... ..... Telephone: ..... Facsimile: ..... e-mail: .....								
1.1.1.14	The time for achieving Practical Completion is as stipulated under Part C3.1A, Clause 8.								
6.2.1	The security to be provided by the Contractor shall be one of the following: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;">Type of security</th> <th style="width: 30%;">Contractor's Choice. Indicate "Yes" or "No"</th> </tr> </thead> <tbody> <tr> <td>Retention of 10% of the value of the Works.</td> <td></td> </tr> <tr> <td>Cash deposit of 10% of the Contract Sum, incl. VAT plus retention of 10% of the value of the Works.</td> <td></td> </tr> <tr> <td>Performance guarantee of 10% of the Contract Sum, incl. VAT plus retention of 10% of the value of the Works.</td> <td></td> </tr> </tbody> </table>	Type of security	Contractor's Choice. Indicate "Yes" or "No"	Retention of 10% of the value of the Works.		Cash deposit of 10% of the Contract Sum, incl. VAT plus retention of 10% of the value of the Works.		Performance guarantee of 10% of the Contract Sum, incl. VAT plus retention of 10% of the value of the Works.	
Type of security	Contractor's Choice. Indicate "Yes" or "No"								
Retention of 10% of the value of the Works.									
Cash deposit of 10% of the Contract Sum, incl. VAT plus retention of 10% of the value of the Works.									
Performance guarantee of 10% of the Contract Sum, incl. VAT plus retention of 10% of the value of the Works.									
6.5.1.2.3	The percentage allowance to cover overhead charges is .....%.								

### C1.3 PERFORMANCE GUARANTEE

The performance guarantee is to contain the wording of the pro-forma document included in the *general conditions of contract for construction works, second edition, 2015*, published by the South African Institution of Civil Engineering. Copies of these conditions of contract may be obtained from the South African Institution of Civil Engineering, Private Bag X200, Halfway House, 1685, at [www.saice.org.za](http://www.saice.org.za).

Herewith a copy of the pro-forma document.

#### **PERFORMANCE GUARANTEE**

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

#### **GUARANTOR DETAILS AND DEFINITIONS**

“Guarantor” means: .....

Physical Address: .....

“Employer” means: .....

“Contractor” means: .....

“Engineer” means: .....

“Works” means: .....

“Site” means: .....

“Contract” means: The Agreement made in terms of the Form of 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: .....

“Expiry Date” means: .....

#### **CONTRACT DETAILS**

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

#### **PERFORMANCE GUARANTEE**

- The Guarantor’s liability shall be limited to the amount of the Guaranteed Sum.
- The Guarantor’s period of liability shall be from and including the date of issue of this Performance Guarantee and up to and including the Expiry Date or the date of issue by the Engineer of the Certificate of Completion of the Works or the date of payment in full of the Guaranteed Sum, whichever occurs first. The Engineer and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.
- The Guarantor hereby acknowledges that:

- any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;
  - its obligation under this Performance Guarantee is restricted to the payment of money.
4. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:
    - 4.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Engineer in an Interim of Final Payment Certificate has not been made in terms of the Contract and falling such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;
    - 4.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.1 and the sum certified has still not been paid;
    - 4.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.
  5. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:
    - 5.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 5; or
    - 5.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and
    - 5.3 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.
  6. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.
  7. Where the Guarantor has made payment in terms of 5, the Employer shall upon 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.
  8. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
  9. Payment by the Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.
  10. The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.
  11. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
  12. This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.
  13. This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.
  14. Where the Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

Signed at .....

Date .....

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



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

Capacity .....

Witness signatory (1) .....

Witness signatory (2) .....

**C1.4 AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT (ACT NO. 85 OF 1993)**

**THIS AGREEMENT** made between:

.....  
(hereinafter referred to as "the Employer") of the one part, herein represented by:

.....  
in his capacity as

**AND:**

.....  
(hereinafter referred to as "the Mandatory") of the other part, herein represented by:

.....  
In his capacity as

.....  
and being duly authorized to act as Mandatory on behalf of the Contractor; WHEREAS the Employer is desirous that certain works be constructed, viz **Contract No: 10/FY/21**

**REPAIRS AND RESTORATION OF THE KOWIE RIVER RETAINING WALL, PORT ALFRED**

and has accepted a tender by the Mandatory for the construction, completion and defects correction of such works and whereas the Employer and the Mandatory have agreed to certain arrangements and procedures to be followed in order to ensure compliance by the Mandatory with the provisions of the Occupational Health and Safety Act 1993 (Act 85 of 1993);

**NOW THEREFORE THIS AGREEMENT WITNESSETH AS FOLLOWS:**

1. The Mandatory shall execute the work in accordance with the contract documents pertaining to this Contract.
2. This Agreement shall hold good from its commencement date, which shall be the date on which the site is handed over to the Mandatory by an order in writing from the Engineer, to either:
  - (a) The date of the final certificate issued in terms of clause 52(1) of the General Conditions of Contract 2015 (hereinafter referred to as "the GCC"), as applicable to this Contract, or
  - (b) The date of termination of the contract in terms of clause 55 or clause 56 of the GCC.
3. The Mandatory declares himself to be conversant with the following:
  - (a) All the requirements, regulations and standards of the Occupational Health and Safety Act (Act 85 of 1993), hereinafter referred to as "The Act", together with its amendments and with special reference to the following Sections of The Act:
    - (i) Section 8: General duties of employers to their employees;
    - (ii) Section 9: General duties of employers and self-employed persons to persons other than employees;
    - (iii) Section 37: Acts or omissions by employees or mandatories; and
    - (iv) Sub-section 37(2) relating to the purpose and meaning of this Agreement.

- (b) The procedure and safety rules of the Employer as pertaining to the Mandatory and to all his subcontractors.
- 4. In addition to the requirements of Clause 36 of the General Conditions of Contract and all relevant requirements of the Contract, the Mandatory agrees to execute all the works forming part of this Contract and to operate and utilize all machinery, plant and equipment in accordance with the Act.
- 5. The Mandatory is responsible for the compliance with the Act by all his subcontractors, whether or not selected and/or approved by the Employer.

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

At ..... For and on behalf of the **EMPLOYER** on  
this the ..... day of .....20....

**SIGNATURE:** .....

**CAPACITY:** .....

**WITNESSES:**

**SIGNATURES:** (1)

.....

(2)

.....

**NAMES:** (1)

.....

(2)

.....

At ..... for and on behalf of the **MANDATORY**  
on

this the ..... day of .....20....

**SIGNATURE:** .....

**CAPACITY:** .....

**WITNESSES:**

**SIGNATURES:** (1)

.....

(2)

.....

**NAMES:** (1)

.....

(2)

.....

**PART C2: PRICING INSTRUCTIONS**

## C2.1 PRICING INSTRUCTIONS

- 1) The Conditions of Contract, the Contract Data, the Specifications (including the Project Specifications) and the Drawings shall be read in conjunction with the Bill of Quantities.
- 2) The Bill comprises items covering the Contractor's profit and costs of general liabilities and of the construction of Temporary and Permanent Works.

Although the Tenderer is at liberty to insert a rate of his own choosing for each item in the Bill, he should note the fact that the Contractor is entitled, under various circumstances, to payment for additional work carried out and that the Engineer is obliged to base his assessment of the rates to be paid for such additional work on the rates the Contractor inserted in the Bill. Clause 8 of each Standardized Specification, and the measurement and payment clause of each Particular Specification, read together with the relevant clauses of the Project Specifications, all set out which ancillary or associated activities are included in the rates for the specified operations.

- 3) Descriptions in the Bill of Quantities are abbreviated and may differ from those in the Standardized and Project Specifications. No consideration will be given to any claim by the Contractor submitted on such a basis. The Bill has been drawn up generally in accordance with the latest issue of Civil Engineering Quantities<sup>1</sup>. Should any requirement of the measurement and payment clause of the appropriate Standardized or Project Specification(s) be contrary to the terms of the Bill or, when relevant, to the Civil Engineering Quantities, the requirement of the appropriate Standardized, Project, or Particular Specification as the case may be, shall prevail.
- 4) Unless stated to the contrary, items are measured net in accordance with the Drawings without any allowance having been made for waste.
- 5) The amounts and rates to be inserted in the Bill of Quantities shall be the full inclusive amounts to the Employer for the work described under the several items. Such amounts shall cover all the costs and expenses that may be required in and for the construction of the work described, and shall cover the costs of all general risks, profits, taxes (but excluding value-added tax), liabilities and obligations set forth or implied in the documents on which the Tender is based.
- 6) An amount or rate shall be entered against each item in the Bill of Quantities, whether or not quantities are stated. An item against which no amount or rate is entered will be considered to be covered by the other amounts or rates in the Bill.

The Tenderer shall also fill in a rate against the items where the words "rate only" appear in the amount column. Although no work is foreseen under these items and no quantities are consequently given in the quantity column, the tendered rates shall apply should work under these items actually be required.

Should the Tenderer group a number of items together and tender one sum for such group of items, the single tendered sum shall apply to that group of items and not to each individual item, or should he indicate against any item that full compensation for such item has been included in another item, the rate for the item included in another item shall be deemed to be nil.

The tendered rates, prices and sums shall, subject only to the provisions of the Conditions of Contract, remain valid irrespective of any change in the quantities during the execution of the Contract.

- 7) The quantities of work as measured and accepted and certified for payment in accordance with the Conditions of Contract, and not the quantities stated in the Bill of Quantities, will be used to determine payments to the Contractor. The validity of the Contract shall in no way be affected by differences between the quantities in the Bill of Quantities and the quantities certified for payment. Ordering of materials is not to be based on the Bill of Quantities.
- 8) For the purposes of this Bill of Quantities, the following words shall have the meanings hereby assigned to them:  
Unit: The unit of measurement for each item of work as defined in the Standardized, Projector Particular Specifications

**Quantity:** The number of units of work for each item

**Rate:** The payment per unit of work at which the Tenderer tenders to do the work

**Amount:** The quantity of an item multiplied by the tendered rate of the (same) item

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

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

mm	=	millimetre
m	=	metre
km	=	kilometre
km-pass	=	kilometre-pass
m <sup>2</sup>	=	square metre
m <sup>2</sup> -pass	=	square metre-pass
ha	=	hectare
m <sup>3</sup>	=	cubic metre
m <sup>3</sup> -km	=	cubic metre-kilometre
kW	=	kilowatt
kN	=	kilonewton
kg	=	kilogram
t	=	ton (1 000 kg)
%	=	percent
MN	=	meganewton
MN-m	=	meganewton-metre
PC Sum	=	Prime Cost Sum
Prov Sum	=	Provisional Sum

- 10) Expanded Public Works Programme (EPWP) Implications

Those parts of the contract to be constructed using labour-intensive methods have been marked in the Schedule of Quantities or Bill of Quantities with the letters LI in a separate column filled in against every item so designated. The works, or parts of the works so designated are to be constructed using labour-intensive methods only. The use of plant to provide such works, other than plant specifically provided for in the scope of work, is a variation to the contract. The items marked with the letters LI are not necessarily an exhaustive list of all the activities which must be done by hand, and this clause does not over-ride any of the requirements in the generic labour intensive specification in the Scope of Works.

Payment for items which are designated to be constructed labour-intensively (either in this schedule or in the Scope of Works) will not be made unless they are constructed using labour-intensive methods. Any unauthorised use of plant to carry out work which was to be done labour-intensively will not be condoned and any works so constructed will not be certified for payment.

- 11) The cost of all samples and tests as may be required to ascertain and check the quality of materials and workmanship or any part of the works are deemed to be included in the relevant rates in the Bill of Quantities. The Contractor shall at his/her own expense take levels and prepare cross sections as required for the measurement and computation of excavation and fill quantities etc.
- 12) Value Added Tax (VAT) shall not be included in the individual rates but is to be added as a total at the end of the summary.
- 13) All materials to be provided by the Contractor will be SABS, ISO or JASWIC approved where such a specification exists, whether specifically stated in the schedule or not.
- 14) Where a particular make of item is specified, the words "or similar approved" shall mean approval by the Engineer in writing.

## C2.2 BILL OF QUANTITIES

**NB** The BOQ must be completed in full using BLACK INK and the summary sheet completed and signed.

The BOQ must also be completed in full.

**CONTRACT NO. 10/FY/21**

**REPAIRS AND RESTORATION OF THE KOWIE RIVER RETAINING WALL, PORT ALFRED**

**SUMMARY OF SECTIONS**

<b>SCHEDULE</b>	<b>DESCRIPTION</b>	<b>TOTALS BROUGHT FORWARD</b>
SCHEDULE A	PRELIMINARY & GENERAL	R .....
SCHEDULE B	REPAIRS & RESTORATION	R .....
<b>SUB-TOTAL</b>		R .....
ADD: 10% CONTINGENCIES		R .....
<b>SUB-TOTAL B</b>		R .....
PLUS: 15% VAT		R .....
<b>TOTAL*</b>		R .....

Note:  
\*Total to be carried forward to the "Form of Offer"



**SCHEDULE 1: PRELIMINARY AND GENERAL**

ITEM NO.	PAYM. REF.	DESCRIPTION	UNIT	QUANT.	RATE	AMOUNT
1,1	<b>SABS 1200A 8,3</b>	<b><u>GENERAL SCHEDULED FIXED-CHARGE AND VALUE-RELATED ITEMS</u></b>				
1.1.1	8.3.1 <b>PSA 4.1</b>	Contractual Requirements	sum	1		-
1.1.2	8.3.2 8.3.2.1	<b><u>Establishment of facilities on site</u></b> <u>Facilities for Engineer</u>				
		a) Name Board (1 No)	sum	1		-
		b) Furnished Offices				
		c) Surveyor, Survey assistants and equipment				
1.1.3	8.3.2.2	<u>Facilities for Contractor</u>				
		a) Offices and storage sheds	sum	1		-
		b) Workshops	sum			
		c) Laboratories	sum			
		d) Living accommodation	sum			
		e) Ablution and latrine facilities	sum	1		-
		f) Tools and equipment	sum	1		-
		g) Water supplies, electric power and communications facilities	sum			
	SD A8.3.2.2(h)	h) Dealing with water	sum	1		-
		i) Access	sum	1		-
		j) Plant	sum	1		-
		Other fixed charge obligations specify: ..... ..... .....				
1.1.4	8.3.3	.....	sum	1		-
1.1.5	8.3.4	Removal of site establishment on completion of works	sum	1		-
	SD 26	Health and Safety Plan: submit for approval	sum	1		-
1,2	<b>8.4</b>	<b><u>SCHEDULED TIME RELATED ITEMS (PSA 4.2)</u></b>				
1.2.1	<b>PSA 4.2</b>	Contractual requirements	sum	1		-
<b>TOTAL CARRIED FORWARD</b>						<b>R -</b>

**SCHEDULE 1: PRELIMINARY AND GENERAL**

ITEM NO.	PAYM. REF.	DESCRIPTION	UNIT	QUANT.	RATE	AMOUNT
<b>TOTAL BROUGHT FORWARD</b>						R -
1.2.2	8.4.2	<b><u>Operations and maintenance of facilities on site</u></b>				
	8.4.2.1	<b><u>Facilities for the Engineer</u></b>				
		a) Name Board (as per PSA 2) (1 No)				
	PSA 4.6	b) Survey assistants and materials (as per PSA 4.6.3)				
1.2.3	8.4.2.2	<b><u>Facilities for the Contractor</u></b>				
		a) Offices and storage sheds	sum	1		-
		b) Workshops				
		c) Laboratories				
		d) Living accommodation				
		e) Ablution and latrine facilities	sum	1		-
		f) Tools and equipment	sum	1		-
		g) Water supplies, electric power & communications	sum	1		-
		h) Dealing with water	sum	1		-
		i) Access	sum	1		-
		j) Plant	sum	1		-
1.2.4	8.4.3	Supervision for duration of the construction	sum	1		-
1.2.5	8.4.4	Company and Head Office overhead costs for the duration of the Contract	sum	1		-
1.2.6	8.4.5	Other time related obligations	sum	1		-
1,3	8,5	<b><u>SUMS STATED PROVISIONALLY BY THE ENGINEER</u></b>				
1.3.1		(a) Community Liaison Officer	month	3		-
		(b) Overheads, charges and profit on item 3.1(a) above	%	0,00		-
<b>TOTAL CARRIED FORWARD</b>						-

**SCHEDULE 1: PRELIMINARY AND GENERAL**

ITEM NO.	PAYM. REF.	DESCRIPTION	UNIT	QUANT.	RATE	AMOUNT
<b>TOTAL BROUGHT FORWARD</b>						-
1.3.2		(e) Additional laboratory testing (only when directed by Engineer)	sum	1		-
		(f) Overheads, charges and profit on item 3.2(a) above	%	0,00		-
1,4	8.8.2 PSA 4.3	<b><u>Dealing with traffic</u></b> Accommodating traffic	sum	1		-
1,5	8,9 PSA 4.4	<b><u>Exposing of existing services:</u></b> Excavation by hand in all materials to expose existing services.	m <sup>3</sup>	45		-
1,6 1.6.1	PSA4.5	<b><u>Occupational Health &amp; Safety</u></b> Provision for the cost related to the Occupational Health & Safety Act, 85 of 1993, and the relevant regulations:				
		a) Preparation of Health & Safety Plan	sum	1		-
		b) Compilation of a Risk Assessment prior to Construction.	sum	1		-
		c) Health & Safety induction training of employees	sum	1		-
		d) Compilation and keeping up to date the Health & Safety file which shall include all documentation required in terms of the Act.	sum	1		-
		e) Implementation of the Health and Safety Plan over the entire construction period	sum	1		-
<b>TOTAL SCHEDULE 1: CARRIED FORWARD TO SUMMARY</b>						-

**SCHEDULE 2: REPAIRS**

ITEM NO.	PAYM. REF.	DESCRIPTION	UNIT	QUANT.	RATE	AMOUNT
2.1  1.1.1	<b>SABS 1200DE</b>	<b><u>ALL TRADES</u></b>				
	8.3.1,1	<b><u>WORKING SPACE</u></b>				
	8.3.1 <b>PSA 4.1</b>	Hoarding off river water no exceeding 1,5m high to allow dry working space during repairs. Contractor to allow any relevant material eligible for blocking off water in different locations	item	1		-
	8.3.2	<b><u>STORMWATER DRAINAGE</u></b>				
		a) Clear, unblock drainage drainage pipes not exceeding 500mm diameter by removing debris, soil and stones etc to allow free flow of stormwater.	m	30		-
		b) Clear dense bush over stormwater channels and clear up to allow proper drainage of stormwater.	m <sup>2</sup>	45		-
		<b><u>Sundries:</u></b>				
		a) Remove loose stones of varying shapes and sizes from existing retaining walls and cart off to spoil.	m <sup>3</sup>	240		-
	<b>SABS 1200DK</b>	<b><u>QUARRY STONES IN PATCHING</u></b>				
	8.2.2	a) Selected quarry stones of varying sizes and shapes from local quarry, dry packed to form retaining wall in various locations along the river banks as directed by the engineer.	m <sup>3</sup>	800		-
		b) Ditto but bonded together with Sikadur 43ZA Epoxy Mortar to areas as directed by Engineer.	m <sup>3</sup>	300		-
	<b>SABS 1200ME</b>	<b><u>IMPORTED FILL</u></b>				
	8.3.1	a) Supply G7 imported gravel, lay and compact to 95% MOD AASHTO DENSITY in layers of 150mm thick and shape to reinstate all eroded embankments to match existing as directed by Engineer.	m <sup>3</sup>	190		-
	<b>SABS 1200G</b>	<b><u>EXISTING STONE RETAINING WALL REPAIRS</u></b>				
8.7	a) Neatly re-pack stones in the same original pattern and bond together with Sikadur 43ZA Epoxy Mortar to all newly re-constructed stones in reas directed by engineer.	m <sup>3</sup>	120		-	
	b) Further allow hording off water, 1m deep or less to allow dry working space during the repairs. Constructor to allow any relevant material eligible for blocking water.	m	100		-	
<b>TOTAL CARRIED FORWARD</b>						<b>R -</b>

**SCHEDULE 2: REPAIRS**

ITEM NO.	PAYM. REF.	DESCRIPTION	UNIT	QUANT.	RATE	AMOUNT
<b>TOTAL BROUGHT FORWARD</b>						<b>R -</b>
		c) Grouted stone pitching to create stormwater channel link from headwall to river bank	m <sup>2</sup>	30		-
<b>TOTAL SCHEDULE 2: CARRIED FORWARD TO SUMMARY</b>						<b>R -</b>

---

**SUMMARY OF BILL OF QUANTITIES**

**Contract No. 10/FY/21**

<b>NO</b>	<b>DESCRIPTION</b>	<b>AMOUNT</b>
1	Schedule 1 : Preliminary And General	-
2	Schedule 2 : Repairs	
<b>3</b>	<b>Sub Total</b>	-
4	ALLOW R 100 000,00 FOR CONTINGENCIES	
<b>5</b>	<b>Sub Total</b>	-
6	ADD 15% VAT	-
<b>7</b>	<b>Total Amount to Form of Offer and Acceptance</b>	-

\_\_\_\_\_  
DATE

\_\_\_\_\_  
SIGNATURE OF TENDERER

**PART C3: SCOPE OF WORK**

### C3.1 PROJECT SPECIFICATION

Although not bound in nor issued with this document, the following standardised specifications shall form part of the contract document and shall apply:

SABS 1200 A 1986	General
SABS 1200 AB 1986	Engineers Office
SABS 1200 C 1980 (as amended 1982)	Site Clearance
SABS 1200 D 1988 (as amended 1990)	Earthworks
SABS 1200 DB 1989	Earthworks (Pipe Trenches)
SABS 1200 DK 1984	Gabions & Pitching
SABS 1200 DM 1981	Earthworks (Road, Subgrade)
SABS 1200 G 1982	Concrete (Structural)
SABS 1200 H 1990	Structural Steelwork
SABS 1200 L 1983	Medium Pressure Pipeline
SABS 1200 LB1983	Bedding (Pipes)
SABS 1200 LC1981	Cable Ducts
SABS 1200 LD 1982	Sewers
SABS 1200 LF 1983	Erf Connections (Water)
SABS 1200 M 1981	Roads (General)
SABS 1200 ME 1981	Sub-base
SABS 1200 MJ 1984	Segmented Paving
SABS 1200 MK 1983	Kerbing and Channelling

All clauses in the Specification Data are preceded with "SD" followed by the relevant letter(s) and number of the relevant clause of the standard specifications. This will replace, amend or add to the standard specification with the same number. For a new clause the numbers follow on from the last clause number used in the relevant specification.

Any clause referred to in the standard specification will also include the relevant Specification Data.

Particular Specifications are specifications for which no standard specification is available.

In the event of any discrepancy between the Construction Specifications and a part or parts of the SABS 1200 Standardised Specifications, the Bill of Quantities or the Drawings, the precedence of documentation is as follows:

- (i) Construction Specifications
- (ii) Bill of Quantities
- (iii) Drawings
- (iv) SABS 1200 Standard Specification



## C3.2 THE WORKS

### PS 1 GENERAL DESSCRIPTION OF CONTRACT

The Employer for the Project is **EASTERN CAPE PARKS & TOURISM**. The employer's objective is to repair and restore the retaining wall at Kowie River, Port Alfred. The contractor shall maximise the use of local resources. These resources include local labour, local suppliers, builders, sub-contractors and plant hire. The contractor is to agree the number and nature of skilled personnel that he wishes to bring onto the project and have these confirmed by the Engineer and PSC. Any changes to this agreed number must be registered with the Engineer.

The work to be carried out under this contract entails the following:

- Repairing and restoration of Kowie River retaining wall;

### PS 2 DESCRIPTION OF SITE AND ACCESS

The site of the proposed works is situated in Port Alfred. A locality plan of the site is enclosed under Annexure C: Drawings.

The Contractor must take note of the fact that transport equipment to be used on existing roads is limited to the allowed legal axle-loads in accordance with the Road-Ordinance of the relevant Authority. The Contractor shall use temporary bypass roads where necessary. No additional payment shall be made in this regard and any additional costs shall be regarded to be included in relevant supplied rates.

The Contractor is made aware that except for payment item 8.3.2.2 of the SABS 1200 A regarding access, no other payment will be made for access to the site of works, borrow pits and dumping sites.

### PS 3 NATURE OF GROUND AND SUBSOIL CONDITIONS

A formal geotechnical investigation was not conducted and is available.

The Contractor is responsible for obtaining all spoil sites.

Contractors must satisfy themselves regarding the quality and type of material on site since the Contractor is responsible for the supply of materials in compliance with the minimum requirements.

The Contractor is responsible to obtain and supply all material that must comply with the minimum requirements for the specific material, as well as the construction and maintenance of all access roads to the works on site, to spoil sites and sources of material on site that may be required by the contractor. No payment will be made for the above and payment will be deemed to be included in the rates for the relevant items.

### PS4 SCOPE OF CONTRACT

#### PS 4.1: Principal Contract

The scope of this principal contract includes the following activities:

- a) Site Clearance
- b) Earthworks (bulk excavations and pipe trenches)
- c) Minor Concrete works (structural- and small concrete works)
- d) Structural steelwork
- e) Road layerworks
- f) Kerbing and channelling
- g) Segmented Paving
- h) Fencing

**PS 4.2: Other Simultaneous Contracts**

During the construction period contracts may be awarded for other contracts. The Contractors attention is drawn to Clause 18.1 of the General Conditions of Contract (2015) that all reasonable access must be given to the other contractors. The civil contractor must co-ordinate his program with the other contractors to accommodate the overlap of construction activities. No additional payment will be made for the above arrangements.

**PS 5: CONSTRUCTION PROGRAMME AND METHODS****PS 5.1: Time for Completion and Programme**

The overall time for completion of the contract is a maximum of **6 Months**.

The above period includes the normal days of inclement weather as specified in the Specification Data and special non-working days listed in the Contract Data, but exclude the standard builders holidays.

The Contractor will be required to develop and maintain for the full duration of the contract, a works programme whose purpose will be to ensure that the work is carried out and controlled in such a way that the contract is completed within the time stated in the tender or in the time extended by the Engineer in writing.

The Contractor shall take all aspects regarding the conditions on site, access, transportation, restricted working space, the availability of material, machines and labour into account during the tender stage and the compiling of a construction programme.

**PS 5.2: Construction Programme**

The Contractor must submit his construction programme within the time stated in the Contract Data and the Engineer shall be empowered to withhold all payment certificates until the Contractor has complied with his obligations in terms of this clause.

The programme is subject to the Engineers approval and remains so for the duration of the contract. If necessary, the Engineer may instruct the contractor to adjust his programme to suit other activities.

This programme shall be in the form of a sloping bar chart or other time/activity form acceptable to the Engineer. The programme shall clearly show the anticipated quantities and values of works performed each month.

The unit of measurement in respect of the time periods of activities will be a week. The programme shall reflect at least the following information:

- (i) A description of each of the major activities, which are to be carried out during the contract and the sequence in which they will be done.
- (ii) The programmed time for carrying out each activity.
- (iii) The dependencies, which exist between the various activities and whether these are time-related or resources-limited or both.
- (iv) The critical path of activities on which final completion of the Works is dependent.
- (v) The amount of slack time for non-critical activities.

The following details shall also accompany the programme:

- (l) Proposed number of working hours per day, working days per week, "pay weekends": if any, and any proposed holiday or other shut down periods.

- (ii) Schedule of proposed labour resources (giving a breakdown of engineers/technicians, foremen, supervisors, artisans, skilled and unskilled labour) for each major activity.
- (iii) Schedule of proposed plant resources (giving a breakdown of description and number of units) for each major activity.

A network-based programme according to the precedence method shall also be provided showing the various activities in such detail as may be required by the Engineer. The programme shall be updated monthly in accordance with the progress made by the contractor.

**If, during the progress of the work, the quantities of work performed per month fall below those shown on the programme, or if the sequence of operations is altered, or if the programme is deviated from in any other way, the contractor shall, within one week of being notified by the Engineer, submit a revised programme and network.**

If the programme has to be revised by reason of the contractor falling behind his programme, he shall produce a revised programme showing how he intends to regain lost time in order to ensure completion of the works within the time for completion as defined in clause 42 of the general conditions of contract or any granted extension of time. Any proposal to increase the tempo of work must be accompanied by positive steps to increase production by either providing more labour and plant on site, or using the available labour and plant in a more efficient manner.

Failure on the part of the contractor to submit or to work according to the programme or revised programmes shall be sufficient reason for the Engineer to take steps as provided in clause 55 of the general conditions of contract.

The approval by the Engineer of any programme shall have no contractual significance other than that the Engineer will be satisfied if the work is carried out according to such programme and that the contractor undertakes to carry out the work in accordance with the programme. It shall not limit the right of the Engineer to instruct the contractor to vary the programme should circumstances make this necessary.

It is in the Contractor's interest to give as much information as possible about times allowed for construction as well as resource or other limitations on programme times, since this programme will form the basis for any contractual negotiations about extensions of time once the contract is commenced. Failure to comply with any of these requirements will entitle the Engineer to use a programme based on his own assumptions to evaluate claims for extension of time for the completion of the work and/or for additional compensation.

Once approved by the Engineer in writing, this programme shall be known as the contract programme and shall be revised only as described below. Minor revisions to the contract programme may be introduced from time to time by mutual agreement between the Contractor and the Engineer. Should the Engineer require a major revision to the contract programme for whatever reason, the Contractor shall be notified in writing and such revision shall be submitted for approval to the Engineer within two weeks of receipt of such notification.

If a revised programme is issued, the effect on the initial critical path must be clearly indicated to the Engineer as must the steps required to be taken to ensure the completion of the contract within the stated Time of Completion.

The Contractor shall submit to the Engineer, at least three working days before each monthly site meeting, one paper print of the contract programme with detailed programmes (as described below) duly marked up to reflect the actual progress up to that date.

**PS 5.3: Detailed Programme**

Detailed programmes (amplifying with certain aspects of the contract programme) must be submitted monthly at least 3 days before the site meetings. The following is the minimum information that must be indicated on the detailed programme.

(i) Detailed bar charts

An extract from the updated contract programme covering the forthcoming two-month period with major activities broken down into daily activities.

(ii) Production graphs

Sloping bar graphs where the "unit" (eg m<sup>3</sup>, km, no, tec) is shown on the vertical axis, "time" (in days) is on the horizontal axis and the graph line reflects the "activity". These are to be produced for the forthcoming month and will cover all activities of a repetitive nature such as: cut to fill, cut to spoil, layer works, etc.

**PS 5.4: Reporting**

The Contractor shall submit to the Engineer at least three days before each monthly site meeting a monthly progress report, which shall include the following:

- (i) A summary of progress on site over the month immediately preceding the monthly site meeting. This shall be in the form of a detailed narrative to the contract programme.
- (ii) Highlight activities running late, indicating what steps have (or will) be taken (e.g. reprogramming), additional plant and/or labour resources, etc.) to ensure that the specified date of completion is not overrun.
- (iii) Status report of all plant employed on site.
- (iv) Status report of all labour resources employed on site.
- (v) Status report of all material on site.

No separate payment will be made for observing these requirements as it is deemed to be included in the amounts tendered for Schedule A: Preliminary and General.

In the event that the Contractor does not deliver the monthly progress report on time, the Engineer may request the Employer to impose a penalty of R150-00 per day for each day the Contractor fails to timeously deliver in his obligations. The penalty will be deducted on the monthly interim payment certificates.

**PS 5.5: Methods**

Construction methods must be of such a nature that no person, property or improvements in the vicinity of the works is endangered. The Employer accepts no responsibility for any work executed without written permission outside the site of Works.

**PS 6: SITE FACILITIES AVAILABLE**

**PS 6.1: Source of Water Supply and Sewerage connection**

The Contractor shall make his own arrangements with the relevant authorities for obtaining water for construction and domestic purposes as well as a sewerage connection. The Contractor shall pay for the water at the rates and tariffs as determined by the local authority, including the cost of supplying a temporary standpipe as required.

**PS 6.2: Source of Power Supply**

The Contractor shall make his own arrangements for obtaining power and be responsible for all costs involved.

**PS 6.3: Location of Camp Site**

The Contractor must make his own arrangements for a Camp Site. The location of the Contractor's camp including the material storage areas, will be subject to the Engineer's approval.

**PS 6.4: Housing for Contractor's employees**

No housing is available for the Contractor's employees, and the Contractor shall make his own arrangements for housing his employees or transporting them to and from the site. The Contractor is in all respect responsible for the housing and transporting of his employees, and for the arrangement thereof, and no extension of time due to any delays resulting from this, will be granted.

No housing on site shall be allowed.

**PS 7: SITE FACILITIES REQUIRED****PS 7.1: Facilities for the Engineer**

No Facilities required for use by the Engineer's site staff.

**PS 7.2: Water, electricity and sewage**

The contractor shall, at his own expense, be responsible for obtaining and distributing the water and electricity required for construction and domestic use. The distribution of water and electricity, the cost of which will be deemed to be included in the tendered rates.

See sub clause PSA 4.2 regarding the sewage requirements.

**PS 7.3: Site instruction book**

A triplicate book supplied by the Contractor to be used for site instruction shall at all times be kept on the site.

**PS8: FACILITIES REQUIRING SPECIAL ATTENTION****PS 8.1: Dealing with Water**

The Contractor is responsible for the control of storm water from adjoining areas, the site and groundwater. No additional payment will be made and it will be deemed to be included in the rates of the relevant items.

**PS 8.2: Survey Beacons**

The Engineer will provide benchmarks with levels and coordinates. The Contractor's attention is drawn to clause 5.1.2 of SABS 1200 A.

**PS 8.3: Record Drawings**

As the Works proceed the Contractor must keep detailed records of all changes to the plans. The actual position of all new and existing services must be indicated on the set of drawings supplied free of charge for this purpose.

The certificate of completion will only be issued once the Engineer has received the record drawings. No separate payment will be made for this and it will be deemed to be included in the rates for the relevant items.

**PS 8.4: Safety**

The Contractor must take the safety of the residents and their property into account during the planning and execution of the works. All open trenches, services, material and machines must be protected and clearly marked.

**PS 8.5: Minimal disturbance to environment**

The site and surroundings are to be kept clean from building rubble, waste etc. throughout the duration of the contract. Roads used for transporting material shall be kept clean, and dirt free on a daily basis. No separate payment will be made for this and it will be deemed to be included in the rate for the relevant items.

Stacking of cut-down trees and vegetation on-site is not allowed, as this is a possible fire-hazard.

**PS 8.6: Site maintenance**

During the progress of the work and until completion, the site of the works shall be kept and left in a clean and orderly condition. The contractor shall at all times store materials and equipment for which he is responsible in an orderly manner, and shall keep the site free from debris and obstruction.

**PS 8.7: Testing and Quality Control**

The contractor shall engage the services of an approved independent testing laboratory for the testing of materials and the quality testing of layer works, to ensure that his work conforms to the specifications. No separate payment will be made for such testing by an approved laboratory, the costs of which will be deemed to be included in the contractor's tendered rates for the various items of work requiring testing in accordance with the specifications.

**PS 8.8: Existing Services**

The positions of existing services are shown on the drawings. The Contractor shall note that although the drawings have been prepared using available information they show only the approximate positions of existing services and shall be a guide only. The Contractor's attention is drawn to clause 5.4 of SABS 1200 A.

Before the Contractor commences operations, he must discuss with and have the approval of the Employer, authority or owner concerned regarding the method he proposes to use for relocating or safe-guarding any services and existing works he may encounter during construction.

The positions of existing services shown on the Drawings are given in good faith and no guarantee can be given that:

- a) these services actually are in the approximate positions indicated.
- b) that these are the only services in the vicinity, and
- c) that the nature and description of these services are correct.

The Contractor shall be responsible to locate and safeguard any existing service or work he may encounter during construction and shall obtain clearance from the Employer, authority and the Engineer before commencing work in the proximity of existing services or works.

The Contractor shall be responsible for any damage to such existing services and works in the execution of this contract and shall reimburse the Employer, authority or the owner concerned for any repairs required and for damages.

The Contractor shall be responsible for immediately notifying the Engineer and the authorities concerned regarding any damage caused to public services and existing works.

The Authority concerned shall carry out any alterations to public services unless the Contractor is instructed otherwise.

The Contractor shall provide the necessary assistance during any operations necessary in connection with the removal, alterations or safeguarding of any public service.

**PS 9: EXTENSION OF TIME ARISING FROM ABNORMAL CLIMATIC CONDITIONS**

The Contractor shall make allowance for the average rainfall and windy conditions that may exist during the contract period. All necessary steps shall be taken to proceed with the Works despite inclement weather. The Contractor shall however record all rainy and windy periods, which adversely affect the Contract. Extension of Time in terms of Clause 42 of the General Conditions of Contract (2015) and Special Conditions arising from abnormal climatic conditions, shall be applied as follows:

Delays on working days only (based on a five-day working week) will be taken into account for the extension of time, but the Contractor shall make provision in his programme of work for an expected delay of "n" working days caused by normal inclement weather, for which he will not receive any extension of time. The value of "n" for this Contract shall be based on the loss of 34 working days per annum due to inclement weather.

Extension of time during working days will be granted to the degree to which actual delays, as defined above, exceed the number of "n" working days as mentioned above.

When considering extension of time for abnormal climatic conditions, the effect of the loss of 34 working days per annum due to normal inclement weather shall be taken cumulatively over the whole contract period.

For portions of less than one year the appropriate number of days of normal inclement weather will be determined on a pro-rata basis based on the following table:

<b>Month</b>	<b>No of normal inclement weather days expected</b>
January	4
February	4
March	4
April	2
May	1
June	1
July	4
August	1
September	2
October	3
November	4
December	4
<b>TOTAL</b>	<b>34</b>

Should the Contractor wish to submit a claim for extension of time for the completion of the Works due to the Works being delayed by reason of exceptionally inclement weather he shall do so in writing and with the following details:

1. The times work was stopped and recommenced.
2. A motivation for the reasons construction could not continue, with reference to the agreed construction programme activities.
3. A report on active resources on site at the time of the disruption, which shall be certified by the Engineer's Site Representative or Clerk of Works.
4. The circumstances surrounding any instruction by a third party to stop work due to inclement weather (i.e. Industrial Council/Safety Officers, etc).

The Contractor shall submit to the Engineer claims for all time lost due to inclement weather within 1 working day of the claim day, duly certified by the Engineer's Representative or Clerk of Works, as the case may be. A record of inclement weather will be kept and recorded at site meetings on a regular basis. Only when all parts of the contract have been handed over will claims, if any, be considered for exceptionally inclement weather.

The onus is on the Contractor to prove these claims.

The delays granted, in terms of this Clause, shall not automatically result in an overall extension of time being granted for completion of the Works unless the effect is clearly

applicable to the critical path of the agreed construction programme activities and affects weather sensitive work.

**PS 10: CERTIFICATES OF PAYMENT**

The statement to be submitted by the Contractor in terms of clause 49 of the General Conditions of Contract (2015) shall be prepared in accordance with the standard payment certificate prescribed by the Engineer and shall consist of at least four sets of A4-sized paper copies.

All costs resulting from the preparation and submission of the statements shall be borne by the contractor.

**PS11: CONSTRUCTION IN LIMITED AREAS**

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

**PS 12: SPOIL MATERIAL**

No indiscriminate spoiling of material will be allowed. All surplus or unsuitable material shall be spoiled at a site to be identified by the contractor. Such site shall meet with the approval of the local authority within whose area it falls, and the spoiling shall comply with all the statutory and municipal regulations.



**PS 13: DRAWINGS**

Any information in the possession of the contractor, which is necessary for the resident engineer to complete his "record" drawings, must be submitted to the resident engineer before a certificate of completion will be issued.

Only figured dimensions shall be used and drawings shall not be scaled unless so instructed by the Engineer. The Engineer will supply any figured dimensions, which may have been omitted from the drawings.

**PS 14: LENGTH OF TRENCHES**

Where no limitations are imposed by construction stages and unless otherwise permitted in writing by the Engineer, not more than 100 m of trench in any one place shall be opened in advance of pipe laying operations.

No trench may be left open over the builders' holidays or weekends.

**PS15: SAMPLES**

The contractor shall at his own cost, supply all samples that may be required. Material or work not conforming to the approved samples shall be rejected. The Engineer reserves to himself the right to submit samples to any tests to ensure that the material represented by the sample conforms to the requirements of the specifications.

**PS 16: MANUFACTURER'S INSTRUCTIONS**

The recommendations of the manufacturers of patented materials must be strictly adhered to regarding the use, mixing, application, fastening, etc. thereof except when otherwise instructed in writing by the Engineer.

**PS 17: PROPRIETARY MATERIALS**

Where proprietary materials are specified it is to indicate the quality or type of materials or articles required, and where the terms "or other approved" or "or approved equivalent" are used in connection with proprietary materials or articles, it is to be understood that the approval shall be at the sole discretion of the Engineer.

**PS 18: NOTICES, SIGNS, BARRICADES AND ADVERTISEMENTS**

The contractor shall erect the necessary signs, notices and barricades for the duration of the contract in order to safeguard both the works and the public.

Note, the contractor may use signs and barricades as well as advertisements only upon approval, and 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 have any sign, notice or advertisement moved to another position or to have it removed from the site of the works, should it in any way prove to be unsatisfactory, inconvenient or dangerous to the general public.

Such notices, signs and barricades shall be provided and erected at the contractor's own expense.

The standard name board of the South African Association of Consulting Engineers is specified, the cost of which shall be included in the rates tendered for items PSA 8.3.1 and 8.3.2 under section 1200 A of the Bill of Quantities.

**PS 19: SETTING OUT OF WORK**

The Engineer at the commencement of the Contract will show reference and level beacons to the Contractor and the Contractor will be responsible for transferring the data to the Site of Works.

The Contractor shall check the condition and accuracy of all reference and level beacons and satisfy himself that they have not been disturbed and are true with regard to position and level. A beacon that has been disturbed shall not be used until its true position and level have been re-established and the Engineer has certified the new values. The Contractor shall thereafter be held entirely responsible for the protection of all reference and level beacons.

The Contractor shall employ a capable surveyor to set out the Works to the required lines and levels. The Engineer shall be informed immediately should any discrepancy be discovered between the levels or dimensions obtained by the Contractor and those shown on the drawings.

Where a beacon is likely to be disturbed during construction operations, the Contractor shall establish suitable reference beacons at locations where they will not be disturbed during construction. No beacons shall be covered over, disturbed or destroyed before accurate reference beacons have been established and details of the positions and levels of such beacons have been submitted to the Engineer. The Contractor's reference beacons shall be of at least the same accuracy and sturdiness of construction as the existing beacons.

The Contractor shall submit the method of setting out he proposes to employ to the Engineer. The Contractor shall provide accurate control offline and level at all stages of construction.

The Engineer may check work set out by the Contractor and the Contractor at his own expense shall rectify any errors found. The Contractor shall supply any instrument, equipment, material and labour required by the Engineer for this survey work. Any assistance, including checking given to the Contractor by the Engineer or any setting out done by the Engineer for Contractor shall not be held as relieving the Contractor of his responsibility for the accurate construction of the Works.

The Contractor's survey instruments and survey equipment shall be suitable for the accurate setting out of the Works and shall be subject to the approval of the Engineer. They shall furthermore be checked and correctly adjusted by the authorized agents before the commencement of the contract and subsequently when required by the Engineer and when otherwise necessary.

When required the Contractor shall, at his own expense, provide one labourer to assist the Engineer. The Engineer shall have the sole right of approving of such a labourer.

Survey work shall not be measured and paid for directly and compensation for the work involved in setting out shall be deemed to be covered by the rates tendered and paid for the various items of work included under the contract.

**PS20: WORKMANSHIP AND QUALITY CONTROL**

The onus to produce work which 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 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 costs of all supervision and process control, including testing thus carried out by the contractor shall 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 standardized specifications regarding the minimum frequency of testing that will be required for process control. The contractor shall, at his own discretion, increase this frequency where necessary to ensure adequate control.

On completion of every part of the work and submission thereof to the Engineer for examination, the contractor shall furnish the Engineer with the results of all relevant tests, measurements and levels to indicate compliance with the specifications.

**PS 21: TRANSPORT OF MATERIAL**

All costs of transporting material, including overhaul, shall be included in the applicable tendered rates. All references in the specifications to transport, overhaul and haul distances shall be deleted irrespective of whether or not the deletion is included in these Specification Data.

**PS 22: EMPLOYMENT OF PREVIOUSLY DISADVANTAGED LOCAL LABOUR**

It is the intention that the project, of which this contract is a part, should make the maximum possible use of the local labour force, which is at present unemployed.

**PS 23: LIAISON WITH LOCAL AUTHORITIES**

The contractor will have to liaise with local authorities regarding the following matters:

- (a) Dealing with traffic.
- (b) Locating of existing underground services.
- (c) Protection of existing services during construction.

If all the relevant authorities are not notified of above operations, the onus rests on the contractor's to immediately contact all these authorities and to accommodate their involvement in his programme of work. The contractor should also warn the authorities at least 48 hours before the actual work commences. Compensation for delays, losses or accidents will not be considered should the contractor at any time have failed to keep the local authorities informed.

The engineer or employer must immediately be notified, should the contractor experience any problem regarding work, which involves a local authority.

**PS 24: COMMUNITY LIASON AND COMMUNITY RELATIONS**

In all dealings with the community and workers employed from within the community, the Contractor shall take due cognisance of the character, culture and circumstances of the community involved and shall at all times use his best endeavours to avoid the development of disputes and to foster a spirit of co-operation and harmony towards the project. The Contractor shall at all times, keep the Engineer fully informed on all matters affecting the contractor and the community, and shall attend all community meetings relating to the project as may be reasonably required by the Engineer. All matters concerning the community shall be discussed and where possible, resolved at such meetings.

Where any resolution of a community meeting shall be contrary to the terms and provisions of the Contract, the Contractor shall not give effect thereto without a prior written instruction from the Engineer. Where the Contractor is of the opinion that any instruction of the Engineer issued in terms of this clause will result in the incurring of additional costs which were not provided for in his tendered rates and/or that a delay in the progress of the works will result, he shall be entitled to submit a claim in terms of Clause 48 of the conditions of contract, provided always that the period of twenty-eight (28) days referred to in Clause 48 shall be reduced to three (3) normal working days in respect of all claims submitted in terms of this clause.

**PS 25: OCCUPATIONAL HEALTH AND SAFETY ACT**

Please refer to Annexure A, Health and Safety Specification, in the bid document and to the requirements of the Construction Regulations of 2003.

The contractor is to implement measures and adhere to these conditions for the duration of the contract. The tendered rate shall be an all-inclusive sum for adhering to the Health and Safety Specification.

**PS 26: ENVIRONMENTAL CONTROL**

The contractor is required to implement measures and to adhere to these conditions for the duration of the contract. The tendered rate shall be an all-inclusive sum for adhering to the EMP enclosed as Annexure B to this document.

## C3.3 VARIATIONS AND ADDITIONS TO THE STANDARDISED SPECIFICATIONS

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**PSA: GENERAL - SABS 1200 A****PSA 1 Setting Out (5.1.1)**

*Replace the 1<sup>st</sup> and 3<sup>rd</sup> paragraphs with the following:*

The Contractor shall be responsible for the setting out of the pipeline routes, positions of reservoirs and other structures indicated by the Engineer on the relevant drawings, along the best available alignment and/or at the best position. The Water Committee shall confirm that the position of any pipeline or structure is acceptable to the local residents and advise the contractor accordingly before construction work commences.

The pipeline route shown on the drawings may be altered to avoid immovable obstacles, including buildings, telephone and electricity infrastructure, rock, watercourses, trees, graves and boulder screed. In general, the pipeline may not be laid in the cut or fill forming part of any road and shall be at least 10m from road centre line.

Major deviations from the route shown on the drawings, or that will affect the length and class of pipe selected for the route shall be reported to the Engineer. Particular attention must be paid to achieving the specified level when selecting reservoir sites.

Co-ordinates provided for setting-out are for guidance only and must be checked on site and adjusted where deemed necessary. Generally coordinates and levels may be taken off the applicable 1:10 000 orthophotos for setting out and reporting purposes. The Engineer will assist with route selection when required to do so, provided at least 24 hour notice is given that assistance is required through a particular section or area.

**PSA 2 Barricading, Lighting and Traffic Crossings (5.2)****PSA 2.1 General Barricading**

Wherever the Works affect the operation or safety of the general public, the Contractor shall barricade off the excavations with 1, 8 m fencing standards driven 0,6 m into the ground at 4 m centres and two strands of red & white plastic tape strung between standards.

**PSA 2.2 Roadworks Barricading**

Wherever the Works affect the operation and safety of public traffic, the Contractor shall barricade off the excavations with white painted 210 litre oil drums at 2 m centres and two strands of red & white plastic tape strung between two drums. A full complement of metal traffic signs shall be erected and maintained to the satisfaction of the Engineer. The signs shall be in accordance with the latest issue of South African Road Traffic Signs Manual.

**PSA 3 Protection of Overhead and Underground Services (5.4)**

Add the following to the provisions of this clause:

Before commencement of any excavations the Contractor shall ascertain, from the relevant authorities, the presence and position of all underground services including any electrical or telephone cables, water, sewer and stormwater services located across or alongside the routes of the pipelines.

Payment for the exposing of such services will be made under the relevant items in the Schedule of Quantities.

The cost of liaison with the authorities regarding such services, as well as the subsequent protection thereof, must be included in the rates for exposing the services.

**PSA 4 Pollution (5.6)**

Should the Engineer not be satisfied with conditions with regard to dust nuisance, pollution of streams, and inconvenience to or interference with the public (or others), he will be entitled to instruct the Contractor to cease work until the problem has been remedied.

**PSA 5 Acceptance Control Testing (7.1.1)**

The Contractor must provide a minimum of 1 working days' notice to the Engineer when works will be available for testing and allow a further 1 full working day for the results to be processed.

**PSA 6 Provisional Sums (8.1.2.1(d) and 8.5)****PSA 6.1 Tools and Equipment**

The Contractor shall ensure that the local subcontractors are equipped with the necessary tools and equipment required to carry out their work, including picks, shovels and assorted hand tools. Certain tools and equipment are required by the Water Committee to repair and maintain the water supply. All purchases of tools and equipment shall require the approval of the Engineer and all items shall be entered into an assets register kept by an appointee of the Water Committee, with the assistance of the Contractor.

**PSA 6.2 Contingencies and Contract Price Adjustment**

A percentage is provided in the summary of the Schedule of Quantities to cover contingent and additional expenditure on the works. Due to the short construction period, CPA will not be applicable to this contract. The expenditure of the contingencies amount, in whole or in part, or not at all, shall be entirely at the discretion of the Engineer.

The provision of this amount shall not in any way imply that the Contractor's tender does not include for the provision of all resources and the fulfilment of all obligations necessary to complete the works as specified, without payment of the amount so provided.

The Engineer shall, if he deems necessary, reduce the scope of work to ensure that expenditure on the works remains within the limit of the project's budget.

**PSA 7 Daywork (8.7)**

The provisions of clause 40(1)(d) of the General Conditions shall apply.

*Add the following Payment Item:*

**PSA 8.9 Miscellaneous Items**

An item which, in the payment clause column of the Bill of Quantities, refers to this clause (PSA8), will be measured in the unit schedule. The sum or rate for such item shall cover the cost of materials, labour and plant to execute and complete the work as specified, described in the Bill of Quantities or shown on the drawing(s).

**AB: ENGINEERS OFFICE****SD AB 3: MATERIAL****SD AB 3.1: Name boards**

Substitute "*South African Institution of Civil Engineers*" in the first paragraph of AB 3.1 with "*South African Association of Consulting Engineers*".

Name boards must be erected on site, situated as specified by the Engineer. The board will be as specified on the standard detail.

**SD AB 3.2: Office Buildings**

Substitute "*as detailed in the project specification*" with "*of a 9000 BTU air conditioner unit*".

*Add the following to AB 3.2:*

- k) suitable power supply for computer, lighting and air conditioner unit.
- l) 1,5m x 2,5 of soft board notice boards.
- m) Conference room table and eight chairs.

**AB 5: CONSTRUCTION****SD AB 5.1: Name boards**

*Add the following to AB 5.1:*

The name boards shall be erected within a month of the commencement date of the contract and shall be placed at the positions indicated by the Engineer. Any damage to these boards shall be repaired within fourteen days of a written instruction issued by the Engineer. No payment shall be made in terms of the contract prior to the erection of the name boards.

*Pass*

The Contractor will not be permitted to erect any of his own name boards.

**SD AB 5.5: Survey Assistants**

Substitute "*two or more suitably educated survey labourers*" in the first sentence of AB 5.5 with "*two semi-skilled labourers*."

*Add the following sub-clause to Clause AB 5:*

**SD AB 5.6: Survey Equipment**

The Contractor shall provide the following tested and approved survey equipment on site for the duration of the contract and for the use of the Engineer whenever needed:

- a) one tacheometer capable of reading to minimum 20 seconds and maximum 6 seconds of arc, plus tripod;
- b) one automatic level plus tripod;
- c) two tacheometer staffs and one level staff, all graduated metrically; and
- d) one 5m and one 100m tape measure.

The above-mentioned equipment may by arrangement be shared between the Contractor and the Engineer's representative.

The Contractor shall provide proof, at the start of the contract, that an acceptable institution has recently serviced the tachometer and level.



The Contractor shall keep the equipment continuously insured against any loss, damage or breakage, and he shall indemnify the Engineer and the Employer against any claims in this regard.

The Contractor shall maintain the equipment in good working order and keep it clean throughout the contract period.

**AB 8: PAYMENT**

**SD AB 8.2.2: Telephone, Fax machine, Photocopy machine, Survey Assistants, Equipment, etc**

No payment will be made in respect of the above-mentioned, and all the costs concerned will be deemed covered by the unit prices for the Contractors' facilities.

**C: SITE CLEARANCE****SD C 3: MATERIAL****SD C 3.1: Disposal of material**

*Substitute the first sentence of C 3.1 with the following:*

"Material obtained from clearing and grubbing, demolition of concrete structures and brickwork, dismantling of pipes where applicable and removal of any items shall be disposed of off-site at a spoil site to be identified and procured by the Contractor. Materials qualifying for disposal on site will be spoiled where indicated by the Engineer. All transport costs shall be included in the rates tendered for site clearance."

**SD C 5: CONSTRUCTION****SD C 5.1: Areas to be cleared and grubbed**

*Substitute the first sentence of C 5.1 with the following:*

Only areas as directed by the Engineer shall be cleared and grubbed where necessary. The Contractor may proceed with clearing and grubbing after handing over of the site only in areas as approved by the Engineer. Measurement and payment for clearing and grubbing shall only occur for areas as required in writing by the Engineer.

*Substitute the last paragraph with the following:*

The Contractor shall program his work in such a way that re-clearing will not be necessary. The cost of re-clearing shall be borne by the Contractor.

**SD C 5.2.3.2: Individual trees**

*Add the following to C 5.2.3.2:*

Trees outside channel and retaining wall routes must be left standing and undamaged, except where otherwise ordered in writing by the Engineer.

**SD C 5.3: Clearing**

*Add the following to C 5.2:*

Damages that occur to the removed fence shall be at the Contractors expense and no additional payment shall be made in this regard.

**SD C 5.6: Conservation of Topsoil**

*Add the following sentence to C 5.6:*

All topsoil removed to a nominal depth of 150 mm shall be preserved for re-use and erosion thereof shall be prevented. Measurement and payment shall be in accordance to C 8.2.10.

**SD C 5.9: Topsoiling**

Upon completion of construction, a 150mm thick topsoil layer from the stockpile shall be placed and watered until germination of natural seeds in the soil is achieved. Measurement and payment shall be in accordance to SD C 8.2.12.

**C 8: MEASUREMENT AND PAYMENT****C 8.2: SCHEDULED ITEMS**

*Add the following payment items:*

**SD C 8.2.1: Clear and Grub In:.....Unit: m<sup>2</sup> or m**

The clearing operation will be decided into the following sections as listed below:

- Road reserves
- Wall servitudes (3m wide)

**SD C 8.2.14: Demolish, Remove from site and dispose of structures.....Unit: m<sup>3</sup>**

The rate shall cover the cost of dismantling, demolishing of all structures and foundations, the additional costs for precautions required during the demolition and loading operations, all excavations and backfilling as required and the cost of loading, transporting and dumping of the material at a dump site to be identified by the Contractor.

**D: EARTHWORKS****SD D2: Interpretations****SD D2.1: SUPPORTING SPECIFICATIONS**

*Replace sub-clause C2.1(b) with the following:*

"b) Any of the other SABS 1200 specifications may form part of the contract documents."

**SD D2.3: DEFINITIONS**

*Replace the definition "Borrow" with the following:*

**"Borrow material:** Material, other than material obtained from excavations required for the works, obtained from sources such as borrow pits or the authorized widening of excavations. 'Borrow' shall have a corresponding meaning."

*Replace the definition "Specified density" with the following:*

**"Specified density:** The specified dry density expressed as a percentage of modified AASHTO dry density."

*Replace the definition "Stockpile" with the following:*

**"Stockpile (Verb):** The process of selecting and, as maybe necessary, loading, transporting and off-loading material in a designated area for later use and a specific purpose."

*Add the following definitions:*

**"Fill:** An embankment or terrace constructed from material obtained from excavations or borrow. In roads it includes the earthworks up to below the selected sub-grade level.

**Fill (material):** Material used for the construction of an embankment or terrace.

**Placing:** Placing shall mean the spreading of backfilling material, as well as the watering, mixing, compacting, final grading, complying with the required tolerances and providing for testing thereof, all in accordance with the requirements of the specification."

**SD D3: MATERIALS****SD D3.1: CLASSIFICATION FOR EXCAVATION PURPOSES****SD D3.1.2: Classes of Excavation**

*Add the following to D3.1.2:*

"For the purposes of measurement and payment in this contract, intermediate and boulder excavation are to be classified as soft excavation, Hard Rock remains as classified in this sub-clause."

**SD D3.3: SELECTION****SD D3.3.1: General**

*Substitute the second paragraph of D 3.3.1 with the following:*

"The Contractor shall deal selectively with material from general excavation. Any imported material that does not comply with the minimum requirements for the respective layers, shall be removed and replaced with suitable material, all at the Contractor's expense."

The Contractor shall deal in such a way with materials from all excavations to ensure that usable material is not contaminated with unsuitable material. If usable material is contaminated, such contaminated material shall be removed and replaced with suitable material, all at the Contractor's expense. No additional payment shall be made in respect of this and all relevant costs shall be deemed to be included in the tendered rates.

All unsuitable material shall be removed prior to importing fill material to such areas.

Prior to commencing with earthworks, the Contractor shall make trial holes at positions and to depths ordered by the Engineer, to determine the area containing unsuitable material that is to be spoiled."

**SD D5: CONSTRUCTION**

**SD D5.1: PRECAUTIONS**

**SD D5.1.1.3: Explosives**

*Substitute D 5.1.1.3 with the following:*

"No blasting will be allowed."

**SD D5.1.2.2: Detection, location and exposure**

*Add the following to D 5.1.2.2:*

"If existing services are not shown on the drawings but the existence thereof can be reasonably expected, the Contractor shall, in conjunction with all relevant authorities, determine the exact depth and location of such services before commencing with construction. After locating the exact position of services the Contractor shall be liable for all costs and subsequent costs arising from the damage thereof as a result of the Contractor's activities. These services must also be indicated on the record drawings."

**SD D5.1.2.3: Protection and Alterations**

*Substitute "estimated position" in the second sentence of D 5.1.2.3 with "actual or exposed position".*

**SD D5.1.4.1: Dust nuisance**

*Add the following to D 5.1.4.1:*

"The Contractor is responsible for dust control and is responsible for all claims which may arise from dust disturbance from the date of site handover to the date of completion of the contract. No payment will be made in respect of the above mentioned and all costs will be deemed as covered by the tendered rates."

**SD D5.2: METHODS AND PROCEDURES**

**SD D5.2.2: Excavation**

**SD D5.2.2.3: Disposal**

*Substitute the second sentence of D 5.2.2.3 with the following:*

"All surplus material, which is suitable for fill, shall be transported to open areas on the site, to be designated by the Engineer, spread and compacted as fill. All material unsuitable for fill shall be transported to a spoil site to be obtained by the Contractor."

**Add the following sub-clause**

**"SD D 5.2.2.4: Excavation by hand around existing services**

Where hand excavation is required around existing services it shall be done within 3,0 m above and on both sides of cables and within 500mm above and on both sides of pipes, as well as underneath the services."

**SD D5.2.3: Placing and Compaction****SD D5.2.3.2: Backfilling and Filling against structures**

*Add the following to D 5.2.3.2:*

"After construction of the structures, backfilling and compaction of material against the structure shall commence as follows:

- a) General: Selected backfill material, free of rocks or rubble larger than 300mm in diameter, shall be placed in layers of maximum thickness 500mm, and each layer shall be compacted to 90 % Mod AASHTO.
- b) Restricted: Restricted backfill material, free of rocks larger than 150mm in diameter, vegetation matter or other rubble, shall be placed in layers of maximum thickness 300mm, and each layer compacted to 90 % Mod AASTHO;

The tendered rates shall include all costs for selecting and loading from stockpiles, hauling, backfilling, spreading and compacting material as applicable."

**SD D5.2.4: Finishing****SD D5.2.4.2: Top-soiling**

*Add the following to D 5.2.4.2:*

"Upon completion of backfill around the concrete structure and spreading of unsuitable or excess material, a 150mm thick topsoil layer from the stockpile shall be placed and watered until germination of natural seeds in the soil is achieved."

*Add the following sub-clauses to Clause D 5.2:*

**"SD D 5.2.7: Subsoil Drain**

Subsoil under-floor drains shall be constructed of uPVC "Corflo" pipes (or similar approved) complying with the requirements of SABS 1601. They shall be perforated or slotted with smooth internal bore. Perforations shall be spaced in two rows for 110 mm pipes and in three rows for 160 mm pipes. The arrangement of perforations and slots shall be subject to the Engineer's approval.

Pipes without slots or perforations required for conveying ground water from the subsoil drainage proper to the point of discharge, shall be un-perforated uPVC pipes as specified above. "Core-drain" pipes will not be accepted.

The pipes shall be laid in a 19mm crushed stone bedding wrapped in a 150 g/m<sup>2</sup> woven geotextile blanket, "Industex S120" or similar approved, as shown on the drawings. The crushed stone in subsurface drains shall be 9.5 mm nominal size stone complying with the grading requirements of SABS 1083.

The payment unit shall be the lineal metre of subsoil drain and tendered rates shall allow for all the following material and associated labour and plant costs:

- (i) the 19 mm crushed stone used;
- (ii) the geo-textile fabric used;
- (iii) the uPVC pipes used.

Cast-iron inspection eyes (110mm diameter) with a 500x500x100mm 15MPa mass concrete surround shall be constructed where indicated on the drawings, and 110mm diameter uPVC Y-junctions and 45 degree bends shall also be installed where required.

Separate extra-over payment items for the above shall apply. The payment unit shall be the number of items and tendered rates shall allow for all the material and associated labour and plant costs required, complete.”

**SD D 8: MEASUREMENT AND PAYMENT**

**SD D 8.3: SCHEDULED ITEMS**

**SD D 8.3.2: Bulk Excavation:**

(a) (i) **Excavate in all materials to bulk excavation line, stockpile within a freehaul distance of 2.0 km and spread to a smooth profile .....Unit: m<sup>3</sup>**

(ii) **Excavate in all materials to bulk excavation line, stockpile selected material within 0.2 km and maintain for backfill .....Unit: m<sup>3</sup>**

*Add the following to D 8.3.2 (a):*

“Payment shall be irrespective of the depth of excavation. No differentiation shall be made between material containing rubble and material not containing rubble.”

No payment shall be made for stockpiling of imported fill material where such stockpiling is necessitated by non-removal of unsuitable material.”

**SD D 8.3.9: Topsoiling: .....Unit: m<sup>3</sup>**

*Add the following to D 8.3.9:*

“The rates shall cover all costs for the spreading of unsuitable or excess material, placing and leveling of a 150 mm thick topsoil layer from the maintained stockpile and the watering thereof until germination of natural seeds in the soil is achieved in accordance to clause SD D 5.2.4.2.”

*Add the following payment items:*

**“SD D 8.3.14: Backfill or fill material from maintained stockpiles against structure:**

(a) **General backfill against structures and cut to slopes .....Unit: m<sup>3</sup>**

(b) **Restricted backfill .....Unit: m<sup>3</sup>**

Load backfill from stockpile, place and compact as specified in SD D 5.2.3.2. The rates shall cover all costs for loading from stockpiles, hauling, backfilling, spreading and compacting the material as applicable.

**SD D 8.3.15: Subsoil Drainage:**

(a) **Subsoil under floor drain of 110mm uPVC partially perforated pipe laid in a 200x400mm 19mm stone bed wrapped in geo-fabric .....Unit: m**

The item shall be measured in lineal metres of subsoil drain and the rate shall cover the cost for all the material, labour and plant indicated in clause SD D 5.2.7.

(b) **Extra-over on SD D8.3.15(a) for a 110mm cast- iron inspection eye complete with 500x500x100mm mass concrete surround slab .....Unit: No.**

The item shall be measured in the number of inspection eyes and the rate shall cover the cost for all the material, labour and plant indicated in clause SD D 5.2.7.

**(c) Extra-over on SD D8.3.15(a) for a 110mm uPVC Y-junction complete .....Unit: No.**

The item shall be measured in the number of Y-junctions and the rate shall cover the cost for all the material, labour and plant indicated in clause SD D 5.2.7.

**(d) Extra-over on SD D8.3.15(a) for a 110mm uPVC 45 degree bend complete  
.....Unit: No.**

The item shall be measured in the number of bends and the rate shall cover the cost of all the material, labour and plant indicated in clause SD D 5.2.7."



**DB: EARTHWORKS (PIPE TRENCHES)****SD DB 3.1: Classes of excavation**

*Add the following to DB 3.1:*

For the purposes of measurement and payment in this contract, intermediate and boulder excavation are to be classified as soft excavation, hard rock remains as classified in this clause.

**SD DB 3.5: Backfill Materials**

*Add the following to DB 3.5.*

- a) All pipe trenches underneath the roadway must be backfilled with sand of upper selected layer quality compacted to 100% of the modified AASHTO maximum density. Sand is defined as non-plastic material and complies with the following sieve analysis:

	<b>% passing</b>
4.740 mm sieve	95% minimum
0.425 mm sieve	50% minimum
0.075 mm sieve	10% maximum

*Add the following to DB 3.5(b):*

- b) All pipe trenches in street reserves shall be classified as areas subject to loads from road traffic.
- c) All pipe trenches underlying or adjacent to the carriageway shall be backfilled with sand complying with the requirements for A3 materials, as specified in SD DB 2.3.

**DB 3.6: Materials for reinstatement of roads and paved areas****SD DB 3.6.1: Subbase and Base**

*Substitute DB 3.6.1 with the following:*

Where trenches cross or run adjacent to surfaced roads and paved areas of which the surfaces are scheduled to be reinstated, the material excavated from the existing base and/or subbase pavement layer(s) shall be set aside and used in the reconstruction of the subbase layer. Where applicable, new material complying with the requirements of SABS 1200 MF shall be used for the reconstruction of the base layer. Any shortfall in material for the reconstruction of the subbase layer shall be made up by the use of material complying with the requirements of SABS 1200 ME.

**SD DB 3.7: Selection**

*Add the following to sub clause DB 3.7:*

The Contractor shall deal selectively with material from general excavation. Any material that does not comply with the minimum requirements for the respective layers, shall be removed and replaced with suitable material, all at the Contractor's expense.

The Contractor shall deal in such a way with materials from all excavations to ensure that usable material is not contaminated with unsuitable material. If usable material is contaminated, such contaminated material shall be removed and replaced with suitable material, all at the Contractor's expense. No additional payment shall be made in respect of this and all relevant costs shall be deemed to be included in the tendered rates.

All unsuitable material shall be removed prior to importing fill material to such areas.

Prior to commencing with earthworks, the Contractor shall make trial holes at positions and to depths ordered by the Engineer, to determine the area containing unsuitable material that is to be spoiled.

**SD DB 3.8: Geotextiles for unstable trench-bottom conditions**

The following products are acceptable: Kaymat U24, Bidim B4, Industex S210.

Alternatives may be submitted to the Engineer for approval.

**DB 4: PLANT**

**SD DB 4.1: Excavation equipment**

*Add the following to DB 4.1:*

All excavations exceeding the specified widths, shall be backfilled with approved selected material. No payment shall be made for this and all relevant costs shall be deemed to be included in the tendered rates.

**DB 5: CONSTRUCTION**

**DB 5.1: Precautions**

**SD DB 5.1.: Stormwater, seepage and dewatering of excavations**

The Engineer may instruct the Contractor to place a layer of crushed stone bedding (150 mm minimum thickness) on the bed of the trench. If the conditions remain unstable due to the condition of the material and degree of saturation, the Engineer may instruct the Contractor to place a geotextile membrane underneath the layer of crushed stone.

After placement of the stone bedding, geotextiles must be folded over with a minimum overlap of 300 mm to form a closed subsoil drain. The crushed stone bedding and geotextile will only be measured when instructed in writing by the Engineer.

**SD DB 5.1.3 Accommodation of Traffic and Access to Properties**

*Add the following to DB 5.1.3:*

Detour and road traffic signs must be in accordance with "CSRA-CUTA : Road Traffic Signs Sub-Committee; Road Signs Note No. 13" and the "Suid-Afrikaanse Handleiding vir Padverkeerstekens" or any amendments thereof and must be approved by the Engineer before commencement of construction.

Where steel drums are being used as barricades they must be filled with sand or soil. Rocks may not be used for this purpose or be stacked on top of drums. Drums must be white washed with danger tape put up between and tied around the drums

**SD DB 5.2: Minimum base widths specified**

*Substitute paragraph (b) of DB 5.2 with the following:*

The minimum base width for all pipes with a diameter less than 125 mm shall be 600 mm plus the outside diameter of the pipes, irrespective of the depth at which they are laid, except for subsurface drains where the width shall be 400 mm and for house water connections where the width shall be 300 mm.

A bedding is required for all pipes with a diameter less than 125 mm, except for subsurface drains.

The minimum base width for Telkom and electric cable ducts shall be 500 mm.

**SD DB 5.4: Excavation**

*Add the following to DB 5.4:*

Excavation and backfilling of pipe trenches on sidewalks in the residential area shall be done in such a way as to ensure the least possible disruption to the public and entrances to properties. No additional payment shall be made for this and all relevant costs shall be deemed to be included in the tendered rates.

**SD DB 5.5: Trench bottom**

*Substitute "90%" in the second paragraph of DB 5.5 with "93% (100% for sand)".*

**DB 5.6: Backfilling**

**SD DB 5.6.2: Material for backfilling**

*Substitute "from trench excavations" in the first paragraph for DB 5.6.2 with "from trench, channel, road reserve or other excavations on the site of works".*

*Add the following:*

All trenches underlying or adjacent to streets shall be backfilled with sand compacted to 100% of Mod AASHTO density, to the bottom of the subbase.

**SD DB 5.6.3: Disposal of Soft Excavation Material**

*Add the following to DB 5.6.3:*

All surplus and unsuitable material as described in DB 5.6.3 shall be disposed of at the spoil site, (as described in SD D 5.2.2.3) and levelled off.

**DB 5.7: Compaction**

**SD DB 5.7.2: Areas subject to traffic loads**

*Add the following to DB 5.7.2:*

All pipe trenches that fall in the street reserves, will be regarded as areas subject to traffic loads.

Sand backfilling shall be compacted to 100% of Mod.AASHTO density.

**DB 5.9 Reinstatement of surface**

**SD DB 5.9.4: Bitumen Roads : Subbase and Base**

*Add the following to DB 5.9.4:*

Any additional imported material required for the reinstatement of selected layers, subbase or base shall comply with the requirements of the relevant standardised and/or SPECIFICATION DATA for this contract.

**DB 8: MEASUREMENT AND PAYMENT**

**SD DB 8.1: Basic principles**

*Delete "along the route of the pipeline" in DB 8.1.1.*

**SD DB 8.1.2 (b)** *Replace the depth increments of 1 m with 0.5 m for excavation, where applicable.*

**DB 8.2: Computation of quantities**

**SD DB 8.2.4: Shoring**

*Add the following to DB 8.2.4:*

No payment will be made in respect of this and all costs will be deemed as covered by the rate for excavation. Shoring will only be measured and paid for if written approval is given by the Engineer before it is installed.

**DB 8.3: Scheduled Items**

**SD DB 8.3.2: Excavation**

**SD DB 8.3.2(a):Excavate in materials for trenches, backfill, compact and dispose of surplus material..... Unit : m**

*Add the following to D 8.3.2 (a):*

The depth of excavation in street reserves shall be measured from the final finished level of the road reserve profile to the invert level of the pipe.

The rates for trench excavation must also include any actions needed to deal with any water in the excavations, as well as loading and transportation of material to a spoil site, spoiling and compacting the material to 90% (100% for sand) of Mod AASHTO at a spoil site as described in SD D 5.2.2.3. The backfill material must be compacted to 93% of Mod AASHTO (100% for sand) in all backfilling of trenches.

The rate for excavation for subsurface drains shall cover the costs of excavation and spoil of surplus material and the supply of suitable free draining sand to be placed directly above the geotextile up to 200mm below the final surface levels.

The rate shall also provide for the fact that the excavation width in sand will be wider than normal.

For duct excavations the tender shall refer to the section where all the types, diameters and pipe combinations are listed to determine trench width and depth detail.

The rates are to allow for excavation in the classes of material as referred to in SD D 3.1.2 as well as excavation and disposal of unsuitable material from the trench bottom. There will be no extra-over payment in terms of intermediate or boulder excavation, but only for hard-rock excavation.

**SD DB 8.3.2(b):Extra over for ..... Unit: m<sup>3</sup>**

*Add the following to D 8.3.2 (b):*

In accordance with SD DB 3.1, all classes of excavation will be paid for under item SD DB 8.3.2 (a), except for hard rock that will be paid for under this item.

**SD DB 8.3.2(c):Excavateunsuitable material from trench bottom.....Unit: m<sup>3</sup>**

Delete "and the disposal" in the heading of DB 8.3.2 (c) and in the last paragraph.

**SD DB 8.3.2(d):Hand excavation and backfill.....Unit: m<sup>3</sup>**

The provisions of DB 8.3.2(a), DB 8.3.2(b) and DB 8.3.2(c) shall apply mutatis mutandis for hand excavation.

Payment shall only be made if so ordered by the Engineer.

**SD DB 8.3.2(e) Extra-over SD DB 8.3.2(a) for temporary stockpiling of material.....Unit: m<sup>3</sup>**

Temporary stockpiling of material will only be measured and paid for if ordered so in writing by the Engineer and if it is not contaminated with unsuitable material.

The rate shall provide for the handling and stockpiling of the material within the free haul distance.

**SD DB 8.3.2(f) Extra-over item SD DB 8.3.2.(a) for restricted excavation for pipe trenches in all materials and use for backfilling, fill or disposal..... Unit: m<sup>3</sup>**

Restricted excavation will be measured and paid as an extra over ordinary excavation in cases where the work space is insufficient to place excavated material alongside the trench, and some or all excavated material has to be temporary removed.

Restricted excavation will only be paid when approved in writing by the Engineer.

Restricted excavation will be measured and paid where work space problems occur whether shoring is installed in the trench or not. Where no shoring is installed, the natural slope of the in-situ and excavated material as contained in SABS 0120 Part 5 DB 3.1.3 will be considered when determining the available space for placing the excavated material.

Should excavated material be unsuitable as backfill material and has to be removed, then no restricted excavation will be measured and paid, but payment will be made under the item for the removal of unsuitable material.

Measurement and payment for restricted excavation will only be made according to the nominal trench excavation and not the volume of excavated material. The rate for restricted excavation must allow for trench walls that collapse where no shoring is installed. The rate must also allow for handling excavated material twice, load, transport, off-load, temporary storage and/or stockpiling, load, transport back to the required position and off-load/placing.

Restricted excavation will be paid according to the discretion of the Engineer in cases where there is enough space for excavated material, but not enough space to place pipe material directly next to the trench.

No overhaul will be measured or paid and all haulage will be regarded as freehaul.

Restricted excavation will be measured according to the percentage of the nominal trench excavation that needs to be removed.

The stipulations of Clauses DB 8.3.2(a), DB 8.3.2(b) and SD DB 8.3.2(c) shall apply mutatis mutandis.

**SD DB 8.3.2(g) Extra-over item SD DB 8.3.2(a) for hand excavation and backfill around existing services .....Unit: m<sup>3</sup>**

Hand excavation around existing services as described in SD D 5.2.2.4 will be measured as an extra over machine excavation. The rate must include the standing time cost of the machine while hand excavation around the service is executed.

**DB 8.3.3: Excavation Ancillaries**

**SD DB 8.3.3.3: Compaction in road reserves ..... Unit: m<sup>3</sup>**

*Add the following to DB 8.3.3.3:*

This item is only applicable to the backfill above the bedding and fill blanket. The volume measured for payment under this item will be determined from the final finished level. No payment will be made where sand, compacted to 100% of Mod AASHTO is used for backfill. All type A3 sands will qualify as sand. This item is only payable if the compaction effort requirement is greater than that specified in SD DB 8.3.2. This item is applicable only to the pipe trenches that cross the roads.

**SD DB 8.3.3.4: Overhaul..... Unit: m<sup>3</sup> or m<sup>3</sup> km**

No overhaul will be measured or paid and all haulage will be regarded as freehaul.

**PS DB 8.3.4 Particular Items**

**a) Shore trench opposite structure or service ..... Unit : m**

Add the following to DB 8.3.4(a):

**PS DB 8.3.4 a) Shore a trench opposite structure or service ..... Unit : m**

Add the following to DB 8.3.4(a):

Separate items shall be provided for shoring on both sides and on one side of trenches.

The tendered rate shall allow for additional excavation for shoring as well as for the design of effective shoring.

*(Specify where shoring is needed. See also SABS 0120 Part 5 item A.1.1.)*

**PS DB 8.3.4 b) Temporary works : Control water inflow**

Substitute DB 8.3.4(b) with the following:

- 1) Provide equipment ..... Unit: Set**
- 2) Operate and maintain ..... Unit: Set days**
- 3) Remove equipment ..... Unit: Set**
- 4) Remove, move and reinstall existing sets of equipment ..... Unit: Set**

The rate for (1) above shall cover the cost of providing the necessary plant and materials, fully erected and operative on site for a set of equipment as described in PS DB 4.4.

*(All sets shall be estimated by the designer at tender stage depending on the amount of teams estimated to be working on site simultaneously.)*

The rate for (2) above shall cover the cost of operating and maintaining the pumps, well points sheeting, close lumbering and other equipment, as applicable, for 24 hour a day. The amount of days allowed for shall be the accumulated amount of set days of all sets. Pro rata set days will be measured where a set is not used and maintained for a full 24 hour day. The set shall be in operation 24 hours a day from installation till removal to be measured and paid for otherwise no payment shall be made.

**DB 8.3.5: Existing services that intersect or adjoin a pipe trench**

**SD DB 8.3.5 (a): Services that intersect a trench..... Unit: No**

Add the following to DB 8.3.5 (a):

Existing services with a depth of cover exceeding 300 mm, measured from the bottom of excavation to the top of the existing service shall not be measured and paid for. There will

be distinguished between existing trunk services and existing erf connection.

The rate shall also allow for the cost of the following:

- (i) Sufficient photo's of existing services being taken and handed over to the Engineer before they are being crossed, if there is a possibility of a difference in opinion over the condition of those services.
- (ii) Reinstatement of existing services damaged by the Contractor.
- (iii) Reinstallation of services which were removed by the Contractor.

**SD DB 8.3.5 (b): Services that adjoin a trench..... Unit: No or m**

*Add the following to DB 8.3.5 (b):*

The unit "number" will only be used for services such as poles and trees.

The cost for shoring shall be deemed as covered by the listed items and no additional payment will be made for this.

No payment will be made for overhead services that do not directly rest on the ground except where allowance is made for this in the schedule of quantities.

Existing services that rest directly on the ground e.g. poles, trees, walls and structures are handled in the same way as underground services, but the axis of the services will be determined as follows:

The vertical axis is defined as the nearest side or corner of the existing structure to the excavation, measured at the point where the structure and natural ground level intersect.

The horizontal axis will be at the point where the structure and the natural ground level intersects. In this instance, where the excavation falls above the 45° line but within 1,0 meter horizontally from the structure, the service will also be measured as adjoining.

If the structure, according to the abovementioned does not qualify as an adjoining service but the foundation of the structure is such that if a 45° line drawn from the nearest bottom corner thereof cuts through the excavation, the structure will be measured as an adjoining service if approved by the Engineer.

If there is more than one service adjoining the same trench and such a service is on the same side of the trench, payment will only be made for the nearest service to the trench, of if they are the same distance from the trench for the top one. The maximum number of services that will be paid for, is therefore one on each side.

**SD DB 8.3.6.1: Reinstate road surfaces, complete with all courses ..... Unit: m<sup>2</sup>**

The layerworks to be allowed for under this item are as follows below. The costs of the imported material to be used in terms of SD DB 3.6.1 and SD DB 5.9.4, and for surfacing to be included in this rate are:

For roads	40mm Medium continuously graded premix
	150mm G2 basecourse
	150mm G5 subbase
	150mm G7 upper selected
	150mm G9 lower selected
For pathways:	25mm Fine continuously graded premix
	100mm G4 basecourse
	150mm G7 upper selected.

Should the layerworks for reinstatement at certain locations be changed, on instruction by the Engineer to suit the existing, the rate will be adjusted accordingly.

No additional payment for a selected layer or any work relating to a selected layer shall be made, since the backfill material in road reserves shall be as per SD DB 3.5. Should level control of the backfill material be required, it is deemed to be included in the tendered rate.

The tendered rate shall be for reinstating the actual width of road layers damaged including provision for the fact that the excavation width in sand and wet conditions will be wider than normal as well as for benching each layer with 150mm. The rate shall also include material, labour and equipment for cutting back the damaged premix layer to form a neat straight line parallel to the kerb line with no steps for at least 20m per section. The rate shall also include the removing of the old premix by hand and replacing it with new premix.

However, where actual reinstatement is specified in the Bill of Quantities, no additional allowances need to be considered since the actual reinstated dimensions will be measured for payment. This will only be done on the instruction of the Engineer for other areas indicated by the Engineer.

**SD DB 8.3.8: Dealing with seepage water in the trench**

The rates for excavation must include any costs for action needed to deal with water in the excavation.

Where instructed by the Engineer, a layer of crushed stone will be put down to stabilize the trench bed. The volume will be calculated according to the length of the trench, the specified minimum width and prescribed thickness.

The tendered rate shall provide for all additional excavations, and the preparation of the trench bed to allow for the layer of stone, the removal of unsuitable material, the provision and placing of 150 mm layer of crushed stone for the prescribed width as well as any other action need to stabilize the trench.

If the Engineer instructs the use of geotextile, it will be measured per area.

The rate must include all costs for the provision and placing of material and losses for excavation that are bigger than prescribed.

- a) Provision and placing of crushed stone.....Unit: m<sup>3</sup>
- b) Provision and placing of geotextile..... Unit: m<sup>2</sup>

**SD DB 8.3.14: Finishing of cut and fill slopes ..... Unit: m<sup>2</sup>**

The area to be measured for payment is the side slopes from the base to the worked ground levels.

The tendered rate must cover the costs to finish the side slopes to the grades, levels, widths and heights (as indicated on the cross-section), compaction of the slopes to required densities and any other action required to finish the slopes to achieve a neat result to the satisfaction of the Engineer.



**DK: GABIONS AND PITCHING****DK 3: MATERIALS****SD DK 3.1.2: Gabion cages**

*Add the following to DK 3.1.2:*

"The size, wire and lacing properties, mesh properties, diaphragm spacing and PVC coating characteristics of the gabion boxes and reno mattresses shall be as indicated in the schedule of quantities and shall be according to the manufacturers specifications and details.

The handling, assembly, fastening procedure, installation and filling as well as the closing of the gabion boxes and reno mattresses shall be according to the manufacturer's specification and detail.

The tendered rate shall include all the required material, delivery, unfolding, placing, filling, lacing, stiffening and bracing necessary to produce a complete unit according to the manufacturer's specifications and details."

**SD DK 3.1.3: Geotextile**

*Add the following to DK 3:*

"Geotextile shall be of the non-woven, 100% polyester, continuous filament, double needle-punched type and shall be placed between the surface of the gabion boxes or reno mattresses and the excavation surface. The type of Geotextile shall be Bidim A4 or approved similar and shall be fit for the application thereof according to the manufacturer's specification."

**DM: EARTHWORKS (ROADS, SUBGRADE)**

**DM 2: INTERPRETATIONS**

**DM 2.3: Definitions and Abbreviations**

**SD DM 2.3.1: Roadbed**

Paved areas shall also be taken as roads. Therefore all references to i.e.: roadbed will refer to work under paved areas.

**DM 3: MATERIALS**

**DM 3.2: Classification for placing purposes**

**SD DM 3.2.3: Selected layers**

*Substitute DB 3.2.3 with the following:*

Materials in the selected layers shall comply with the following:

Description	Lower selected layer (G9-TRH14)	Upper selected layer (G7-TRH14)
Minimum CBR at 93% Mod.AASHTO density (100% for sand)	7	15
Maximum CBR swell at 100% Mod.AASHTO density	1.5%	1.5%
Maximum size of aggregate after compaction	100 mm	100 mm
Minimum Grading Modulus (GM)	0.5	0.75
Maximum Plasticity Index (PI)	18	10 + 3 GM
Maximum Group Index	-	1

All material underlying the subbase or base of the final road prism, whichever may be applicable, that does not comply with the requirements for lower selected layer or upper selected layer in the respective depth categories, shall be removed and replaced with material complying with the requirements of selected layers.

Where required for drainage purposes, the Engineer may instruct that free draining sand be used in the selected layers. The same specification in the table above shall apply, except the grading requirements.

**DM 4: PLANT**

**SD DM 4.2: Plant for Treatment of Road-bed**

**SD DM 4.2.1: Pneumatic-tyred Roller**

Pneumatic-tyred rollers shall be of the self-propelled type that is equipped with smooth pneumatic-tyred wheels of the same diameter. The mass of the roller shall be at least 10 tons. All wheels must bear the same mass. The rollers must be equipped with devices that will be able to keep the wheels wet and clean during operation.

The wheels of the roller shall be arranged in such a way that one pass with the roller will cover the whole width of the machine. The roller must be able to take a tyre pressure of 600 kPa and the minimum allowed working tyre pressure shall be 450 kPa. The maximum difference in pressure between any two wheels shall not be greater than 35 kPa.

**DM 5: CONSTRUCTION****DM 5.1: Precautions****SD DM 5.1.2: Accommodation of traffic**

*Add the following to DM 5.1.2:*

Bypasses shall be constructed and road signs erected where the free flow of public traffic is restricted. Such bypasses and road signs shall be in accordance with the "CSRA - CUTA ; Road Traffic Signs Sub-committee; Road Signs Note no 13, the SA Road Traffic Signs Manual" and shall be approved by the Engineer before the commencement of construction.

*Add the following to DM 5.1:*

**SD DM 5.1.3: Existing Services****SD DM 5.1.3.1: General**

The provisions of Sub-clause 5.4 of SABS 1200 A or of Sub-clause 5.2 of SABS 1200 AA, as relevant, shall apply in addition to the requirements of SDDM 5.1.3.2-SDDM 5.1.3.4 below.

**SD DM 5.1.3.2: Detection, location and exposure**

The drawings show the position of existing services based on the best information available. The Contractor shall verify the position of all services and all other obstacles and existing works on the Site. Manholes, valve boxes and the like will be regarded as known services. Before commencing construction in any particular area, the Contractor shall verify the positions of services and report to the Engineer any that are missing.

Where any underground services are shown on the drawings, the Contractor shall have the equipment referred to in 4.4 SABS 1200 D available on the Site for as long as is necessary to detect and locate such services and, if so ordered, he shall excavate by hand to expose such services in areas and in a manner and at a time agreed upon with the Engineer (see 8.3.8.1 of SABS 1200 D.) and relevant local Authority.

**DM 5.2: Methods and procedures****DM 5.2.2: Cut and borrow****SD DM 5.2.2.2: Dimensions of cuts**

*Substitute "sub-base" in the second paragraph of DM 5.2.2.2 with "sub-base or selected layer, whichever may be applicable" and*

*Substitute "CBR of at least 7" with "CBR as applicable according to the provisions of SD DM 3.2.3".*

**SD DM 5.2.2.3(b): Cut to spoil**

*Substitute DM 5.2.2.3 (b) with the following:*

All surplus and/or unsuitable material shall be removed from the site and disposed of at the spoil site (as described in SD D 5.2.2.3) and shall be shaped to establish a free draining surface and compacted to 90% MOD AASHTO (100% for sand).

**SD DM 5.2.2.4: Temporary stockpiling of materials**

*Add the following to DM 5.2.2.4:*

The Contractor shall program the works in such a manner that suitable excavated material shall, if practically possible, be placed directly in the appropriate position to ensure that

temporary stockpiling is limited to an absolute minimum. No payment shall be made for the temporary stockpiling of material where such material is to be used for backfilling of pipe trenches, except when so ordered in writing by the Engineer.

**DM 5.2.3: Treatment of road bed**

**SD DM 5.2.3.3: Treatment of road bed**

- a) Preparation and compaction of road bed.

*Substitute the first paragraph of DM 5.2.3.3 (a) with the following:*

The road-bed shall be scarified to a depth of 150 mm, shaped and compacted to 90% of Mod.AASHTO density (100% for sand), except where otherwise ordered by the Engineer. In clay areas, only excavation and shaping to the correct level will be necessary.

Any portion of the road-bed that lies within the selected layers and that, with the exception of its density, complies with the requirements of selected layer material, shall be scarified to the necessary depth, watered and compacted to 93% of mod AASHTO density (100% for sand) over the specified depth for selected layers.

*Add the following sub-clause to DM 5.2.3.3*

- c) In-situ preparation of road-bed with eight roller passes.

Any part of the road-bed which, regardless of its density, is suitable according to the Engineers opinion for the layer in which it lies, can be used in-situ if so instructed in writing by the Engineer.

If due to the nature of material, the degree of compaction cannot be controlled by means of in-situ density tests, the Engineer may instruct compaction to be done by eight roller passes as specified in SD DM 4.2. The Engineer may further request that the compaction effort be altered by increasing or reducing the number of passes and that payment be amended accordingly.

The surface of the road-bed shall be shaped true in respect of line and level within the tolerances as specified in clause DM 6. During the shaping of the road bed, all material that has to be removed and cannot be re-used, shall be disposed of and will be paid for under time SD DM 8.3.7. If necessary, additional material that has been approved by the Engineer shall be imported to meet the required levels.

No strict measurements in connection with soil moisture content will be applied by the Engineer during compaction. The Contractor must however convince the Engineer that all possible efforts have been made to utilise favourable soil moisture conditions. Compaction must be done during periods when the road-bed is not too wet or too dry. The Engineer has full authority to decide whenever conditions are favourable for compaction, and may at any stage instruct the Contractor to water the road-bed at the Contractors expense if he, in the Engineer's opinion, neglected to satisfy the abovementioned requirements.

**SD DM 5.2.5: Selected layer**

*Add the following to DM 5.2.5:*

Where the quality of the in-situ material that lies within the selected layers complies with the requirements of selected layer material, these areas will be treated as described in SD DM 5.2.3.3 (Treatment of road-bed).

To determine the suitability of in-situ material for selected layers, the Engineer may order the Contractor to dig testholes with maximum dimensions of 1.5 m x 1.5 m and 1.0 m deep at positions indicated by the Engineer and to have tests conducted, before construction commences. The Contractor must allow for this in his programming of works. The Contractor shall backfill all testholes with selected material and compact it to 95% of

Mod.AASHTO density (100% for sand), after the Engineer has taken samples and profiled the holes.

**SD DM 5.2.8: Transport**

**SD DM 5.2.8.1: Freehaul**

*Replace the content of this sub-clause with the following:*

"All transport will be regarded as freehaul."

**SD DM 5.2.8.2: Overhaul**

*Delete the contents of this clause and replace with the following:*

*"No overhaul inside or outside the site boundaries will be paid. All transport costs for spoiling or importation of material will be deemed to be included in the relevant rates."*

**DM 6: TOLERANCES**

**SD DM 6.5: Dimensions and level control**

The Contractor shall submit to the Engineer, in a form acceptable to the Engineer, records of dimensions and level control, prior to requesting the Engineer to carry out any routine inspections.

**DM 7: TESTING**

**SD DM 7.2: Process control**

Amend table 1 of DM 7.2 as follows:

*Substitute "2000 m<sup>2</sup>" with "1500 m<sup>2</sup>", "1500 m<sup>2</sup>" with "1200 m<sup>2</sup>" and "5000 m<sup>2</sup>" with "3 000 m<sup>2</sup>".*

**DM 7.3: Routine inspection and testing**

*Substitute DM 7.3.2 with the following:*

No density shall be less than the specified minimum density for the relevant layer.

The cost of all routine testing done by the Engineer, and of which the results do not comply with the specified minimum requirement for the material, shall be borne by the Contractor and will be subtracted from the monthly payment certificates.

**DM 8: MEASUREMENT AND PAYMENT**

**SD DM 8.2: Computation of quantities**

Replace sub-clause 8.2.1 to 8.2.3 (inclusive) with the following:

SDDM 8.2.1: The provisions of sub-clause 8.2.1 of SABS 1200 D shall apply.

SDDM 8.2.2: The provisions of sub-clause 8.2.2 of SABS 1200 D shall apply.

SDDM 8.2.3: The provisions of sub-clause 8.2.3 of SABS 1200 D shall apply.

**SD DM 8.2.5: Verifying quantities**

*Replace the first sentence with the following:*

"Before any earthworks are commenced but after completion of any site preparation, the engineer will upon a written request from the contractor provide cross-sections for the purpose of measurement of earthworks quantities."

**SD DM 8.2.7: Excavation widths**

For the measurement of quantities the excavation width will be measured from 200 mm behind the rear of the precast kerb. The total width therefore is the sum of the blacktop width, the plan measurement of the kerb/channel plus 400 mm. In the case of gravel roads the excavation width will be measured from the specified edge of the gravel layer. No additional payments will be made for wider excavations.

**DM 8.3: Scheduled Items**

**SD DM 8.3.3: Treatment of road bed**

*Substitute DM 8.3.3 (b)(1) and (2) with the following:*

**(b) Treatment of in-situ road-bed in:**

- 1) **Intermediate material**..... **Unit: m<sup>3</sup>**  
 2) **Hard rock material**..... **Unit: m<sup>3</sup>**

*Add the following sub-clauses:*

- c) In-situ preparation of road-bed with eight roller passes (pneumatic roller)**  
 ..... **Unit : m<sup>2</sup>**

The unit of measurement is in square metres of road-bed which has been treated with eight roller passes.

The rate shall cover the costs of shaping, watering and compacting all as specified in SD DM 5.2.3.3 (c). The removal, disposal, transport and replacing of materials will be paid under the appropriate items.

- d) Variations in compaction effort (pneumatic roller) .....Unit : m<sup>2</sup>.pass**

The unit of measurement is the surface on which the variation is applicable multiplied by the amount with which the compaction effort was reduced or increased as instructed by the Engineer.

If there is a change in compaction effort, as instructed by the Engineer, the Contractor will be paid as for the standard effort, except that the amount as calculated above, will be subtracted or added in the appropriate item.

This rate shall include full compensation for supervision, labour, machines, construction equipment, fuel, material and additional costs necessary for the completion of the process.

**SD DM 8.3.4: Cut to fill, borrow to fill ..... Unit : m<sup>3</sup>**

*Substitute "90%" in DB 8.3.4 with "93% (100% for sand)" and "road prism" with "road prism and borrow pits".*

*Add the following:*

Separate items will be scheduled for fill in the road prism, or elsewhere on site as instructed by the Engineer (where a minimum density for such spoil material is required by the Engineer) from (a) road prism, (b) fill from the site and (c) fill from commercial sources.

The rate for fill from commercial sources shall, in addition to the requirements of DM 8.3.4, cover the cost of the location of the source, complying with all the applicable precaution as set out in DM 5.1, obtaining the material, selection and transport from the source to the point

on the road or elsewhere on site as instructed by the Engineer where it is to be used. The fill will be shaped and compacted to the Engineer's approval.

**SD DM 8.3.5: Selected Layer compacted to 93% of Mod.AASHTO density ..... Unit: m<sup>3</sup>**

*Substitute "93% of Mod.AASHTO density" in the heading of DM 8.3.5 with "93% (100% for sand) of Mod.AASHTO density".*

*Add the following to DM 8.3.5:*

Separate items will be scheduled for lower and upper selected layers as well as for material from the site of works and from commercial sources. The rate for selected layers from commercial sources shall, in addition to the provisions of DM 8.3.5, allow for locating the source, complying with all the applicable precautions as set out in DM 5.1, obtaining the material, selection and transport from the source to the point on the road where it is going to be used. No payment shall be made for the removal and replacement of unsuitable imported material.

Where in-situ material is used as selected layer material, this is scheduled as a separate item under DM 8.3.3 (a) (Treatment of road bed).

**SD DM 8.3.7: Cut to spoil or stockpile from ..... Unit: m<sup>3</sup>**

*Add the following to DM 8.3.7:*

The site for spoil is as described in SD D 5.2.2.3.

Payment for temporary stockpiling shall be made under DM 8.3.11, only if so instructed in writing by the Engineer.

Material spoiled on erven must be compacted to 43% of Mod AASHTO density (100% for sand)

**SD DM 8.3.12: Overhaul ..... Unit: m<sup>3</sup> or m<sup>3</sup>/km**

*Substitute DM 8.3.12 with the following:*

"All transport will be regarded as freehaul".

**SD DM 8.3.17: Trim, shape and compact sidewalks..... Unit: No**

The area to be trimmed is the area of in-situ material from the backside of the kerbs or gravelled area to the boundary of the road reserve, or such wider area necessitated by the road prism.

Measurement and payment for the above shall be restricted to areas ordered in writing by the Engineer.

The rate shall cover the cost of trimming and shaping the sidewalks to the lines, levels and dimensions as shown on the drawings, of acquiring additional material to compensate for any material lost due to weather or other reasons, and of the compaction of any loose or disturbed material to 90 % of Mod.AASHTO density (100 % for sand).

**SD DM 8.3.19: Removal of unsuitable material from roadbed ..... Unit: m<sup>3</sup>**

The volume measured for payment will be the volume of unsuitable material removed under the roadbed on instruction of the Engineer in accordance with clause 5.2.3.2 of SABS 1200 DM.

This tariff is an extra-over payment item for DM 8.3.7 and cover all additional costs for the removal and dumping of unsuitable material, as well as any other costs to backfill the excavated area. Payment for the backfilling will be made in accordance with DM 8.3.4 or under payment clause DM 8.3.5, which ever applicable.

Unsuitable material in the roadbed will be measured in the increments as listed.

**SD DM 8.3.23: Tie In with existing road edge..... Unit : m**

The tendered rate shall include full compensation for removal and disposal of existing surfacing, protecting the existing paving when excavating the road box adjacent to it and tying the new layerworks to the existing. The rate shall also include for saw cutting of the existing pavement to a depth of 75 mm.



**G: CONCRETE (STRUCTURAL)****SD G3: MATERIAL****SD G3.2: CEMENT****SD G3.2.1: Applicable Specifications**

*Replace G 3.2.1 with the following:*

All concrete mix designs shall be approved by the Engineer in advance. Strength of concrete is as shown on the drawings.

The mix design and casting procedure shall be approved by the Engineer prior to casting.

Portland Cement I5FA ("PC I5FA") compliant with the requirements of SABS 831 can be used. The fly-ash cement obtained by blending of the OPC and Pulverised Fly Ash (PFA) shall comply with the requirements of SABS 1466-1988. No other types of cement (e.g. Rapid Hardening Cement, Portland Blast furnace Cement) may be used. If aggregates to be used in this contract are alkali-reactive, the OPC used on this Contract shall not have an alkali content  $(Na_2O + 0,656K_2O)$  which exceeds 0.6% by mass of the cement. For the cement used in conjunction with the selected additional aggregates the alkali content per cubic metre of concrete shall not exceed 2,1kg. The Contractor shall submit the necessary test results to prove the above.

*Add the following to G 3.2.1:*

"In accordance with the new SABS, all Portland cement (OPC or RH) shall be in accordance with SABS ENV 197-1 (CEM II) except for non-structural concrete where CEM I 32.5 is acceptable. Pulverized fly ash (PFA) shall conform to the requirements of SABS 1491-2."

**SD G3.2.2: Alternative types of Cement**

*Replace the contents of G 3.2.2 with the following:*

"Only ordinary Portland cement (OPC) may be used. Should the Contractor wish to use any other type of cement, he shall obtain the Engineer's prior written approval (see G 8.1.3.2 and 8.1.3.3)."

**SD G3.2.3: Storage of cement**

*Add the following to G 3.2.3:*

"Cement shall not be kept in storage for more than 10 weeks without the Engineer's permission."

**SD G3.4: AGGREGATES****SD G3.4.1: Applicable Specification**

*Replace G 3.4.1 with the following:*

"The stone size for all concrete shall be as shown on the drawings.

The maximum water absorption of the coarse aggregate shall not exceed 1% and the flakiness index shall not exceed 25%. The maximum water demand of the fine aggregate shall be 190 l/m<sup>3</sup> and the aggregate shall comply with the requirements of SABS 1083.

Aggregates to be used in this contract shall be tested in accordance with subsection C-15 of SABS 1083 to determine whether they are potentially alkali-reactive. If they are alkali-reactive they shall either be replaced with aggregates that are non-reactive. The fineness modulus of the sand must be between 1,7 and 2,8 with a standard deviation of not more than 0,1.

At tender stage the Contractor shall assure himself by means of tests and test mixes by an accredited laboratory that the fine and coarse aggregates that he intends to use comply with the specification. The tendered rates shall therefore be deemed to allow for the importation of aggregates that do comply with the Specification.

The Contractor shall be responsible for locating the sources of all aggregates."

**SD G3.4.3: Storage of aggregates**

*Add the following sentence:*

"Where aggregates of differing chloride content are stockpiled on the site, strict control shall be exercised over their use for differing classes of concrete."

*Add the following new sub-clause to G 3.5:*

**SD G3.5.3: Mixing Water**

Only potable water shall be used for mixing water."

**SD G4: PLANT**

**SD G4.3.1: General Requirements for Mixing Plant**

*Add the following to sub-clause G 4.3.1:*

"All concrete shall be weight batched."

**SD G4.4: VIBRATORS**

*Add the following to clause G 4.4:*

"All concrete shall be compacted by vibrators and a spare vibrator in working order shall be available on Site for use at all times."

**SD G5: CONSTRUCTION**

**SD G5.1: REINFORCEMENT**

**SD G5.1.2: Fixing of reinforcement and spacer-blocks**

*Add the following to clause G 5.12:*

"The welding of reinforcement steel is not permitted.

Spacer-blocks must be of an approved design and approved by the Engineer in advance.

Where concrete (mortar) blocks are used, they must be properly shaped so that they do not slip out of position and they must be made of the same mortar mix as the concrete into which it is cast. The mortar must be compacted by using approved methods in order to give blocks that have a density of at least 2 300 kg per m<sup>3</sup> and that are free of honey-combing. They must be cured in water for at least 7 days."

**SD G5.1.4: Splicing**

*Add the following to G 5.1.4:*

"Splice lengths for water-retaining structures shall not be less than 45 diameters and in non-water-retaining structures not less than 40 diameters. Where applicable in water-retaining structures, splices shall be staggered so that they are evenly spread throughout the structure."

**SD G5.2: FORMWORK****SD G5.2.1: Classification of finishes**

*Add the following to clause G 5.2.1(b):*

“Wherever it is indicated on the drawings, exposed concrete surfaces above final ground level and inside the reservoirs must have a smooth surface finish. The forms used shall be unblemished and the panels regular. **In the case of circular surfaces to be formed, a “Flexform system” or similar approved curved formwork system shall be used with circular structures.** Joints shall be a feature of the pattern and shall be handled with care. The finished concrete shall be accurate to Degree of Accuracy II. After removing the formwork, the surfaces must receive no after-treatment except in the positions of the formwork anchor bolts. These must be placed in a regular and precise pattern.”

*Add the following sub-clauses to G 5.2.1:*

c) Special off-shutter finish

The special off-shutter finish is applicable to all visible concrete. Form work panels shall be made of steel panels. Approved laminated wooden board inserts to steel framed panels shall only be used in confined places and the use thereof will be subject to approval by the Engineer. The panels shall be free from rust, ridges, fins, bulges, imperfections, irregularities, air bubbles, honeycomb or surface discolourations. Grout checks and chamfers shall be used at all construction joints and corners.

Joints between panels shall be sealed tightly to prevent local honeycombing or leaching of concrete. Joints between panels shall form straight horizontal and vertical lines which shall be spaced evenly on the formed concrete surface, and shall be even and smooth and require minimal or no finishing. The layout of all form work panels and construction joints shall be discussed with the Engineer before application, and approved in writing.

c) Concrete finish

All unformed concrete to have a steel-floated finish unless indicated different on the drawings.

f) Visible corners

Visible corners shall have a 15mm x 15 mm chamfer. No additional payment will be made for this and it will be deemed to be included in the tendered rates.”

**SD G5.2.5: Removal of Formwork**

*Add the following to sub-clause G 5.2.5:*

“The Contractor shall make provision for the continued support of beams and slabs while the formwork is being removed and/or for back propping of beams, slabs, etc. The propping may be required simultaneously on more than one level directly underneath one another. The requirements for continuous propping and/or back propping shall be calculated to a theoretical model that is acceptable to the Engineer, and details shall be submitted for the Engineer's approval. Data required for such calculations, e.g. design loads and structural dimensions, will be supplied by the Engineer on request.”

*Add the following new sub-clause to G 5.2:*

**“SD G5.2.6: Chamfers and Fillets**

All internal and external corners in the concrete must be formed with chamfers or fillets, except where otherwise specified or instructed. This requirement is normally not shown on drawings. This item shall not be measure and paid separately and the costs thereof shall be allowed for in the formwork rates.”

**SD G5.3: HOLES, CHASES AND FIXING BLOCKS**

*Add the following to clause G 5.3:*

"Fixing blocks and fixtures may be embedded in concrete, provided that the strength or any other desirable feature (such as the appearance of the member) is not, in the opinion of the Engineer, impaired thereby."

**SD G5.5: CONCRETE****SD G5.5.1.3: Workability**

*Replace G 5.5.1.3 with the following:*

"The workability range for all PFA concrete (slump) shall be between 60mm and 90mm for a pump mix and between 50mm and 60mm for a non-pump mix."

**SD G5.5.1.5: Durability**

The exposure conditions for concrete are classified as "Severe".

*Add the following values to table 5:*

"The maximum water/cement ratio for moderate sections, general reinforced concrete, exterior portions of mass concrete, as well as for internal concrete in buildings under conditions of moderate exposure, is 0,50.

The maximum water/cement ratio for concrete slabs on the ground under very severe conditions, is 0,45."

**SD G5.5.1.7: Strength concrete**

*Add the following to sub-clause G 5.5.1.7:*

"c) **Design of concrete mixes** No concrete may be cast before the Engineer has approved the design of the concrete mix and casting procedures. Strength 35MPa concrete with minimum and maximum cementitious contents of 325 kg/m<sup>3</sup> and 400 kg/m<sup>3</sup> respectively, shall be used. For concrete containing PFA the maximum cement content shall be 450 kg/m<sup>3</sup>. The Engineer may at any time request that the concrete mix must be revised. The concrete mix, which is used in water retaining structures, must have a cement water ratio of at least 2.0, and to ensure workability, water reducing agents of approved manufacture may be used. The concrete mix design must be prepared in an approved laboratory and must be presented to the Engineer for approval. In the design of the concrete mix, special attention must be given to the fact the concrete is to be used in a water retaining structure, and should therefore be a very dense mix."

*Add the following new clause to G 5.5.1:*

**"SD G 5.5.1.8: No-fines Concrete**

No-fines concrete shall be laid under the reservoir floor and footings 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. No sooner than 48 hours after casting, the surface shall be skimmed with a 4:1 sand:cement mortar to give a smooth flat steel float finish.

Payment shall be by the cubic metre of no-fines concrete placed. The tendered rate shall include compaction and skimming to the approval of the Engineer."

**SD G 5.5.3.1: Mixing at construction site**

*Add the following sentence:*

"The production of concrete on site is NOT permitted."

**SD G5.5.3.2: Ready-mixed concrete**

*Add the following to G 5.5.3.2:*

"The use of ready-mixed concrete for this Contract will only be permitted if adequate proof of quality control for the specific design mix can be provided to the Engineer."

**SD G5.5.5: Placing**

*Add the following to sub-clause G 5.5.5.1:*

"The Contractor shall give the Engineer at least 48 hours' notice of his intention to cast concrete. No concrete may be cast if a duly signed Pouring Certificate has not been issued by the Engineer or his Representative for a particular cast."

*Add the following to sub-clause G 5.5.5.5:*

"Concrete shall not be allowed to fall freely through a height of more than 2.4m. This implies that walls in these structures may not be cast in lifts of more than 2,4m in height, or as indicated by the positions of the horizontal construction joints on the drawings. Columns shall be cast in lifts not more than 2.4m."

**SD G5.5.7: Construction Joints**

*Add the following to sub-clause G 5.5.7.1:*

"Construction joints may only be placed where shown on drawings. Should the Contractor wish to deviate from the Engineer's placement of the construction joints, he shall indicate his positioning of the construction joints on the drawings before construction work commences and submit these to the Engineer for comment and approval."

*Replace the first sentence of sub-clause G 5.5.7.3 with the following:*

"The method adopted for forming joints not covered by 5.5.7.1 and unforeseen joints in non-water-retaining-structures shall be as items a) to d) and in water-retaining structures shall be item e).

*Add the following to sub-clause G 5.5.7.3:*

e) Construction joints in water retaining structures:

The surface of the concrete shall be brushed with a steel wire brush or chipped with a light hammer or bush hammer or sprayed with a high pressure water jet within 24 hours of casting to remove all laitance and fine particles to a depth of at least 10mm and to expose the coarse aggregate embedded in sound concrete. Whichever method is used to expose the coarse aggregate the Contractor shall ensure that the green concrete is not damaged or disturbed during the preparation of the joint and that water stops are not damaged.

After the reinforcement for the next pour has been fixed and the formwork erected, the construction joint shall be cleaned thoroughly with a pressurised water jet. The joint shall then be wetted continuously with water for 24 hours to completely saturate the concrete immediately before new concrete is cast. Before the new concrete is cast all excess water shall be removed from the construction joint and the new concrete shall be cast directly onto the prepared surface.

**SD G5.5.8: Curing and Protection**

*Add the following to this clause:*

**"a) Floor and wall footings**

Abovementioned structural elements shall be protected with approved plastic sheets that comply with the requirements as specified below immediately after the prescribed surface finishing has been completed. When the concrete has gained sufficient strength to prevent damage to the surface thereof, the plastic sheets shall be removed on a regular basis to allow the application of more water to the concrete to ensure that it is kept moist continuously. Plastic sheets shall be reinstalled after each wetting of the concrete. The curing period shall be at least 10 days.

**SD G5.5.10: Concrete Surfaces**

*Add the following to sub-clause G 5.5.10.2:*

**"a) Wood-floated Finish**

When a wood-floated finish is specified, the surface shall first be treated as specified in sub-clause 5.5.10.1, and after the concrete has hardened sufficiently, it shall be floated to a uniform surface free from trowel marks. The levelled surface shall be wood floated either by hand or by machine only, to remove trowel marks.

**b) Steel-floated Finish**

When a steel-floated finish is specified, the surface shall be treated as specified for a wood-floated finish above, except that when the bleed water has disappeared and the concrete has hardened sufficiently to prevent the migration of concrete foam to the surface, the levelled surface shall be floated with a steel trowel on which a firm uniform pressure shall be applied to provide a dense, smooth, uniform surface of high quality free from trowel marks."

**SD G5.5.11: Watertight Concrete**

*Add the following to replace G 5.5.11:*

“The floor, roof, columns and walls of the reservoir shall be constructed using watertight concrete. The Contractors shall abide by all conditions set out in sub-clause G 5.5.11 and pay particular attention to this aspect of the works. The formwork/shutters shall be fastened using an approved imbedded fastening system. Open ferrules will not be permitted in the reservoir. No extra item shall be scheduled for payment under this sub-clause and the costs thereof shall be covered by the formwork and concrete rates. In particular shall any honeycombing not be allowed or such concrete accepted.”

**SD G5.5.13: Grouting**

*Add the following to replace G 5.5.13:*

**“SD G5.5.13.1: Water**

Water for grout shall comply with the requirements given in Sub-clause 3.3 of SABS 1200 G.

**SD G5.5.13.2: Aggregates**

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

**Table 1**

1	2
Test sieve nominal aperture size (mm)	% Passing (by mass)
9.5	100
4.75	95-100
1.18	46-65
0.3 9 (300 um)	5-15
0.15 (150 um)	0-5

**Table 2**

1	2
Test sieve nominal aperture size (mm)	% Passing (by mass)
9.5	100
4.75	95-100
2.36	0-5

**SD G5.5.13.3: Cement**

Cement shall be ordinary Portland cement complying with the requirements of SABS 471.

**SD G5.5.13.4: Admixtures**

Admixtures shall comply with the requirements of Sub-clause 3.5 of SABS 1200 G and shall have a proven record of satisfactory performance. All admixtures are to be approved by Engineer.

**SD G5.5.13.5: Proprietary grouting materials**

Unless otherwise approved by the Engineer, proprietary grouting materials shall be obtained ready mixed in sealed pockets as supplied by the manufacturers.”

**SD G5.5.14: Defects**

*Add the following sub-clause G 5.5.14.1:*

“The method of repair of defects in the concrete shall be by approved epoxy primer, epoxy and filler applied strictly according to the manufacturer’s specifications or such other methods acceptable to the Engineer. Cementitious mortar may not be used for such remedial works. All repair materials shall be of an equivalent thermal and structural elasticity to concrete.”

*Add the following new sub-clauses to G 5:*

**“SD G5.6: JOINTS**

**SD G5.6.1: Construction Joints in the Floors**

This clause is to be read in conjunction with G 5.5.7. Construction joints may only be placed where shown on Drawing No. 10030/S/205 or to the approval of the Engineer.

These joints shall be cast against a vertical shutter leaving a 10mm deep x 5mm wide recess which is to be sealed with “Sikaflex-11FC” one-part elastic joint sealant (or similar approved) on completion. The sealant used and method of application shall be to the Engineers approval. The entire contact surface along the joint in the concrete already cast shall be chipped or water jetted to expose the coarse aggregate to 5mm beyond the surrounding mix. 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 an approved wet-to-dry epoxy coating applied before casting against the joint.

All construction joints in the reservoir floors shall be cast with 250mm wide “Durajoint PVC External c” or similar approved PVC water-stops. See Drawing No. 10030/S/205 for the details of the joint. All water-stops shall be heat-weld jointed on site strictly in accordance to the manufacturer’s specifications.

The payment unit shall be for the linear metre. The tendered rate shall include the supply and casting-in of the water-stop, the sealant and the forming and preparation of concrete at the joint all inclusive.

**SD G6: TOLERANCES**

**SD G6.1: BASIS OF MEASUREMENT**

**SD G6.1.1: General**

*A Degree of Accuracy II shall apply in general, except for smooth shuttering (exposed surfaces) which must have a Degree of Accuracy I.*

**SD G6.2: PERMISSIBLE DEVIATIONS**

**SD G6.2.3: Specified permissible deviations**

*Add the following to G 6.2.3:*

“Degrees of Accuracy shall apply as specified in SD G 6.1.1. Each specified permissible deviation shall be binding by itself. No cumulative effect of permissible deviations will be considered.

The specified permissible deviations also apply to slip-form concrete, unless the Engineer has accepted another set of permissible deviations in writing beforehand. Such amended permissible deviations shall clearly make provision for interfaces between structures erected with the aid of conventional concrete.

The maximum permissible deviation from a 3 m long straight line connecting two points on the surface of a finished floor is 5mm.”

*Add the following to G 6.2.3 b):*

“Monolithic finishes should be laid in panels of the same size as those of the base. For separate bonded finishes, the area of a panel should not exceed 9,0 m<sup>2</sup>. Where a concrete overslab is used to provide a concrete wearing surface over a damp-proof membrane (i.e. separate unbonded construction), joint spacing should not exceed the lesser 30 times the slab thickness, and 4,5 m.



The general pattern of the panels will depend upon such aspects as the shape of the floor area and the position of columns. Wherever possible, panels should be square, or the length of a panel should be limited to 1.25 times its width, to reduce the tendency to crack."

**SD G7: TESTS**

**SD G7.2: TESTING**

**SD G7.2.1: General**

*Add the following:*

"The Contractor shall allow for all the costs for testing in his rates."

**SD G7.3: ACCEPTANCE CRITERIA FOR STRENGTH CONCRETE**

**SD G7.3.2: Criteria for Three Valid Test Results**

*Add the following to G 7.3.2:*

"Test results obtained by a ready-mixed concrete production plant as part of its quality-control system are not acceptable for evaluation purposes in terms of sub-clause G 7.3, but test samples shall be taken from ready-mixed concrete on location.

Cubes shall be taken on all pours in accordance with G 7.3. All costs hereof shall be deemed to be included in the rate tendered for the supply of concrete. Where cubes are not taken during a pour no payment shall be made for that particular pour."

*Add the following sub-clause to Clause G7:*

**SD G7.4: TESTING OF THE STRUCTURES FOR WATER TIGHTNESS**

The reservoir shall be tested for water tightness in accordance with BS 8007 Section 9.

(a) Testing of Structure

On completion of the reservoir it shall be cleaned and tested for water tightness. The structure 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.

Please note that the structures are not designed to retain water inside at full height without being backfilled on the outside. The Contractor shall take cognisance of this whilst testing the structures for water tightness.

Notwithstanding the satisfactory completion of the test any seepage visible on the outer faces of the structure shall be stopped. Any making good of cracks in the structure shall, where practical, be carried out from the inside face. If a lining is used for this purpose, it shall be sufficiently flexible and not cause a taste to the water.

(b) Testing of Roof

Any roofs shall be tested on completion by either of the following methods:

- (i) By flooding the roof to a minimum depth of 25 mm of water for a period of 24 hours.
- (ii) Using hose or sprinkler system to obtain sheet flow over the whole area of the roof for a period of not less than 6 hours.

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

No additional payment item shall be scheduled for this testing. The costs of testing shall be included in the rates tendered for the 35MPa (watertight) concrete.

**SD G8: MEASUREMENT AND PAYMENT**

**SD G8.1: MEASUREMENTS AND RATES**

**SD G8.1.1: Formwork**

**“SD G8.1.1.7: Formwork to edges of screeding**

Formwork to the edges of screeding or blinding will not be paid for separately. The rates for the concrete in the screeds and blinding must cover the cost of such formwork.”

**SD G8.1.2: Reinforcement**

*Delete sub-clause G 8.1.2.2 and G 8.1.2.3 and replace with the following:*

“Mild steel and high tensile steel will be measured separately. Welded mesh will be scheduled separately for each type and mass per square metre of mesh.

The rate shall cover the cost of supply, cutting, bending, placing in position, and fixing of the reinforcing and supporting steel scheduled, and the provision of all spacer devices and binding wire, as well as the cost of tests in terms of SABS 920. The rate for welded mesh shall cover the supply, cutting and placing of mesh, as well as the cost of all waste due to laps.”

**SD G8.1.3: Concrete**

*Add the following new sub-sub-clause to sub-clause 8.1.3:*

**“SD G8.1.3.4: Design of concrete mixes**

The cost of preparation of mix designs by an approved laboratory and the shrinkage test for the aggregate will be regarded as included in the rates for concrete.

**SD G8.1.3.5: Surface finishing**

Payment will not be made for wood-trowelled surface finishes in the case where that surface is subsequently covered with a screed.”

**SD G 8.4: SCHEDULED CONCRETE ITEMS**

*Add the following new payment item:*

**SD G 8.4.7: No-fines concrete;.....Unit: m<sup>3</sup>**

No-fines concrete shall be laid under the reservoir floor and footings to a thickness of 200 mm as specified in SD G 5.5.1.8, and shall consist of coarse aggregate, cement and water only. No fine aggregate shall be used.

48 hours after casting, the surface shall be skimmed with a 4:1 sand:cement mortar to give a smooth flat steel float finish.

The rate shall cover all formwork, supply, mixing, placing, compaction, skimming and float finishing for this item.”

**LB: BEDDING (PIPES)****PS LB 1.1 SCOPE**

Add the following to LB 1.1:

This specification also covers the bedding required for electric cables and cable ducts.

**LB 3 MATERIALS****PS LB 3.1 SELECTED GRANULAR MATERIAL**

Substitute LB 3.1 with the following:

Selected granular material shall be an aggregate, sand or granular material, all of a non-cohesive nature and free from any organic material, of which the grading analysis shows 100 % passing a 13,2 mm sieve and not more than 5 % passing a 0,075 mm sieve.

In very wet conditions and if so ordered by the Engineer, a non plastic crushed material with the specification as stated underneath should be used for bedding cradle.

**a) Grading**

<b>Sieve size (mm)</b>	<b>% going through</b>	
19,0		100
13,2	84	- 100
9,5	70	- 84
4,75	45	- 65
2,36	29	- 47
1,18	19	- 33
0,600	13	- 25
0,300	10	- 18
0,150	6	- 13
0,075	4	- 10

**b) Crusher value**

The aggregate crushing value, calculated at minus 13,2 mm plus 0,5 mm fraction, may not exceed 29.

**PS LB 3.2 SELECTED FILL MATERIAL**

Substitute LB 3.2 with the following:

The requirements of PS LB 3.1 shall apply mutatis mutandis.

**PS LB 3.3 BEDDING**

Add the following to LB 3.3:

All pipes shall be classified as rigid pipes and shall be laid on a Class C bedding except water connections which shall be classified as flexible pipes. Cable bedding is specified separately.

**PS LB 3.5 PROTECTIVE CONCRETE SLABS FOR CABLES**

Protective concrete slabs shall be precast concrete slabs with dimensions of 1 000 mm x 350 mm x 50 mm, and shall comply with the requirements of SABS 1200 G for 25 MPa strength concrete. The slabs shall be reinforced with three 8 mm diameter high-tensile reinforcing bars in both directions.

**PS LB 3.6 POLYETHYLENE WARNING TAPE**

The danger tape shall be manufactured from Grade XJF 46/60 polyethylene at least 0,4 mm thick and with a nominal width of 230 mm, and which is completely impregnated with a light orange pigment reasonably matching colour no B26 of SABS 1091.

A black triangle and lightning flashes for electricity, as depicted on sign WW7 of SABS 1186, as well as the words "DANGER, GEVAAR, INGOSI" shall be printed clearly and permanently onto the tape. The whole pattern shall be repeated every 1 m.

The quality of all materials employed shall be such as to ensure the permanency of the tape under all environmental and soil conditions, as well as the stability of the orange pigmentation and the lettering and warning symbols.

**LB 5 CONSTRUCTION****LB 5.1 GENERAL****PS LB 5.1.4 Compacting**

Substitute "90 % of MAASHTO" in LB 5.1.4 with "93 % of MAASHTO (100 % for sand)".

**PS LB 5.1.5 Placing and Preparation Of Bedding/Fill Blanket For Electric Cables**

Bedding for electric cables shall be placed under this contract, so that only the cables, protective concrete slabs or warning tape can be installed by the electrical contractor.

The bedding shall be the same as specified for flexible pipes.

**LB 8 MEASUREMENT AND PAYMENT****LB 8.1 PRINCIPLES****PS LB 8.1.1 Supply Of Bedding Materials Measured Separately**

Add the following to LB 8.1.1:

Except for electric cables payment for bedding material and selected fill material is only made if the selected trench-excavation material cannot be used in the same position as bedding material but has to be obtained from another part of the site of works or designated borrow pits, or from commercial sources.

**PS LB 8.1.4 Separate Items For Cradle And Blanket**

Substitute LB 8.1.4 with the following:

No distinction shall be made as regards material for the bedding cradle and selected fill blanket, and the material shall comply with the requirements for material for bedding cradle.

**PS LB 8.1.5 Disposal Of Displaced Material**

Add the following to LB 8.1.5:

Surplus displaced material shall be dumped and levelled at the spoil site.

**LB 8.2 SCHEDULED ITEMS****LB 8.2.2 Supply Only Of Bedding By Importation****PS LB 8.2.2.3 From commercial sources**

Add the following to LB 8.2.2.3:

- c) **Bedding for wet conditions** ..... **Unit: m<sup>3</sup>**

The requirements of PS LB 3.1 for bedding in wet conditions must be noted. Payment will only be applicable if ordered by the Engineer.

**PS LB 8.2.2.4 From stockpile (provisional)**

- a) **Selected granular material** ..... **Unit: m<sup>3</sup>**

- b) **Selected fill material** ..... **Unit: m<sup>3</sup>**

The rate shall cover the cost of obtaining, handling and transport regardless the distance, of the required bedding material from the stockpile, the delivery thereof at positions that are spaced along the trench in such a way as suits the working method of the Contractor, as well as the removal of material displaced by this importation within a free-haul distance of 0,5 km.

**PS LB 8.2.6 Bedding For Cables** ..... **Unit: m Trench**

The tendered rate for cable bedding shall provide for the placing of material from any position along the trench within 50 m, the preparation and bedding for cables for the complete trench length, regardless of the number of cables. The tendered rate shall also make provision for the fact that long trenches have to be prepared (as specified PS DB 8.3.2), for all necessary arrangements with the electrical contractor to lay the cables, for the installation of the fill blanket and backfilling on the same day on which the cables are installed.

**PS LB 8.2.7 Additional Bedding** ..... **Unit: m trench**

The rate for additional bedding for electric cables is extra over LB 8.2.1 and LB 8.2.2 and provides for the preparation of each additional bedding level for cables, concrete slabs and protective layers over and above the preparation of the Initial bedding level in the same trench.

**PS LB 8.3 PROTECTIVE CONCRETE SLABS FOR CABLES** ..... **Unit: No**

The provisions of G 8.6 shall apply mutatis mutandis.

**PS LB 8.4 POLYETHYLENE WARNING TAPE** ..... **Unit: m**

The rate shall cover the cost of the supply, handling and placing of the tape.

**LC: CABLE DUCTS****LC 3: MATERIALS****SD LC 3.1: Ducts**

*Add the following to LC 3.1:*

Class 6 uPVC pipes to SABS 966 shall be used as ducts for electric cables under streets.

**SD LC 3.2: Bedding**

*Substitute LC 3.2 with the following:*

The provisions of SABS 1200 LB: Bedding (Pipes) and the relevant SPECIFICATION DATA shall apply mutatis mutandis and payment shall be made under the appropriate payment clauses of SABS 1200 LB.

**SD LC 3.3: Backfill**

*Substitute LC 3.3 with the following:*

The provisions of SABS 1200 DB: Earthworks (Pipe Trenches) and the relevant SPECIFICATION DATA shall apply mutatis mutandis and payment shall be made under the appropriate payment clauses of SABS 1200 DB.

**SD LC 3.4: Cable duct markers**

*Add the following to LC 3.4:*

Cable duct markers shall be provided as specified in SD LC 5.10.

**LC 5: CONSTRUCTION****LC 5.1: Excavation of trenches****SD LC 5.1: Trench widths and depths**

*Add the following to LC 5.1.1:*

Trench widths shall be in accordance with the provisions of SABS 1200 DB : Earthworks (Pipe Trenches).

The minimum depth of cover over ducts shall be 600 mm from the final road level.

**SD LC 5.1.3: Excavation of trenches at road crossings**

The minimum depth of cover over ducts shall be 300 mm where construction traffic is liable to cross them. Road crossing shall therefore be constructed after the construction of the roadworks has reached the stage where the required cover is available.

**SD LC 5.2: Bedding and compaction of bedding**

*Substitute LC 5.2.1 and LC 5.2.2 with the following:*

All ducts shall be laid on a Class C bedding according to the provisions of SABS 1200 LB : Bedding (Pipes). Backfilling shall be according to the provisions of SABS 1200 DB : Earthworks (Pipe Trenches).

**SD LC 5.4: Backfilling and compaction**

*Add the following to LC 5.4:*

Road crossings shall be backfilled with sand from designated borrow pits, the site or commercial sources, whichever is applicable, up to underneath the sub-base, and compacted to a minimum of 100% of Mod.AASHTO density.

**SD LC 5.8: Road crossings**

*Substitute "0,5 m" in the last sentence of LC 5.8 with "1,0 m" and add the following:*

Ducts for road crossings shall be effectively sealed by means of end caps.

**LC 7: TESTING****SD LC 7.2: Compaction tests**

*Substitute LC 7.2 with the following:*

The Contractor shall, for at least one out of every five road crossings, submit density tests to the Engineer at his own expenses. The decision as to which road crossing densities shall be tested, rests with the Engineer. The Contractor shall, if such densities fail to meet the minimum requirements, prove at his expense that all the other densities do comply with the specified minimum requirements.

**LC 8: MEASUREMENTS AND PAYMENT****LC 8.2: Scheduled items****SD LC 8.2.8: Cable markers ..... Unit: No**

*Substitute LC 8.2.8 with the following:*

The rate shall also cover:

The cost of the end cap, and the service marker fixed to the draw wire, as specified in SD LC 5.10.

**M: ROADS (GENERAL)****M5: CONSTRUCTION**

*Add the following to M 5:*

**SD M 5.2: Selection**

The Contractor must be selective when breaking up existing roads to ensure that subbase material is not contaminated. If suitable material is contaminated the Contractor must replace the contaminated material as his own cost with material complying with the requirements.

**M6: TOLERANCES****SD M 6.3: Frequency of Checks**

*Replace "sufficient checks" with "do sufficient checks and submit to the Engineer for approval".*

**M 7: TESTING****SD M 7.3: Routine inspection and testing**

*Substitute M 7.3.3 with the following:*

Statistical evaluation of test results shall not be applicable to this contract and all tests shall meet the specified minimum requirements for the specific material.

**M8: MEASUREMENT AND PAYMENT****SD M 8.1: Measurement and Payment**

*Add the following to M 8.1:*

The cost of all routine testing done by the Engineer, and of which the results do not comply with specified minimum requirements for the material, shall be borne by the Contractor.

These costs shall be deducted from the Contractor's monthly payment certificate if accounts are not settled with the appointed laboratory.



**ME: SUBBASE****ME 3: MATERIALS****ME 3.2: Physical Properties****SD ME 3.2.: Subbase Material (G5 quality according to TRH 14)**

*Substitute the requirements for unstabilized subbase in ME 3.2.1 with the following;*

Materials for use in the unstabilized subbase shall comply with the following requirements:

i) Maximum size of aggregate after compaction	63 mm
ii) Maximum liquid limit	30
iii) Maximum plasticity index (PI)	10
iv) Maximum linear shrinkage	5%
v) Minimum CBR at 95% of Mod.AASHTO density	45
vi) Maximum CBR swell at 100 % of Mod.AASHTO density	0.5%
vii) Maximum group index	0
viii) Minimum grading modulus (GM)	1.5%

No crushed building rubble will be accepted as a subbase material

**ME 5.4: Placing and Compaction****SD ME 5.4.1: Placing**

*Substitute "the project specification" in the second paragraph of ME 5.4.1 with "ME 6.1.4".*

**SD ME 5.4.4: Compaction**

*Add the following to ME 5.4.4:*

In certain cases, such as in Provincial roads or under block-paving, the subbase may be specified to be compacted to 97% Mod. AASHTO density.

**SD ME 5.4.4.3: Penetration**

*Add the following new sub-clause to ME 5.4.4:*

The Contractor must provide for the penetration of the subbase material in the selected layer. The specified layer thickness will be a net homogenous layer. Only the homogenous layer will be measured for payment.

**ME 5.7: Transport****SD ME 5.7.1: Free haul**

*Substitute ME 5.7.1 with the following:*

An unlimited free haul distance shall apply to subbase material.

**ME 7: TESTING****ME 7.2: Process control and routine inspection and testing****SD ME 7.2.1: Process control**

*Substitute "1500 m<sup>2</sup>" with "1200 m<sup>2</sup>" and "5000 m<sup>2</sup>" with "3500 m<sup>2</sup>" in Table 2 of ME 7.2.1.*

**SD ME 7.2.2: Routine Inspection and testing**

*Substitute the second sentence of ME 7.2.2 with the following:*

No density shall be less than the specified minimum density for the relevant layer.

**ME 8: MEASUREMENT AND PAYMENT**

**SD ME 8.2: Computation of Quantities**

*Substitute ME 8.2 with the following:*

Measurement and payment shall be to the exact dimensions as shown on the drawings.

**MJ: SEGMENTED PAVING****MJ 3 MATERIAL****MJ 3.1 UNITS****PS MJ 3.1.2 Class, Strength And Type**

Add the following to MJ 3.1.2:

All paved parking areas shall be constructed of 60 mm thick Type S-A class 25 precast concrete blocks (interlocking type). Footpaths shall consist of 60 mm thick Type S-C class 25 precast rectangular concrete blocks. A "Terracotta" colour shall be used.

**MJ 5 CONSTRUCTION****MJ 5.1 PREPARATION****PS MJ 5.1.2.3 Stabilised subbase**

Add the following to MJ 5.1.2.3:

The subbase for the parking area shall be stabilised.

**PS MJ 5.7 JOINT FILLING**

Joint filling shall be done with a 1:3 cement-sand mix.

**MJ 6 TOLERANCES****PS MJ 6.2 PERMISSIBLE DEVIATIONS**

Add the following to MJ 6.2:

The degree of accuracy shall be degree I.

**MJ 8 MEASUREMENT AND PAYMENT****MJ 8.2 SCHEDULED ITEMS****PS MJ 8.2.2 Construction Of Paving Complete..... Unit: m<sup>3</sup>**

Add the following to MJ 8.2.2:

The rate shall also cover the cost of the cement-sand mix as specified in PS MJ 5.7.

**PS MJ 8.2.6 Placement Of Pavers In Stead Of Painted Lines ..... Unit: m**

If required by the Engineer, parking bays and other painted markings on the parking area shall be indicated with tan-coloured paving blocks.

The rate shall cover the cost of all material, labour and equipment for the placing of such blocks.

**MK: KERBING AND CHANNELLING****MK 3: MATERIALS****MK 3.2: Precast kerbing and channelling****SD MK 3.2.3: Strength**

*Substitute MK 3.2.3 with the following:*

Precast kerbs, edging and channels shall be of grade 25 MPa/19 mm concrete.

**SD MK 3.9: Bedding material**

*Substitute MK 3.9 with the following:*

The material on which concrete kerbs, channels and edging are bedded, shall be in accordance with the dimensions shown on the drawings and shall consist of a 15 mPa concrete mix with a 6.7 mm single size coarse aggregate.

**MK 5: CONSTRUCTION****SD MK 5.1: Excavation and bedding**

*Substitute "90%" in MK 5.1 with "93% (100% for sand)".*

**SD MK 5.2: Precast concrete kerbing and channelling**

*Substitute the first sentence of MK 5.2 with the following:*

Precast concrete kerbing and channelling shall be laid and bedded on a concrete bedding complying with the requirements of SD MK 3.9 and to the dimensions shown on the drawings.

**SD MK 5.10: Protection**

*Substitute the word "bad" in the second sentence with the following:*

"No chipped or patched kerbs will be accepted."

**MK 7: TESTING**

*Add the following paragraph:*

**SD MK 7.2: Water testing of kerbs**

A water test must be done on all kerbs, inlets and channels after installation to ensure good drainage. This test must be done after the application of the prime coat but before the placing of asphalt or a bituminous surface treatment. The channels and inlets must be cleaned before the water test is done. All alterations to kerbs, channels and inlets must be done before the placing of the final layer. No payment will be made for the water testing of kerbs.

**MK 8: MEASUREMENT AND PAYMENT****SD MK 8.1: Basic principles**

*Add the following to MK 8.1.1:*

Payment shall include the provision of expansion joints as specified.

**MK 8.2: Scheduled Items**

**SD MK 8.2.1: Concrete kerbing .....Unit: m**

*Add the following to MK 8.2.1(b):*

The tendered rate includes the supply, from site within freehaul distance, and placing of material of upper selected layer quality for backfill behind the kerbs.

## C3.4 PARTICULAR PROJECT SPECIFICATIONS

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PB:	BUILDING WORK	
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SD PM:	MECHANICAL EQUIPMENT	
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PM	MECHANICAL EQUIPMENT	
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PMC:	PROTECTIVE COATING SYSTEMS FOR MECHANICAL EQUIPMENT	<b>ERROR!</b>
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PMM	MOTORS	
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PMN:	STARTERS	MOTOR
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PMO:	PROTECTION SYSTEMS	MOTOR
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PMP:		PUMPS
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PMV:		VALVES
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PSMW	MEASURING AND RECORDING INSTRUMENTS	
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PS UA:	MECHANICAL SCREENS	
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PS PM:	WEDGE WIRE MECHANICAL SCREENS	<b>ERROR!</b>
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SD ES:	ELECTRICAL SUPPLY	
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SD PE:  
ELECTRICAL EQUIPMENT

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SD PE 9  
LOW VOLTAGE ELECTRICAL INSTALLATION (420/220V AC)  
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PUMP  
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PPS3  
STANDBY GENERATOR SETS

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**PB: BUILDING WORK****PB 1: SCOPE**

This section specifies the general requirements for the construction of buildings.

**PB2. INTERPRETATIONS****PB2.1 SUPPORTING SPECIFICATIONS**

- (a) Project Specification;
- (b) SABS 1200 A or SABS 1200 AA as applicable;
- (c) SABS 1200 C;
- (d) SABS 1200 D or SABS 1200 DA as applicable;
- (e) SABS 1200 G or SABS 1200 GA or SABS 1200 GB as applicable.

**PB2.2 GENERAL**

Building work shall be carried out in accordance with the National Building Regulations and Building Standards Act, 1977, and these specifications.

References to specifications and codes of practice of the South African Bureau of Standards shall be taken to be references to the latest edition of such specifications and codes of practice as amended. Where possible the SABS mark shall appear on all articles, materials or items where it is required to comply with such SABS specification.

**PB2.3 COMMERCIAL PRODUCTS**

In all instances where the Contractor handles, stores, uses, applies or fixes commercial products, the work shall be strictly carried out according to the instructions of the manufacturer of such products.

**PB2.4 SAMPLES**

The Contractor shall furnish without delay, such samples as called for or may be called for by the Engineer. Materials or workmanship not corresponding with approved samples, may be rejected by the Engineer and shall be removed from the works at the cost of the Contractor.

**PB3. MATERIALS****PB3.1 CEMENT**

Cement shall be ordinary Portland cement complying with the requirements of SABS 471.

**PB3.2 WATER**

Water shall be clean and free from clay, silt, oil, acid, alkali, organic or other matter which would impair the required strength and durability of mortar, plaster or floor screed.

**PB3.3 LIME**

Lime shall be hydrated bedding mortar lime complying with the requirements of SABS 523.

**PB3.4 AGGREGATE**

Sand for plaster and mortar shall comply with the requirements of SABS 1090, whereas the aggregates for normal and granolithic floor creeds shall comply with the requirements of BS1199 and BS1201 respectively.



**PB3.5 BURNT CLAY BRICKS**

Burnt clay bricks shall comply with the requirements of SABS 227 and shall also be equal in all respects to the three samples of each type of brick furnished by the Contractor prior to commencement of the works and as approved by the Engineer.

General purpose (special) bricks shall be used in foundation walls and lintels.

The colour and texture of face bricks shall be as specified in the project specifications.

Care shall be taken to avoid damage to arisses and faces during transport and handling.

Fire bricks shall be of well burnt refractory fire clay, resistant to spalling and cracking and of same size as the ordinary bricks.

**PB3.6 CONCRETE MASONRY UNITS**

Pre-cast concrete masonry units shall comply with the requirements of SABS 1215 and shall be solid unless specified otherwise in the project specifications.

**PB3.7 CALCIUM SILICATE MASONRY UNITS**

Calcium silicate masonry units shall comply with the requirements of SABS 285.

**PB3.9 AIR BRICKS**

Air bricks shall be well-burnt terra-cotta air bricks in external faces of walls and 250 mm x 150 mm rectangular gypsum air bricks covered with copper mosquito gauze in internal faces.

**PB3.10 BRICK REINFORCEMENT**

Brick reinforcement shall be hard drawn mild steel comprising two 3,15 mm diameter wires spaced 75 mm apart and 2,8 mm diameter cross wires spaced at not exceeding 300 mm apart welded to main wires.

**PB3.11 CONCRETE PAVING SLABS**

Concrete paving slabs shall be precast units of grade 25 MPa/13 mm concrete and shall be of approved manufacture, at least 50 mm thick and sizes 250 mm x 250 mm minimum and 600 mm x 600 mm maximum.

Concrete slabs shall be even in thickness, truly square, free from cracks, twists and blemishes, with a uniform natural cement colour and surface finished smoothly in the mould and shall also be equal in all respects to the samples furnished by the Contractor prior to commencement of the works and as approved by the Engineer.

**PB3.12 DAMP-PROOF MEMBRANE**

Damp-proof membrane under floors, unless otherwise specified, shall be of polyethylene sheeting complying with the requirements of SABS 952 as Type C-plain surfaces specified therein, 250 microns in dry areas and 375 microns in wet areas.

**PB3.13 DAMP-PROOF COURSE IN WALLS**

Horizontal and vertical damp-proof course, unless otherwise specified, shall be of bituminous sheeting complying with the requirements of SABS 248 and as Type FV (Fibre Base) sheeting or as Type GH (Hessian Base) sheeting specified therein, or of polyethylene sheeting complying with the requirements of SABS 952 and as Type A-plain surfaces 450 microns or as Type B-embossed surfaces 375 microns as described therein.

**PB4. PLANT****PB4.1 GENERAL**

The Contractor shall have at his disposal the normal plant necessary for the proper and neat completion and rounding off of all facets of the building work.

**PB5. CONSTRUCTION****PB5.1 BRICKLAYER****PB5.1.1 Cement Mortar**

Cement mortar shall, unless otherwise specified, be composed of four parts by volume of sand and one part by volume of cement for normal brickwork, and three parts by volume of sand and one part by volume of cement for reinforced brickwork.

The ingredients for cement mortar shall be measured in proper gauge boxes on a boarded platform and thoroughly mixed. Alternatively mixing may be by means of an approved mechanical batch mixer. Only when the dry ingredients have been thoroughly mixed and a mixture of uniform colour has been obtained may the water be added in sufficient quantity to obtain mortar with the required consistency.

Care shall be taken in mixing cement mortar to remove from the mixing machine or platform any old mortar that has already set, as such mortar must not be incorporated in any new batch.

Cement mortar shall be produced in such quantities as can be used before commencing to set, as no cement mortar that has once commenced to set shall be used in any way.

**PB5.1.2 Brickwork**

Brickwork, wherever practicable and not otherwise specified, shall be built in English bond. No false headers shall be used, and none but whole bricks employed, except where legitimately required to form bond.

The brickwork, unless otherwise specified, shall be built in 4:1 cement mortar. Brick arches and brick lintels shall be built in 3:1 cement mortar.

The bricks shall be laid on a solid bed of mortar and all joints thoroughly grouted up solid throughout the whole width of each course.

The brickwork shall be carried up in a uniform manner, no portion being raised more than 1,2 m above an adjacent portion.

The bricks shall be well saturated with water, in the stack or dump, approximately two hours before being used. The tops of walls left off, shall be well wetted before work is recommenced.

All rough and fair cutting and cutting of splays, skew backs, chamfers, etc., shall be properly performed.

All necessary openings for pipes, etc., shall be formed or left and made good after pipes, etc., are fixed in position.

Walls generally shall be taken up two courses above panelled ceilings in the same mortar as the wall below and cut between ties, etc.

Where hollow concrete masonry units are used brick-force shall be built into the walls every third course. Mortar for hollow concrete masonry units shall consist of one part cement, two parts lime and nine parts sand by volume. All cavities below floor level shall be filled with Grade 15 MPa/19 mm concrete.

**PB5.1.3 Mortar Joints**

Mortar joints to brickwork generally shall be 10 mm in thickness.

The joints in brickwork receiving plaster, tiling or similar finishings, shall be raked out whilst the mortar is soft to form key for the plaster or mortar backing. The depth of the raking out will depend on the condition of the bricks; the rougher the bricks on face the shallower the raking out and the smoother the bricks the deeper the raking out.

The joints in brickwork shall be flushed off where walls are to be bagged, in readiness for the bagging.

**PB5.1.4 Brickwork In Thicknesses**

Walls built in two or three thicknesses shall be tied together with and including metal ties of sufficient length to allow not less than 75 mm of each end to be built into brickwork and shall be spaced not more than 1 m apart to every third course and staggered.

**PB5.1.5 Brickwork In Linings**

Linings to concrete shall be tied with and including 4 mm diameter galvanised crimped wire ties of necessary length to allow 75 mm to be bedded into concrete and 75 mm of the other end to be built into brickwork and evenly spaced 1 m apart to every third course and staggered.

**PB5.1.6 Half Brick Thick Walls**

Half brick thick walls shall be built in 4:1 cement mortar and reinforced with 75 mm wide brick reinforcement, one row to every eighth course in height, and built 100 mm into main connecting walls. The reinforcement shall be lapped 150 mm at end joints, where these are necessary, and 75 mm at angles.

**PB5.1.7 Cavity Walls**

Cavity walls, unless otherwise specified, shall be built with two half brick thicknesses of brickwork in stretcher bond with 50 mm cavity between, and the two thicknesses tied together with 200 mm long metal wall ties of the butterfly type, spaced at not more than 1 m centres alternately to every third course of brickwork.

Unless otherwise specified, the brickwork shall be built in 4:1 cement mortar.

The cavities shall be carried up from one course of brickwork below damp course level up to two courses below wall plate level, unless otherwise shown or specified. The brickwork above cavities shall be built solid, and where 270 mm thick shall be cut and well bonded where possible. Cavities in foundation walls of cavity walls shall be filled with Grade 15 MPa/19 mm up to 150 mm below the damp-proof course level.

The cavities shall be kept free of all rubbish, mortar droppings and projecting mortar.

The tops of walls shall be covered with planks or sacking during wet weather to prevent rain from entering the cavities.

The cavities shall not be ventilated.

At door, windows and other openings, the cavities shall be stopped 110 mm back from jambs of openings with the inner thickness of brickwork returned and stopped against the outer thickness and not bonded to same. A 110 mm wide strip of damp-proof sheeting as described for damp-proof course in clause 3.15 shall be built in between the two thicknesses in the joint formed by the return and the outer thickness. The damp-proof strip shall be lapped at least 50 mm on to the sheeting between the two thicknesses of sills and between the two thicknesses of lintels.

Sills to windows shall be divided into external and internal thicknesses with strips of damp-proof sheeting as above, built in line with the damp-proof sheeting in jambs and extending 100 mm beyond the jambs of openings.

The lintels shall be provided with damp-proof sheeting as described under lintels.

Unless otherwise specified, cavities shall be stopped one course below and one course above and 110 mm from sides of openings for air bricks and the like.

**PB5.1.8 Reinforced Brick Lintels**

Reinforced brick lintels shall be built with sound machine made bricks, in 3:1 cement mortar, with all vertical and horizontal joints filled solid with mortar throughout the required number of courses and to a distance of at least 330 mm on either side of the clear opening.

The number of courses in lintels over the various size openings shall be as specified in table hereunder, and reinforcing steel wires or rods shall be built into the first horizontal joint over the bottom course as laid down therein, viz.:

LINTEL SPAN	NUMBER OF COURSES	REINFORCEMENT
Not exceeding 1 m	4	One row of 75 mm wide brick reinforcement for each half brick width soffit.
Over 1 m tot 1,5 m	6	One row of 75 mm wide brick reinforcement for each half brick width soffit.
Over 1,5 m tot 2,1 m	7	Three 6,3 mm diameter mild steel rods for each half brick width of soffit.

The reinforcing wires and rods shall be of length at least equal to the width of the clear opening plus 330 mm at each end. The reinforcement shall be evenly spaced in the brick joints, with the outer wires or rods having at least 20 mm cover from face of brickwork.

Brick lintels in 270 mm thick cavity walls shall be built in two half brick thicknesses in stretcher bond, with inner face of outer thickness for a depth of three courses above soffit, covered with sheeting as for damp-proof course, the full length of lintels, and space between the two thicknesses for the depth of the sheeting filled in solid with Grade 15 MPa/19 mm concrete. Where cavities continue above lintels, the sheeting shall be taken up and turned on to top of first course of brickwork to inner thickness of wall, above the concrete filling in lintels.

The lintels, except where built over pressed steel door frames and the like, shall be supported on temporary formwork left in position for at least fourteen (14) days.

#### **PB5.1.9 Beam Filling**

Beam filling, unless otherwise specified, shall be half brick thick, built in similar mortar as used in the walls below, cut in between roof timbers and carried hard up to underside of roof covering, and flushed up in mortar.

#### **PB5.1.10 Bagged Finish To Brickwork**

Bagged finish to brickwork, if done whilst the mortar in joints is still soft, shall be formed by rubbing over the wall surfaces with wet rough sacking, until all joints and crevices are filled up and an even surface is obtained. Mortar, as used for building the brickwork, shall be added as may be necessary.

If bagging to walls is done after the mortar in joints has set the wall surfaces shall be rubbed over with wet rough sacking as above, but cement grout shall be added as necessary to fill up the joints and crevices and to obtain an even surface.

#### **PB5.1.11 Building InInbrick Work**

Ends of timbers, hold-fasts, cramps, gratings, air bricks, dowels, etc., shall be built-in in cement mortar.

Door and window frames and the like shall be set up in positions for building in and securely strutted to prevent distortion whilst the brickwork, lintels, etc., are being built.

Pressed steel door frames shall be grouted in solid at back with cement mortar as the work proceeds.

Wood slips, fixing bricks, hoop iron, roof ties, etc., shall be built in as the work proceeds.

Ventilators shall be built into openings formed in the walls, in 3:1 cement mortar, and grouted in solid with similar mortar and wall finishes made good if disturbed.

Wood frames to doors, windows, etc., shall be set up in position for building in as described and built in as the work proceeds with cramps to jambs of 1,6 mm thick galvanised hoop iron, 32 mm wide, with ends turned 50 mm up against stiles of frames and each twice screwed to frame, and built 450 mm into wall with end turned up into brickwork joint. Cramps shall be built in approximately 0,3 m up from bottom and approximately 0,3 m down from head of frames and intermediately at not exceeding 0,85 m apart. No frame shall have less than two cramps to each jamb irrespective of height.

Cramps to frames in 270 mm thick cavity walls shall be cranked as necessary and built into inner and outer thicknesses of walls alternately.

The stiles of wood door frames, and similar frames not having sills framed in, shall be doweled to concrete, brick, stone and similar thresholds with 10 mm diameter mild steel dowels 75 mm long, one to each stile.

**PB5.1.12 Bedding And Pointing**

All door, window and similar frames shall be bedded and pointed in 3:1 cement mortar. All wall plates shall be set true and level and bedded in 4:1 cement mortar.

Steel door and window frames shall be carefully pointed all round and made perfectly watertight.

Where steel door and window frames are specified to be pointed with mastic compound they shall be pointed all round externally with an approved waterproof compound, of such composition that it will not stain surrounding surfaces, and that it will adhere tenaciously, remain plastic without sagging or running, be capable of accommodating any normal movement of the joint sealed, and will receive paint without "bleeding". The pointing material shall be forced into the joints, which shall have been previously prepared to receive same, by means of a pressure gun, or by other suitable method, all in accordance with the manufacturer's instructions.

**PB5.1.13 Asbestos Cement Sills**

Sills shall be in single lengths cut between reveals, fitted with fixing lugs and solidly bedded in 3:1 cement mortar with a slight projection beyond the finished wall face below. Internal sills shall be level. External sills shall be set sloping on cut brickwork or on fine concrete filling under.

**PB5.1.14 Installation Of Electrical Service**

The Contractor shall embed in the concrete and/or brickwork, as the work proceeds, all conduits, boxes, etc., which will be fixed in position by the electricians, and must cut all necessary chases and holes in walls for conduits and form recesses in walls for distribution boards, all in the positions directed, notwithstanding whether the installation of the electrical service is carried out by the Contractor or under a separate contract. Alternatively, distribution boards may be built into walls as the work proceeds, providing prior approval is obtained from the Engineer.

The Contractor shall afford every facility and shall render reasonable assistance to the electricians in carrying out their work, and shall make good where necessary, in all trades, after installation has been completed.

**PB5.1.15 Installation Of Mechanical Equipment**

Where the installation of mechanical equipment is carried out under a separate contract the Contractor shall arrange for the building in of special fittings, leaving holes and openings or forming chases in floors, walls, etc., for pipes, cables etc., and for the building in of pipes, sleeves, pipe clips, bolts, etc., as required or directed.

All cutting of holes through finished floors, walls, etc., after the concrete or mortar has set, must be avoided as far as possible, and the Contractor must give ample notice to the Engineer who will ascertain the exact positions where pipe sleeves, pipes, pipe clips, etc., are to be built in.

**PB5.1.16 Protect And Clean Down Brickwork, Etc.**

Angles of face brickwork, reveals, steps, etc., liable to damage shall be covered up and protected during the progress of the remaining work, and any damage done shall be made good at the Contractor's expense and to the satisfaction of the Engineer.

Face brickwork and brick and tile sills, copings, etc., shall be cleaned down as the work proceeds, and surfaces liable to be soiled by mortar or plaster splashes during the progress of the remaining work shall be covered with paper, pasted on, or by other approved means. At completion of the works the coverings shall be removed and the surfaces again cleaned down to the satisfaction of the Engineer.

Any detergent or other materials used in the cleaning down of face brickwork, etc., shall be of such nature that will not harm adjoining paint and other finishings in any way.

All tile and other pavings shall be thoroughly cleaned off after laying to remove all traces of mortar and other substances, covered up and protected from damage during the progress of the works, and again cleaned off at completion.

## **PB5.2 PLASTERER AND PAVIOR**

### **PB5.2.1 Cement Plaster**

Cement plaster for one coat work on walls shall be composed of four parts of sand and one part of cement for internal work, and five parts of sand and one part of cement for external work, all by volume, and mixed as described for cement mortar in clause 5.1.1. Cement plaster on concrete surfaces shall be composed of three parts by volume of sand and one part by volume of cement.

### **PB5.2.2 Forming Key To Concrete For Plaster Finish**

All surfaces of concrete receiving plaster, or similar finishings, shall be well wetted and wire brushed immediately after the formwork is removed and slushed over with 2:1 cement grout to form key for the finish, to the approval of the Engineer. The slushing to be allowed to set hard before the finish is applied.

Other methods may be used if approved by the Engineer.

Particular care shall be taken in forming the key for plaster where steel shuttering is used, and if considered necessary the surface of the concrete shall be hacked.

### **PB5.2.3 Thickness Of Plaster**

Plaster on walls shall be not less than 12 mm or more than 20 mm in thickness, and plaster on concrete ceilings and beams shall be not less than 9 mm or more than 16 mm in thickness, unless otherwise specified.

### **PB5.2.4 Application Of Plaster**

Walls shall be well wetted before plastering is commenced.

The surfaces of internal plaster shall be steel trowelled to a smooth, even and true finish. External plaster shall be finished to a true and even surface with a wood float. All plaster surfaces shall be free from blemish.

Plaster shall be returned into reveals and soffits of openings, and all angles shall be true and straight with salient angles slightly rounded.

The rendering coat of plaster in two coat work shall be approved by the Engineer before the setting coat is applied, and notice shall be given to the Engineer when it is ready for inspection.

All cracks, blisters and other defects shall be cut out and made good and the whole left perfect at completion.

**NB** - See clause 5.3.2 for forming key for plaster on concrete.

### **PB5.2.5 Normal Screeds To Floors**

Concrete sub-floors finished with wood mosaic, vinyl sheeting and tiles, and similar finishings, shall be screeded with 3:1 cement mortar, of thickness required, but in no case less than 12 mm, and steel trowelled to a true and smooth surface suitable to receive finishings.

The screeding shall be laid before the concrete sub-floors have matured otherwise the exposed surfaces of concrete shall be thoroughly cleaned with a wire brush, and a coat of neat cement grout applied immediately before the screeding is laid.

The screeding shall be laid in good time to allow of it being perfectly dry when the finishings are laid.

No traffic shall pass over nor shall any building operations take place on the screeding without proper covering first being provided.

### **PB5.2.6 Granolithic Screeds**

Granolithic screeds shall be composed of two parts by volume of cement and three parts by volume of aggregate with sufficient water added to obtain a consistency as dry as may be practicable. The screed shall be rendered with a wood float and struck off with a steel trowel after set has commenced.

Granolithic screeds to floors, treads of steps, thresholds, and similar horizontal surfaces unless otherwise specified, shall be not less than 25 mm thick. Granolithic screeds to stair risers, sides of kerbs, and other vertical surfaces, shall, unless otherwise specified, be not less than 20 mm thick. Exposed salient angles of granolithic screeds shall be neatly rounded to approximately 20 mm radius, unless otherwise specified.

The granolithic screeds shall be laid before the concrete sub-floor has matured otherwise the exposed surface of concrete shall be thoroughly cleaned with a wire brush, and a coat of neat cement grout applied immediately before the granolithic screed is laid.

The granolithic screeds shall be laid in panels not exceeding 9 m<sup>2</sup> in area, and joined to lines of panels and lined into smaller squares as directed with sunk V-joints. The joints between the panels shall coincide with joints in the concrete sub-floor where possible.

Where granolithic screed is to be tinted it shall be laid in two layers, a lower layer laid to within 6 mm of the finished level, and an upper layer into which the requisite quantity of approved colouring pigment shall have been mixed. **No dusting on of colouring material will be allowed.**

All granolithic work shall be done by experienced workmen, and shall be protected from injury caused by rain or other extreme weather for twelve hours after being laid, and against too rapid drying whilst hardening, by being covered with wet sacks, or other suitable material, and shall be protected from injury and discolouration during the progress of the remaining work.

Edges of granolithic floors butting against different floor finishings, and edges of margins, etc. shall be true and sharp, and shall be protected by fixing temporary wood strips, which shall remain, in position until the commencement of the laying of the adjoining flooring material.

#### **PB5.2.7 Reedings To Steps, Etc.**

The treads of granolithic finished steps and upper surfaces of granolithic finished external thresholds shall be rendered non-slip by reeding same near front edges for a width of 100 mm stopped 100 mm from ends.

#### **PB5.2.8 Power Floated Finish**

Power floated finish to floors etc., unless otherwise specified, shall be floated mechanically to smooth and even surfaces before the concrete has set. Small surfaces and inaccessible places to be floated by hand in a similar way. Under no circumstances is cement mortar to be added while floating the concrete.

#### **PB5.2.9 Laying Of Concrete Paving Slabs And Paving Bricks**

Concrete paving slabs and paving bricks shall be bedded and jointed on a layer of 30 mm clean dry river sand. Joints shall be 6 mm wide, continuous in both directions, filled solidly with 3:1 cement mortar and slightly pointed with a round jointing tool. Lengths in excess of 10 metres shall be provided with expansion joints.

### **PB5.3 WATERPROOFING**

#### **PB5.3.1 Damp-Proof Course In Walls**

The damp-proof course shall be the full thickness of walls above foundations and shall be laid without longitudinal joints. At end joints, angles and intermediate junctions the sheeting shall be lapped 150 mm.

Where so specified all laps in the damp-proof course shall be sealed over the whole area of laps, to an approved method. Care shall be taken not to tear or otherwise damage the sheeting.

#### **PB5.3.2 Damp-Proof Membrane**

The damp-proof membrane under floors, etc., shall be laid in the widest practical widths to minimise joints and shall be turned up, dressed to load bearing walls and if applicable lapped with the damp-proof course in the walls. All joints shall be sealed with pressure sensitive tape applied over the leading edge of the joint.

### **PB5.3.3 Expansion Joints**

Expansion joints shall be at least 10 mm wide and filled in with approved bitumen impregnated soft board or closed cell expanded polyethylene strip. Expansion joints shall be sealed with a two component polysulphide joint sealer, 12 mm deep, according to instructions of the manufacturers.

## **PB5.4 CARPENTER AND JOINER**

### **PB5.4.1 Protection Of Timber On Site**

Timber stored on site shall be properly stacked when received, and adequately protected against extremes of weather and exposure to the sun, until required for use.

### **PB5.4.2 Wrought Faces**

Exposed woodwork, unless otherwise specified, shall be wrought to a smooth surface, and properly sand-prepared to remove all machine or other tool marks.

For each wrought face on structural timber, an allowance will be made off the "nominal" dimensions specified or stated on the drawings, as follows:

- (a) 2,5 mm for "nominal" dimensions up to and including 76 mm;
- (b) 3,5 mm for "nominal" dimensions over 76 mm.

For each wrought face on joinery timber, an allowance will be made off the "nominal" dimensions specified or stated on the drawings, as follows:

- (a) 3 mm for "nominal" dimensions up to and including 76 mm;
- (b) 5 mm for "nominal" dimensions over 76 mm.

The above will be the nett allowances permitted off the "nominal" dimensions specified or stated on the drawings and will not be additional to the tolerances specified for sawn timbers.

All exposed angles of wrought woodwork, unless otherwise specified, shall be arris rounded. The term "arris rounded" denotes that the angles shall be rounded off to approximately 3 mm radius.

Angles of wrought woodwork specified to be angle rounded shall be rounded off to 6 mm radius, unless otherwise shown on the drawings, and shall include, in framed joinery, for housed and mitred joints.

Hip and ridge tiles for interlocking tile roofs shall be socketed V-type, shall match general tiling, and shall be bedded solid in 3:1 cement mortar with strip of approved bituminous sheeting laid under the mortar bedding, of such width as will give a lap of at least 25 mm on to the roof tiling at each side, and lapped not less than 75 mm at end joints. Socketed joints of hip and ridge tiles shall be bedded in mortar as above and pointed with neatly recessed joints, and hip iron of 25 mm x 4,5 mm mild steel 300 mm long, suitably bent, twice holed and securely nailed to hip rafter, shall be provided at foot of each hip. The mortar bedding shall be trowelled smooth at open ends of ridges.

Ridge tiles for plain tile roofs shall be as above but half-round and but jointed and neatly pointed in tinted 3:1 cement mortar, and hip tiles shall be round pattern bonnet type, to course and bond in with general tiling, and with each tile bedded and neatly pointed in mortar as above and nailed to hip rafter with galvanised nail.

Hip and ridge tiles shall be neatly cut and fitted together at junctions between ridges and hips or valleys, and shall be bedded solid and neatly pointed in tinted 3:1 cement mortar with approved bituminous sheeting under the mortar bedding, cut to shape required and with lap of 25 mm on to the roof tiling.

## **PB5.5 METALWORK**

### **PB5.5.1 Manufactured Steelwork Generally**



Welding is to be done electrically in the most up to date manner by skilled workmen and cleaned off on completion.

All welds are to be welded with welding rods of the same chemical composition as the tubes, rods, bars, etc., to be welded and all external welds are to be filed clean and smooth.

Welding to be continuous fillet welding to all exposed edges unless otherwise described.

No scaffolding shall be allowed to rest on or fixed to steel windows, doors, frames, etc., in any way.

## **PB5.6 GLAZIER**

### **PB5.6.1 Fixing Of Glass**

Glass fixed with glazing beads in unpainted hardwood doors shall be bedded on strips of rubber, velvet, leather, or felt turned over on to both sides of glass in the rebates to form a soft packing between the glass and the woodwork. In all other cases the glass shall be well bedded in back putty in the rebates.

Glass rebates, other than in unpainted hardwood doors, shall be primed before glazing.

Glass panes exceeding 0,5 m<sup>2</sup> in surface area and fixed with putty only in wood doors, sashes and the like shall be secured in addition with glazing sprigs, and in steel windows and doors with glazing pegs or clips inserted in holes in the steel framing.

Glass panes shall have adequate clearance between the edges of glass and the rebates. Putty shall be carefully trimmed and cleaned off with front putty worked to within 3 mm of the sight lines.

## **PB5.7 PAINTER**

### **PB5.7.1 Preparatory Work**

#### **(a) General**

All floors must be swept clean and walls dusted down, and surfaces not being painted such as face brickwork, sills, floors and stained woodwork covered up and protected against spotting, before any painting is commenced.

No sweeping or dusting shall be done whilst painting is in progress or whilst paint is still wet.

#### **(b) On woodwork**

Woodwork being painted shall be well brushed down, knots treated with knotting, and all surfaces primed, stopped with hard stopping and rubbed down to an even surface ready to receive the paint.

Woodwork being oiled or stained shall have all plaster stains, pencil marks and other surface discolourations and blemishes carefully removed, and stopped with tinted stopping and well rubbed down.

#### **(c) On metalwork**

All metal surfaces being painted, except steel structures shall be cleaned of all rust, scale and dirt by scraping or by means of steel wire brushes; also all oil and grease shall be removed and a perfectly clean surface obtained. If necessary the surface shall be de-greased immediately before applying the priming coat, by the use of a suitable grease-removing solvent; any salt deposits on the metal surfaces as may occur in industrial and marine atmospheres shall be removed by the use of a suitable detergent and the surface then thoroughly rinsed and allowed to dry.

New galvanised metal surfaces and surfaces of all non-ferrous metals, which are to be painted, shall be cleaned down as above and given one coat of wash primer (metal etch primer).

Protective coatings on new galvanised metal surfaces, applied by the manufacturers to prevent storage stain and white rust, shall be completely removed by the use of a suitable cleaning agent and the surfaces thoroughly rinsed and allowed to dry, before the surfaces are primed or painted.

After cleaning off rust on metalwork those portions so affected shall be treated with an approved rust inhibitor.

#### **(d) On plaster**

All plastered wall, ceiling and such like surfaces being painted or distempered shall be filled where necessary with suitable stopping or patching plaster and the whole rubbed down ready to receive the finishings.

**PB5.9.2 Surfaces To Be Dry**

All plastered wall, ceiling and similar surfaces shall be perfectly dry and in a fit state to receive the finishings, before the work is put in hand.

**PB5.9.3 Priming**

Wood, metal and other surfaces normally primed before being painted shall be prepared and primed as before described in readiness to receive the specified paint system.

Backs of wood door and similar frames and surfaces of other new or re-fixed joinery in contact with brickwork, etc., and built in as the work proceeds, shall be primed before building in whether the articles are to be painted or not, to prevent moisture seeping into the wood from the mortar bedding.

Wood surfaces shall be knotted, primed and stopped before being coated with emulsion paint or distemper.

Tongued and grooved and rebated edges of boards in batten doors, and other suchlike inaccessible parts of joinery shall, before the joinery is assembled, be primed or where the joinery is to receive a finish other than paint, be given one coat of such other finishing material.

Priming to external structural timbers shall be applied before the timbers are fixed in position and shall include all wrought surfaces, such as backs of fascia and barge boards.

**PB5.9.4 Application Of Paint**

All coats of paint shall be thoroughly dry before subsequent coats are applied and rubbed down where necessary.

All work shall be finished to colour approved by the Engineer. The tints of undercoats shall approximate those of the finishing colour and in order to indicate the number of coats applied and to avoid misses when applying a succeeding coat, a slight difference shall be made in tint of each coat.

Priming on wood surfaces shall be by brush application. Priming on surfaces other than wood shall be by brush application or if in the opinion of the Engineer, the primer and the surfaces are considered suitable for roller application, the primer may be so applied. Priming applied by brush application shall be well brushed in to obtain maximum penetration.

Undercoat and finishing coats may be applied by brush or roller.

The use of spray gun on site for application of paint will not be permitted, except in the case of cellulose and other special cases where spraying is the accepted method of application; in cases where spraying is permitted all surrounding surfaces shall be properly masked.

The finishing coat on woodwork and metalwork, unless otherwise specified, shall be of high gloss paint. All materials shall be used in strict accordance with the manufacturer's instructions.

**PB5.10 PROTECTION AND CLEANING OF WORKS**

The Contractor shall provide all necessary dust sheets, covers, etc., and shall exercise all necessary care to prevent marking surfaces of walls, floors; ceilings, glass, electrical fittings, etc., and shall keep all parts of the works perfectly clean and free at all times from spotting, accumulation of rubbish, debris or dirt arising from the operations. Any surface disfigured or otherwise damaged shall be completely renovated or replaced as necessary, to the Engineer's approval, by the Contractor at his own expense.

The Contractor shall test all doors, fanlights and windows and all other fittings for proper operation and effect the required rectification prior to the handing over of the building.

The premises shall be left clean and fit for occupation at the completion of the work.

**PB6. TOLERANCES****PB6.1 BASIS OF MEASUREMENT****PB6.1.1 General**

Permissible deviations will apply in the case of linear dimensions, position, and level. The Contractor shall construct each of the various parts of the works within the limits of the applicable permissible deviations set out in clause 6.2 unless some other degree of accuracy is required in terms of the project specification or is shown on the drawings.

**PB6.1.2 Methods Of Measurement Of Deviations**

Certain deviations will be measured as set out below:

- (a) Any deviation from flatness of a plane surface, will be measured as the maximum deviation of the surface from any straight line of length 3 m joining two points on the surface, determined by means of a straight edge the ends of which are supported on identical blocks of suitable thickness placed one over each of the points.
- (b) Any abrupt change in a continuous surface, including a local depression or peak in a floor or wall, will be measured as specified in (a) above.
- (c) Out-of-squareness of a corner or an opening or an element such as a column will be measured by taking the longer of two adjacent sides as the base line, and determining any departure from the perpendicular of the side at either end of this base line.

**PB6.2 PERMISSIBLE DEVIATIONS**

The permissible deviations for elements or components shall be as follows:

- (a) Position on plan of any edge or surface measured from the nearest grid line or agreed centre line ..... ± 25 mm
- (b) Linear (other than cross-section) dimensions ..... ± 30 mm
- (c) Cross-section dimensions ..... -10 + 20 mm
- (d) Level (deviation from designed level with reference to the nearest transferred datum (TD) of the upper or lower surface, as may be specified, of any slab or other element or component) ..... ± 10 mm
- (e) Out-of-squareness of a corner or an opening or an element such as a column (See clause 6.1.2(c)) for short side of length:
  - (i) up to and including 0,5 m ..... ± 5 mm
  - (ii) over 0,5 m up to and including 2 m ..... ± 15 mm
  - (iii) over 2 m up to and including 4 m ..... ± 20 mm
- (f) Exposed surface (including floor slabs and paving):
  - (i) Flatness of plane surface ..... ± 5 mm
  - (ii) Abrupt changes in a continuous surface ..... ± 5 mm
- (g) Exposed surface to be plastered or receive normal or granolithic screeds:
  - (i) Flatness of plane surface ..... ± 10 mm
  - (ii) Abrupt changes in a continuous surface ..... ± 5 mm
- (h) Surface of plaster and normal or granolithic screeds ..... ± 5 mm

**PB7. TESTS****PB7.1 GENERAL**

The Engineer shall have free access to the works for taking samples and carrying out tests. The Contractor shall render any assistance necessary. If so required, the Contractor shall provide storage and protection of such samples on site.



# ANNEXURES

**ANNEXURE A:  
HEALTH & SAFETY SPECIFICATION**

**ANNEXURE B:**  
**ENVIRONMENTAL MANAGEMENT PLAN**

**ANNEXURE C:  
DRAWINGS**