



KAREEBERG MUNICIPALITY

UPGRADING OF CARNARVON OXIDATION PONDS PHASE 1: CONSTRUCTION OF INLET WORKS AND ANAEROBIC POND

TENDER NO.: KBM 11-2026

.....
NAME OF TENDERER:

.....
TOTAL AMOUNT (VAT INCLUDED)

PERIOD FOR COMPLETION.....WEEKS

April 2026

COMPILED FOR:

Kareeberg Municipality
10 Hanau Street
Private Bag X226
Carnarvon
8925

Tel: +27 (0)53 382 3012
Fax: +27 (0)53 382 3142
email: il.manciya@gmail.com

COMPILED BY:

iX Engineers (Pty) Ltd
Contact person: Tanryn Johnson-Ackeer
10 Oliver Road
PO Box 50
Kimberley, 8300
South Africa
Telephone: +27 (0)53 830 0460
email: tanryn.j@ixengineers.co.za

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KAREEBERG MUNICIPALITY

**UPGRADING OF CARNARVON OXIDATION PONDS
PHASE 1: CONSTRUCTION OF INLET WORKS AND ANAEROBIC POND**

TENDER NO.: KBM 11-2026

<p>PARTICULARS OF TENDERER</p>

1. TENDERER:
ADDRESS:
CONTACT PERSON:
TELEPHONE NUMBER:
FAX NUMBER:
2. BANK:
BRANCH:
CHEQUE ACCOUNT NUMBER:
CONTACT PERSON:
TELEPHONE NUMBER:
3. PERFORMANCE SECURITY:
BRANCH -CONTACT PERSON:
TELEPHONE NUMBER:
4. VAT REGISTRATION NUMBER:
5. CIDB REGISTRATION NUMBER:

.....
SIGNATURE OF TENDERER

.....
DATE

KAREEBERG MUNICIPALITY
UPGRADING OF CARNARVON OXIDATION PONDS
PHASE 1: CONSTRUCTION OF INLET WORKS AND ANAEROBIC POND
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KAREEBERG MUNICIPALITY
UPGRADING OF CARNARVON OXIDATION PONDS
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PART T1: TENDERING PROCEDURES

- T1.1 Tender Notice and Invitation to Tender**
- T1.2 Tender Data**

KAREEBERG MUNICIPALITY
UPGRADING OF CARNARVON OXIDATION PONDS
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T1.1 : TENDER NOTICE AND INVITATION TO TENDER

Kareeberg Municipality



TENDER: KBM 11-2026

UPGRADING OF CARNARVON OXIDATION PONDS
PHASE 1: CONSTRUCTION OF INLET WORKS AND ANAEROBIC POND

TENDER NOTICE AND INVITATION TO TENDER

The KAREEBERG MUNICIPALITY invites tenderers from civil engineering contractors for the **UPGRADING OF CARNARVON OXIDATION PONDS PHASE 1: CONSTRUCTION OF INLET WORKS AND ANAEROBIC POND**

It is estimated that tenderers should have a CIDB contractor grading designation of 5 **CE** or higher and must be a B-BBEE level 3 contributor or higher. (Only B-BBEE Level 1, 2 and 3 can submit offers).

Contractors registered as potentially emerging (PE) enterprises with the CIDB who are registered in one contractor grading designation lower than that required in terms of the total sum tendered are also eligible to tender.

Only tenderers who satisfy the eligibility criteria stated in the Tender Conditions and Tender Data are eligible to submit tenders.

The Kareeberg Municipality Procurement and Supply Chain Management Policies, the Preferential Procurement Policy framework Act, Act No 5 of 2000 and the regulations promulgated under this act shall apply in the adjudication and awarding of the tender.

Tender documents will be available electronically on e-tenders and municipal website from 1 April 2026.

Queries relating to these documents may be addressed directly to Mr. Lusanda Manciya at (053) 382 3102.

A compulsory site inspection meeting with representatives of the Employer will take place at the municipal offices of **Kareeberg Municipality, Hanau Street in Carnarvon on 14 April 2026** starting at **10:00 AM**. Persons arriving later than **12:00** will not be allowed into the meeting. Only tenderers who attend the compulsory site inspection meeting are eligible to submit tenders. ***Proof of attendance at Clarification meeting must be submitted with tender documents.***

The closing time for receipts of tender is **12h00 PM on Friday, 8 May 2026**. Sealed tenders, endorsed with the corresponding tender number and description, must be placed in the tender box at **Kareeberg Municipality, Hanau Street, Carnarvon, 9825**. Tenders will be opened on the same day in the Council Chambers at 12:00. Late or unmarked tenders will not be considered. **Hand-delivered or posted bids are acceptable but tenders received via e-mail and other electronic media will NOT be accepted.** Please note that the tender box is only available between Monday and Friday from 08:00 to 16:00

KAREEBERG MUNICIPALITY
UPGRADING OF CARNARVON OXIDATION PONDS
PHASE 1: CONSTRUCTION OF INLET WORKS AND ANAEROBIC POND
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T1.2 : TENDER DATA

The Conditions of Tender are the Standard Conditions of Tender as contained in Annex F of the CIDB Standard for Uniformity in Construction Procurement (refer: www.cidb.org.za) and included as Appendix A in this document.

The Standard Conditions of Tender make several references to the Tender Data. 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.

Clause	Wording
F.1.1	The employer is KAREEBERG MUNICIPALITY
F.1.2	<p>The tender documents issued by the employer comprise:</p> <p>PART T1 : TENDERING PROCEDURES</p> <p>T1.1: Tender Notice and Invitation to Tender</p> <p>T1.2: Tender Data</p> <p>PART T2 : RETURNABLE DOCUMENTS</p> <p>T2.1: List of Returnable Documents</p> <p>T2.2: Returnable Schedules</p> <p>PART C1: AGREEMENTS AND CONTRACT DATA</p> <p>C1.1: Form of Offer and Acceptance</p> <p>C1.2: Contract Data (Part 1 and 2)</p> <p>C1.3: Performance Guarantee</p> <p>C1.4: Occupational Health and Safety Agreement</p> <p>C1.5: Disclosure Statement</p> <p>C1.6: Adjudication Board Member Agreement</p> <p>PART C2 : PRICING DATA</p> <p>C2.1: Pricing Instructions</p> <p>C2.2: Bills of Quantities</p> <p>C2.3: Summar of Bill of Quantities</p> <p>C2.4 Daywork Schedule</p> <p>PART C3 : SCOPE OF WORK</p> <p>C3.1 Description of the Works</p> <p>C3.2 Engineering</p> <p>C3.3 Procurement</p> <p>C3.4 Construction</p> <p>C3.5 Management</p> <p>C3.6 Occupational Health and Safety Specification</p> <p>C3.7 Annexes</p> <p>PART C4 : SITE INFORMATION</p>

Clause	Wording
F.1.4	<p>The Employer's agent is:</p> <p>Name: iX Engineers (Pty) Ltd</p> <p>Address: 10 Oliver Road, Monument Heights, Kimberley, 8301</p> <p>Tel: (0) 53 830 0460</p> <p>E-mail: tanryn.j@ixengineers.co.za</p>
F.2.1.1	<p>Only those tenderers who satisfy the following criteria are eligible to submit tenders:</p> <p>a) Availability of previous experience on contracts of a similar nature; Bidder experience.</p> <p>b) Availability of skills to manage and perform the contract, Key Personnel Qualification and Key Personnel Experience</p> <p>c) Availability of resources to execute and perform the works (plant and financial.</p> <p>d) Quality achievements on previous contracts of a similar nature.</p>
F.2.1.1.2	<p>Only those tenderers who are registered with the CIDB, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25 (7A) of the Construction Industry Development Regulations, for a 5 CE class of construction work, are eligible to have their tenders evaluated</p> <p>Joint Ventures are eligible to submit tenders provided that:</p> <ol style="list-style-type: none"> 1. every member of the joint venture is registered with the CIDB; 2. the lead partner has a contractor grading designation in the CE class of construction work; 3. the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a 5 CE class of construction work or a value determined in accordance with Regulation 25 (1B) or 25 (7A) of the Construction Industry Development Regulations. <p>Notwithstanding the above, tenderers who are capable of being so registered prior to the evaluation of submissions may be evaluated at the sole discretion of the Employer.</p>
F.2.7	<p>The arrangements for a compulsory clarification meeting are:</p> <p>Location: Offices of Kareeberg Municipality, Hanau Street, Carnarvon</p> <p>Date: 14 April 2026</p> <p>Starting time: 10:00 AM</p>
F.2.12	<p>If, a tenderer wishes to submit an alternative 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.2.13.5 F.2.15.1	<p>The Employer's address for delivery of tender offers and identification details to be shown on each tender offer package are:</p>

Clause	Wording
	Location of tender box: Kareeberg Municipality Physical address: 10 Hanau Street Carnarvon
	Postal address: P.O. Box 226, Carnarvon, 8925 Identification details: "TENDER NO: KBM 11-2026.: UPGRADING OF CARNARVON OXIDATION PONDS PHASE 1: CONSTRUCTION OF INLET WORKS AND ANAEROBIC POND"
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: 12:00 PM on Friday, 8 May 2026
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.2.22	Return all retained tender documents within twenty eight (28) days after the expiry of the validity period.
F.2.23 F2.23.1 F2.23.2	The tenderer is required to submit the following certificates with his tender: Tax Clearance Certificate Tenderers shall be registered and in good standing with the South African Revenue Service (SARS) and shall submit documentary evidence in the form of an original valid Tax Clearance Certificate issued by SARS or proof that he or she has made arrangements with SARS to meet his or her outstanding tax obligations. A new tax clearance certificate issued as from 18 April 2016, and/or the document issued by SARS indicating the tax clearance PIN. Please note that it is the responsibility of the supplier to ensure that all tax related matters are in order daily. Each party to a Consortium/Joint Venture shall submit a separate Tax Clearance Certificate, or proof that he or she has made the necessary arrangements with SARS. Either a Certificate of Contractor Registration issued by the Construction Industry Development Board <i>OR</i> a copy of the application Form for registration in terms of the Construction Industry Development Board Act (Form F006)
F.3.2	Issue addenda <i>Add the following to F.3.2:</i> 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	The procedure for the evaluation of responsive tenders will be based on the 90/10 or 80/20 preference point system. The financial offer will be scored using the prescribed formula in the Preferential Procurement Policy Framework Act (PPPFA). The applicable system will be determined as follows: 1) 90/10 system: where the estimated tender value exceeds R50 000 000 (inclusive of VAT) 2) 80/20 system: where the estimated tender value is equal to or less than R50 000 000 (inclusive of VAT) Functionality will be evaluated as a threshold requirement prior to price and preference scoring.

Scoring functionality:

The following criteria will be used to score the functionality criterion:

1. Experience of Bidder	30 POINTS
No information Supplied	0
3 x Completed projects of a similar nature less than 5 million	10
3 x Completed projects of a similar nature greater than 5 million and less than 10 million	20
3 x Completed projects of a similar nature greater than 10 million and less than 15 million	30
2. Key Personnel Qualification	20 POINTS
No Information Supplied	0
Personnel have no qualification	5
Personnel have Proof of certified qualification	10
Personnel Professionally registered with relevant body	20
3. Key Personnel Experience	15 POINTS
No Information Supplied	0
Personnel have limited experience (0-5 years)	5
Personnel have reasonable experience (5 – 9 years)	10
Personnel have extensive experience (> 10 years)	15
4. Construction Schedule and Availability of Resources/Plant	20 POINTS
No Information Supplied	0
Limited availability and allocation of resources. Programme and method statement indicate project will be completed beyond specified period.	5
Good availability and allocation of resources. Programme and method statement indicate project will be completed beyond 110% of Specified Period.	7
Good availability and allocation of resources. Programme and Method Statement indicate project will be completed within the specified duration of project	10
Excellent availability and allocation of resources. Programme and Method Statement indicate project will be completed within the specified duration of project.	15
5. Bank rating	15 POINTS
"E" or lower Bank Rating	0
"D" Bank Rating	5
"C" Bank Rating	7
"B" Bank Rating	10
"A" Bank Rating	15
6. TOTAL POINTS	100
7. QUALIFYING POINTS 75	

1. Company related working experience (30 Points)

Points will be awarded for the 4 (four) highest value project successfully completed within the last ten (10) years. The Tenderer must submit proof of successfully completed similar and sewer related comparative projects, i.e. construction of wastewater treatment work. Appointment Letter (on the client's letter head) and Copies of Contractor's Completion Certificate (with signatures of the Client, the Consulting Engineer and the Contractor) must be attached for each project.

Target Goals	Point Allocation
Completed projects of less than R 5,0 million in the 10 years.	10

Completed projects from R 5,0 Million and less than R10,0 million in the 10 years.	20
Completed projects from R 10,0 Million and less than R15,0 million in the 10 years.	30

2. Key Staff Competence (20 Points)

The Tenderer must submit Proposed Team Structure, identifying Contract Manager, Site Agent, General Foreman and OHS Practitioner as key personnel. Certified qualifications for each key personnel must be attached for determination of points to be allocated as per the table below:

Key Personnel	Target Goals	Point Allocation
Contract Manager	Proof of certified qualification of BEng/ BSc/ BTech in Civil Engineering of higher. Professionally registered with ECSA as Pr.Eng/ Pr.Tech Eng/ Pr. Techni	10
	Proof of certified qualification of National Diploma in Civil Engineering of higher	5
	Less than above	2
Construction Manager / Site Agent	Proof of certified qualification of BEng/ BSc/ BTech in Civil Engineering of higher	5
	Proof of certified qualification of National Diploma in Civil Engineering of higher	3
	Less than above	1
OHS Practitioner	Accredited OHS Qualification by SAIOSH and SACPCMP or any recognised accredited organisation	3
	Less than above	1
General Foreman	Trade qualification NQF 4 – Labour intensive	2
	Less than above	1

3. Experience of Key Staff (15 Points)

The Tenderer must submit Proposed Team Structure, identifying Contract Manager, Site Agent, General foreman and OHS Practitioner as key personnel. Copies of a comprehensive CVs (not more than 5 pages) with contactable references, clearly outlining the years of related experience for each key personnel must be attached for determination of points to be allocated as per the table below:

Key Personnel	Target Goals	Point Allocation
Contract Manager	10 years or more	15
	5 to 9 years	3
	Less than 5 years	1
Construction Manager / Site Agent	10 years or more	4
	5 to 9 years	2
	Less than 5 years	1
OHS practitioner	10 years or more	3
	5 to 9 years	2
	Less than 5 years	1
General Foreman	10 years or more	3

	5 to 9 years	2
	Less than 5 years	1

4. Proposed Programme and Method statement (10 Points)

The Tenderer must submit Proposed Program of Works and method statement for the project, clearly outline the main activities and timeframe from start to end of the project.

Target Goals	Point Allocation
No program attached	0
Inadequate or no information submitted for either or all of the following: - Program Not in Gant Chart format - Program and method statement do not outline proposed program of all main construction activities	5
Adequate or detailed and realistic information submitted for either or all of the following: - Program in Gant Chart format - Program and method statement outline the proposed program of all main construction activities	10

5. Plant and Equipment (10 Points)

TLB	≥ 1 TLB's	2
	no TLB	0
Excavator	≥ 1 Excavator	2
	No Excavator	0
Pedestrian Roller (Walk behind Roller)	≥ 2 Hand compactor	2
	No Hand compactor	0
Water Tanker	≥1 Water tanker	1
	No Water tanker	0
Tipper Truck	≥ 1Tipper Trucks	1
	No tipper truck	0
Concrete Mixer	≥ 1 Concrete Mixer	2
	No Concrete Mixer	0

6. Bank Rating (15 Points)

Bank ratings are interpreted as follows:

Rating	Description	Point Allocation
A	Undoubted for amount of enquiry	15
B	Good for amount of enquiry	10
C	Good for amount quoted, if strictly for business	5

D	Fair trade risk for amount quoted	1
E-H	Amount to high/New account/Dishonest on record/ Frequently dishonest	0
F.3.13.1	<p>Tender offers will only be accepted if:</p> <ol style="list-style-type: none"> a) the offer section of the “Form of Offer and Acceptance” (Part C1.1) is fully completed and signed; b) the tenderer submitted with the tender offer an original valid Tax Clearance Certificate issued by the South African Revenue Services; c) the tenderer submitted with the tender offer a valid B-BBEE certificate indicating that the tenderer is registered as a LEVEL 1(ONE) - LEVEL 3 (three) contributor. d) the tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation; e) bidders are registered at National Treasury’s Central Suppliers Data Base (CSD) and proof is submitted; f) the tenderer is not in arrears for more than 3 months with municipal rates and taxes and municipal service charges; g) the tenderer or any of its directors is not listed in 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; and h) the tenderer has not: <ol style="list-style-type: none"> i) abused the Employer’s Supply Chain Management System; or ii) failed to perform on any previous contract and has been given a written notice to this effect; and i) 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 comprise the tender process. j) The tender has satisfied the functionality criterion and obtained a minimum score of 75 points. 	
F.3.18	The number of paper copies of the signed contract to be provided by the Employer is 1	
	<p>The additional conditions of tender are:</p> <ol style="list-style-type: none"> 1. Prices must be valid for 120 days and must be inclusive of VAT 2. Tenders need a valid Tax Clearance Certificate for tender. If no certificate is available, the tender will be rejected. 3. Proof of CIDB registration in 5CE or 5CE PE is required. If no certificate is available, the tender will be rejected. 4. The lowest or any tender will not necessarily be accepted. 5. The tender document must be completed in black Ink by means of ball point pen. Pencil entries will render the tender offer non-compliant. Computerized/typed tenders will be disqualified. 6. The tender document must be completed on the original tender document. Copies of the tender document or parts thereof will render the document non-responsive. 7. Bids that are late or non-complaint will not be considered. 	

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PART T2: RETURNABLE DOCUMENTS

T2.1 List of Returnable Documents

KAREEBERG MUNICIPALITY
UPGRADING OF CARNARVON OXIDATION PONDS
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T2.1: LIST OF RETURNABLE DOCUMENTS

The following documents are to be completed and returned as they constitute the tender. Whilst many of the returnables are required for the purpose of evaluating the tenders, some will form part of the subsequent contract, as they form the basis of the tender offer. For this reason, it is very important that tenderers return **all information requested**.

**T2.1.1 RETURNABLE SCHEDULES REQUIRED FOR TENDER EVALUATION PURPOSES
(included hereafter for completion)**

- Schedule: 1 Invitation to Bid (MBD 1)
- Schedule: 2 Declaration of Interest (MBD 4)
- Schedule: 3 Compulsory Enterprise Questionnaire
- Schedule: 4 Authority of Signatory
- Schedule: 5 Certificate of Authority for Joint Ventures
- Schedule: 6 Personnel Schedule
- Schedule: 7 Schedule of Plant and Equipment available for the Contract
- Schedule: 8 Schedule of Work Experience
- Schedule: 9 Details of Key-personnel Experience
- Schedule: 10 Program and Monthly Expenditure
- Schedule: 11 Schedule of Proposed Subcontractors
- Schedule: 12 Proposed Amendments and Qualifications
- Schedule: 13 Certificate of Attendance at Clarification Meeting
- Schedule: 14 Declaration in terms of the MFMA (No 56 of 2003) with respect to Municipal Rates and Services (MBD 8)
- Schedule: 15 CSD Registration
- Schedule: 16 Quality Assurance Plan
- Schedule: 17 Tax Clearance Certificate Requirements (MBD 2)
- Schedule: 18 A: Tax Clearance Certificate
 B: Certificate of Contractors Registration issued by the CIDB
 C: Tender Entity Identification
 D: Audited Financial Statement (if >R10 million incl. VAT)
 E: B-BBEE Certificate

T2.1.2**OTHER DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES
(append to relevant schedule in document or attach separately to this document)**

- Certificate of Contractors Registration issued by the CIDB – Append to Schedule 19
- Proof that bidder is registered at National Treasury's Central Suppliers Data Base (CSD). Append to Schedule 15.
- Proof of Authority of Signatory – Append to Schedule 4
- Original Tax Clearance Certificate / Application for Tax Clearance Certificate - Append to Schedule 18
- Certificated copy of the Certificate of Incorporation of his/her company, founding statements if a closed corporation or a certified copy of the partnership agreement if a partnership.

In the case of a Joint Venture between two or more firms, a certified copy of the Joint Venture Agreement and proof of existence of each member as required above. – Append to Schedule 18

- Joint Venture Agreement, if applicable – Append to Schedule 5
- Curriculum Vitae of Key-personnel – Append to Schedule 6
- Audited financials for the past three years or since the establishment of the enterprise, if required by law to produce annual financial statements (if >R10 Million incl. VAT); Append to Schedule 18

T2.1.3**RETURNABLE SCHEDULES THAT WILL BE INCORPORATED INTO THE CONTRACT
(to be attached with submission)**

- | | |
|--------------|--|
| Schedule: 19 | Record of Addenda to Tender Documents |
| Schedule: 20 | Preference Points Claim Form in terms of the Preferential Procurement Regulations 2011 and Affidavit that will be incorporated into the Contract (MBD 6.1) |
| Schedule: 21 | Declaration Concerning Fulfillment of the Construction Regulations, 2003 |
| Schedule: 22 | Certificate of Independent Bid Determination (MBD 9) |

Part C1**OTHER SCHEDULES AND AFFIDAVITS THAT WILL BE INCORPORATED INTO THE CONTRACT (included hereafter for completion)**

- | | |
|-------|---|
| C1.1: | The Offer portion of the Form of Offer and Acceptance |
| C1.2: | Contract Data (Part 2) |
| C1.3: | Performance Guarantee (Pro Forma) |
| C1.4: | Occupational Health and Safety Agreement |
| C1.5: | Disclosure Statement |
| C1.6: | Adjudication Board Member Agreement |
| C2.2: | Bills of Quantities |
| C2.3: | Daywork Schedule |

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SCHEDULE 1: INVITATION TO BID

MBD 1

INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE
KAREEBERG MUNICIPALITY

BID NUMBER: KBM 11-2026 **CLOSING DATE:** 8 May 2026 **CLOSING TIME:** 12:00

DESCRIPTION: UPGRADING OF CARNARVON OXIDATION PONDS
PHASE 1: CONSTRUCTION OF INLET WORKS AND ANAEROBIC POND

The successful bidder will be required to fill in and sign a written Form of Offer and Acceptance (C1.1)

BID DOCUMENTS MAY BE POSTED TO:

P.O. Box 226

CARNARVON, 8925

OR

DEPOSITED IN THE BID BOX SITUATED AT (*STREET ADDRESS*)

10 Hanau Street, CARNARVON, 8925

Bidders should ensure that bids are delivered timeously to the correct address. If the bid is late, it will not be accepted for consideration.

The bid box is open normal working hours from Monday to Friday

ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS – (NOT TO BE RE-TYPED)

THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2011, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT

KBM 11-2026

List of Returnable Documents

NB: NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE (as defined in Regulation 1 of the Local Government: Municipal Supply Chain Management Regulations)

**THE FOLLOWING PARTICULARS MUST BE FURNISHED
(FAILURE TO DO SO MAY RESULT IN YOUR BID BEING DISQUALIFIED)**

NAME OF BIDDER
POSTAL ADDRESS
STREET ADDRESS
TELEPHONE NUMBER CODE.....NUMBER.....
CELLPHONE NUMBER
FACSIMILE NUMBER CODENUMBER.....
E-MAIL ADDRESS
VAT REGISTRATION NUMBER

HAS AN ORIGINAL AND VALID TAX CLEARANCE CERTIFICATE BEEN ATTACHED? (MBD 2)
YES/NO

HAS A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE BEEN SUBMITTED? (MBD 6.1)
YES/NO

IF YES, WHO WAS THE CERTIFICATE ISSUED BY?

- AN ACCOUNTING OFFICER AS CONTEMPLATED IN THE CLOSE CORPORATION ACT (CCA)
 - A VERIFICATION AGENCY ACCREDITED BY THE SOUTH AFRICAN NATIONAL ACCREDITATION SYSTEM (SANAS)
 - A REGISTERED AUDITOR
- (Tick applicable box)

(A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE 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? YES/NO
(IF YES ENCLOSE PROOF)

SIGNATURE OF BIDDER

DATE

CAPACITY UNDER WHICH THIS BID IS SIGNED

TOTAL BID PRICE.....TOTAL NUMBER OF ITEMS OFFERED

ANY ENQUIRIES REGARDING THE BIDDING PROCEDURE MAY BE DIRECTED TO:

Kareeberg Municipality

ANY ENQUIRIES REGARDING TECHNICAL INFORMATION MAY BE DIRECTED TO:

Contact Person: Mr. Lusanda Manciya

Tel: 053 – 382 3012

Fax: 053 – 382 3142

KAREEBERG MUNICIPALITY
UPGRADING OF CARNARVON OXIDATION PONDS
PHASE 1: CONSTRUCTION OF INLET WORKS AND ANAEROBIC POND
TENDER NO.: KBM 11-2026

SCHEDULE 2 : DECLARATION OF INTEREST

MBD 4

DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state*.
2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority and/or take an oath declaring his/her interest.

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

- 3.1 Full Name:
- 3.2 Identity Number:
- 3.3 Company Registration Number:
- 3.4 Tax Reference Number:
- 3.5 VAT Registration Number:

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

* MSCM Regulations: "in the service of the state" means to be –

- (a) a member of –
 - (i) any municipal council;
 - (ii) any provincial legislature; or
 - (iii) the national Assembly or the national Council of provinces;
- (b) a member of the board of directors of any municipal entity;
- (c) an official of any municipality or municipal entity;
- (d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);
- (e) a member of the accounting authority of any national or provincial public entity; or
- (f) an employee of Parliament or a provincial legislature.

KBM 11-2026

List of Returnable Documents

3.6.1 If so, furnish particulars.

.....
.....

3.7 Have you been in the service of the state for the past twelve months?

YES / NO

3.7.1 If so, furnish particulars.

.....
.....

3.8 Do you, have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid?

3.8.1 If so, furnish particulars.

.....
.....

3.9 Are you, aware of any relationship (family, friend, other) between a bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid?

3.9.1 If so, furnish particulars

.....
.....

YES / NO

YES / NO

3.10 Are any of the company's directors, managers, principal shareholders or stakeholders in service of the state?

YES / NO

3.10.1 If so, furnish particulars.

.....
.....

3.11 Are any spouse, child or parent of the company's directors, managers, principal shareholders or stakeholders in service of the state?

YES / NO

3.11.1 If so, furnish particulars.

.....
.....

CERTIFICATION

I, THE UNDERSIGNED (NAME)

CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS CORRECT.

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

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

KAREEBERG MUNICIPALITY
UPGRADING OF CARNARVON OXIDATION PONDS
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SCHEDULE 3 : 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 of service of the state

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

- | | |
|--|---|
| <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 |
|--|---|

If any of the above boxes are marked, disclose the following: (insert separate page if necessary)

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"/> 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 any provincial legislature | <input type="checkbox"/> a member of an accounting authority of any national or provincial public entity |
| <input type="checkbox"/> a member of the National Assembly or the National Council of Province | <input type="checkbox"/> an employee of Parliament or a provincial legislature |
| <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 | |

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 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, 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;
- v) 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 _____

* The schedule should be used where tenders are subject to the local Government: Municipal Finance Management Act

KAREEBERG MUNICIPALITY
UPGRADING OF CARNARVON OXIDATION PONDS
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SCHEDULE 4: AUTHORITY FOR SIGNATORY
--

Indicate the status of the tenderer by ticking the appropriate box hereunder. The tenderer must complete the certificate set out below for the relevant category and attach any supporting documentation to the relevant schedule.

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

A. Certificate for Company

I,, chairperson of the board of directors of
, hereby confirm that by resolution of the
 board (copy attached) taken on 20..., Mr/Ms
 acting in the capacity of, was authorized to sign all documents in
 connection with this tender and any contract resulting from it on behalf of the company.

As witnesses:

- | | |
|---------|------------------|
| 1. | Chairman : |
| 2. | Date : |

B. Certificate for Partnership

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

NAME	ADDRESS	SIGNATURE	DATE

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

C. Certificate for Joint Venture

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorize Mr/Ms , authorised signatory of the company , acting in the capacity of lead partner, to sign all documents in connection with the tender offer for Contract and any contract resulting from it on our behalf.

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

NAME OF FIRM	ADDRESS	AUTHORISING SIGNATURE, NAME & CAPACITY
Lead partner		

D. Certificate for Sole Proprietor

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

As witnesses:

1. _____ Signature: Sole owner : _____
 2. _____ Date : _____

E. Certificate for Close Corporation

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

NAME	ADDRESS	SIGNATURE	DATE

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

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SCHEDULE 5: CERTIFICATE OF AUTHORITY FOR JOINT VENTURES
--

This returnable schedule is to be completed by joint ventures.

We, the undersigned, are submitting this tender offer in joint venture and hereby authorize Mr/Ms ...
, authorised signatory of the company, close corporation or partnership
, acting in the capacity of lead partner, to sign all documents in connection with the tender offer and any contract resulting from it on our behalf.

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

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

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SCHEDULE 6: PERSONNEL SCHEDULE

Job Description	Number of Non-Local Labour to be Employed on the Contract	Number of Local Labour to be Employed on the Contract
Contract Manager		
Site Agent		
Quantity Surveyor		
Surveyors		
General Foreman		
Foremen		
Community Officers		
Clerks		
Operators		
Bricklayers		
Learner Bricklayers		
Steel fixers		
Watchmen		
Gang Bosses		
Pipe Layers		
Labourers		
* Other		
* Other		
* Other		

* To be filled in by Tenderer

Signed Date

Name Position

Tenderer

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<p>SCHEDULE 7: SCHEDULE OF PLANT AND EQUIPMENT AVAILABLE FOR THE CONTRACT</p>
--

The following are lists of major items of relevant equipment that I/we **presently** own or lease and will have available for this contract or will acquire or hire for this contract if my/our tender is accepted.

(a) Details of major equipment that is owned by and immediately available for this contract.

Quantity	Description, Size, Capacity, etc

Attach additional pages if more space is required.

(b) Details of major equipment that will be hired, or acquired for this contract if my/our tender is acceptable.

Quantity	Description, Size, Capacity, etc

Attach additional pages if more space is required.

Signed Date

Name Position

Tenderer

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SCHEDULE 8: SCHEDULE OF WORK EXPERIENCE
--

The tenderer shall insert in the spaces provided below a list of the tenderer's past work experience in terms of similar successfully completed projects. The value and scale of the projects indicated for these purposes must be supplied together with any other relevant information requested.

Listed projects with invalid or incorrect contact details for the employer and/or consulting engineer and information not supplied in the format as requested below will **NOT** be evaluated and the tenderer will score **NO** eligibility points in this regard.

Employer (Name and Contact No)	Consulting Engineer (Name and Contact No)	Similar projects (Tenderer need to identify the type of work in a short description)	Value of Work (incl. VAT) (R million)	Date completed (Month and Year)

Signed Date

Name Position

Tenderer

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SCHEDULE 9: DETAILS OF KEY-PERSONNEL'S EXPERIENCE
--

The tenderer shall set out in the tables hereafter details of the relevant experience in similar successfully completed projects of the persons identified for each listed position.

Tenderers that fail to supply the information requested in this schedule (both pages of this schedule included) with their tender offers and in this format will **NOT** be evaluated and the tenderer will score **NO** eligibility points in this regard.

Note: One person only to qualify for each of the positions listed below. The key personnel to be used in this regard will be subject to the approval of the Engineer prior to the commencement date of the contract. Should any of the persons identified not be available for the position which they are indicated for, then a suitable candidate with equal or superior tertiary qualification and/or relevant experience than that of the person which he/she replaces shall be used for every such position.

Contact's Manager	NAME:			
	TERTIARY QUALIFICATION			
	Project Description	Position held	Value of work (Incl. VAT) (R million)	Year completed

Site Agent	NAME:			
Contact and Client	TERTIARY QUALIFICATION			
	Project Description	Position held	Value of work (Incl. VAT) (R million)	Year completed
.....				

General Foreman	NAME:			
Contact and Client	TERTIARY QUALIFICATION			
	Project Description	Position held	Value of work (Incl. VAT) (R million)	Year completed
.....				

Signed Date

Name Position

Tenderer
.....

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SCHEDULE 10: ESTIMATED MONTHLY CASH-FLOW

The tenderer shall state his estimated expenditure for the duration of the construction period indicated with the values of each monthly claim in terms of Clause 6.10.1 of the Conditions of Contract (2015) which he estimates will arise based on his preliminary programme and tendered rates in the table below.

The amount for contingencies must not be included. The Tenderer must make note of any cash-flow restrictions.

The total of the monthly amounts indicated below shall be equal to the tender price less contingencies.

Tenderers that fail to supply the information requested in this schedule with their tender offers and in this format will score **NO** eligibility points in this regard.

Month	Value (Rand)
1 st	R
2 nd	R
3 rd	R
4 th	R
5 th	R
6 th	R
7 th	R
8 th	R
9 th	R
10 th	R
SUBTOTAL	R
CONTINGENCIES (10%)	R
SUBTOTAL	R
VAT (14%)	R
TOTAL	R Incl. VAT

Signed Date

Name Position

TENDERER

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SCHEDULE 11: PROPOSED SUBCONTRACTORS

We notify you that it is our intention to employ the following Subcontractors to work on this contract.

If we are awarded the 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 Builder Registration Council.]

No.	Name and Address of Proposed Subcontractor	Nature and Extent of Work	Previous Experience with Subcontractor
1.			
2.			
3.			
4.			
5.			
6.			
7.			

Signed Date

Name Position

Tenderer

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SCHEDULE 12: 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

Tenderer

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SCHEDULE 13: CERTIFICATE OF ATTENDANCE AT CLARIFICATION MEETING

This is to certify that

..... (Tenderer)

of..... (address)

.....

was represented by the person(s) named below at the compulsory meeting held for all tenderers at

..... (location) on (date), starting at

We acknowledge that the purpose of the meeting was to acquaint ourselves with the site of the works and / or matters incidental to doing the work specified in the tender documents in order for us to take account of everything necessary when compiling our rates and prices included in the tender.

Particulars of person(s) attending the meeting:

Name Signature

Capacity

Name Signature

Capacity

Attendance of the above persons at the meeting is confirmed by the Employer's representative, namely:

Name Signature

Capacity Date & Time

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**SCHEDULE 14: DECLARATION IN TERMS OF THE MUNICIPAL
FINANCE MANAGEMENT ACT (No. 56 of 2003)
WITH RESPECT TO MUNICIPAL RATE AND SERVICES**

MBD 8

DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

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

Item	Question	Yes	No
4.1	Is the Tenderer or any of its directors listed on the National Treasury database as a company or person prohibited from doing business with the public sector? (Companies or persons who are listed on this database were informed in writing of this restriction by the National Treasury after the audi alteram partem rule was applied).	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.1.1	If so, furnish particulars:		
4.2	Is the Tenderer 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)? (To access this Register enter the National Treasury's website, www.treasury.gov.za, click on the icon "Register for Tender Defaulters" or submit your written request for a hard copy of the Register to facsimile number (012) 326 5445)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.2.1	If so, furnish particulars:		

4.3	Was the Tenderer or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.3.1	If so, furnish particulars:		
4.4	Does the Tenderer 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 Tenderer 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"/>
4.5.1	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 Tenderer

Where the entity tendering is a joint venture, each party to the joint venture must sign a declaration in terms of the Municipal Finance Management Act and attach it to this schedule

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SCHEDULE 15: CSD REGISTRATION

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SCHEDULE 16: QUALITY ASSURANCE PLAN

The tenderer shall attach to this schedule the proposed Quality Assurance Plan which will be implemented to effectively ensure quality control and compliance with the specified standards and requirements of this contract.

The tenderer shall also take into account the additional requirements stated in Part C3: Scope of Work when drawing up the Quality Assurance Plan for the contract.

Note: Where the entity tendering is a joint venture, one Quality Assurance Plan on behalf of the joint venture is adequate for these purposes.

Details of the Quality Assurance Plan shall be appended to this Schedule.

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

Signed Date

Name Position

Tenderer
.....

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SCHEDULE 17: TAX CLEARANCE CERTIFICATE REQUIREMENTS
--

MBD 2

TAX CLEARANCE CERTIFICATE REQUIREMENTS

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

- 1 In order to meet this requirement bidders are required to complete in full the 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 bidders / individuals who wish to submit bids.
- 2 SARS will then furnish the bidder 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 bid. Failure to submit the original and valid Tax Clearance Certificate will result in the invalidation of the bid. Certified copies of the Tax Clearance Certificate will not be acceptable.
- 4 In bids 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.
- 6 Applications for the Tax Clearance Certificates may also be made via eFiling. In order to use this provision, taxpayers will need to register with SARS as eFilers through the website www.sars.gov.za.

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SCHEDULE 18A: TAX CLEARANCE CERTIFICATE

A. TAX CLEARANCE CERTIFICATE

An **original** valid Tax Clearance Certificate from the South African Revenue Service (SARS) shall be attached to this Schedule or proof that the tenderer has made arrangements with SARS to meet his or her outstanding tax obligations.

Each party to a Consortium/Joint Venture shall submit a separate Tax Clearance Certificate, or proof that he or she has made the necessary arrangements with SARS.

B. CERTIFICATE OF CONTRACTOR'S REGISTRATION

A Certificate of the Contractor's Registration issued by the CIDB shall be attached to this schedule.

C. CERTIFIED COPY OF THE CERTIFICATE OF INCORPORATION

.....

D. INFORMATION REQUIRED FOR CONTRACTS OVER R10 MILLION

Tenderers are referred to Clause F.2.18.1 and shall, on written request from the Employer, provide all the required documentation where a tender price inclusive of VAT **exceeds R10 million**.

Each party to a Consortium/Joint Venture shall provide a separate set of documents.

E. CONTRACTS TO ORGANS OF STATE

.....

Signed Date

Name Position

Tenderer

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SCHEDULE 18B: CERTIFICATE OF CONTRACTORS REGISTRATION ISSUED BY THE CIDB

The tenderer must attach to this page a certified copy of the certificate of contractor registration of his/her company, close corporation or partnership issued by the CIDB. In the case of a joint venture between two or more firms, the tenderer shall attach a copy of the document of incorporation of the joint venture.

KAREEBERG MUNICIPALITY
UPGRADING OF CARNARVON OXIDATION PONDS
PHASE 1: CONSTRUCTION OF INLET WORKS AND ANAEROBIC POND
TENDER NO.: KBM 11-2026

SCHEDULE 18C: TENDER ENTITY IDENTIFICATION

KAREEBERG MUNICIPALITY
UPGRADING OF CARNARVON OXIDATION PONDS
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SCHEDULE 18D: AUDITED FINANCIAL STATEMENT (IF >R10 MILLION INCL. VAT)

KAREEBERG MUNICIPALITY
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SCHEDULE 18E: CERTIFICATE OF B-BBEE STATUS LEVEL OF CONTRIBUTOR
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The tenderer must attach to this page a certified copy of the certificate of B-BBEE status of his/her company, close corporation or partnership. In the case of a joint venture between two or more firms, the tenderer shall attach a copy of the document of incorporation of the joint venture.

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SCHEDULE 19: RECORD OF ADDENDA TO TENDER DOCUMENTS

Attach additional pages if more space is required.

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:

No.	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Signed Date

Name Position

Tenderer

KAREEBERG MUNICIPALITY
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**SCHEDULE 20: PREFERENCE POINTS CLAIM FORM IN TERMS OF
THE PREFERENTIAL PROCUREMENT REGULATIONS 2011 AND AFFIDAVIT THAT
WILL BE INCORPORATED INTO THE CONTRACT**

MBD 6.1

This preference form must form part of all bids invited. It contains general information and serves as a claim form for preference points for 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, 2011.

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 to not 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; and
- (b) B-BBEE Status Level of Contribution.

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

	POINTS
1.3.1.1 PRICE	80
1.3.1.2 B-BBEE STATUS LEVEL OF CONTRIBUTION	<u>20</u>
Total points for Price and B-BBEE must not exceed	100

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 Registered Auditor approved by the Independent Regulatory Board of Auditors (IRBA) or an Accounting Officer as contemplated in the Close Corporation Act (CCA) together with the bid, 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.

2. DEFINITIONS

- 2.1 “**all applicable taxes**” includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;
- 2.2 “**B-BBEE**” means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- 2.3 “**B-BBEE status level of contributor**” means the B-BBEE status received by a 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 “**bid**” means a written offer in a prescribed or stipulated form in 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 “**Broad-Based Black Economic Empowerment Act**” means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- 2.6 “**comparative price**” means the price after the factors of a non-firm price and all unconditional discounts that can be utilized have been taken into consideration;
- 2.7 “**consortium or joint venture**” means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract;
- 2.8 “**contract**” means the agreement that results from the acceptance of a bid by an organ of state;
- 2.9 “**EME**” means any enterprise with annual total revenue of R5 million or less.
- 2.10 “**Firm price**” means the price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition, or abolition of customs or excise duty and any other duty, levy, or tax, which, in terms of the law or regulation, is binding on the contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract;
- 2.11 “**functionality**” means the measurement according to predetermined norms, as set out in the bid documents, of a service or commodity 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 “**non-firm prices**” means all prices other than “firm” prices;
- 2.13 “**person**” includes a juristic person;
- 2.14 “**rand value**” means the total estimated value of a contract in South African currency, calculated at the time of bid invitations, and includes all applicable taxes and excise duties;
- 2.15 “**sub-contract**” means the primary contractor’s 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, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act and promulgated in the *Government Gazette* on 9 February 2007;
- 2.17 “**trust**” means the arrangement 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; and

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 of 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 The 80/20 or 90/10 Preference Point Systems

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

$$\begin{array}{ccc} \mathbf{80/20} & \mathbf{or} & \mathbf{90/10} \\ Ps = 80 \left(1 - \frac{Pt - Pmin}{Pmin} \right) & \mathbf{or} & Ps = 90 \left(1 - \frac{Pt - Pmin}{Pmin} \right) \end{array}$$

Where

Ps = Points scored for comparative price of bid under consideration

Pt = Comparative price of bid under consideration

Pmin = Comparative price of lowest acceptable bid

5. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTION

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

B-BBEE Status Level of Contributor	Number of points (90/10 system)	Number of points (80/20 system)
1	10	20
2	9	18
3	8	16
4	5	12
5	4	8
6	3	6
7	2	4
8	1	2
Non-compliant contributor	0	0

5.2 Bidders who qualify as EME's 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.

5.3 Bidders other than EMEs must submit their original and valid B-BBEE status level verification certificate or a certified copy thereof, substantiating their B-BBEE rating issued by a Registered Auditor approved by IRBA or a Verification Agency accredited by SANAS.

5.4 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.

5.5 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.

5.6 Tertiary institutions and public entities will be required to submit their B-BBEE status level certificates in terms of the specialized scorecard contained in the B-BBEE Codes of Good Practice.

5.7 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 points that such a bidder qualifies for, unless the intended sub-contractor is an EME that has the capability and ability to execute the sub-contract.

5.8 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 capability and ability to execute the sub-contract.

6. BID DECLARATION

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

7. B-BBEE STATUS LEVEL OF CONTRIBUTION CLAIMED IN TERMS OF PARAGRAPHS 1.3.1.2 AND 5.1

7.1 B-BBEE Status Level of Contribution: =(maximum of 10 or 20 points)

(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 5.1 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 – COMPULSORY & LOCAL

8.1 Will any portion of the contract be sub-contracted? **YES / NO**

The successful contractor is required to sub-contract at least 30% of the contract to local contractors/suppliers.

8.1.1 If yes, indicate:

- (i) what percentage of the contract will be subcontracted?
- (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**

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 COMPANY/ FIRM

- Partnership/Joint Venture / Consortium
- One person business/sole propriety
- Close corporation
- Company
- (Pty) Limited

9.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

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

9.6 COMPANY CLASSIFICATION

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

[TICK APPLICABLE BOX]

9.7 MUNICIPAL INFORMATION

Municipality where business is situated

Registered Account Number

Stand Number

9.8 TOTAL NUMBER OF YEARS THE COMPANY/FIRM HAS BEEN IN BUSINESS?

.....

9.9 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBEE status level of contribution indicated in paragraph 7 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown 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 as shown in paragraph 7, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are 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 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 *audi alteram partem* (hear the other side) rule has been applied; and
 - (e) forward the matter for criminal prosecution

9. **DECLARATION** (to be signed in the presence of a Commissioner of Oaths)

The undersigned, who warrants that he/she is duly authorized to do so, on behalf of the firm, confirms that the contents of this Affidavit are within my personal knowledge, and save where stated otherwise to the best of my belief both true and correct.

Signature:

Duly authorized to sign on behalf:

Address:

.....

.....

Telephone

Signed and sworn to before me at.....

on this theday of

by the Deponent, who has acknowledged that he/she knows and understands the contents of this Affidavit, that its true and correct to the best of his/her knowledge and that he/she has no objection to taking the prescribed oath, and that the prescribed oath will be binding on his/her conscience.

Commissioner of Oaths

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**SCHEDULE 21: DECLARATION CONCERNING FULFILMENT OF
THE CONSTRUCTION REGULATIONS, 2003**

In terms of regulation 4(4) of the Construction Regulations, 2003 (hereinafter referred to as the Regulations), promulgated on 18 July 2003 in terms of Section 43 of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) the Employer shall not appoint a contractor to perform construction work unless the Contractor can satisfy the Employer that his/her firm has the necessary competencies and resources to carry out the work safely and has allowed adequately in his/her tender for the due fulfilment of all the applicable requirements of the Act and the Regulations.

Tenderers shall answer the questions below:

1. I confirm that I am fully conversant with the Regulations and that my company has (or will acquire/procure) the necessary competencies and resources to timeously, safely and successfully comply with all of the requirements of the Regulations.

(Tick)

YES	
NO	

2. Indicate which approach shall be employed to achieve compliance with the Regulations.

(Tick)

Own resources, competent in terms of the Regulations (refer to 3 below)	
Own resources, still to be hired and/or trained (until competency is achieved)	
Specialist subcontract resources (competent) - Specify:	
.....	
.....	
.....	
.....	
.....	

3. Provide details of proposed key persons, competent in terms of the Regulations, who will form part of the Contract team as specified in the Regulations (CVs to be attached):

.....

.....

.....

4. Provide details of proposed training (if any) that will be undergone:

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

5. List potential key risks identified and measures for addressing risks:

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

6. I have fully included in my tendered rates and prices (in the appropriate payment items provided in the Schedule of Quantities) for all resources, actions, training and any other costs required for the due fulfilment of the Regulations for the duration of the construction and defects repair period

(Tick)

YES	
NO	

SIGNATURE OF PERSON(S) AUTHORISED TO SIGN THIS TENDER:

1. ID NO:

(Name in Print):

2. ID NO:

(Name in Print):

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MBD 9

SCHEDULE 22: CERTIFICATE OF INDEPENDENT BID DETERMINATION
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CERTIFICATE OF INDEPENDENT BID DETERMINATION

- 1 This Municipal Bidding Document (MBD) must form part of all bids¹ invited.
- 2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
- 3 Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
 - a. take all reasonable steps to prevent such abuse;
 - b. reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
 - c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
- 4 This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
- 5 In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

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

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

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

(Bid Number and Description)

in response to the invitation for the bid made by:

(Name of Municipality / Municipal Entity)

do hereby make the following statements that I certify to be true and complete in every respect:

I certify, on behalf of: _____ that:

(Name of Bidder)

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - (a) has been requested to submit a bid in response to this bid invitation;
 - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However

communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.

7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - (a) prices;
 - (b) geographical area where product or service will be rendered (market allocation)
 - (c) methods, factors or formulas used to calculate prices;
 - (d) the intention or decision to submit or not to submit, a bid;
 - (e) the submission of a bid which does not meet the specifications and conditions of the bid; or
 - (f) bidding with the intention not to win the bid.
8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

³ Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

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PART C1: AGREEMENT AND CONTRACT DATA

The General Conditions of Contract for Construction Works, Third Edition, 2015 have been compiled on the basis that the following supplementary documentation in the format of pro-formas, once completed by the Party of Parties as relevant, shall form part of the Contract.

- C1.1 Form of Offer and Acceptance**
- C1.2 Contract Data**
- C1.3 Performance Guarantee**
- C1.4 Occupational Health and Safety Agreement**

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C1.1: FORM OF OFFER AND ACCEPTANCE

1. OFFER

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

UPGRADING OF CARNARVON OXIDATION PONDS PHASE 1: CONSTRUCTION OF INLET WORKS AND ANAEROBIC POND.

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

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

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

..... Rand (in words);

R (in figures)

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

For the **Tenderer**:

Signature

Name

Capacity

Name and address of organisation:

.....

.....

Name and signature of witness:

Signature

Name

Date

2. 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 Parts C1 to C4 above.

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

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

For the **Employer**:

Signature

Name

Capacity

Name and address of organisation:

.....
.....

Name and signature of witness:

Signature

Name

Date

3. 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 Schedule of Deviations, the Employer and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, as well as any confirmation, clarification or change to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance.

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

For the Tenderer

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

Name and address of organization

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

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

For the Employer

Signature(s)

Name(s)

Capacity

Name and address of organization

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

Witness Signature

Witness Name

Date

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

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C1.2: CONTRACT DATA (PART 1)

The Conditions of Contract are the General Conditions of Contract for Construction Works (3rd Edition 2015) published by the South African Institution of Civil Engineering (SAICE). Copies of these conditions of contract may be obtained from the SAICE Tel no.: (0)11 805 5947.

The General Conditions of Contract for Construction Works make several references to the Contract Data. The Contract Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the General Conditions of Contract.

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

PART 1 : DATA PROVIDED BY THE EMPLOYER

Clause	Description
1.1.1.13	The Defects Liability Period is twelve (12) months measured from the date of the Certificate of Completion.
1.1.1.15 1.2.1.2	The name of the Employer is Kareeberg Local Municipality The Employer's address for receipt of communications and notices is: Telephone: 053 382 3012 Facsimile: 053 383 3142 Address (Postal): P.O Box 226 Address (Physical): 10 Hanau Street CARNARVON CARNAROVN 8925 8925
1.1.1.16 1.2.1.2	The name of the Employer's Agent/Engineer is iX Engineers (Pty) Ltd The Engineer's address for receipt of communications and notices is: Telephone: 053 830 0460 E-mail: tanryn.j@ixengineers.co.za Address (Postal): P.O Box 50 Address (Physical): 10 Oliver Road Kimberley Monument Heights 8300 Kimberley 8301
1.3.2	The governing law is the law of the Republic of South Africa.
3.2.3	The Engineer shall obtain the specific approval of the Employer before executing any of the following functions or duties: a) The issuing of a variation order in terms of Clause 6.3.2. b) Nomination of Engineer's Representative in terms of Clause 3.2.1. c) Engineer's authority to delegate in terms of Clause 3.2.4. d) Non-working times in terms of Clause 5.8.1.

Clause	Description
	e) Suspension of the Works in terms of Clause 5.11.1. f) Acceleration instead of extension of time in terms of Clause 5.12.4.
4.3.2	If required, and for the duration of this contract, the Contractor shall provide proof to the Engineer that the Contractor is in good standing with respect to duties, taxes, levies and contributions required in terms of legislation applicable to the work in this Contract. Failure to provide such proof shall entitle the Employer to withhold any payments due to the Contractor until such proof is provided.
4.4 4.4.1 4.4.2 4.4.3 4.4.4 4.4.5	Subcontracting The Contractor shall not subcontract the whole contract. The Contractor shall be liable for the acts, defaults and negligence of any subcontractor, his agents or employees as fully as if they were responsible for the acts, defaults or negligence of the Contractor. The contractual relationship between the Contractor and any subcontractors selected by the Contractor in consultation with the Employer in accordance with the requirements of and a procedure set out in the Scope of Work, shall be the same as if the Contractor had appointed the subcontractor in terms of Clause 4.4.2. Any appointment of a subcontractor in accordance with Clause 4.4.3 shall not amount to a contract between the Employer and the subcontractor, or a responsibility or liability on the part of the Employer to the subcontractor and shall not relieve the Contractor from any liability or obligation under the contract. In the event of termination of the contract under Clause 9.2, the subcontract in terms of Clause 4.4.3 shall be assigned to the Engineer upon such an instruction by the Employer.
5.2.1	The Commencement date shall be the date of Confirmation of Receipt referred to in the form of offer and Acceptance.
5.3.1	The documentation required before commencement with the Works execution is: <ol style="list-style-type: none"> 1. Performance Guarantee (Clause 6.2) 2. Letter of Good Standing (Clause 6.2) 3. Insurance (Clause 8.6) 4. Initial Programme (Clause 5.6) 5. Occupational Health and Safety Agreement 6. Occupational Health and Safety Plan (Clause 4.3)
5.3.2	The time to submit documentation from commencement date is fourteen (14) days
5.4.2	Access to and possession of the site shall not be exclusive to the Contractor insofar as the provisions of Clause 4.8 apply and where ongoing use by the general public is required. 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: <ol style="list-style-type: none"> 1. All Gazetted public holidays falling outside the year end break 2. The year-end break commencing on 11 December 2026.
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 be claimed in accordance with the provisions of Clause 5.12.

Clause	Description
	<p>The number of days indicated below shall be regarded as a fair estimate of the days to be anticipated and allowed for as described above:</p> <p>January 3 days February 3 days March 3 days April 2 days May 1 days June 1 days July 1 days August 1 days September 1 days October 1 days November 1 days December 3 days</p> <p>Claims for delays for abnormal climatic conditions shall be accompanied by substantiating facts and evidence, which shall be submitted timeously as each day or half-day is experienced.</p> <p>It shall be noted that where the critical path is not affected, no extension of time for abnormal climatic conditions or for any other reason will be entertained.</p>
5.13.1	The penalty for failing to complete the Works is R 2,500.00 per calendar day
5.16.3	The latent defects period is 5 years.
6.2.1	<p>The Contractor shall deliver to the Employer within such time as may be stated in the Contract Data a Performance Guarantee of an Insurance Company or Bank as security. The said Company or Bank shall be subject to approval by the Employer.</p> <p>The Performance Guarantee is to contain the wording of the document included in C1.3.</p> <p>The Performance Guarantee shall be ten per cent (10%) of the Tender Price.</p>
6.2.2	Delete Clause 6.2.2 in its entirety
6.2.3	The expiry date shall be the date, of the issue by the Engineer, of the Certificate of Completion of the Works.
6.5.1.2.3	The percentage allowance to cover overhead charges is 10% .
6.8.2	<p><i>Add the following to Clause 6.8.2:</i></p> <p>The Contract Price shall not be subject to any contract price adjustment and the rates and prices tendered in the bill of quantities shall be final and binding throughout the period of the Contract.</p>
6.8.3	Notwithstanding the above, if special materials are specified in Part 2 of the Contract Data then the provisions of Clause 6.8.3 of the General Conditions of Contract shall apply to such special materials.
	<p>Where applicable, in terms of the foregoing, the value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following values:</p> <p>The value of "x" is 0,15.</p> <p>The values of the coefficients are:</p>

Clause	Description
	<p>a = 0,20 b = 0.25 c = 0.50 d = 0.05</p> <p>The base month is one month prior to the month in which the tender closed.</p> <p>In addition, the Contract Price Adjustment Schedule shall be amended as follows:</p> <p>“L” is the “Labour Index” and shall be the Consumer Price Index (CPI per Province) for the National Province wherein the larger part of the Site is located, as published in the Statistical News Release, P0141 Table A of Statistics South Africa.</p> <p>“P” is the “Plant Index” and shall be the Producer Price Index for Civil engineering plant as published in the Statistical News Release P0151, Table 4 of Statistics South Africa.</p> <p>“M” is the “Materials Index” and shall be the Producer Price Index for materials for Building and construction – Civil engineering as published in the Statistical News Release P0151, Table 3 of Statistics South Africa.</p> <p>“F” is the “Fuel Index” and shall be the Producer Price Index for Diesel at wholesale level – Coast as published in the Statistical News Release P0151, Table 4 of Statistics South Africa.</p>
6.8.4	<p><i>Add the following to Clause 6.8.4:</i></p> <p>Notwithstanding the above, in the event that a public holiday is proclaimed within 28 days before the closing date for tenders, no costs other than those that can be claimed under Clause 5.12.3 shall be added to the contract price.</p>
6.9.2	<p><i>Substitute Clause 6.9.2 with the following:</i></p> <p>The expression “materials” used in this Clause shall only include pipe material, manhole shafts, cover slabs and covers and frames, all of which are to be permanently built into and incorporated in the Works.</p>
6.10	<p>Payment for materials on site but not yet built into the Permanent Works shall be limited to 80% of the invoiced value, subject to compliance with this Clause.</p>
6.10.3	<p><i>Add the following to Clause 6.10.3:</i></p> <p>Notwithstanding the provision of a performance guarantee in terms of Clause 6.2.1, interim payments to the Contractors shall be subject to a retention by the Employer of an amount limited at 10% of the said amounts due to the contractor. A guarantee in lieu of retention is not permitted.</p> <p>The retention period is 12 months after practical completion. 5% will be released on Practical Completion. The remaining 5% will be released at Final Completion of the Works.</p>
6.10.4	<p><i>Add the following to clause 6.10.4:</i></p> <p>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.</p>
8.6.1.1.2	<p>The value of Plant and materials supplied by the Employer to be included in the insurance sum is R 0.00 (Nil).</p>
8.6.1.1.3	<p>The amount to cover professional fees for repairing damages and loss to be included in the insurance sum is 10% of the tender amount (excl. VAT).</p>
8.6.1.3	<p><i>Add the following to Clause 8.6.1.3:</i></p> <p>The limit of indemnity for liability insurance is R 5 000 000 for any single claim – the number of claims to be unlimited during the construction and defects liability periods.</p>
8.6.1.5	<p>In addition to the insurances required in terms of General Conditions of Contract Clauses 8.6.1.1 to 8.6.1.4 the following insurance is also required:</p> <p>a) Insurance of Construction Equipment (including tools, offices and other temporary structures and contents) and other things (except those intended for incorporation into the Works) brought onto the site for a sum sufficient to provide for their replacement.</p>

Clause	Description
	<p>b) Insurance in terms of the provisions of the Compensation of Occupational Injuries and Diseases Act No. 130 of 1993.</p> <p>c) Motor Vehicle Liability Insurance comprising (as a minimum) “Balance of Third Party” Risks including Passenger Liability Indemnity.</p> <p>d) Where the contract involves manufacturing and/or fabrication of the works or part thereof at premises other than the Site, the Contractor shall satisfy the Employer that all materials and equipment for incorporation in the works are adequately insured during manufacture and/or fabrication. In the event of the Employer having an insurable interest in such works during manufacture or fabrication then such interest shall be noted by endorsement to the Contractor’s Policies of Insurance.</p>
8.6.6	The evidence that the insurances have been effected in terms of Clause 8.6.1, shall be in the form of an insurance broker’s warranty worded precisely as given in Part C1.6 Insurance Broker’s Warranty.
9.2.1 9.2.1.3.9 9.2.1.3.10	<p>Add the following to Clauses after Clause 9.2.1.3.8:</p> <p>The Contractor committed a corrupt or fraudulent act during the procurement process or the execution of the contract.</p> <p>An official or other role player committed any corrupt or fraudulent act during the procurement process or in the execution of the contract that benefitted the contractor.</p>
10.5.3	The number of ad-hoc Adjudication Board Members to be appointed is 1 (one).
11.	<p>ADDITIONAL CONDITIONS OF CONTRACT</p> <p><i>Add the following clause after clause 10:</i></p> <p>Details to be confidential</p> <p>The Contractor shall treat the details of the Works comprised in this Contract as private and confidential (save in so far as may be necessary for the purposes hereof) and shall not publish or disclose the same or any participants thereof in any trade or technical paper elsewhere without the prior written consent of the Engineer.</p>

KAREEBERG MUNICIPALITY
UPGRADING OF CARNARVON OXIDATION PONDS
PHASE 1: CONSTRUCTION OF INLET WORKS AND ANAEROBIC POND
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C1.2: CONTRACT DATA (PART 2)

PART 2: DATA PROVIDED BY THE CONTRACTOR

Clause	Description									
1.1.1.9	The name of the Contractor is <i>[Enter the Legal name of the Contractor].</i>									
1.2.1.2	The Contractor's address for receipt of communications and notices is: Telephone: Facsimile: E-mail: Address (Postal): Address (Physical):									
1.1.1.14	The time for completing the Works is days/weeks/months The time for completing the Works in portions as set out in the Scope of Works for: The whole of the Works shall be complete within days/weeks/months									
6.5.1.2.3	The percentage allowance to cover all overhead charges for work executed on a daywork basis is: Labour % Materials %									
6.8.3	The variation in cost of special materials is: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Type of Material</th> <th style="width: 20%;">Unit</th> <th style="width: 30%;">Rate or Price</th> </tr> </thead> <tbody> <tr> <td>.....</td> <td>.....</td> <td>.....</td> </tr> <tr> <td>.....</td> <td>.....</td> <td>.....</td> </tr> </tbody> </table>	Type of Material	Unit	Rate or Price
Type of Material	Unit	Rate or Price								
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KAREEBERG MUNICIPALITY
UPGRADING OF CARNARVON OXIDATION PONDS
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C1.3: PERFORMANCE GUARANTEE

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

GUARANTOR DETAILS AND DEFINITIONS

“Guarantor” means

Physical address

“Employer” means KAREEBERG MUNICIPALITY

“Contractor” means

“Engineer” means

“Works” means **CONTRACT NO. KBM 11-2026: UPGRADING OF CARNARVON OXIDATION PONDS PHASE 1: CONSTRUCTION OF INLET WORKS AND ANAEROBIC POND**

“Site” means: The site as defined in Clause 1.1.1.29 of the General Conditions of Contract.

“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: Date of issue by the Engineer of the Certificate of Completion of the Works.

CONTRACT DETAILS

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

PERFORMANCE GUARANTEE

1. The Guarantor’s liability shall be limited to the amount of the Guaranteed Sum.
2. The Guarantor’s period of liability shall be from and including the date of issue of this Performance Guarantee and up to the date of issue by the Engineer of the Certificate of Completion of the Works or the date of payment in full of the Guaranteed Sum, whichever occurs first. The Engineer and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.
- 3.

4. The Guarantor hereby acknowledges that:
 - 4.1 any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;
 - 4.2 its obligation under this Performance Guarantee is restricted to the payment of money.
5. 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:
 - 5.1 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 or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;
 - 5.2 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;
 - 5.3 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.
6. 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:
 - 6.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 5; or
 - 6.2 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
 - 6.3 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.
7. 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.
8. 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.
9. 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.
10. Payment by the Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.
11. 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.
12. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.

13. 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.
14. 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.
15. Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No. 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

Signed at

Date

Guarantor's signatory (1)

Capacity

Guarantor's signatory (2)

Capacity

Witness signatory (1)

Witness signatory (2)

KAREEBERG MUNICIPALITY
UPGRADING OF CARNARVON OXIDATION PONDS
PHASE 1: CONSTRUCTION OF INLET WORKS AND ANAEROBIC POND
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C1.4: OCCUPATIONAL HEALTH AND SAFETY AGREEMENT

AGREEMENT MADE AND ENTERED INTO BETWEEN THE KAREEBERG MUNICIPALITY (HEREINAFTER CALLED THE "EMPLOYER") AND

..... ,
(Contractor/Mandatory/Company/CC Name)

IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, ACT No. 85 OF 1993 AS AMENDED.

I,, representing
..... , as an employer
in its own right, do hereby undertake to ensure, as far as is reasonably practicable, that all work will be performed, and all equipment, machinery or plant used in such a manner as to comply with the provisions of the Occupational Health and Safety Act (OHSA) and the Regulations promulgated there under.

I furthermore confirm that I am/we are registered with the Compensation Commissioner and that all registration and assessment monies due to the Compensation Commissioner have been fully paid or that I/We are insured with an approved licensed compensation insurer.

COID ACT Registration Number:

OR Compensation Insurer: Policy No.:

I undertake to appoint, where required, suitable competent persons, in writing, in terms of the requirements of OHSA and the Regulations and to charge him/them with the duty of ensuring that the provisions of OHSA and Regulations as well as the Council's Special Conditions of Contract, Way Leave, Lock-Out and Work Permit Procedures are adhered to as far as reasonably practicable.

I further undertake to ensure that any subcontractors employed by me will enter into an occupational health and safety agreement separately, and that such subcontractors comply with the conditions set.

I hereby declare that I have read and understand the appended Occupational Health and Safety Conditions and undertake to comply therewith at all times.

I hereby also undertake to comply with the Occupational Health and Safety Specification and Plan.

Signed and sworn to before me at on this day of
..... 20.....

Witness

Mandatory

Signed and sworn to before me at on this day of
..... 20.....

Witness

.....
for and on behalf of
Kareeberg Local Municipality

OCCUPATIONAL HEALTH AND SAFETY CONDITIONS

1. The Chief Executive Officer of the Contractor shall assume the responsibility in terms of Section 16(1) of the Occupational Health and Safety Act (as amended). Should the Contractor assign any duty in terms of Section 16(2), a copy of such assignment shall immediately be provided to the representative of the Employer as defined in the Contract.
2. All work performed on the Employer's premises shall be performed under the supervision of the construction supervisor who understand the hazards associated with any work that the Contractor performs on the site in terms of Construction Regulations 2003.
3. The Contractor shall appoint a Competent Person who shall be trained on any occupational health and safety aspect pertaining to them or to the work that is to be performed.
4. The Contractor shall ensure that he familiarizes himself with the requirements of the Occupational Health and Safety Act and that he, his employees, and any sub-contractors, comply with them.
5. Discipline in the interests of occupational health and safety shall be strictly enforced.
6. Personal protective equipment shall be issued by the Contractor as required and shall be worn at all times where necessary.
7. Written safe work procedures and appropriate precautionary measures shall be available and enforced, and all employees shall be made conversant with the contents of these practices.
8. No substandard equipment/machinery/articles or substances shall be used on the site.
9. All incidents referred to in terms of Section 24 of the Occupational Health and Safety Act shall be reported by the Contractor to the Department of Labour and the Employer.
10. The Employer hereby obtains an interest in the issue of any formal inquiry conducted in terms of Section 32 of the Occupational Health and Safety Act and into any incident involving a Contractor and/or his employees and/or his sub-contractor/s.
11. No use shall be made of any of the Employer's machinery / plant / equipment / substance / personal protective equipment or any other article without prior arrangement and written approval.
12. No alcohol or any other intoxicating substance shall be allowed on the site. Any person suspected of being under the influence of alcohol or any other intoxicating substance shall not be permitted access to, or allowed to remain on the site.
13. Prior to commencement of any work, verified copies of all documents mentioned in the agreement, must be presented to the Employer.

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PART C2: PRICING DATA

- C2.1 Pricing Instructions**
- C2.2 Bills of Quantities**
- C2.3 Summary of Bill of Quantities**
- C2.4 Daywork Schedule**

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C2.1: PRICING INSTRUCTIONS

C2.1.1 PREAMBLE TO THE BILLS OF QUANTITIES

- C2.1.1.1 Measurement and payment shall be in accordance with Clause 8 of the SANS 1200 Standardised Specifications for Civil Engineering Construction referred to in the Scope of Works, subject to the variations and amendments contained in the section “Applicable SANS 1200 standardised specifications”.
- C2.1.1.2 Descriptions in the Bills of Quantities are abbreviated and comply generally with those in the Standardised Specifications. Clause 8 of each Standardised Specification, read together with the relevant clauses of the Scope of Work, set out what ancillary or associated activities are included in the rates for the operations specified. Should any requirements of the measurement and payment clause of the applicable Standardised Specification, or the Scope of Work, conflict with the terms of the Bill, the requirements of the Standardised or Scope of Work, as applicable, shall prevail.
- C2.1.1.3 The clauses in a specification in which further information regarding the Bill item can be obtained appear under “Reference clause” in the Bills of Quantities. The reference clauses indicated are not necessarily the only sources of information in respect of schedule items. Further information and set specifications may be found elsewhere in the contract documents. Standardised Specifications are identified by the letter or letters which follow SANS in the SANS 1200 series of specifications, e.g. G for SANS 1200 G.
- C2.1.1.4 Unless otherwise stated, items are measured nett in accordance with the drawings, and no allowance is made for waste.
- C2.1.1.5 The quantities set out in these Bills of Quantities are approximate and do not necessarily represent the actual amount of work to be done. The quantities of work accepted and certified for payment will be used for determining payments due and not the quantities given in the Bills of Quantities.
- C2.1.1.6 The prices and rates to be inserted in the Bills of Quantities are to be the full inclusive prices for the work described under the several items. Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead charges and profit. The prices will be used as a basis for assessment of payment for additional work that may have to be carried out.
- C2.1.1.7 It will be assumed that prices included in these Bills of Quantities are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders. (Refer to www.stanza.org or www.iso.org for information on standards).
- C2.1.1.8 Where the Scope of Work requires detailed drawings and designs or other information to be provided, all costs associated therewith are deemed to have been provided for and included in the unit rates and sum amount tendered such items
- C2.1.1.9 A price or rate is to be entered against each item in the Schedule/Bills of Quantities, whether the quantities are stated or not. An item against which no price is entered will be considered to be

covered by the other prices or rates in the Bills of Quantities. A single lump sum will apply should a number of items be grouped together for pricing purposes.

C2.1.1.10 Except where rates only are required, the Tenderer shall insert all amounts to be included in his total tendered price in the "Amount" column and show the corresponding total tendered price.

C2.1.1.11 The units of measurement described in the Bills of Quantities are metric units. Abbreviations used in the Bills of Quantities are as follows:

ha	=	hectare	h	=	hour
kℓ	=	kilolitre	kg	=	kilogram
km	=	kilometre	kW	=	kiloWatt
km-pass	=	kilometre pass	MN	=	MegaNewton
kPa	=	kiloPascal	MN.m	=	MegaNewton-metre
ℓ	=	litre	%	=	per cent
m	=	metre	PC sum	=	Prime Cost sum
mm	=	millimetre	Prov sum	=	Provisional sum
m ²	=	square metre	No.	=	number
m ² .pass	=	square metre-pass	R/only	=	Rate only
m ³	=	cubic metre	sum	=	lump sum
m ³ .km	=	cubic metre-kilometre	t	=	ton (1 000 kg)
MPa	=	MegaPascal	W/day	=	Work day

C2.1.1.12 Pipes, fittings and valves (pipe specials)

The following abbreviations are used:

dia	-	diameter	uPVC	-	Unplasticised Polyvinyl Chloride
mat	-	material	MS	-	Mild Steel
SS	-	Stainless Steel	AS	-	As Specified
c to f	-	centre to face	GMS	-	Galvanised Mild Steel
d.f.	-	double flanged	o.a.	-	overall
p.f.	-	puddle flange	CI	-	Cast Iron
NB	-	Nominal Bore	w.t	-	wall thickness

Applicable general material and corrosion protection specifications for pipe specials items:

- a) All mild steel pipes and fittings shall be cleaned and treated with a polyimide-cured epoxy system similar and equal to COPON EP2300 or AMERCOAT 385 coating, externally and internally as specified in Clause 3.9.2.2 of SANS 1200L, to a dry-film thickness of at least 300 micrometres.

After installation, all exposed pipes shall be coated with an azure polyurethane enamel paint, to a dry-film thickness of 60 micro- metres.

- b) Stainless steel pipes and fittings shall be manufactured from grade 316L stainless steel.
- c) All bolts, nuts and washers shall comply with the requirements of Clause PSL 3.9.5 of the Project Specification.
- d) All rates shall be consistent for similar items of the same material and diameter. Where amendments are ordered, new rates shall be calculated by direct interpolation between the tender rates for the nearest two similar items. Only when amended or new items fall outside the range of similar items for which rates have been tendered, will new rates be negotiated.
- e) Unless otherwise stated, the dimensions and drilling of flanges shall comply with the requirements of SANS 1123, Table 16 for pipes with a diameter of 150 mm and smaller and Table 10 for diameters exceeding 150 mm.

f) No pipes, fittings or spirals shall be tendered unless authorised by the engineer in writing.

C2.1.1.13 The Tenderer must price each item in the Bills of Quantities in **BLACK INK**.

C2.1.1.14 All prices and rates shall exclude value added tax (VAT). The Tenderer shall calculate value added tax and enter it at the end of the summary of the Bills of Quantities.

C2.1.1.15 While the Employer has every intent to complete the full scope of works, the Employer reserves the right to reduce or increase the scope of works according to the dictates of the budget, or to terminate this contract, with adjustment to the agreed rates, sums or fees and without payment of any penalty in this regard. The Service Provider shall however be entitled to pro-rata payment for all services carried out in terms of any adjustment to the Scope of Work or, in the case of termination, remuneration and/or reimbursement.

**KAREEBERG MUNICIPALITY
UPGRADING OF CARNARVON OXIDATION PONDS
PHASE 1: CONSTRUCTION OF INLET WORKS AND ANAEROBIC POND
TENDER NO.: KBM 11-2026**

C2.2: BILL OF QUANTITIES

CONTRACT NO: KBM 11-2026
KAREEBERG LOCAL MUNICIPALITY
UPGRADING OF THE CARNARVON WASTEWATER TREATMENT WORKS
SCHEDULE A: PRELIMINARY AND GENERAL

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SANS 1200A	PRELIMINARY AND GENERAL				
A1	8.3	Fixed charge items				
A1.1	8.3.1	Contractual requirements	Sum	1		
A2	8.3.2	Establish facilities on site				
A2.1	8.3.2.1	Facilities for the Engineer				
A2.1.1	PSAB 3.1	Name board	No	2		
A2.1.2		Site instruction book	No	1		
A2.2	8.3.2.2	Facilities for the Contractor				
A2.2.1		Office and storage sheds	Sum	1		
A2.2.2		Workshops	Sum	1		
A2.2.3		Laboratories	Sum	1		
A2.2.4		Living accommodation	Sum	1		
A2.2.5		Ablution and toilet facilities	Sum	1		
A2.2.6		Tools and equipment	Sum	1		
A2.2.7		Water supply, electric power and communications	Sum	1		
A2.2.8		Dealing with water	Sum	1		
A2.2.9		Access	Sum	1		
A2.2.10		Plant	Sum	1		
A2.3	8.3.3	Other fixed charged obligations(specify)	Sum	1		
A2.4	8.3.4	Removal of site establishment	Sum	1		
Sub-total carried forward						

SCHEDULE A: PRELIMINARY AND GENERAL						
ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Brought forward						
A3	8.4	Time related items				
A3.1	8.4.1	Contractual requirements	Sum	1		
A3.2	8.4.2	Operation and maintenance of facilities on site for duration of construction				
A3.2.1	8.4.2.1	FACILITIES FOR ENGINEEER				
A3.2.2	PSAB 3.1	Name board	Sum	1		
A3.3	8.4.2.2	FACILITIES FOR CONTRACTOR				
A3.3.1		Offices and storage sheds	Sum	1		
A3.3.2		Workshops	Sum	1		
A3.3.3		Laboratories	Sum	1		
A3.3.4		Living accommodation	Sum	1		
A3.3.5		Ablution and toilet facilities	Sum	1		
A3.3.6		Tools and equipment	Sum	1		
A3.3.7		Water supply, electric power and communications	Sum	1		
A3.3.8		Dealing with water	Sum	1		
A3.3.9		Access	Sum	1		
A3.4	8.4.3	Supervision for duration of construction	Sum	1		
A3.5	8.4.4	Company and head office overhead costs for the duration of the contract	Sum	1		
A3.6	8.4.5	Other time related obligations (specify)	Sum	1		
A3.7	PS A 8.4.7	Compliance with Environmental Management Plan (EMP)	Sum	1		
Sub-total carried forward						

SCHEDULE A: PRELIMINARY AND GENERAL						
ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Brought forward						
A4	8.5	PROVISIONAL ITEMS				
A4.1	PSA 8.5	Community liaison officer (CLO)				
A4.2	8.5.1(c)	Remuneration of Community Liaison Officer (CLO)	Prov Sum	1	R60,000.00	R60,000.00
A4.2	8.5.2(d)	Contractor's mark up on Item A4.2 above	%			
A5	8.3	COMPLIANCE WITH OCCUPATIONAL HEALTH AND SAFETY AND CONSTRUCTION REGULATIONS 2014				
A5.1	PSA 8.3.5	Fixed charge items				
A5.1.1		General safety obligations	Sum	1		
A5.1.2		Risk assessment	Sum	1		
A5.1.3		Health and safety plan	Sum	1		
A5.1.4		Medical assessment of employees	Sum	1		
A5.1.5		All other fixed charge health and safety obligations (specify)	Sum	1		
A5.2	PSA 8.4.6	Time related items				
A5.2.1		General safety obligations	Sum	1		
A5.2.2		Health and safety plan	Sum	1		
A5.2.3		Construction safety officer and other health and safety related appointments for the duration of the contract	Sum	1		
A5.2.4		Other time-related obligations (Specify)	Sum	1		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT NO: KBM 11-2026
KAREEBERG LOCAL MUNICIPALITY
UPGRADING OF THE CARNARVON WASTEWATER TREATMENT WORKS
SCHEDULE B: DAYWORKS

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SANS 1200 A	DAYWORKS				
B1	8.7	Labour				
B1.1		Skilled labour	Sum	1		
B1.2		Semi-skilled labour	Sum	1		
B1.3		Unskilled labour	Sum	1		
B2	PSA 8.5	Materials				
B2.1	8.5 a	Allow for net cost of goods or materials actually used	Prov.	1	R17,000.00	R17,000.00
B2.2	8.5.b	Percentage mark up on item B2.1 above	%			
B3		Contractors own plant on site				
B3.1	8.5 a	Allow for all inclusive cost of using the Contractor's own plant on Site	Prov. Sum	1	R22,000.00	R22,000.00
B4		Plant hired by the Contractor				
B4.1	8.5 a	Allow for net cost of hired plant	Prov. Sum	1	R11,000.00	R11,000.00
B4.2	8.5 b	Percentage mark up on item B4.1 above	%			
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT NO: KBM 11-2026
KAREEBERG LOCAL MUNICIPALITY
UPGRADING OF THE CARNARVON WASTEWATER TREATMENT WORKS
SCHEDULE C: ANAEROBIC PONDS

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SANS 1200 C	SITE CLEARANCE				
C1.1	8.2.1	Clear and grub vegetation and trees	m ²	2000		
C1.2	8.2.2	Remove and grub large trees and tree stumps of girth				
		Over and Up to				
C1.2.1	8.2.2. a	1 m 2.m	No	2		
C1.2.2	8.2.2.b	2 m 3 m	No	2		
C1.3	8.2.10	Remove topsoil to nominal depth of 150 mm, stockpile and maintain.	m ³	175		
C1.4	PS C 8.2.11	Remove and re-erect existing fences to their original condition	m	10		
	SANS 1200 DE	SMALL EARTH DAMS				
C2		Excavation				
C2.1	8.3.3 (a)	Excavate material unsuitable for embankment	m ³	825.00		
C2.2	8.3.3 (b)	Excavate material suitable for embankment from suitable essential excavation	m ³	385.00		
C2.3	8.3.3 (c)	Extra over items D1.1 to D1.2 for excavation in hard rock	m ³	330.00		
C3	8.3.5	Forming of embankment compacted to 93% of Mod AASHTO from material obtained from:				
C3.1.		Selected material from excavations on site	m ³	385		
C3.2		Unselected material from excavations on site	m ³	550		
C3.3.	8.3.5 (h)	Gravel capping	m ³	100		
C3.4.	8.3.7	Extra over for forming trial embankments	Sum	1		
Sub-total carried forward						

SCHEDULE C: ANAEROBIC PONDS						
ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Brought forward						
C4	8.3.8	Overhaul				
C4.1.	8.3.8 (a)	Short haul between 0,5 and 1,0 km (provisional)	m ³	200		
C4.2.	8.3.8 (b)	Long haul in excess of 1,0 km (provisional)	m ³ .Km	100		
C5	PSDE 8.3.11	Preparation of areas to be covered by a water tight membrane				
C5.1	8.3.11 (a)	Removal of stones and other sharp objects from the surface	m ²	935		
C5.2	8.3.11 (b)	Provision of 25mm sand layer where the insitu material is not suitable for receiving the membrane using sand available within 2.5 Km haul distance	m ²	200		
C6	PSDE 8.3.12	Water tight membrane				
C6.1.		Supply and install the following HDPE Geomembrane :				
C6.1.1		1500 micon thick to horizontal surfaces inside ponds	m ²	95.00		
C6.1.2		1500 micon thick to sloping surfaces inside ponds	m ²	970.00		
C6.1.3		1500 micon thick to top of embankment and inside anchor trench	m ²	200.00		
C6.1.4		1000 micon thick to horizontal surfaces inside ponds	m ²	100.00		Rate only
C7	PSDE 8.3.13	Anchoring of membrane on top of embankments	m	150.00		
C8	PSDE 8.3.14	Anchoring of membrane to concrete structures	m	10.00		
C9	PSDE 8.3.15	Anchoring of membrane around pipes for the following pipes:				
C9.1.		110 mm Ø uPVC	No.	1		
C9.2		100 mm Ø steel pipe	No.	1		
C9.3		160 mm Ø uPVC	No.	1		
C9.4		150 mm Ø steel pipe	No.	1		
Sub-total carried forward						

SCHEDULE C: ANAEROBIC PONDS						
ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Brought forward						
	SANS 1200 G	CONCRETE STRUCTURAL				
C8	8.2	Formwork				
C8.1	8.2.1	Rough	m ²	25.00		
C8.2	8.2.2	Smooth	m ²	15.00		
C9	8.3.	Reinforcement				
C9.1	8.3.1	High tensile steel bars:	t	1.30		
C9.4		High tensile welded mesh	m ²	200		
C9.5	8.3.1	Mild steel bars:	t	0.10		
C10	8.4	Concrete				
C10.1		15 Mpa Blinding layer	m ³	1		
C10.2		35 Mpa concrete	m ³	10		
C10.3		20 Mpa mass concrete around pipes as shown on drawings	m ³	2		
C11	8.4.4	Unformed surface finishes:				
C11.1		Wood floated	m ²	12		
C11.2		Steel floated	m ²	5		
C12	PS G 8.10	Building pipes into concrete work and grouting pipes	No.	6		
Sub-total carried forward						

SCHEDULE C: ANAEROBIC PONDS						
ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Brought forward						
	SANS 1200 DB	EARTHWORKS (PIPE TRENCHES)				
C13	8.3.2 a	Excavate in all material for trenches, backfill, compact and dispose off surplus material for the following pipes:				
C13.1		110mm Ø uPVC pipe	m	347		
C13.2		160mm Ø uPVC pipe	m	23		
C13.3		200mm Ø uPVC pipe	m	43		
	8.3.2(b)	Extra-over items 1.1 to 1.3 for:				
C13.4		Hard rock excavation	m ³	20		
	8.3.3	EXCAVATION ANCILLARIES				
C14	PS DB 8.3.3.1	Make up deficiency in backfill material. No payment for overhaul				
C14.1	8.3.3.1(a)	From other trench excavation on site	m ³	10		
C14.2	8.3.3.1(b)	By importation from designated borrow pits	m ³	10		
C14.3	8.3.3.1(c)	By importation from commercial sources	m ³	5		
	SANS 1200 D	EARTHWORKS				
C15		Bulk excvation				
C15.1	8.3.2	Excavate in all material for trenches, backfill, compact and dispose off surplus material for the sludge draw box	m ³	12		
	SANS 1200 LB 8.2.1	BEDDING (PIPES)				
C16		Provision of bedding material from thrench excavations on site compacted to 93% of MAASHTO density 100% for sand. (No payment for overhaul)				
C16.1	8.2.1 a	Selected granular material	m ³	8		
C16.2	8.2.1 b	Selected fill material	m ³	50		
C17	8.2.2.1	Provision of bedding material by importation from borrowpits compacted to 93% of MAASHTO density 100% for sand.				
C17.1	8.2.2.1 a	Selected granular material	m ³	8		
C17.2	8.2.2.1 b	Selected fill material	m ³	30		
C18	8.2.2.2	Provision of bedding material from cormercial sources compacted to 93% of MAASHTO density 100% for sand.				
C18.1	8.2.2.2 a	Selected granular material	m ³	18		
C18.2	8.2.2.2 b	Selected fill material	m ³	10		
Sub-total carried forward						

SCHEDULE C: ANAEROBIC PONDS						
ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Brought forward						
	SANS 1200 LD	SEWERS				
C19	8.2 8.2.1	Supply, lay, joint, bed and test pipe specials complete as follows: (Drawing: P08403-W-TD-001)				
		Anaerobic pond inlet				
C19.1		API/1: 150mm Cast Iron (CI) flanged adaptor to suit 160mm diameter uPVC class 6 pipe	No.	1		
C19.2		API/2: 150mm mild steel (M.S) pipe 1500mm O.A. one end flanged other end plain with P.F. 400mm from flanged end.	No.	1		
C19.3		Supply, lay, joint, bed and test 160mm Ø uPVC pipe , Class 6	m	25		
		Anaerobic pond outlet				
C19.4		Supply, lay, joint, bed and test 200mm Ø uPVC pipe , Class 6	m	45		
		Sludge draw off box				
C19.5		SDB/1: 150mm Cast Iron (CI) flanged adaptor to suit 160mm diameter uPVC class 6 pipe	No.	2		
C19.6		SDB/2: 150mm mild steel (M.S.) flanged radial Tee 560mm long with branch 368mm C of F.	No.	1		
C19.7		SDB/3: 150mm mild steel (M.S.) D.F. pipe 650mm O.A. with P.F. 325mm from one end.	No.	1		
C19.8		SDB/4: 150mm cast iron (C.I) D.F. Resilient seal gate valve 279mm O.A. with cap top to suit extension spingle	No.	1		
C19.9		SDB/5: 150mm mild steel (M.S.) D.F. Pipe 1055mm O.A.	No.	1		
C19.10		SDB/6: 150mm mild steel (M.S.) blank flange	No.	1		
C19.11		SDB/7: Galvanised mild steel (G.M.S.) Extension spindle 1725mm O.A. complete with handwheel and fixing bracket. Distance between spindle and wall = 250mm.	No.	1		
C19.12		SDB/8: 150mm mild steel (M.S.) Pipe 450mm O.A. one end flanged other end plain with P.F. 100mm from plain end.	No.	1		
		Box detail 1 & 2				
C19.13		BD/1: 200mm Cast Iron (CI) flanged adaptor to suit 200mm diameter uPVC class 6 pipe.	No.	2		
C19.14		BD/2: 200mm mild steel (M.S) pipe 450mm O.A. one end flanged other end plain with P.F. 100mm from flanged end.	No.	2		
Sub-total carried forward						

SCHEDULE C: ANAEROBIC PONDS						
ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Brought forward						
		Recirculation pipe inlet				
C19.14		RPI/1: 100mm Cast Iron (CI) D.F. Resilient seal gate valve 254mm O.A. complete with handwheel.	No.	1		
C19.15		RPI/2: 100mm mild steel (M.S.) D.F. Pipe 800mm O.A.	No.	1		
C19.16		RPI/3: 100mm mild steel (M.S.) D.F. 45° bend 102mm C to F and 919mm straight pipe between bends as shown on the drawing.	No.	1		
C19.17		RPI/4: 100mm cast iron (C.I) flange adaptor to suit 110mm diameter uPVC class 6 pipe.	No.	1		
		Bypass pipeline				
C19.18		Supply, lay, joint, bed and test 200mm uPVC pipe , Class 6	m	236		
C19.19		Rising main pipeline				
C19.20		Supply, lay, joint, bed and test 160mm uPVC pipe , Class 6	m	140		
		Bends				
C19.21		90° Bend for 200mm Ø uPVC pipe , Class 6	No.	4		
C19.22		90° Bend for 160mm Ø uPVC pipe , Class 6	No.	5		
C19.23		45° Bend for 200mm Ø uPVC pipe , Class 6	No.	2		
C19.24		45° Bend for 160mm Ø uPVC pipe , Class 6	No.	2		
C19.25		22.5° Bend for 200mm Ø uPVC pipe , Class 6	No.	1		
C19.26		22.5° Bend for 160mm Ø uPVC pipe , Class 6	No.	1		
C19.27		11,25° Bend for 200mm Ø uPVC pipe , Class 6	No.	1		
C19.24		11,25° Bend for 160mm Ø uPVC pipe , Class 6	No.	1		
C19.25	8.2.8	Anchor/Thrust blocks and pedestals, 15 mpa	m ³	50		
C20	8.2.3	Manholes				
C20.1	PS LD 8.2.3	Manholes; Sludge draw off off box 2.0 m - 3.0 m	No.	2		
C20.2	PS LD 8.2.3.3	New manholes on existing pipes	No.	2		
C21	PS LD 8.2.8	Anchor blocks	m ³	1		
C22	PS LD 8.2.11	Connection To Existing Sewers	No.	2		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT NO: KBM 11-2026
KAREEBERG LOCAL MUNICIPALITY
UPGRADING OF THE CARNARVON WASTEWATER TREATMENT WORKS
SCHEDULE D: INLET WORKS

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SANS 1200 C	SITE CLEARANCE				
D1	8.2.1	Clear and grub vegetation and trees	m ²	275		
D2	8.2.2	Remove and grub large trees and tree stumps of girth				
		Over and Up to				
D2.1	8.2.2. a	1 m 2.m	No.	1		
D2.2	8.2.2.b	2 m 3 m	No.	1		
	SANS 1200 D	EARTHWORKS				
D3	8.3	Excavation				
D3.1	8.3.2	Excavate in all materials and use for embankment or backfill or dispose as ordered	m ³	30.00		
D3.2	8.3.2 (b)	Extra over items for excavation in hard rock	m ³	5.00		
D4	8.3.8	Existing services				
D4.1	8.3.8.1 (c)	Excavate by hand in soft material to expose services	m ³	10		
D4.2	8.3.8.2 (c)	Temporary protection of existing services (Provisional sum)	P Sum	1		
D5	8.3.9	Extra-over for backfill or fill material against structures using G5 material, 150mm layers compacted to 95% Mod AASHTO, (Provisional sum)	m ³	90		
D6	PS D 8.3.16	Supply and place Bidim U14 (geotextile, Grade A2)	m ²	5		
D7	PS D 8.3.17	Supply and place 40mm stone	m ³	1		
	SANS 1200 G	CONCRETE STRUCTURAL				
D8	8.2	Formwork				
D8.1	8.2.1	Rough	m ²	45.00		
D8.2	8.2.2	Smooth	m ²	40.00		
D8.3	8.2.6	Box out holes or Form voids as follows:				
D8.3.1	8.2.6 (a)	Small, circular of diameter up to and including 0,35m over and up to and including;				
D8.3.1.1		1) 0 - 0,5m deep	No.	5		
D8.3.2	8.2.6 (b)	Small, other than circular of area up to and including 0,1m ²	No.	1.00		
Sub-total carried forward						

SCHEDULE D: INLET WORKS						
ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Brought forward						
	SANS 1200 LD	SEWERS				
D15	8.2 8.2.1	Supply, lay, joint, bed and test pipe specials complete as follows: (Drawing: P08403-W-DT-003-01; P08403-W-TD-001)				
D15.1		IW/1: 150mm mild steel (M.S.) Pipe 450mm O.A. One end flanged other end plain with P.F. 100mm from plain end.	No.	2		
D15.2		IW/2: 160mm cast iron (CI) flanged adaptor to suit 160mm Ø upvc class 34 pipe.	No.	2		
D15.3		IW/3: 100mm mild steel (M.S.) Pipe 1200mm O.A. one end flanged other end plain.	No.	1		
D15.4		IW/4: 100mm mild steel (M.S.) Pipe 600mm O.A. one end flanged other end plain.	No.	1		
D15.5		IW/5: 100mm cast iron (C.I.)D.F. Resilient seal gate valve 254mm O.A. with cap top to suit extension spindle.	No.	2		
D15.6		IW/6: Galvanised mild steel (G.M.S.) Extension spindle 1230mm O.A. complete with handwheel and fixing brackets. Distance between wall and spindle = 330mm.	No.	2		
D15.7		IW/7: 150mm mild steel (M.S) D.F. 45° medium radius bend both legs 430mm C to F.	No.	2		
D15.8		IW/8: 200mm cast iron (CI) flanged adaptor to suit 200mm Ø upvc class 34 pipe.	No.	1		
D15.9		IW/9: 200mm mild steel (M.S.) Pipe 450mm O.A. One end flanged other end plain with P.F. 100mm from plain end.	No.	1		
D15.10		Supply, lay, joint, bed and test 160mm Ø uPVC pipe , Class 34	m	50		
D15.11		Supply, lay, joint, bed and test 200mm Ø uPVC pipe , Class 34	m	56		
Sub-total carried forward						

SCHEDULE D: INLET WORKS

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Brought forward						
D16	PS LD 8.2.3	Manholes				
D16.1		1.0 m - 2.0 m	No.	2		
D16.2		2.0 m - 3.0 m	No.	1		
D17	PS LD 8.2.3.3	New manholes on existing pipes	No.	1		
D18	PS LD 8.2.11	Connection To Existing Sewers	No.	2		
D19	SANS 1200 HA	STRUCTURAL STEELWORK (Sundry items) (Drawing P08403-W-DT-003, complete with corrosion protection)				
D19.1	8.3.1	Structural steel handscreen	No.	1		
D19.2	8.3.2	Handrails				
D19.2.1	PS HA 8.3.2(b)	Handrail assembly complete	m	40		
D19.3	PS HA 8.3.3	Ladders, complete and installed	No.	3		
D19.4	PS HA 8.3.4	Flooring, complete and installed with frames				
D19.4.1	8.3.4(a)	Open steel grid floors	Sum	1		
D19.5	PS HA 8.3.8	3CR12 Weir plates	No.	2		
D19.6	PS HA 8.3.9	Aluminium handstops	No.	4		
TOTAL CARRIED FORWARD TO SUMMARY						

CONTRACT NO: KBM 11-2026
KAREEBERG LOCAL MUNICIPALITY
UPGRADING OF THE CARNARVON WASTEWATER TREATMENT WORKS
SCHEDULE K: ACCESS ROAD

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SANS 1200 C	SITE CLEARANCE				
K1.1	8.2.1	Clear and grub vegetation and trees	m ²	280		
	SANS 1200 DM	ROADS				
K2	8.3.2	Preparation of site				
K2.1		a) Preparation and stripping , removal of 150mm topsoil , stockpile and maintaining.	m ³	40		
K3	8.3.7	Cut to spoil or stockpile from:				
K3.1		b) Intermediate excavations	m ³	160		
K4	8.3.6	Extra-over item 8.3.7 above for:				
K4.1		c) Hard rock excavations	m ³	48		
K5	8.3.3	Treatment of road bed				
K5.1		a) Roadbed preparation and compaction of material to 93% mod AASHTO	m ³	40		
K6	8.3.5	Selected G6 layer compacted to 95% of Mod AASHTO	m ³	40		
K7	SANS 1200 ME	SUBBASE				
K7.1	8.3.3	Construct the subbase course C3 with material from commercial sources, compacted to 97% of Mod				
K7.2	8.3.5	Process subbase material by the following processes as relevant and use in the subbase				
K7.2.1		d) Stabilization	m ³	80.00		
K7.3	8.3.8	Stabilizing agent				
K7.3.1		b) Portland cement	t	0.15		
Sub-total carried forward						

SCHEDULE K: ACCESS ROAD						
ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Brought forward						
K8	SANS 1200 MJ	SEGMENTED PAVING				
K8.1	8.2.2	Construction of paving complete, precast concrete paving Type SA, 80mm thick on 20mm bedding sand	m ²	264		
K8.2	8.2.3	Cut units to fit edge restraints	m	20.00		
K8.3	8.2.4	Rolling to locked-up condition	m ²	240.00		
K9	1200 MK 8.2.1	Concrete mountable kerbing and channelling, curved or straight, as indicated on the drawings (SABS 927 Figure 7)	m	80.00		
K10	1200MK 8.2.1	300mm wide x 150mm thick edge restraints, concrete Grade 25/19 MPa	m	20.00		
TOTAL CARRIED FORWARD TO SUMMARY						

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KAREEBERG LOCAL MUNICIPALITY
UPGRADING OF THE CARNARVON WASTEWATER TREATMENT WORKS
SUMMARY

SCHEDULE	DESCRIPTION	AMOUNT
A	PRELIMINARY AND GENERAL	R
B	DAYWORKS	R
C	ANAEROBIC PONDS	R
D	INLET WORKS	R
E	ACCESS ROAD	R
	Sub-Total 1	R
	Contingency 10%	R
	Sub-Total 2	R
	VAT 15%	R
	Total	R

C2.2-18

KAREEBERG MUNICIPALITY
UPGRADING OF CARNARVON OXIDATION PONDS
PHASE 1: CONSTRUCTION OF INLET WORKS AND ANAEROBIC POND
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C2.3 SUMMARY OF BILL OF QUANTITIES

SECTION	DESCRIPTION	AMOUNT (RAND)
A	PRELIMINARY AND GENERAL	
B	DAY WORKS	
C	ANAEROBIC PONDS	
D	INLET WORKS	
E	ACCESS ROAD	
	SUB TOTAL 1	
	10% Contingencies	
	SUB TOTAL 2	
	15% VAT	
	TOTAL	

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C2.4: DAYWORK SCHEDULE

C2.4.1 GENERAL

Tenderers must complete this list which shall be used for the assessment of value of the work which the Engineer instructed in writing that must be done on a day work bases, all in agreement with Clause 6.5 of the General Conditions of Contract for Construction Works 2015. All the rates are fixed and shall be binding until and with the issuing of the final certificate, except for statutory increases, announced from time to time.

C2.4.2 LABOUR COSTS

Rates for labour as listed below shall include all the allowances as specified in the General Conditions of Contract for Construction Works 2015.

Overtime costs attached to this contract shall be paid in the same relation as to that which the employees are actually paid.

Only the net working hours will be measured under Daywork and it will be held that the Contractor has made provision in his rates for possible interruptions and standing time.

DESCRIPTION	UNIT	RATE
Unskilled labour	hour	
Semi skilled labour	hour	
Skilled labourer	hour	
Pipe layer	hour	
Ganger	hour	
Foreman/Section leader	hour	
Brick layer	hour	
Plumber	hour	
Surveyor	hour	

C2.4.3 EQUIPMENT COSTS

Full comprehensive hourly rates, which also include the cost of the operators and other equipment, must be listed below. Rates must also include all the costs of consumable items, maintenance, depreciation, tools and all other coincidences that shall be necessary to operate the equipment for the purpose it is designed for. The rates must also include all the overhead costs, profits, site supervision, insurance, holidays with payment, travelling costs (or travelling allowances) and residence allowances of operators and any other allowances that is applicable. No further percentage allowances shall be applicable on equipment. The Tenderer must list under each heading the fabrication and specification of the equipment available.

The Contractor will be paid the actual net cost of plant hired by him for Daywork and in addition will be paid a percentage allowance on the net cost of such hire which allowance will cover the Contractors overhead costs and profit.

DESCRIPTION	UNIT	RATE
1. Excavators	hour hour hour hour	
2. Bulldozers	hour hour hour hour	
3. Graders	hour hour hour hour	
4. Scrapers	hour hour hour hour	
5. Front-end loaders	hour hour hour hour	
6. Rollers	hour hour hour hour	
7. Pneumatic tyre rollers	hour hour hour hour	

8. Small rollers	hour hour hour hour	
9. Trucks (m ³ specified)	hour hour hour hour	
10. Water truck (litres specified)	hour hour hour hour	
11. Tractor and trailer	hour hour hour hour	
12. "Shaunee" tractor	hour hour hour hour	
13. Crane truck (tons specified)	hour hour hour hour	
14. Compressor	hour hour hour hour	

15. Concrete mixer (litres specified)	hour hour hour hour hour	
16. "Dumper" (m ³ specified)	hour hour hour hour hour	
17. Water pumps 75 mm 100 mm 150 mm	hour hour hour	
18. Compactors (Plate)	hour hour hour hour hour	
19. Other equipment	hour hour hour hour hour	

SCHEDULE D: INLET WORKS						
ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Brought forward						
D9	8.3.	Reinforcement				
D9.1	8.3.1	High tensile steel bars:				
D9.1.1		Inlet Works	t	8.00		
D9.1.3		High tensile welded mesh	m ²	20		
D9.2	8.3.1	Mild steel bars:	t	0.10		
D10	8.4	Concrete				
D10.1		15 Mpa/19mm Blinding layer	m ³	6		
D10.2		35 Mpa /19mm concrete	m ³	60		
D10.3		20 Mpa Mass concrete around pipes as shown on drawings.	m ³	5		
D11	8.4.4	Unformed surface finishes:				
D11.1		Wood floated	m ²	50		
D11.2		Steel floated	m ²	85		
D12	PS G 8.5	Joints	m	50		
D13	PS G 8.10	Building pipes into concrete work and grouting pipes.	No.	4		
	SANS 1200 DB	EARTHWORKS (PIPE TRENCHES)				
D14	8.3.2 a	Excavate in all material for trenches, backfill, compact and dispose off surplus material for the following pipes:				
D14.1		160mm Ø uPVC pipe	m	50		
D14.2		200mm Ø uPVC pipe	m	56		
	8.3.2(b)	Extra-over items 1.1 to 1.3 for:				
D14.3		Hard rock excavation	m ³	5		
	8.3.3	EXCAVATION ANCILLARIES				
D15	PS DB	Make up deficiency in backfill material. No payment for				
	8.3.3.1(a)	From other trench excavation on site	m ³	5		
	8.3.3.1(b)	By importation from designated borrow pits	m ³	7		
	8.3.3.1(c)	By importation from commercial sources	m ³	3		
	SANS 1200 LB	BEDDING (PIPES)				
	8.2.1	Provision of bedding material from thrench excavations on site compacted to 93% of MAASHTO density 100% for sand. (No payment for overhaul)				
	8.2.1 a	Selected granular material	m ³	3		
	8.2.1 b	Selected fill material	m ³	5		
	8.2.2.1	Provision of bedding material by importation from borrowpits compacted to 93% of MAASHTO density 100% for sand.				
	8.2.2.1 a	Selected granular material	m ³	5		
	8.2.2.1 b	Selected fill material	m ³	10		
	8.2.2.2	Provision of bedding material from commercial sources compacted to 93% of MAASHTO density 100% for sand.				
	8.2.2.2 a	Selected granular material	m ³	3		
	8.2.2.2 b	Selected fill material	m ³	8		
Sub-total carried forward						

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PART C3: SCOPE OF WORK

C3.1 Description of the Works

C3.2 Engineering

C3.3 Procurement

C3.4 Construction

C3.5 Management

C3.6 Occupational Health and Safety Specification

C3.7 Environmental Management

C3.8 Annexes

Annexure A	Locality Plan
Annexure B	Standard Drawings
Annexure C	Drawings Issued for Tender
Annexure D	Geotechnical Report
Annexure E	Environmental Management Programme and Environmental Authorisation

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C3.1: DESCRIPTION OF THE WORKS

C3.1.1 EMPLOYER'S OBJECTIVES

The Employer requires that the existing Oxidation Ponds at Carnarvon be upgraded to increase its capacity.

The Employer desires that the work required for the upgrading be of a high standard, completed in the shortest practical time whilst making maximum use of local labour.

C3.1.2 OVERVIEW OF THE WORKS

The contract comprises the civil engineering construction of HDPE lined earth dams, small concrete water retaining structures, building works, interconnecting pipework and general site works.

C3.1.3 EXTENT OF THE WORKS

The work included in this contract involves the following:

- General site works and paving.
- Construction of one new anaerobic pond with a total area of approximately 950 square meters.
- Lining of the pond with 1,5mm thick HDPE liner.
- Construction of a new inlet works.
- Construction of a new discharge slab
- Construction of concrete boxes and other small structures.
- Construction of Access Road
- Interconnecting pipework.



Figure 1: Area of Works

Figure 1 shows the extent of works described as follows:

- Red fill: Anaerobic Pond
- Yellow fill: Access Road, discharge slab and inlet works
- Green line: pipeline from main sewer pumpstation to inlet works

Construction methods must be such that no property or life is endangered. The Employer accepts no responsibility for work that is done outside the site boundaries without the Engineer's approval.

All mechanical and electrical work will form part of the civil contract and no additional payment will be made for delays caused by poor liaison or co-ordination between the different contractors.

As indicated in Clause 21 of the General Conditions, the Contractor shall afford reasonable facilities to other Contractors.

Sufficient photos of structures, walls and areas that have to be crossed must be taken by the Contractor and handed over to the Engineer before such operations commence.

No payment will be made in this regard and it shall be deemed to be covered in the preliminary and general items.

The Contractor must program his work in such a way that no construction is to be done during the holiday season and Easter weekend as set out in the Contract Data.

The compilation of the construction program and any amendments thereto during the course of construction shall be at the cost of the Contractor and shall not be measured elsewhere in this contract.

The existing oxidation ponds shall remain in operation throughout the duration of the contract. The Contractor must take this into account when programming the work and take note of the following:

- At least one of the existing ponds should remain in operation for the duration of the construction period. In order to achieve this objective, it may be necessary to first complete the new anaerobic ponds in order to divert the flow from the existing ponds to the new ponds.
- The remainder of the new structures will not be affected and can be constructed concurrently with any other works on site.

C3.1.4 LOCATION OF WORKS

The site is situated at the existing Carnarvon Oxidation Ponds and is shown on the locality plan in Annex A.

Access to the site is from the main Carnarvon-Vosburg tar road.

It is required of the contractor to familiarise themselves with the area.

C3.1.5 GEOTECHNICAL INFORMATION

A full geotechnical study with respect to this project was carried out. The complete report on the geotechnical study is included in Part 5, Annexure D.

All information regarding sub-surface conditions and materials on the Site is provided in good faith, for the Contractor's convenience, as an indication of the conditions likely to be encountered. The Employer accepts no responsibility for the accuracy or comprehensiveness of the information or that the information is representative of the conditions or materials likely to be encountered. The provision of such information shall not be regarded as in any way limiting, or detracting from the Contractor's responsibilities under the Contract. The Contractor will be deemed to have satisfied himself as to all surface and sub-surface conditions to be encountered on the Site of the Works and to have allowed accordingly in his tendered amounts.

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C3.2: ENGINEERING

C3.2.1 DESIGN SERVICES AND ACTIVITY MATRIX

Works designed by, per design stage:

Concept, feasibility and overall process	Employer (Engineer)
Basic engineering and detail layout to tender stage	Employer (Engineer)
Final design to approved for construction stage	Employer (Engineer)
Temporary works	Contractor (Engineer)
Preparation of “as built” drawings	Contractor

C3.2.2 DRAWINGS

The drawings listed below are attached in order to give an overview of the project. The drawings will be either attached to this document, or submitted separately in a drawings book.

Additional construction drawings will, in terms of Clause 5.9.1 of the General Conditions of Contract (2015 3rd Edition), be issued to the Contractor by the Engineer/Employer on the commencement date and from time to time as required.

Upgrading of Carnarvon Oxidation Ponds Phase 1: Construction of Inlet Works and Anaerobic Pond.	
Drawing number	Title
P08403-W-LA-003	ACCESS ROAD LAYOUT
P08403-W-DT-011	TANKER DISCHARGE SLAB
P08403-W-DT-003-01 C	INLET WORKS PLAN VIEW & SECTIONS (SHT 1 OF 2)
P08403-W-DT-003-02 C	INLET WORKS PLAN VIEW & SECTIONS (SHT 2 OF 2)
P08403-W-DT-001-01 C	ANAEROBIC POND – LAYOUT AND DETAILS (SHT 1 OF 2)
P08403-W-DT-001-02 C	ANAEROBIC POND – LAYOUT AND DETAILS (SHT 2 OF 2)
P08403-W-LA-000 C	GENERAL SITE LAYOUT
P08403-W-LA-002 C	GENERAL PIPEWORK ARRANGEMENT LAYOUT
P08403-W-TD-001 B	TYPICAL DETAIL DRAWING SECTIONS & PIPE SCHEDULE (SHT 1 OF 1)

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C3.3: PROCUREMENT

C3.3.1 PREFERENTIAL PROCUREMENT PROCEDURES

C3.3.1.1 Requirements

The works shall be executed in accordance with the conditions attached to preferences granted in accordance with the preferencing schedule.

C3.3.2 Sub- Contracting

Notwithstanding other requirements of the Contract, the Contractor shall not sub-contract any part of the Contract without the prior consent of the Engineer, which consent shall not be unreasonably withheld.

C3.3.3 Appointment of Sub-Contractors

Any consent granted in terms of C3.3.2 or appointment of the sub-contractor in terms of C3.3.2 or C3.3.3 shall not imply a contract between the Employer and the sub-contractor, or a responsibility or liability on the part of the Employer to the sub-contractor and shall not imply a contract between the Engineer and the sub-contractor, or a responsibility or liability on the part of the Engineer to the sub-contractor and shall not relieve the Contractor from any liability under the Contract and he (the Contractor) shall be liable for the acts, defaults and neglects of any sub-contractor, his agents or employees as fully as if they were the acts, defaults or neglects of the Contractor, his agents or employees.

C3.3.4 Payment of Sub-Contractors

Before the Engineer, in terms of Clause 6.10.1 [Interim Payments] of the General Conditions of Contract for Construction Works (Third Edition, 2015), issues any certificate that includes any payment in respect of work done or goods supplied by any sub-contractor in terms of Clause 4.4 [Sub-Contracting] of the General Conditions of Contract for Construction Works (Third Edition, 2015), he shall be entitled to call upon the Contractor to furnish reasonable proof that all payments (less retention moneys) included in previous certificates in respect of the work or goods of such sub-contractors have been made or discharged by the Contractor, in default of which, unless the Contractor:

- (a) Informs the Engineer in writing that he has reasonable cause for withholding or refusing such payment, and
- (b) Submits to the Engineer reasonable proof that he has so informed such sub-contractor in writing,

The Employer shall be entitled to pay directly such sub-contractor (nominated or otherwise) on the Engineer's certificate all payments (less retention moneys) the Contractor has failed to make to such sub-contractor and to deduct, by way of settlement, the amount so paid by the Employer from any moneys owing to or that may become owing to the Contractor.

Provided always that where the Engineer has certified and the Employer has paid directly as aforesaid, the Engineer shall, in issuing any further certificate in favour of the Contractor, deduct from the amount thereof the amount paid direct as aforesaid, but shall not withhold or delay the issue of the certificate when due to be issued in terms of the Contract.

C3.3.5 EMPLOYMENT TARGETS

Minimum local community employment

Failure to meet any of the following minimum labour-based targets will be penalised.

Employment of local community labour

The maximum possible number of workers is to be employed from the labour lists of the currently unemployed persons in the local community.

To this end the Contractor is required to give preference to the use of local community labour and limit the use of non-local labour to key personnel only. All unskilled labour shall be from the local community.

Local community labour is defined as people who reside in the municipal area of Carnarvon and who have been identified by the CLO.

Key personnel are defined as supervisors and skilled labourers without whom a specific task cannot be executed. As far as possible these people should impart their management and building skills to individuals within the local workforce who show a keen interest and display a willingness to learn. It is expected from the successful contractor to issue attendance certificates to all local labourers clearly mentioning the type of work done.

Employment of women

It is preferred that part of the workforce must be women.

Employment of youth

30% of the workforce must be youth (18 – 35 years of age).

Employment of disabled people

If available

Remuneration of local labourers

The minimum wages shall be the prescribed Minimum Wage or EPWP rate as set by the applicable law of the specific jurisdiction area.

C3.3.3 WORKER CONTRACTS

The Contractor will be required to enter into employment contracts with all labourers employed. All Workers Contracts for labourers employed during the month must accompany the Contractor's monthly report. The labourers must have a fixed job description that they must understand and they must acknowledge their production requirements and responsibilities.

C.3.3.4 COMMUNITY LIASON OFFICER (CLO)

The Contractor must employ on a full-time basis a Community Liaison Official for the entire duration of the contract to act as a link between the Contractor, the labourers and the local community. The Municipality will nominate the CLO. The remuneration of the CLO is calculated at a fixed rate per hour for an average 8-hour working day for the duration of the contract. Provision for the payment of the CLO is made under the preliminary and general section of the bill of quantities.

The primary task of the CLO will be to supply labourers to the contractor on request and the management of labour relations. The CLO will under no circumstances appoint any labourers on the project but only supply the names to the contractor who will appoint the employees.

Meetings must be organised by the CLO to explain how the community will be affected by the execution of the works and also to address possible complaints that may arise from the community.

The Community Liaison Officer's duties will be:

- a) To be available on site during normal construction working hours.
- b) To communicate daily with the contractor and the Engineer to determine the labour requirements with regard to numbers and skills.
- c) To identify possible labour disputes and to assist in their resolution.
- d) To attend all meetings in which the community and/or labour is present or is required to be present. In particular he/she will attend site meetings to report on the local community labour involvement.
- e) To identify, screen and nominate labour from the labour pools provided by the community in accordance with the Contractor's requirements.
- f) To inform local labour of the conditions of temporary employment, their timely availability and to inform local labourers when their appointments will be terminated.
- g) To attend disciplinary proceedings and to ensure that hearings are fair and reasonable.
- h) To keep a daily written record of his/her interviews concerning community liaison.
- i) To keep a daily written report of all local labour used on the project.

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C3.4: CONSTRUCTION

C3.4 GENERAL CLAUSES AND REQUIREMENTS

This section of the Contract documents should be read together with all other sections and Standard and Particular Specifications included in the Contract documents or Standard Specifications mentioned in the Contract documents, but separately available. The documents should be read and interpreted jointly in order to determine the full requirements of the Contract.

C3.4.1.1 Information Required at Tender Stage

It is a specific requirement of the tender that full information of all the equipment offered must be supplied at the time of tendering in order for the Engineer to evaluate the Tenderer's submission. In this regard, the Tenderer shall complete all technical schedules issued as part of the tender document. Manufacturer's pamphlets and catalogues shall be included, where necessary, to describe the particular item offered.

C3.4.1.2 Drawings

Only figured dimensions on the Drawings may be used in the interpretation thereof, and the Drawings shall not be scaled unless the Contractor is so instructed by the Engineer in writing. The Engineer will upon written request provide any dimensions that may have been omitted from the Drawings.

Only A1 size construction drawings issued by and bearing the signature of the Engineer shall be used for construction purposes. The Engineer shall issue 3 x A1 and 1 x A3 copies of the construction drawings to the Contractor at the start and during the course of construction. Additional copies may be made by the Contractor at his expense, however, copyright of the Drawings shall remain vested with the Employer at all times.

For the portions of the Works designed by the Contractor (such as final pipe items and fittings), the latter shall furnish the Engineer with a full set of working drawings showing the exact dimensions and details of equipment to be manufactured. The drawings must be approved by the Engineer before manufacture of the equipment commences. Once satisfied, the Engineer shall approve the drawings in principle, which shall not relieve the Contractor from his responsibility to execute the Works in terms of the Specification, correctness of the drawings and final dimensions of all manufactured items.

All information in the possession of the Contractor that is required by the Engineer's Representative to complete the Record (As-Built) drawings and to prepare a completion report for the Employer, must be submitted to the Engineer's Representative before a Certificate of Completion will be

issued for the civil portion of the Works.

C3.4.1.3 Operation and Maintenance Manuals

The Contractor shall be responsible for the compilation and submission of the operation and maintenance manuals for all equipment.

C3.4.1.4 Site Facilities Available

C3.4.1.4.1 Camp and depot

No housing is available on the Site and the Contractor shall make his own arrangements to house his employees and transport them to and from Site. The Contractor shall identify his proposed position(s) of his camp and depot for approval by the Engineer.

C3.4.1.4.2 Access to Site

The Contractor may make use of the existing R384 between Carnarvon and Vosburg for access to the Site. If the Contractor requires additional access to and within the Site, these shall be constructed at his own expense.

Proper access control shall be instituted by the Contractor to prevent any unauthorised entry to the working front(s) and adequate fencing of the working front shall be executed during the Contractor's establishment on Site.

The Contractor shall make the necessary allowance in his tender and be responsible for access control and security on site during the construction period, including weekends, public holidays and the builder's break.

C3.4.1.4.3 Water supply

The Contractor shall make his own arrangements and pay all installation and consumption charges for the supply of water.

C3.4.1.4.4 Power supply

The Contractor shall make his own arrangements and pay all installation and consumption charges for the supply of electrical power.

C3.4.1.4.5 Other services

The Contractor shall make his own arrangements and pay all installation and consumption charges for the supply of any other services required.

C3.4.1.4.6 Sanitation

The Contractor shall provide the necessary ablution facilities for his camp and depot.

C3.4.1.4.7 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 respects responsible for the housing and transporting of his employees, and for the arrangement thereof, and no extension of time due to delays resulting from this will be granted.

C3.4.1.5 Existing Services and Structures

The position and details of all existing services and structures known to the Engineer are shown on the Drawings. Although the Engineer has endeavoured to indicate the position of the services and structures as accurately as possible, it will remain the responsibility of the Contractor to prove the exact position of all services impacted by construction activities prior to commencing with such activity.

Any/all services and structures damaged during the construction period due to construction activities shall be repaired by the Contractor as soon as practically possible at the Contractor's expense. In emergency situations, the Employer or its mandated agent may undertake critical repairs at the cost of the Contractor should this be deemed necessary.

C3.4.1.6 Blasting Activities

Should blasting be required, the activity shall be planned and executed by a suitably-qualified professional and all steps shall be taken to prevent any damage to existing structures, services and the general public. A detailed method statement and risk assessment shall be prepared and approved by the Engineer prior to each blasting event. All relevant Occupational Health and Safety Regulations shall strictly be observed and applied.

C3.4.1.7 Fire-risk

The Contractor shall be responsible to safeguard the areas adjacent to the Contractor's camp against fire caused in any way by the construction activities on Site. The Contractor shall be responsible for any damage or loss suffered in this regard.

C3.4.1.8 Potential Material Sources and Dump Sites

The Contractor shall locate suitable disposal sites, off site, for the disposal of cleared vegetation, rubble, unsuitable material or surplus material. The Contractor shall inform the Engineer of any site he proposes to use.

C3.4.1.9 Conditions of Employment

The Contractor shall be responsible to engage all staff and labour, local or otherwise, and for their payment, housing, feeding and transport. A contract of employment or sub-contract shall be signed between the Contractor and each of his employees or sub-contractors as the case may be. Likewise contracts of employment must be entered into between each such sub-contractor and each of the specific sub-contractor's employees. Although the Contractor shall adhere to the minimum wage rates described below he is at liberty to negotiate additional incentive payments based on performance.

Contracts of employment or sub-contracts should provide for the following basic conditions:

- a) The minimum wage payable will be determined in terms of applicable legislation and shall, as a minimum, adhere to section 56(1) of the Basic Conditions of Employment Act (Act 75 of 1997), Sectoral Determination 2: Civil Engineering Sector dated 27 August 2010 (or subsequent revision hereof applicable at the time of tendering) as published periodically by the Department of Labour.
- b) The Contractor shall adhere to the provisions for payment method and intervals, overtime and pay for work on Sundays and public holidays (if required) in the Basic Conditions of Employment Act (Act 75 of 1997).
- c) The Contractor shall register all labourers employed on the Contract with the Workmen's Compensation Commissioner and the Unemployment Insurance Fund, as applicable. The Contractor shall obtain the Unemployment Insurance Fund and Workmen's Compensation registration cards.
- d) Workers shall be entitled to one (1) day sick leave with full pay per month worked. This will accumulate if the leave is not used.
- e) Annual leave shall be calculated as published in terms of section 56(1) of the Basic Conditions of Employment Act (Act 75 of 1997), Sectoral Determination 2: Civil Engineering Sector dated 27 August 2010 (or subsequent revision hereof applicable at the time of tendering) as published periodically by the Department of Labour.
- f) Upon termination of the Contract, each locally employed labourer shall be entitled to receive his/her Unemployment Insurance Fund and the Workmen's Compensation registration cards as well as a Certificate of Employment from the Contractor clearly stating the following:
 - i) The type of work done.
 - ii) The duration of employment.
 - iii) The number of days absent from work.
 - iv) The Contractor's general impression of the quality of work done.
- (g) The Occupational Health and Safety Act must be adhered to with reference to the safety of all employees employed by the Contractor. Suitable safety equipment and clothing shall be issued and maintained by the Contractor for the duration of construction.
- (h) Should any of the above conditions be less favourable than any bargaining council agreement or Act applicable to the Contractor, the more favourable condition shall apply.

C3.4.1.10 Quality Control

The onus to produce work that conforms in quality and accuracy of detail to the requirements of the Specifications and the Drawings rests solely with the Contractor, and the Contractor shall, at

his own expense and in accordance with the General Conditions of Contract for Construction Works (Third Edition, 2015), institute a quality assurance system to demonstrate compliance with the requirements of the Contract 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 quality of the Works at all stages of the Contract. The Engineer shall be entitled to audit any aspect of the system.

Details of all procedures and compliance documents shall be submitted to the Engineer for information before each design and execution stage is commenced. When any document of a technical nature is issued to the Engineer, evidence of the prior approval of the Contractor himself shall be apparent on the document itself.

Within two weeks after the Commencement Date, and before commencement of manufacturing of any Plant and Materials, the Contractor shall submit a comprehensive proposal for a quality assurance (QA) plan to the Engineer for consideration. The Engineer will then issue his requirements for quality control (QC) which will be based on the Contractor's proposals, provided these are adequate.

Workshop-type drawings shall be prepared for all pipe items and specials for the Engineer's approval (in principle) prior to commencing with manufacturing. A specialist shall be appointed by the Engineer to conduct any/all factory-acceptance tests required in terms of the Contractor's quality assurance plan or as required in terms of the Contract.

Compliance with the quality assurance system shall not relieve the Contractor of any of his duties, obligations or responsibilities under the Contract.

C3.4.1.11 Survey Control and Setting Out

The Engineer has established permanent survey beacons on the Site of the Works. The Contractor will be provided with a listing of the survey beacons, indicating the co-ordinates and level of each beacon. The Contractor should use these survey beacons to set out the Works. The Contractor shall take special care to preserve these beacons for the duration of construction and shall be responsible to re-establish any/all beacons damaged or disturbed during construction at his expense.

C3.4.1.12 Contractor's Representative and Superintendence

The Contractor shall employ suitably-qualified representatives to oversee construction activities. CV's of the Contractor's proposed Contract's Manager and Site Agent shall be submitted to the Engineer within one (1) week of the Commencement Date and shall be approved in writing by the Engineer prior to commencing with any site establishment. Any change in the Contractor's key supervisory personnel shall be communicated timeously to the Engineer in writing.

Once the above personnel has been approved, the Contractor shall submit to the Employer and Engineer a list of addresses and telephone numbers of his Representatives who may be contacted both during and outside normal working hours in connection with the Works. The Contractor shall also refer to the General Conditions of Contract for Construction Works (Third Edition, 2015).

C3.4.1.13 Site Meetings

The Engineer will conduct monthly site meetings as a minimum, prepare and circulate minutes, as determined by him in consultation with the Employer. The Contractor shall attend these meetings and shall ensure that when necessary, all required sub-contractors are represented. The Contractor shall submit monthly progress reports as required in terms of the Employer's reporting systems.

C3.4.1.14 Security of the Site

The attention of the Contractor is drawn to the necessity of securing his Site, in particular his construction camp and depot. The Contractor shall allow at all times for the necessary security and watching to prevent theft or damage to materials, plant and the Contractor's equipment, and to ensure the safety of both the Contractor's personnel and the Employer's personnel.

It is in the interest of the Contractor to establish and maintain healthy community liaison and employment structures throughout the duration of the Contract as healthy structures will serve to elicit the support of affected communities in detecting and prosecuting criminal activity.

C3.4.2 STANDARD SPECIFICATIONS

The applicable "Standard Specifications" shall be the document "Standard Specifications for Civil Engineering Construction, SANS 1200", issued by the South African Bureau of Standards.

Tenderers, Contractors and Sub-contractors shall obtain their own copies of this document for tendering purposes and for use for the duration of the Contract from the SABS (SANS) and shall bear all expenses in this regard.

C3.4.3 VARIATIONS AND ADDITIONS TO THE STANDARD AND PARTICULAR SPECIFICATIONS

The Standard Specifications do not cover all the different types of work included in the Contract. The general requirements for portions of the Works not covered by the Standard Specifications are described in the Particular Specifications under section C3.4.4.

The Clauses under section C3.4.3 (referred to as Project Specifications) are numbered "PS" and refers to the clauses in the Standard or Particular Specifications. New clauses not covered by clauses in the Standard or Particular Specifications, if included here, are also designated "PS" followed by a number.

The various documents listed under sections C3.4.2, C3.4.3 and C3.4.4 shall be treated as mutually explanatory. However, should any requirement of section C3.4.3 conflict with any requirement of the Standard Specification or with any requirement of the Particular Specifications, then the requirement of section C3.4.3 shall prevail.

C3.4.4 WORKS SPECIFICATION

C3.4.4.1 Applicable SANS Standards

- a) For the purpose of this Contract the latest issues of the following Standard Specifications for Civil Engineering Construction, applicable at the date of tender advertisement, shall apply -

SANS 1200 A	:	General
SANS 1200 AB	:	Engineer's Office
SANS 1200 C	:	Site Clearance
SANS 1200 D	:	Earth Works
SANS 1200 DB	:	Earth Works (Pipe Trenches)
SANS 1200 DE	:	Small Earth Dams
SANS 1200 DM	:	Earthworks (Roads, Subgrade)
SANS 1200 G	:	Concrete (Structural)
SANS 1200 HA	:	Structural Steelwork (Sundry Items)
SANS 1200 LB	:	Bedding (Pipes)
SANS 1200 LD	:	Sewers
SANS 1200 M	:	Roads (General)
SANS 1200 ME	:	Subbase (1981)
SANS 1200 MF	:	Base (1981)
SANS 1200 MJ	:	Segmented Paving
SANS 1200 MK	:	Kerbing and Channelling

PROJECT SPECIFICATION

SANS 1200 SPECIFICATIONS

A: GENERAL

PS A 3 MATERIALS

PS A 3.1 QUALITY

Substitute the second sentence of the first paragraph of A 3.1 with the following:

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

Substitute the second paragraph with the following:

The Contractor is responsible for the cost of all testing to ascertain that the materials do comply with the relevant minimum requirements, and all such costs shall be deemed to be included in the tendered rates. The cost of control tests done by the Engineer and of which the results do not comply with the minimum requirements shall be for the Contractor's account.

The Contractor shall inform the Engineer of any control testing to be done at least 48 hours before such tests are required and must allow in his program for the time necessary for the tests and the processing of the results thereof.

The handling, storage, transport and erection of equipment, machinery and materials shall be strictly in accordance with the requirements of the supplier and or manufacturer.

All materials shall be new and of the best quality available unless otherwise specified. Materials must function satisfactorily under prevailing climate and weather conditions at the place of installation.

PS A 3.3 DELAY DUE TO SUPPLY OF MATERIALS

Add new sub-clause A 3.3:

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

PS A 4 PLANT

PS A 4.2 CONTRACTOR'S OFFICE, STORES AND SERVICES

Add the following to A 4.2:

The Contractor's site agent or representative must be contactable at all times by phone. Should use be made of radio and/or cellular phone, these must be operational at all times with sufficient back-up batteries or recharging facilities.

There exist no housing facilities for the Contractor's work force, and arrangements must be made by the Contractor to accomplish that as well as transport. The Contractor is solely responsible for all housing, or the arranging thereof, and no payment or extension of time will be allowed because of any delay and/or work damage that may arise.

PS A 4.3 **HAND TOOLS**

Add new sub clause A 4.3:

The Contractor shall provide and maintain all hand tools required for the execution of the Works and all such costs shall be deemed to be included in the tendered rates and no separate payment will be made for it.

PS A 4.4 **MEDICAL FACILITIES AND SAFETY EQUIPMENT**

Add new sub clause A 4.4:

The Contractor shall provide a First Aid cabinet fully equipped and maintained with the minimum contents as listed in the Annexure (Regulation 3) to the General Safety Regulations of the Occupational Health and Safety Act (Act 85 of 1993), to deal with accidents and ailments which are likely to occur during the construction period.

The Contractor shall provide personal safety equipment and facilities as required by Regulation 2 of the General Safety Regulations of the Occupational Health and Safety Act (Act 85 of 1993).

The Contractor shall designate his Safety Officer and Qualified First Aider. The Contractor shall give copies of the minutes of the site safety meetings to the Engineer.

A 5 **CONSTRUCTION**

A 5.1 **SURVEY**

PS A 5.1.1 **Setting Out of the Works**

Substitute the first sentence in A 5.1.1 with the following:

The works shall be set out as shown on the drawings. Benchmarks will be placed before handing over of the site.

Add the following:

Setting out of the works is the sole responsibility of the Contractor and shall be done from survey pegs along the street reserve boundaries and from benchmarks as indicated on the drawings. The Contractor shall, within two (2) weeks after the site has been handed over to him, ascertain himself of the correctness of all pegs and benchmarks. Any discrepancy shall immediately be reported in writing to the Engineer.

Any costs or subsequent costs arising from discrepancies which had not been reported to the Engineer within the aforementioned period, shall be the sole responsibility of the Contractor.

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

PS A 5.2 **WATCHING, BARRICADING, ELECTRIC LIGHTING AND TRAFFIC CROSSINGS**

Add the following to A 5.2:

All excavations must be marked with drums, reflecting tape and warning signs to satisfaction of the Engineer.

PS A 5.4 **PROTECTION OF OVERHEAD AND UNDERGROUND SERVICES**

Add the following to A 5.4:

The Contractor shall as soon as possible after handing over of the site, commence with the detection of existing services, continue with it without interruption and finalise it at least seven (7) days before excavation starts at that particular section.

Detected existing services shall also be indicated on the "Record" drawings.

PS A 5.5 **DEALING WITH WATER ON WORKS**

Add the following to A 5.5:

Special treatment of water on site shall where necessary, be specified separately.

PS A 5.6 **POLLUTION**

The Contractor's attention is drawn specifically to dust disturbance (See PS D 5.1.4.1).

PS A.5.7 **SAFETY**

Substitute A 5.7 with the following:

"Pursuant to the provisions of the Conditions of Contract, and without in any way limiting the Contractor's obligations there under, the Contractor shall at its own expense (except only where specific provision (if any) is made in the Contract for the reimbursement to the Contractor in respect of particular items):

- (a) Provide to its Employees on the Site of Works, all safety materials, clothing and equipment necessary to ensure full compliance with the provisions of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) as amended and effective measures to ensure the proper usage of such safety materials, clothing and equipment at all times; and
- (b) Provide, install and maintain of all barricades, safety signage and other measures to ensure the safety of workmen and all persons in, on and around the Site, as well as the general public; and
- (c) Implement on the Site of Works, such procedures and systems and keep all records as may be required to ensure compliance with the requirements of the Act at all times; and
- (d) Implement all necessary measures as to ensure compliance of the Act by all subcontractors engaged by the Contractor and their employees engaged on the Works; and
- (e) Comply fully with all other requirements pertaining to safety as may be specified in the Contract.

The Employer, Employers Agent and the Engineer shall be entitled, although not obliged, to make such inspections on the Site, as they shall deem appropriate, for the purpose of verifying the Contractor's compliance with the requirement of the Act. For this purpose, the Contractor shall grant full access to the Site of all parts of the Site and shall co-operate fully in such inspection and shall make available for inspection, all such documents and records as the Employer's and/or Engineer's representative may reasonably require.

Where any such investigations reveal, or where it comes to the Engineer's attention that the Contractor is in any way in breach of the requirements of the Act or is failing to comply with the provisions of this clause, the Engineer shall, in accordance with the provision of Clause 39 of the General Conditions of Contract, be entitled to suspend progress on the Works or any part

thereof until such time as the Contractor has demonstrated to the satisfaction of the Engineer, the breach has been rectified.

The Contractor shall have no grounds for a claim against the Employer for extension of time and/or additional costs if the progress on the Works or any part thereof is suspended by the Engineer in terms of this clause and the Contractor shall remain fully liable in respect of the payment of penalties for late completion in accordance with the provisions of Clause 43(1) of the General Conditions of Contract should the Contractor fail to complete the Works on or before the specified Due Completion Date in consequence of the suspension.

Persistent and repeated breach by the Contractor of the requirements of the Act and/or this clause shall constitute ground for the Engineer to act in terms of Sub-Clause 55.1.5 of the General Conditions of Contract and for the Employer to terminate the Contract in accordance with the further provisions of the said Clause 55.

PS A 5.9 **TRAINING OF LOCAL LABOUR (in task)**

An aim to this construction project is to provide as many temporary employment opportunities to the community of **CARNARVON** as possible. It is incumbent on the Contractor to provide the necessary core of artisans, skilled and semi-skilled personnel required to construct, supervise and adequately control the project as well as providing any necessary on-going training in basic construction skills.

PS A 5.10 **WORKMEN's COMPENSATION ACT**

It is a requirement of this contract that all labour employed on the site be covered by the Workmen's Compensation Act. The Contractor is to arrange a suitable method of complying with the Act including the payment of the necessary levies.

A 7 **TESTING**

PS A 7.4 **STATISTICAL ANALYSIS OF CONTROL TESTS**

Substitute A 7.4 with the following:

Test results shall not be evaluated by statistical methods. All results shall comply with the specified minimum requirements of the materials concerned.

A 8 **MEASUREMENT AND PAYMENT**

A 8.2 **PAYMENT**

A 8.5 **SUMS STATED PROVISIONALLY BY ENGINEER**

Add the following to A 8.5:

PS A 8.5 (a) **Provision of material and Plant Unit: Prov. Sum**

The provision of material will only be paid for as required or requested by the Engineer.

PS A 8.5 (b) **Overhead costs, charges and profit on (a) above Unit: %**

The tariff is to cover the contractor's overheads, charges, insurance and profit on payments for material testing and will be calculated as percentage levy on payments. No payments will be made on this item before any payments is made for material testing.

PS A 8.5 (c) **Remuneration of Community Liaison Officer (CLO) Unit: Prov. Sum**

A salary must be paid fortnightly by the Contractor to the person appointed as the Community Liaison Officer for the project. The payment dates will be determined as soon as the CLO is appointed. The hourly rate for the CLO will be as agreed with the Employer.

PS A 8.5 (d) **Overhead costs, charges and profit on (c) above Unit: %**

The tariff is to cover the contractor's overheads, charges, insurance and profit on payments made to the Community Liaison Officer (CLO) and will be calculated as percentage levy on payments. No payments will be made on this item before any payments is made to the CLO.

PS A 8.7 **DAYWORK**

Replace A 8.7 with the following:

Daywork will be paid according to the percentage allowance method. For calculating the total remuneration, the General Conditions of Contract for Construction Works, Third Edition (2015) shall apply, with the amendments as in the appropriate Special Conditions of Contract, which is bound into this document. A daywork schedule will be provided for filling in the necessary information.

PS A 8.3 **SCHEDULED FIXED-CHARGE AND VALUE-RELATED ITEMS**

PS A 8.3.5 Compliance with the Occupational Health and Safety Act and its Regulations and with the Employer's Health and Safety Specification(Unit: Sum)

Add new payment clause A 8.3.5:

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

- Provision of Health and Safety Plan
- Provision of Health and Safety File
- Health and Safety Training
- Personal Protective Clothing and Equipment
- Fences, Signs and Barricades
- Establishment of Safety Administration
- Baseline Medicals for all employees, working at the Site of the Works, including:
- Other Health and Safety Fixed-charge Obligations

PS A 8.4 SCHEDULED TIME-RELATED ITEMS

PS A 8.4.6 Compliance with Occupational Health and Safety Act and its Regulations and with the Employer's Health and Safety Specification during the construction phase as specified.....(Unit: Sum)

Add new payment clause A 8.4.6:

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

- The employment cost of all health and safety personnel including consultants, health and safety officers, inspectors, supervisors and issuers required in terms of the Contractor's Health and Safety Plan,
- Updating the Health and Safety Plan as needed,
- Carrying out of periodic own audits and follow-up audits,
- Compiling on going risk assessments and risk assessment reports as required by the Works,
- Convening of regular safety meetings with the Safety Representatives,
- Accompanying and supporting the Employer or his Safety Agent during ad hoc audits,
- Compilation of monthly safety reports and statistics for the Employer or his Safety Agent,
- Implementation and maintenance of Training,
- Maintenance of personal protective clothing and equipment,
- Maintenance of fences, signs and barricades,
- Implementation and maintenance of safety administration,
- Other Health and Safety Time-related Obligations.

PS A 8.10 **ENVIRONMENTAL MANAGEMENT PLAN**

PS A.8.4.7 **Complying with the Environmental Management Plan (EMP)Unit : Sum**

The sum shall cover the time-related cost of whatever nature, for complying with the Environmental Management Plan (EMP) Specifications of this document and that is not specifically covered in PS A.8.10.1

AB: ENGINEER'S OFFICE

PS AB 3 MATERIALS

PS AB 3.1 NAMEBOARDS

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

PS AB 3.2 OFFICE BUILDINGS

Add the following to AB 3.2:

No office needs to be supplied to the Engineer, but the Contractor must supply space in his office for the use of the Engineer during visits.

AB 4 PLANT

PS AB 4.1 TELEPHONE

Add the following to AB 4.1:

No telephone needs to be supplied to the Engineer.

AB 5 CONSTRUCTION

PS AB 5.1 NAMEBOARD

Add the following to AB 5.1:

The nameboard shall be erected within one month after receipt of the letter of acceptance and shall be placed at the position indicated by the Engineer and kept in good repair for the duration of the contract and the defects liability period. Any damage to the board 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 nameboard.

The Contractor will be permitted to erect a maximum of two of his own nameboards, in positions approved by the Engineer. The Engineer reserves the right to order the removal of these boards if they are not kept in good repair.

PS AB 5.3 KEY PERSONNEL

Add the following to AB 5.3:

The Contractor shall inform the Engineer of the person to whom he has assigned duties with respect to the site in terms of the Occupational Health and Safety Act and the person(s) who are in possession of a valid certificate of competency in first aid. The Contractor shall give copies of the minutes of the site safety meeting to the Engineer.

PS 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."

PS 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 5 m and one 100 m tape measure.

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

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 **MEASUREMENT AND PAYMENT**

AB 8.2 **PAYMENT**

PS AB 8.2.2 **Telephone, Survey Assistants and Survey Equipment**

No payment shall be made for the telephone, survey assistants or survey equipment and all costs shall be deemed to be covered by the rates tendered for the Contractor's facilities.

PS C: SITE CLEARANCE

C 3 MATERIAL

PS C 3.1 DISPOSAL OF MATERIAL

Substitute the first sentence of C 3.1 with the following:

An area for the disposal of material obtained from clearing and grubbing, demolition of manholes, dismantling and removal of pipes shall be disposed off site to the municipal dumping site. The use of the disposal area must be confirmed with the Employer prior to disposal.

Material obtained from clearing and grubbing and demolition structures shall be disposed of at the dump site.

C 5 CONSTRUCTION

PS C 5.1 AREAS TO BE CLEARED AND GRUBBED

Substitute the first sentence of C 5.1 with the following:

Unless otherwise indicated by the Engineer, clearing and grubbing are limited to the area of the ponds and inlet works and a 3 m wide strip for pipelines not in street reserves. The Contractor may proceed with clearing and grubbing after the handing over of the site. 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 manner that re-clearing will not be necessary. The cost of re-clearing shall be borne by the Contractor.

C 5.2 CUTTING OF TREES

Trees outside the area to be excavated for the new structures must be left standing and undamaged, except when otherwise ordered, in writing, by the Engineer.

A penalty of R1000-00 per tree for trees damaged and/or removed will be charged.

PS C 5.9 EXISTING FENCING

Add new sub-clause C 5.9:

The fencing around the construction area must only be removed and re-erected at the positions as indicated and approved by the Engineer and repaired where it was damaged. After completion of the work these fences or gates must be repaired to the same condition as before commencement of the work.

The Contractor is strongly advised to make sketches and, where applicable, take photographs of existing fences before they are removed so as to avoid, as far as possible, arguments that may arise between himself and the property owner as to the quality of the re-erected fences.

C 8 MEASUREMENT AND PAYMENT

PS C 8.2.11 Remove and re-erect existing fences..... Unit: m

a) Add new payment clause C 8.2.11:

The rate shall cover the cost of removal and stacking of fencing material, including all gates, as well as the re-erection thereof with the existing material. No payment will be made for the replacement of fencing material that has been damaged by the Contractor and all costs for this are deemed to be covered by the rate for the appropriate items.

Material that is unsuitable for re-erection must be viewed by the Engineer before it is removed. Only by written approval from the Engineer can the Contractor claim advance compensation for such material.

PS D: EARTHWORKS

D 2 INTERPRETATIONS

PS D 2.3 DEFINITIONS

Add the following to D 2.3:

Sand (cohesionless and non-cohesive)

For the purposes of the compaction requirements, a non-plastic material of which not less than 95 % by mass passes a sieve of nominal aperture size 4,75 mm, and not more than 10 % passes a sieve of nominal aperture size 0,075 mm.

D 3 MATERIALS

PS D 3.1.2 Classes Of Excavation

Add the following to D 3.1.2:

Under this contract soft and intermediate excavation shall be classified together as soft excavation, and hard rock and boulder excavation shall be classified together as hard rock excavation.

D 3.3 SELECTION

PS D 3.3.1 General

Substitute the second paragraph of D 3.3.1 with the following:

The Contractor shall deal in such a way with materials from all excavations for structures and pipe trenches 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 material of standard at least equal to the in situ useable 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.

Add the following to D 3:

PS D 3.4 SUBSOIL DRAIN UNDER STRUCTURES

A subsoil drain consisting of 110 mm diameter perforated or slotted uPVC pipes, or 100 mm diameter geopipes in a bed of 19 mm stone, all as specified and shown in the drawings, shall be installed where shown on the drawings. The pipes shall be connected with approved couplings and a gradient as shown in the drawings, or of 1 in 200 must be maintained towards the discharge point.

PS D 3.4.1 Material For Subsoil Drainage

PS D 3.4.1.1 Pipes

Pipes for subsoil drainage shall be uPVC pipes complying with the requirements of SANS 791, but shall be perforated or slotted.

The size of perforations in perforated pipes shall in all cases be 8 mm in diameter \pm 1,5 mm and the number of perforations per metre shall be not less than 26 for 110 mm pipes and 52 for 160 mm pipes. Perforations shall be spaced in two rows for 110 mm pipes and in three rows for 160 mm pipes.

Slotted pipes shall have a slot width of 8 mm ± 1,5 mm. The arrangement of slots shall be subject to the Engineer's approval, but the total slot area shall be not less than that presented for perforations.

Pipes without slots or perforations required for conveying ground water from the subsoil drainage proper to the point of discharge, shall be uPVC pipes as specified above.

PS D 3.4.2 **Crushed Stone**

Crushed stone in subsoil drains shall be 19 mm single-sized stone complying with the grading requirements of stone for concrete in SANS 1083.

PS D 3.4.3 **Geotextile Blanket**

The geotextile blanket around subsoil drains shall be a woven polypropylene tape similar and equal to Industex S110.

PS D 3.4.4 **Sand**

Sand in subsoil drains shall comply with the requirements of PS D 2.3.

D 4 **PLANT**

PS D 4.5 **AVOIDING QUAGMIRE CONDITIONS**

In order to prevent quagmire conditions occurring in the excavations, relatively static plant such as back-actors shall be used combined with hand trimming to complete the excavation to final level. Should the Contractor allow quagmire conditions to develop, he shall, at his own expense, take such steps to rectify the conditions as the Engineer may order.

D 5 **CONSTRUCTION**

D 5.1 **PRECAUTIONS**

PS D 5.1.2 **Existing Services**

PS D 5.1.2.2 **Detection, location and exposure**

Add the following to D 5.1.2.2:

The requirements of PS A 5.4 shall apply mutatis mutandis.

PS D 5.1.2.3 **Protection of cables**

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

PS D 5.1.4 **Nuisance**

PS D 5.1.4.1 **Dust nuisance**

Add the following to D 5.1.4.1:

The Contractor is responsible for dust control and is liable for all claims that may result from dust nuisance on all parts of the site and at all times from the date of handing over of the site to the completion date of the contract. No payment regarding the above-mentioned will be made and all costs shall be deemed to be covered by the tendered rates.

D 5.2 **METHODS AND PROCEDURES**

D 5.2.1 **Site Preparation**

PS D 5.2.1.2 **Conservation of topsoil**

Add the following to D 5.2.1.2:

Removal of topsoil shall only occur in areas as approved, in writing, by the Engineer. The topsoil shall be conserved for use elsewhere.

D 5.2.2 **Excavation**

PS D 5.2.2.1 **Excavations for general earthworks and for structures**

Add the following to D 5.2.2.1:

Strip foundations and encasement of pipes shall be cast directly against excavated surfaces.

Materials under foundations and floors of structures which are regarded by the Engineer as unsuitable for the bearing of such structures shall be removed to the depths and widths ordered. The excavated voids shall then be filled with sand compacted to 100 % of MAASHTO density, to the underside of such foundation or floors, unless a soil cement mixture in terms of PS D 5.2.3.2 is ordered by the Engineer.

PS D 5.2.2.3 **Disposal**

Substitute the second sentence of D 5.2.2.3 with the following:

All surplus and unsuitable material shall be dumped and neatly finished off at the site indicated during the site inspection.

All material unsuitable for fill shall be transported to the municipal dumping site.

PS D 5.2.2.4 **Excavation limits for payment purposes**

For measurement and payment purposes, the limits of the excavations for structures shall be as shown on the Drawings.

Were no excavation limits are shown on the Drawings and the Engineer has decided that formwork has to be provided to the sides of a concrete member, the limits of the excavation for measurement and payment purposes shall be the vertical planes 0,5m outside the perimeter of the concrete member for which the formwork is to be provided at the founding level as shown on the Drawings.

PS 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 300 mm above and on both sides of pipes, as well as underneath the services.

PS D 5.2.3 **Placing and Compaction**

PS D 5.2.3.1 **Embankments**

Add the following to D 5.2.3.1:

Embankments of ponds and terraces shall be constructed of approved material from excavations and shall be compacted to 95 % (100% for sand) of MASSHTO density, in layers not exceeding 150 mm in depth.

PS D 5.2.3.2 Backfilling of trenches and backfilling against structures

Add the following to D 5.2.3.2:

Backfilling around structures shall be compacted to 95 % (100 % for sand) of MAASHTO density.

When specified or ordered by the Engineer the backfilling against structures shall be done using a mixture of soil cement. The mixture shall contain 5 % cement and just sufficient water for it to be placed and compacted like ordinary backfilling material.

D 5.2.4 Finishing

PS D 5.2.4.1 Final grading

Add the following to D 5.2.4.1:

Terraces shall be trimmed to an even grade of 1 in 2.

PS D 5.2.5 Transport for Earthworks

PS D 5.2.5.1 Free-haul

Replace 0,5 km in the last sentence of D 5.2.5.1 with 1,0 km.

PS D 5.2.6 Removal Of Unsuitable Material

The provision of SANS 1200 DM : Earthworks (Roads) clause DM 5.2.3.2 shall apply mutatis mutandis.

PS D 5.2.7 Dewatering of foundation excavations

Over and above his general obligations in regard to dealing with water as specified in SANS 1200 A, the Contractor shall be responsible for preventing the ingress (from groundwater or leaking adjacent structures) of water into the foundation excavations. The preventive measures shall include the construction of proper drainage channels, diversion channels, berms, sumps, and the supply, operation and maintenance of the necessary bailing and pumping equipment.

The dewatering measures, with the exception of pumping, shall be maintained until the backfilling has been completed, after which all settled silt, mud, etc. shall be removed from the exposed surfaces where necessary. Between the various construction stages, pumping may be interrupted as may be decided by the Engineer. The draining or pumping of water from foundation excavations shall be so done that no concrete materials will be carried away.

D 8 MEASUREMENT AND PAYMENT

PS D 8.3.16 Geotextile Blanket Unit: m²

Add new payment clause D 8.3.16:

The tariff includes the cost for the provision, off-loading and placing of the material including the cutting, waste, joining, overlapping and fixing of material where instructed by the Engineer in writing.

PS D 8.3.17 Filter stone Unit: m³

Add new payment clause D 8.3.17:

The volume measured for payment is the net volume according to the dimensions as shown on the drawings or as requested by the Engineer. The rate shall cover the cost of obtaining, delivery and placing as indicated on the drawings

PS DB: EARTHWORKS (PIPE TRENCHES)

DB 1 SCOPE

Add the following to DB 1.1:

This specification additionally covers the excavation for pipe and cable trenches.

PS DB 2.2 APPLICATION

Substitute "pipe trenches" with "pipe and cable trenches" in DB 2.2.

DB 3 MATERIALS

PS DB 3.5 BACKFILL MATERIALS

a) Substitute "from trenches" in DB 3.5(a) with "from trenches or excavations for structures".

Add the following to DB 3.5(b):

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 DB 3.4.

DB 4 PLANT

PS 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

PS DB 5.1.2 Stormwater, Seepage And Dewatering Of Excavations

Substitute DB 5.1.2 with the following:

The costs of dealing with water shall be deemed to be included in the tendered rates for excavation and no additional payment shall be made in this respect.

Add the following to DB 5.1:

PS DB 5.1.5 Hand Excavation

Certain trenches will have to be excavated by hand, because of limited access and space. The Contractor is to ensure that all excavation done by hand is in strict accordance with the requirements of the Occupational Health and Safety Act.

PS DB 5.2 MINIMUM BASE WIDTHS SPECIFIED

Substitute DB 5.2(a) with the following:

The base widths for combined pipe and cable trenches are as shown on the drawings and the excavation depth is determined by the deepest pipe in the trench. The depth increment of a combined trench will be determined by the sewer pipe. The total excavation, backfilling,

bedding, etc form a specific trench and is measured in the bill of quantities under the service that determines the depth.

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, shall be 400 mm.

A bedding is required for all pipes with a diameter less than 125 mm.

The minimum base width for electric cable trenches shall be 500 mm. Where more than one cable is installed in the same trench, the base width shall become 300 mm plus the distances specified between the centre lines of the cables (50 mm minimum).

PS DB 5.4 **EXCAVATION**

Add the following to DB 5.4:

Excavation and backfilling of pipe trenches shall be done in such a way as to ensure the least possible disruption to the public. No additional payment shall be made for this and all relevant costs shall be deemed to be included in the tendered rates. Electric cable trenches shall be dug in lengths as requested by the electrical contractor.

PS DB 5.5 **TRENCH BOTTOM**

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

DB 5.6 **BACKFILLING**

PS DB 5.6.2 **Material For Backfilling**

Substitute "from trench excavations" in the first paragraph of DB 5.6.2 with "from excavations for trenches and structures.

Add the following to DB 5.6.2:

Where pipe trenches cross a road the selected fill blanket specified in PS LB 3.2 shall be brought up to the bottom of the sub base.

PS 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 PS D 5.2.2.3) and levelled.

PS DB 5.7 **COMPACTION**

PS DB 5.7.2 **Areas Subject To Traffic Loads**

Substitute "98 %" in DB 5.7.2 with "100 %".

Add the following to DB 5.7.2:

Sand backfilling shall be compared to 100 % of MAASHTO density.

DB 8 **MEASUREMENT AND PAYMENT**

PS DB 8.1 **BASIC PRINCIPLES**

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

Add the following to DB 8.1.2(b):

The depth of electric cable trenches is as indicated on the relevant drawings.

DB 8.2 **COMPUTATION OF QUANTITIES**

PS DB 8.2.4 **Shoring**

Add the following to DB 8.2.4:

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**

PS DB 8.3.3 **Excavation Ancillaries**

PS DB 8.3.3.1 **Make up deficiencies in backfill material.....Unit: Prov or m³**

Add the following to DB 8.3.3.1:

No payment for overhaul.

(a) From other necessary excavation on site.....Unit: m³

(b) By importation from designated borrow pits.....Unit m³

(c) By importation from commercial sourcesUnit m³

Items (b) and (c) above will not be measured for payment unless importation has been ordered in writing. The rate for material from other necessary excavations on site shall cover the cost of selection of suitable material, the moving of the material to points alongside the trench spaced to suit the Contractor's method of working, and the disposal of the material that is replaced, all within freehaul distance.

The rate for material from designated borrow pits shall cover the cost of royalties, if applicable, excavation and selection of suitable material, the moving of the material to points alongside the trench spaced to suit the Contractor's methods of working, and the disposal of the material that becomes surplus as a result of the importation, all within freehaul distance.

PS DE: SMALL EARTH DAMS

DE 1 SCOPE

PS DE 1 SCOPE

Add the following to DE 1.1:

This specification also covers the cladding of the dam with a geo-membrane.

DE 2 INTERPRETATIONS

PS DE 2.3 DEFINITIONS AND ABBREVEATIONS

Add the following to DE 2.3:

Sand (cohesionless and non-cohesive)

For the purpose of the compaction requirements, a non-plastic material of which not less than 95 % by mass passes a sieve of nominal aperture size 4,75 mm, and not more than 10 % passes a sieve of nominal aperture size 0,075 mm.

DE 3 MATERIALS

DE 3.2 CLASSIFICATION FOR PLACING PURPOSES

PS DE 3.2.1 Earth fill Material

Substitute paragraph (b) of DE 3.2.1 with the following:

- b) shall comply with the requirements for the various embankment zones, as shown on the drawings.

DE 3.3 SELECTION

PS DE 3.3.1 General

Replace DE 3.3.1 with the following:

The Contractor shall in all excavations be selective in order to prevent contamination of usable material with unsuitable material. No extra payment will be made in this regard and all costs related to this shall be deemed to be covered in the rates for the relevant items. The Contractor shall remove all contaminated material, unsuitable for further use on the site of works, and replace it with material of the same quality as that of the usable in situ material, all at his own cost.

PS DE 3.3.3 Fill Materials

Add the following at the end of the first sentence of DE 3.3.3:

"and from designated borrow pits"

PS DE 3.4.1 **WATERTIGHT MEMBRANE**

The watertight membrane shall consist of a high density polyethylene (HDPE) geomembrane supplied on rolls of at least 6,5m wide with a thickness as shown on the drawings or as scheduled.

Concrete surfaces receiving HDPE liner terminations/anchor trenches shall be finished to a steel-trowel finish with surface evenness ± 5 mm over 2 m straightedge and no sharp arises. Anchor trench 300×300 mm minimum unless otherwise designed; verify pull-out capacity against liner uplift forces. Provide gas/pressure relief vents beneath liner where groundwater gases may accumulate.

The geomembrane shall be welded together on site by using a continuous extrusion / fusion method to ensure an integrated and homogenous joint.

PS DE 3.4.2 **Preparation of Exposed Surface**

Add the following : Exposed surfaces shall be deemed to include all surfaces to be concealed by geomembranes.

PS DE 3.4.3 **Preparation of area to be covered by Geomembrane**

The subgrade surfaces, over which the geomembrane shall be placed, shall be free of stones, rocks, roots, sticks or sharp debris of any kind. The surface shall provide a firm unyielding uniform base for the membrane. The surface shall be compacted to a density to allow the movement of vehicles, walking, equipment and personnel on it without causing rutting or other detrimental effects. The earthworks contractor shall complete the subgrade preparation to the approval of the lining contractor.

Where the subgrade material is of such a nature that it is impractical to remove sharp rocky material, the engineer may instruct the contractor to place and compact a 25mm layer of approved sand between the subgrade and the liner.

DE 4 **PLANT**

Add the following to DE 4:

PS DE 4.3 **COMPACTION PLANT**

The plant used for applying the dynamic load, controlling the moisture content, and grading or mixing shall be capable of achieving the compaction specified.

DE 5 **CONSTRUCTION**

DE 5.2 **METHODS AND PROCEDURES**

DE 5.2.2 **Excavation**

PS DE 5.2.2.3 **Borrow pits**

Add the following to DE 5.2.2.3:

The position of the designated borrow pit will be indicated during the site inspection.

PS DE 5.2.2.4 **Disposal**

Add the following to DE 5.2.2.4:

Surplus and unsuitable material shall be dumped and neatly finished off at the site indicated during the site inspection.

DE 5.2.3 Placing and Compacting

PS DE 5.2.3.1 Lines and grades

Substitute the second sentence of DE 5.2.3.1 with the following:

The Contractor shall allow for settling during construction to ensure that the final crown level is the same as that shown on the drawings. (See DE 8.2.1).

PS DE 5.2.3.2 Embankment

Add the following to DE 5.2.3.2(d):

Fill shall be compacted to a minimum density of 98 % of the Proctor density at a minimum moisture content of 2 % above the optimum moisture content.

DE 5.2.5 Transport for Earthworks

PS DE 5.2.5.1 Free-haul

Substitute DE 5.2.5.1 with the following:

The provisions of D 5.2.5.1 shall apply mutatis mutandis.

PS DE 5.2.5.2 Overhaul

Substitute DE 5.2.5.2 with the following:

The provisions of D 5.2.5.2 shall apply mutatis mutandis.

PS DE 5.2.6 Anchoring and Sealing

Anchoring and sealing of watertight membranes to pipes and concrete structures shall be done according to the manufacturer's approved prescriptions.

The manufacturer shall inspect and approve the surface of the structure before the membrane is laid. The surface shall be level and firm.

DE 8 MEASUREMENT AND PAYMENT

DE 8.3 SCHEDULED ITEMS

PS DE 8.3.11 Preparation of surfaces to be covered by the membrane Unit: m²

The rate shall include the costs of all labour and material to prepare the areas to be covered by the liner to the standards required by the liner supplier by:

- (a) Compacting the in-situ material in accordance with Clause PS DE 3.4.2
- (b) Providing and compacting an approved sand layer of 25 mm where the in-situ material is not suitable for placing the liner.

PS DE 8.3.12 Watertight membrane Unit: m²

The rate shall include the cost of the manufacture, supply, delivery to site, installation, jointing, overlapping and welding the liner in all areas where shown on the drawings.

The rate shall cover the nett area of the liner as installed and wastage, overlapping etc. shall be deemed to be included in the tendered rate.

PS DE 8.3.13 Anchoring of membrane on top of embankments Unit: m

The rate shall include the cost of excavating the anchor trench of 300 mm wide by 300 mm deep, temporary stockpiling of the excavated material, placing the membrane in the trench, backfilling and compaction of the trench and any additional work required to anchor the liner in the trench.

The cost of the liner is measured separately.

PS DE 8.3.14 Anchoring of membrane to concrete structures Unit: m

The costs shall include all labour and materials to fix the membrane to concrete structures to form a watertight joint. Materials and details are as shown on the drawings or as scheduled.

PS DE 8.3.15 Anchoring of membrane around pipes Unit: no

The costs shall include all labour and material required to form a watertight joint between the membrane and pipes. Separate items shall be scheduled for different pipe types and diameters.

PS DM: EARTHWORKS (ROADS, SUBGRADE)

PS DM 3 MATERIALS

PS DM 3.1 CLASSIFICATION FOR EXCAVATION PURPOSES

Add the following to DM 3.1:

The requirements of PS D 3.1.2 shall apply mutatis mutandis.

All in situ pavement material shall be classified as soft material for excavation purposes.

PS DM 3.2 CLASSIFICATION FOR PLACING PURPOSES

PS DM 3.2.3 Selected Layers

Substitute DM 3.2.3 with the following:

All imported material underlying the sub base 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, all at the Contractor's expense.

PS DM 5 CONSTRUCTION

PS DM 5.1 PRECAUTIONS

PS DM 5.1.1 Safety, Existing Services, Stormwater, Etc. And Nuisance

Add the following to DM 5.1.1:

The requirements of PS A 5.4 shall apply mutatis mutandis.

PS DM 5.2 METHODS AND PROCEDURES

PS DM 5.2.2.3 b) Cut to spoil

Substitute DM 5.2.2.3(b) with the following:

The requirements of PS D 5.2.2.3 shall apply mutatis mutandis.

PS 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.

PS DM 5.2.3 **Treatment Of Road bed**

PS 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, watered, shaped and compacted to 90 % of MAASHTO 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.

PS DM 6 **TOLERANCES**

PS DM 6.5 **DIMENSIONS AND LEVEL CONTROL**

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

PS DM 7 **TESTING**

PS 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.

SECTION G: CONCRETE (STRUCTURAL)

PS G 3 MATERIAL

PS G 3.2 CEMENT

PS G 3.2.1 Applicable Specifications

Add the following to G 3.2.1:

BS EN 206:2013 - Concrete - Specification, performance, production and conformity

Substitute G 3.2.1 with the following:

All cement types shall comply with the requirements of SANS EN 197-1.

For this contract only CEM I portland cement shall be used in structural concrete.

PS G 3.2.3 Storage of Cement

Add the following to G 3.2.3:

Separate storage facilities shall be provided for the various types of cement specified.

Consignments of cement shall be used in the same sequence as that in which they are delivered to site. No cement shall be used which has been stored on site for a longer period than 6 (six) weeks. All cement so stored for a longer period than 6 (six) weeks, all cement damaged in any way, and all cement which does not comply with the specification, shall be removed immediately and permanently from the site.

PS G 3.5.2 Air-entraining Agents

Substitute G 3.5.2 with the following:

Air-entraining agents shall not be used in concrete.

G 4 PLANT

PS G 4.5.3 Ties

Add the following to G 4.5.3:

Permanent metal ties shall have a minimum concrete cover of 40 mm after formwork has been removed.

Tie holes shall be filled with an approved expansive cementitious grout similar to "Durabed" of ABE. The product shall be prepared to a non-slump consistency, but where no cracking occurs when pressed into a firm ball. Trial mixes shall be made to arrive at the required working consistency.

PS G 5 CONSTRUCTION

PS G 5.1 REINFORCEMENT

PS G 5.1.3 Cover

Substitute G 5.1.3 with the following:

The cover of concrete over reinforcement, unless otherwise indicated on the drawings, shall in no case be less than 40 mm.

Unless noted otherwise on drawings, minimum concrete cover for all reinforcement in water-retaining structures and inlet works shall be not less than 50 mm. This supersedes any conflicting cover values stated elsewhere.

PS G 5.2.1 **Classification of Finishes**

Add the following to G 5.2.1:

The following surface conditions are required on the various portions of the finished concrete:

(a) **Rough**

Concealed surfaces and surfaces more than 150 mm below final ground level.

(b) **Smooth**

All surface finishes not classified as "rough" in paragraph (a) shall be classified as "smooth". All exposed arrises (i.e. where the angle between adjacent sides is 110° or less) unless otherwise indicated on the drawings, shall be chamfered 20 mm x 20 mm by means of triangular fillets fixed to the formwork.

(c) **Special smooth, repaired and rubbed**

This shall be for formed surfaces of structures prominently exposed to public view where appearance is of special importance. Formwork shall only be of approved plywood, approved commercial formboard or smooth tongue-and-groove boards, except that in certain cases such as for pre-cast units permission may be granted to use steel formwork provided that sufficient vibration is used. After defects have been repaired, as described in paragraph (e), all ridges, nail marks and other projections shall be removed with carborundum stone. After the treatment the surface shall then be kept continuously wet for 10 days after which period of additional curing it shall be allowed to approach surface dryness immediately prior to treatment by sack rubbing in order to secure a degree of suction most favourable for obtaining good bond. A soft mortar consisting of one part cement and two parts sand passing the 1,18 mm sieve shall be thoroughly rubbed over the entire exposed surface with clean hessian, completely filling all pits and irregularities. The mortar consistency shall be that of thick cream. At a sufficient interval after the sack rubbing to prevent smearing, but before the mortar hardens, most of the excess mortar shall be removed by rubbing with clean hessian. After the mortar has set for several hours, curing shall be resumed and continued for at least two (2) days. The surface shall then be allowed to become surface dry and in this condition well sanded with no. 2 sandpaper.

(d) **Exposed edges**

All exposed edges (i.e. where the angle between adjacent sides is 110° or less) unless otherwise indicated on the drawings, shall be chamfered 25 mm x 25 mm by means of triangular fillets fixed to the formwork.

(e) **Repair of concrete**

Immediately after the removal of the formwork, the Engineer shall inspect the concrete for defects. Skilled workmen only shall perform all repairs of such defects, by approved methods and to the satisfaction of the Engineer and at the expense of the Contractor.

Repairs shall be carried out as soon as practicable after the removal of the formwork and in any case not longer than twenty four (24) hours after exposure. Concrete that is damaged from any cause and concrete that is honeycombed, fractured or otherwise defective, and concrete which, because of excessive surface depressions must be excavated and built up to bring the surface to the prescribed lines, shall be removed and

replaced with mortar or concrete as hereinafter specified or as otherwise directed by the Engineer.

Concrete filling generally of the same class as the damaged concrete shall be used for holes extending entirely through concrete sections and of such a size as will accept concrete and for holes in mass concrete greater in area than 0,1 m² and deeper than 100 mm and for holes in reinforced concrete which are greater in area than 0,15 m² and which extend beyond the reinforcing. Mortar filling composed of sand and cement in the same proportions as used for the concrete and of a consistency such as will make the mortar sufficiently plastic to be easily placed, shall be used for all other imperfections.

A filling shall be bonded tightly to the surface of the area being repaired and shall be bound and free from shrinkage, cracks and hollow areas after the filling has been cured and dried. Curing of repaired areas shall be performed in such a manner and for such periods as the Engineer may direct.

Particular care shall be exercised to ensure that the colour of the repair work shall match as nearly as possible to the colour of the surrounding concrete. No cement washing or plastering shall be carried out except on the written instruction of the Engineer.

PS G 5.2.5 **Removal Of Formwork**

In Table 2 of G 5.2.5.2, substitute "Portland cement and Portland cement 15" in columns 2, 3 and 4 with "CEM 1 Portland cement, delete columns 5 to 10.

PS G 5.4 **PIPES AND CONDUITS**

Add the following to G 5.4:

All pipes and specials, which must be installed in the floors and walls of structures, shall be embedded in the concrete during the casting of such concrete. No holes shall be left for the later installation of pipes and specials, without the written approval of the Engineer.

Where such holes have been approved by the Engineer, the Contractor shall be responsible for the grouting-in of such pipes or specials with an approved expansive cementitious grout as specified in PS G 4.5.3, regardless of whether or not these have been supplied by himself. The Contractor shall provide a smooth, dense and waterproof finish around the pipes or specials.

The clear space between pipes of any kind embedded in reinforced concrete and the clear space between such pipes and reinforcement shall at any point be not less than -

- (a) 40 mm, or
 - (b) 5 mm plus the maximum size of coarse aggregate,
- whichever is the greater.

PS G 5.5 **CONCRETE**

PS G 5.5.1.5 **Durability**

Substitute G 5.5.1.5 with the following:

Concrete shall be so proportioned to ensure that the water/cement ratio does not exceed 0,5 and, to ensure workability, water-reducing admixtures of approved manufacture shall be used in preference to increasing the cement content.

PS G 5.5.1.7 **Strength concrete**

Add the following to G 5.5.1.7:

The grade of strength concrete and the maximum nominal size of coarse aggregate for each portion of the works, unless otherwise indicated on the drawings, shall be as follows:

- (a) Mass concrete under floors and foundations 20 MPa/19 mm
- (b) Blinding layers 20 MPa/19 mm
- (c) Encasing of pipes 20 MPa/19 mm
- (d) Strip foundations 20 MPa/19 mm
- (e) Benching and screeds 20 MPa/10 mm
- (f) All Reinforced concrete 35 MPa/19 mm
- (g) All water retaining concrete 35 MPa/19 mm

PS G 5.5.7 **Construction Joints**

Add the following to G 5.5.7.1:

Construction joints shall be limited to the minimum and shall only be made in positions as shown on the drawings or in positions as specifically approved by the Engineer. Construction joints between tank bottoms, floors, or wall bases, and the walls standing on them shall not be made flush with the supporting surface, but shall be made in the wall 150 mm above the base. The 150 mm high riser wall shall be cast as an integral part of the bottom, floor or base, i.e. the concrete in the riser shall be deposited simultaneously with the concrete in the bottom, floor or base adjacent to it. Where there is a fillet at the bottom of a wall, the construction joint shall be made 150 mm above the fillet.

Provide centrally positioned PVC waterstops without center bulb (150 mm for walls < 200 mm, 200 mm for ≥ 200 mm). Mechanically fix waterstops to reinforcement to prevent displacement. All waterstop welders to be qualified; trial weld samples to be taken and tested prior to first pour and monthly thereafter.

PS G 5.5.7.4 **Expansion joints**

Expansion joints shall be formed in positions and in accordance with details as shown on the drawings. All expansion joints shall be formed with an approved closed cell polyethylene fill material with a density of not less than 100 kg/m³. Joint sealers shall consist of a two component polyurethane sealing compound complying with SABS 1077. Expansion joints to be sealed with combiflex system with a 60mm cover on each side as shown on detail drawing.

All sealants, fill material and waterstops shall be installed strictly in accordance with the specification of the manufacturers and to the satisfaction of the Engineer. The sealant shall be installed in one operation and jointing to already hardened sealant will not be permitted.

Joint sealant shall be resistant to sewage and hydrogen sulphide environments. Use 2-part polysulphide or polyurethane of proven chemical resistance; prepare substrates by grit-blasting/grinding; install bond breaker where required. Detail per drawings; no sealing over laitance or curing membrane.

PS G 5.5.9 **Adverse Weather Conditions**

Add the following to G 5.5.9.1:

No material having a temperature of below 5 °C shall be used for concrete, and no concrete shall be deposited when the ground or air temperature is below 2 °C. Furthermore, if the air or ground temperature is likely to fall below 2 °C within 12 (twelve) hours after depositing of concrete, no concreting shall be done without the written consent of the Engineer. If such consent is given the Contractor shall heat the aggregate stockpiles and mixing water, and defrost the formwork and reinforcement.

Hot-weather concreting: Maximum concrete placing temperature 30 °C. Provide chilled mixing water/ice, shade, windbreaks and reduce pour sizes as required. Avoid re-tempering. Increase curing frequency in ambient > 30 °C and wind speed > 20 km/h.

PS G 5.5.10 **Concrete Surfaces**

Add the following to G 5.5.10.1:

Concrete surfaces under screeds, granolithic floor finishes or benching, and surfaces of strip foundations and footings shall be brought up to a plane, uniform surface with a suitable screed board.

Add the following to G 5.5.10:

PS G 5.5.10.4 **Wood-floated finish**

Where wood floating is specified or scheduled, the surface shall first be given a finish as specified in G 5.5.10.1 and after the concrete has hardened sufficiently, it shall be floated to a uniform surface free from trowel marks. The screeded surface shall be wood-floated, either by hand or machine, only sufficiently to produce a uniform surface free from screed marks.

PS G 5.5.10.5 **Steel-floated finish**

Where steel floating is specified or scheduled, the surface shall be treated as specified in PS G 5.5.10.4 except that, when the moisture film has disappeared and the concrete has hardened sufficiently to prevent laitance from being worked to the surface, the screeded surface shall be steel-trowelled under firm pressure to produce a dense, smooth, uniform surface free from trowel marks.

PS G 5.5.11 **Watertight Concrete**

Add the following to G 5.5.11:

All structures shall be deemed to be water-retaining, unless otherwise specified.

All structures shall be deemed to be water retaining, unless otherwise specified.

PS G 5.5.11.1 **Requirements and tests for watertightness of structures**

The completed structure shall be watertight, and the quality and finish of the work shall be such that no after-treatment of the work such as plastering or cement wash is necessary to ensure compliance with this requirement.

The works will not be certified complete until the structures enumerated in PS G 5.5.11 has been proved by testing to be watertight.

Do not commence filling for watertightness testing until a minimum of 14 days after casting of the last relevant lift and completion of curing. Record ambient conditions and evaporation; crack-map all water faces before and after test. Any observed leakage to be repaired with approved methods; retest until compliant. Upon approval from the Engineer, the structure shall be filled by the gradual admission of water until the water level reaches the designed maximum level. The water level shall then be carefully noted and recorded by the Engineer in relation to a fixed bench mark, and the structure shall be allowed to remain filled for a period of 2 (two) weeks or such longer time as may be required to permit complete saturation of the concrete. During this period, readings will be taken by the Engineer and the results so obtained will be available for the information of the Contractor.

At the end of this period more water shall be added, if necessary, to bring the water level back to the designed maximum level and the water shall be left undisturbed for a period of at least 4 (four) days during which time the level shall again be recorded by the Engineer at regular intervals. The structure shall be considered to be watertight if the drop in water level does not exceed 6 mm in 96 (ninety six) hours in the case of a roofed structure and if no leakage is apparent.

The acceptable drop in level in the case of an unroofed structure shall be such that it allows for normal evaporation during the time of the test.

If appreciable leakage is evident at any stage of the filling or testing or if, in the opinion of the Engineer, the degree of watertightness is unsatisfactory, the Contractor shall, when so ordered by the Engineer, discontinue the test immediately and at his own expense take approved steps to rectify the work. The work of rectification shall be continued assiduously until, on repetition of the test procedure, a satisfactory test result is obtained and the degree of watertightness is acceptable.

Backfilling around structures shall not commence until a satisfactory test result has been obtained.

The Engineer shall have the right to retest the structure before the expiry of the defects liability period and the results of these tests will be made available to the Contractor. If these tests indicate to the Engineer that the degree of watertightness is unsatisfactory, the Engineer (before issuing the final certificate) will be entitled to order the Contractor to rectify the work at his own expense in such a manner as will cause least interruption of the water supply to consumers and will ensure that the degree of watertightness of the structure is satisfactory.

PS G 5.6

SCREED IN CLARIFIERS

No screeding of clarifier floors shall be allowed unless allowed by the Engineer. In this case, the contractor shall consult with the Mechanical Contractor, before application of the screed, to obtain advice on the use of the scraper mechanism for a smooth finish to the screed.

PS G 5.8 **NO-FINES CONCRETE**

PS G 5.8.1 **Materials**

Cement shall be CEM II.

Water and aggregate shall comply with the requirements of G 3.3 and G 3.4.

Each size of aggregate shall be a single size aggregate graded in accordance with SABS 1083.

PS G 5.8.2 **Classes of No-fines Concrete**

No-fines concrete shall be classified by the prefix NF and the size of aggregate to be used. Class NF 19 means a no-fines concrete with a 19 mm nominal size aggregate.

The volume of aggregate per 50 kg of cement for each class of concrete shall be as follows:

CLASS	AGGREGATE PER 50 kg CEMENT
NF 38	0,33m ³
NF 19	0,30m ³
NF 13	0,27 m ³

PS G 5.8.3 **Batching and Mixing**

Cement shall be measured by mass or in full pockets of 50 kg each and aggregate shall be measured by volume in approved measuring boxes or barrows.

The aggregate shall be moist or wetted before the cement is added. Where drum mixers are used, about 20 % of the water shall be poured into the drum before the aggregate and cement are loaded. The mixing time in the drum shall be about 45 to 50 seconds.

The quantity of water added shall be just sufficient to form a smooth grout which will adhere to and completely coat each and every particle of aggregate, and which is just wet enough to ensure that, at points of contact of aggregate, the grout will run together to form a small fillet to bond the aggregate together. The mix shall contain no more than 20 litres of water for every 50 kg of cement.

Mixing shall be done in an approved batch-type mechanical mixer, but small quantities may be hand mixed.

PS G 5.8.4 **Placing**

No-fines concrete shall be placed in accordance with the procedure approved by the Engineer. It shall be placed in its final position within 15 minutes of having been mixed.

The concrete shall be worked sufficiently to ensure that it will completely fill the space to be concreted and that adjacent aggregate particles are in contact with one another. Excessive tamping shall be avoided and the concrete shall not in any circumstances be vibrated.

PS G 5.8.5 **Protection**

All no-fines concrete shall be protected from the elements and loss of moisture. Protection against loss of moisture shall be accomplished by one or more of the following methods:

- a) Retaining formwork in place;
- b) Covering exposed surfaces with sacking or other approved material kept continuously wet;

- c) Covering exposed surfaces with plastic sheeting.

No-fines concrete placed during cold weather shall be adequately protected against frost for at least three (3) days.

PS G 5.9 HARDENING OF TOP OF CLARIFIER WALLS

When the walls of the clarifiers have become dry, but at least twenty eight (28) days after its completion, the Contractor shall apply a chemical hardening and dust proofing compound, similar to Purigo 5S of Sika, to the top surface thereof.

Three coats shall be applied, at a rate of one litre per 6 m² each.

PS G 5.10 JOINING NEW CONCRETE TO EXISTING

Where partial demolition is required for extension work to existing structures, the contact face shall be cut to predetermined line and level, and any loose and fragmented material shall be removed, and projecting steel cleaned and bent as directed by the Engineer. Where partial demolition is not required but extension work only, the contact surface shall be scabbled and cleaned of all dirt and loose particles.

If dowels are required, they shall be installed in holes drilled into the existing structure, in accordance with the details shown on the drawings, and secured by means of an approved type of epoxy bonding compound such as Epidermix 372 or similar.

Fresh concrete shall be bonded to the old concrete with an approved type of epoxy bonding compound, such as Epidermix 344 or similar.

PS G 6 TOLERANCES

PS G 6.2.2 Concrete Surfaces

Add the following to G 6.2.2:

The top surface of the clarifier wall shall be finished to Degree of Accuracy I in G 6.2.3(d)7, but there shall be no abrupt changes in the continuous surface. Deviations shall be measured as set out in G 6.1.2(a).

PS G 7 TESTS

PS G 7.2 ACCEPTANCE CRITERIA FOR STRENGTH CONCRETE

PS G 7.3.6 Submittals

The Contractor shall submit the following documentation for acceptance by the Engineer:

- Details and experience of Mix Designer.
- Copy of valid Professional Indemnity cover Certificate of Designer (Minimum value to be twice the value of the concrete works for each and every claim).
- List concrete requirement (to include, but not limited to):
 - The structures are exposed to industrial and municipal sewage.
 - Abrasion and chemical resistance required, mainly due to industrial waste.
 - Water tight structures, designed with a maximum crack width of 0.1mm and a minimum cover of 50mm.

- The structures design life: 50 years.
- The grade of concrete for all structures and structural elements = 35MPa cube strength @ 28 days, 19mm stone
- Permeability testing (e.g., RCPT or equivalent) on trial mixes and at 28 days (acceptance limits to be agreed).
- Drying shrinkage at 7/28 days.
- Heat of hydration control plan for large pours; max core temperature rise to be managed to limit thermal gradients.
- Mock-up panel for formed water-retaining surface finish and joint/waterstop details (Engineer approval prior to production).
- Shutters as proposed by contractor (Steel, timber, etc.)
- Curing and shutter stripping as proposed by contractor.
- Maximum heat of hydration = 24°C.
- Mix design (to include):
 - Materials, material origins, mix proportions and associated testing.
 - Cube test results for 3, 7 and 28 days (56 day test results can follow)
- Quality Assurance Management Plan (including post concreting inspections and sign offs).
- Remedial Maintenance Procedures and Suggested Remedial Maintenance Program.

PS G 7.3.7 Suppliers Warranty

The contractor shall submit a written guarantee accompanied by substantiating data, stating that the products used are in accordance with or exceed these specifications.

In addition to the above, upon completion of works the Mix Designer shall submit all documentation to confirm constructed concrete works meet his design specifications and were correctly implemented on site.

G 8 MEASUREMENT AND PAYMENT

G 8.1 MEASUREMENT AND RATES

PS G 8.1.1 Formwork

Delete "or the plan size of the excavation where additional excavation is provided to facilitate erection of forms" in the first sentence of PS G 8.1.3.1(c).

Delete the following in G 8.1.1.3(c):

"and for different prop heights for beams and slabs".

PS G 8.1.3 Concrete

Delete "or the plan size of the excavation where additional excavation is provided to facilitate erection of forms" in the first sentence of PS G 8.1.3.1(c).

Add the following to PS G 8.1.3.1(d):

Strip foundations and encasement of pipes shall be cast directly against the sides and bottoms of excavations. No payment shall be made for additional concrete in over-break.

For tank bases, walls, channels, sumps and any water-retaining structural element, provide 75 mm blinding concrete over proof-rolled, tested founding. Do not cast structural concrete directly against the excavation for these elements.

Delete the full stop at the end of G 8.1.3.3(a) and add the following:

"and special steps necessary before depositing concrete during cold weather, as prescribed in PS G 5.5.9".

G 8.2 SCHEDULED FORMWORK ITEMS

PS G 8.5 JOINTS Unit: m

Add the following to G 8.5:

Only construction joints with PVC waterstops shall be measured separately. The cost of all other construction joints shall be deemed to be included in the rates for the relevant concrete items. Formwork for joints must be included in rate for joint. The rate shall also include the cost welding of PVC waterstops as required.

The cost of all other construction joints shall be deemed to be included in the rates for the relevant concrete items.

PS G 8.10 BUILDING PIPES INTO CONCRETE WORK AND GROUTING PIPES..... Unit : No

The rate shall cover the cost of forming the opening for the pipe, scabbling, cleaning and preparing the concrete surface, providing an approved non-shrink epoxy grout, placing and ramming of it solidly into all voids, formwork and finishing to a smooth watertight surface.

All pipe penetrations through water-retaining concrete to be cast-in with puddle flanges/boots; no post-cored penetrations without Engineer approval. Provide minimum clear spacing ≥ 40 mm or 5 mm + max aggregate size (whichever greater) to reinforcement. Grout with approved non-shrink, sewage-resistant grout.

PS HA : STRUCTURAL STEELWORK (SUNDRY ITEMS)

PS HA 5 CONSTRUCTION

PS HA 5.2 FABRICATION AND ASSEMBLY

PS HA 5.2.6 Handrails

Substitute the first sentence of HA 5.2.6 with the following:

Handrails shall be of the tube and sphere type similar to Monoweld and shall be manufactured by an approved firm specialising in such works from grade 304 L stainless steel or hot dipped galvanized (heavy duty coating), as scheduled or shown on the drawings..

Handrails shall be 1 000 mm high and shall consist of a handrail and a knee-rail, both manufactured of steel tubing of nominal thickness 2,6 mm and of nominal outside diameter of at least 34 mm.

Stanchions shall be manufactured pre-formed in one piece and shall be of steel tubing of nominal thickness of 2,6 mm and of nominal outside diameter of at least 42 mm. The bases of the stanchions shall be manufactured of 150 mm x 75 mm x 12,5 mm flat bars and shall be pre-formed to suit the situation in which they are to be installed (i.e. for platform- or side-mounting, and for horizontal- or sloped-mounting on concrete or steel), and the stanchion spheres shall be pre-formed to suit right angled or other angled intersections), all as shown on the drawings.

Stanchions shall be spaced at intervals not exceeding 1,5 m and shall be fixed with two M16 bolts, washers and nuts each. All joints shall be welded.

Materials shall be as shown on the drawings or as scheduled.

PS HA 5.2.11 Ladders

Add the following to HA 5.2.11:

Materials shall be as shown on the drawings or as scheduled.

PS HA 5.2.12 Prefabricated Open Grid Floors

Add the following to clause 5.2.12.1:

Open grid flooring shall be of square pattern type of approved manufacture with 40 x 4 mm minimum thickness bearer bars spaced at not more than 40 mm centres and shall be manufactured in grade 304 stainless steel or 3 CR 12 steel (as scheduled or as shown on the drawings). The tendered rate shall include for all cutting into the required panels, banding and for frames detailed below.

Open grid flooring shall be provided with welded frames as scheduled, made of 50 x 50 x 5 mm thick 3 CR 12 steel angle to provide a seating for the open grid flooring. The nett clearance between the side bars of the open steel flooring and the vertical leg of the frame or strip shall be 5 mm per side. The frames shall be complete with 100 x 40 x 3 mm 3 CR 12 steel anchors fixed at 500 mm centres for building the frame into the concrete work.

Pickling and passivation shall be carried out in accordance with the requirements of the Standardized Corrosion and Painting Specification for Civil Engineering Works.

PS HA 5.2.13 Floor plate Floors

Substitute HA 5.2.13 with the following:

Materials shall be as shown on the drawings or as scheduled.

Add the following Sub-Clauses:

PS HA 5.2.14 Ground water pressure relief valves

Ground water pressure relief valves shall be J.K.F. type B or similar approved by the Engineer, 110 mm diameter with 12 mm thick neoprene disc and sealing ring. The body of the valve shall be manufactured from S.G. iron and all bolts and fittings shall be grade 304 stainless steel.

A 110 mm diameter hot dipped galvanized mild steel pipe shall be used as a spacer ring when building the valve into concrete work, all as shown on the Drawing.

The valves must be designed for a water pressure of at least 6 metres and to maintain a flow rate of 320 litres per minute at a differential head of 1,0 metres.

PS HA 5.2.15 Weir plates

Weir plates shall be 6 mm thick and shall be manufactured in 3 CR 12 steel. Dimensions and slots for M 10 stainless bolts shall be as shown on the Drawings.

The weir plate shall be fixed to the concrete surface using 8 mm thick neoprene seals.

PSHA 5.2.16 Penstocks

All parts shall be designed for the duty required, but the minimum factor of safety against structural failure shall not be less than 3, based on the working stress of the material. In the design, due consideration shall be given to the thickness of materials with regard to corrosion and operating conditions. The force required at a handwheel or crank to raise a gate or open a penstock shall be in the order of 100 Newton.

The frames and gates of penstocks shall be made of grade 304 stainless steel with a thickness suitable for the duty required but shall not be less than 3,5 mm thick.

All gates shall be well guided with no possibility of jamming. The gates of wall mounted types shall be held uniformly against the side facings of the frames by the action of adjustable wedges and shall provide drop-tight closure under the conditions as shown on the drawings. Penstocks (any seating condition) shall not spill water over the top or sides of the frame other than through the opening provided in the penstock for the water to pass through. All penstocks shall be of the level invert type fitted with renewable seals of a non-biodegradable material on the invert.

Penstocks shall have rising spindles protected by suitable transparent nylon sleeves, the latter providing convenient visual inspection and greasing facilities. Handwheels shall be of cast iron with diameters to suit operating either directly on the head frame or on a grade 304 stainless steel tubular pedestal to suit the installation depth, as shown on the drawings. Where necessitated by the mass of the gate and/or the pressure against the gate, suitable gearing shall be provided.

All penstocks measured in the Schedules of Quantities shall be supplied and installed by the Contractor under this Contract. In the case of penstocks to be fixed against concrete walls, holding down bolts made of 304 stainless steel must be supplied and installed into the concrete work. The Contractor shall also execute the complete grouting of the penstocks and carry out all necessary adjustments to ensure proper and smooth operation of the penstocks.

PS HA 5.2.17 **Handstops**

All parts shall be designed for the duty required, but the minimum factor of safety against structural failure shall not be less than 3, based on the working stress of the material. In the design, due consideration shall be given to the thickness of materials with regard to corrosion and operating conditions. The force required at the handle(s) to raise a gate or open handstop shall not be more than 200 Newton. Should this not be feasible then the handstop gate is to be cut in more than one part, each with its own handle(s) in order to achieve this limit of 200 Newton per section.

The frames and gates of handstops shall be made of aluminium with a thickness suitable for the duty required but shall not be less than 3,5 mm thick.

All gates shall be well guided in frames purpose made to suit their position and duty and shall provide drop-tight closure under the conditions as shown on the drawings. Handstops shall not spill water over the top or sides of the frame other than through the opening provided in the handstops for the water to pass through. All handstop frames shall be extended to the top of the concrete member concerned. Water tightness of handstops shall conform to the requirement that leakage at full water level will not exceed one litre in 15 seconds.

All handstops shall be supplied and installed by the Contractor under this Contract. The Contractor shall also execute the complete grouting of the handstops and carry out all necessary precautions to ensure proper and smooth operation of the handstops.

PS HA 8 **MEASUREMENT AND PAYMENT**

PS HA 8.3.2 Handrails

PS HA 8.3.2(b) **Handrail assembly complete** **Unit : m**

Delete the reference to "details given" and add: as specified in Sub-Clause PS HA 5.2.6 (state material to be used).

The tendered rate shall include handrails comprising hand and kneerails installed complete as specified

PS HA 8.3.3 **Ladders, complete and installed** **Unit : m**

The rate shall cover the cost of supplying all materials for each ladder, including lugs or other means of fixing to walls, floors, etc., as shown on drawings, and fabricating, installing and grouting in.

PS HA 8.3.4 **Flooring, complete and installed with frames** **Unit : Sum**

a) Open grid floors **Unit : Sum**

The rate shall cover the cost of supplying open grid floors complete with frames. The cost of all fixings, installing and fixing and grouting in.

PS HA 8.3.8 **3CR12 weir plates (state size), (refer to drawings)** **Unit : No**

The unit of measurement shall be the number of complete weir plates.

The tendered rate shall include full compensation for manufacture of the weir plates, supplying, installation, including self drilling M10 anchor bolts, cutting slots in plates for bolts, supplying and installing 8 mm thick neoprene sealing material between concrete and plate and adjusting after installation to obtain the correct level as shown on the drawings.

PS HA 8.3.9 **Aluminium handstops**

Unit : No

(refer to drawings and clause PS HA5.2.17)

(state size of clear opening)

The tendered rate shall include full compensation for manufacture, supplying, installation of the handstop to suit the position described and shown on the drawings.

PS LB: BEDDING (PIPES)

LB 1 SCOPE

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

Sieve size (mm)	% going through
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 3.4.1 **Suitable Material Available From Trench Excavations**

Substitute LB 3.4.1 with the following:

The provisos of PS D 3.3.1 shall apply mutatis mutandis.

PS LB 3.5 **BEDDING IN WATERLOGGED CONDITIONS**

In waterlogged conditions, the Engineer may instruct the Contractor in writing to use a bedding cradle comprising single sized 6,7 mm crushed stone complying with SANS 1083.

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 5.5 **PLACING AND BEDDING OF CABLES**

Bedding and backfilling for cables shall be executed under this contract. Cables shall be installed by the mechanical contractor.

Machine compaction shall not be carried out directly over cables, unless the cables are covered by at least 300 mm of fill material.

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.

PS LD: SEWERS

LD 3 MATERIALS

PS LD 3.1 PIPES, FITTINGS, AND PIPE JOINTS

PS LD 3.1.3 uPVC Pipes

Add the following to LD 3.1.5:

Substitute "approved flexible joints" in LD 3.1.5 with "spigot and socket rubber ring joints".

uPVC Class 6 pipes and fittings shall be used.

PS LD 3.5 MANHOLES, CHAMBERS, ETC.

PS LD 3.5.7 Step Irons

Substitute LD 3.5.7 with the following:

Step irons shall be installed in all manholes deeper than 1,2 m. Step irons shall consist of polypropylene coated 12 mm high tensile steel, such as Calcamite or similar. The installation of the step irons shall be in accordance with the specification of the manufacturer.

LD 5 CONSTRUCTION

LD 5.4 CONNECTIONS TO MANHOLES

Add the following to LD 5.4:

If the gradient of a pipe is more than 1:10, a vertical bend shall be used to connect up to the manhole. The Contractor shall take care that no low point is formed in the pipe as a result of the bend. If a pipe lays at a gradient of 1:10 (5,71°), a 11,25° bend cannot be used since a bend with an angle larger than the grade of the pipe will result in a low point. It is the responsibility of the Contractor to shorten the bend in order to create the required angle.

For pipes with a gradient of up to 1:10, the angle can be taken up by a joint in the manhole and if required, also by the joint between the short-length and first full pipe.

LD 5.6 MANHOLES, INSPECTION CHAMBERS, ETC

PS LD 5.6.1 General

Substitute LD 5.6.1(a) with the following:

Manholes shall be of precast concrete sections with an inside diameter of at least 1 000 mm and shall be constructed as shown on the drawings bound into the document.

1. Final cover levels of manholes in roads and paved areas shall be to the same level as the road or paved area.
2. In the veld 100 mm above natural ground level.

If a manhole is positioned at a low point or in a hollow where stormwater infiltration may occur, the manhole cover level must be raised to a level to avoid the danger of infiltration, or to a level as agreed with the Engineer.

If the manhole needs to be raised with more than 300 mm, precast concrete sections with the same diameter shall be installed and sealed with epoxy.

PS LD 5.6.2 **Benching**

Add the following to LD 5.6.2.3:

Benching for all manholes except those with sand traps shall be in accordance with the drawings bound into the document. Figure 3.

PS LD 5.6.3 **Step Irons**

Add the following to LD 5.6.3:

Step irons shall only be installed in manholes deeper than 1,2 m.

In the case of sand traps the lowest step iron will be installed 300 mm above the floor of the manhole. An additional step iron shall be installed on the opposite side of the sand trap at the same level as the lowest step iron, as shown on the drawings.

PS LD 5.6.4 **Brick Manholes**

Add the following to LD 5.6.4.3:

Walls of brick manholes, as well as the extension of precast manholes above the concrete roof slab, shall be plastered internally. External plasterwork shall extend to at least 150 mm below ground level. Manholes shall not be extended above the concrete roof slab by more than 300 mm with brickwork.

Walls of brick manholes, as well as the extension of AC manholes above the concrete roof slab, shall be plastered internally as shown on Figure 3. External plaster work shall extend to at least 150 mm below ground level. Manholes shall not be extended above the concrete roof slab by more than 300 mm with brickwork.

If manhole covers are raised with bricks, a half-brick recess, as a foothold, shall be left directly above the concrete slab above the step irons.

LD 7 **TESTS**

PS LD 7.1 **GENERAL**

Add the following to LD 7.1.5:

All tests shall be repeated after the completion of backfilling of pipe trenches.

LD 8 **MEASUREMENT AND PAYMENT**

LD 8.2 **SCHEDULED ITEMS**

PS LD 8.2.3 **Manholes**

Add the following to LD 8.2.3:

Manholes shall be measured complete as indicated on the drawings and the rate shall be all inclusive for benching, step irons, type 4A CI cover and frame, and it shall make provision for all additional excavation and backfilling.

The depth of manholes as mentioned in the schedule of quantities, shall be measured from the final cover level to the outlet invert level (flow level).

PS LD 8.2.3.3 New manholes on existing pipes Unit : No

The tendered rate shall be all inclusive for the handling of sewage flow, all excavation and backfilling, cutting of pipe and supply and installation of the new manhole, complete as described in LD 8.2.3.1, with finish and benching to accommodate the level difference of approximately 200 mm.

PS LD 8.2.8 Anchor Blocks Unit: m³

Add the following to LD 8.2.8:

Payment for anchor blocks shall be made for pipes with gradients steeper than 1:10 and shall be measured in m³.

PS LD 8.2.11 Connection To Existing Sewers Unit: No

Add the following to LD 8.2.11:

Separate items will be scheduled for each diameter of connecting pipe.

The tendered rate shall include full compensation for connecting the proposed pipe, any additional channelling and benching associated with the connection, cutting the pipe to suit the connection, supplying and building in the short junction pipe, extra couplings, dealing with existing flow, preventing foreign material from entering the sewer and making the connection.

The excavation for pipelines, pipes, backfilling and manholes shall be measured separately.

Where a direct connection is made to an existing pipe, the rate covers all labour involved in opening the existing pipe, the removal of the existing end cap and disconnection at the pipe.

PS M : ROADS (GENERAL)

PS M3 **MATERIAL**

PS M 3.2 **RESPONSIBILITY FOR LOCATION**

Add the following to M3.2:

The sub base and base layers of all roads shall be constructed with material from designated borrow areas. The Contractor is responsible for the selection of the material in the borrow areas and if the material in the paving layers do not comply with the minimum requirements it shall be removed and replaced with suitable material at the expense of the Contractor.

PS M 5 **CONSTRUCTION**

PS M 5.1 **SELECTION**

The Contractor shall deal selectively with material in order that suitable material is not contaminated with unsuitable material. If suitable material is contaminated, the Contractor shall replace such contaminated material with suitable material, at his own expense.

PS M 6 **TOLERANCES**

PS M 6.3 **FREQUENCY OF CHECKS**

Add the following to M 6.3:

These checks shall be submitted to the Engineer for his approval.

PS M 7 **TESTING**

PS 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.

PS M 8 **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 certificates.

PS ME: SUBBASE

ME 3 MATERIALS

ME 3.2 PHYSICAL PROPERTIES

PS ME 3.2.1 Subbase Material

Substitute ME 3.2.1 with the following:

- a) Materials of G5 quality for use in the unstabilised subbase shall comply with the requirements of SABS 1200 M 3.3.3.
- b) Materials of G7 quality for use in the unstabilised subbase shall comply with the requirements as specified in SABS 1200 M 3.3.3, except that the maximum aggregate size after compaction shall not exceed 63 mm.

PS ME 3.2.2 Gravel Shoulder And Gravel Wearing Coarse Material

Substitute ME 3.2.2 with the following:

The material used for gravel shoulders and/or gravel wearing course shall comply with the following requirements:

- i) Maximum aggregate size after compaction 37,5 mm
- ii) Oversize index (I_o) nil
- iii) Shrinkage product (S_p) 100-240
- iv) Grading coefficient (G_c) 16-34
- v) Minimum CBR at 95 % of MAASHTO of density 45
- vi) Minimum plasticity index (PI) 4

Where:

Oversize index (I_o) is the mass of the material larger than 37,5 mm, expressed as a percentage of the total mass of material;

Shrinkage product (S_p) is the product of the linear shrinkage and the percentage smaller than 0,425 mm (expressed as a percentage of the material smaller than 37,5 mm) of the material;

and

Grading coefficient (G_c) is the product of the percentage of material smaller than 26,5 mm but larger than 2,0 mm and the percentage smaller than 4,75 mm (expressed as a percentage of the material smaller than 37,5 mm) divided by 100.

ME 5 **CONSTRUCTION**

ME 5.4 **PLACING AND COMPACTION**

PS ME 5.4.1 **Placing**

Substitute "the project specification" in the second paragraph of ME 5.4.1 with "ME 6.1.4".

PS ME 5.4.5 **Work in Restricted Areas**

No additional payment shall be made for work in restricted areas and any relevant costs shall be deemed to be included in the tendered rates.

ME 5.7 **TRANSPORT**

PS 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**

PS ME 7.2.1 **Process Control**

Substitute "1 500 m²" with "1 200 m²" and "5 000 m²" with "3 000 m²" in Table 2 of ME 7.2.1.

PS 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**

PS 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.

PS ME 8.3.3 **Gravel Wearing Course from Commercial Sources Unit: m³**

Add the following to ME 8.3.3:

Material imported from commercial sources shall comply with the requirements as specified in PS ME 3.2.2.

PS ME 8.3.11 **Preparation of Road bed to a depth of 150 mm as subbase compacted to 95 % of MAASHTO density (100 % for sand) .. Unit: m³**

The rate covers the cost of crust breaking up to a minimum depth of 150 mm, watering, shaping, building and compaction of subbase, final scraping, compliance with the tolerances and testing.

SECTION MJ: SEGMENTED PAVING

MJ 3 **MATERIALS**

MJ 3.1 **UNITS**

PS MJ 3.1.2 **Class, Strength and Type**

Add the following to MJ 3.1.2:

Areas as indicated on the drawings shall be paved with 80 mm thick Type S-A Class 35 precast concrete blocks (interlocking type).

MJ 5 **CONSTRUCTION**

PS MJ 5.7 **JOINT FILLING**

Joint filling shall be done with sand (A3 specification).

MJ 6 **TOLERANCES**

PS MJ 6.2 **PERMISSIBLE DEVIATIONS**

Add the following to MJ 6.2:

The degree of accuracy shall be degree I.

SECTION MK: KERBING AND CHANNELLING

MK 3 MATERIALS

MK 3.2 PRECAST KERBING AND CHANNELLING

PS MK 3.2.3 Strength

Substitute MK 3.2.3 with the following:

Precast kerbs, edging and channels shall be of grade 20 MPa/19 mm concrete.

PS 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 1:3:6 concrete mix with a 6,7 mm single size coarse aggregate.

MK 5 CONSTRUCTION

PS MK 5.1 EXCAVATION AND BEDDING

Substitute "90 %" in MK 5.1 with "93 % (100 % for sand)".

PS 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 concrete bedding complying with the requirements of PS MK 3.9 and to the dimensions shown on the drawings.

PS MK 5.11 TRANSITION SECTIONS AND INLET AND OUTLET STRUCTURES

Substitute the first sentence of the second paragraph of MK 5.11 with the following:

Inlet and outlet structures shall be in accordance with the details shown on the drawings.

KAREEBERG MUNICIPALITY
UPGRADING OF CARNARVON OXIDATION PONDS
PHASE 1: CONSTRUCTION OF INLET WORKS AND ANAEROBIC POND
TENDER NO.: KBM 11-2026

C3.5: MANAGEMENT

C3.5.1 MANAGEMENT OF THE WORKS

C3.5.1.1 Applicable SANS standards

The provisions of these SANS 1200 take precedent over the provisions of any part of SANS 2001 that is applicable to the contract. The variations and additions to these specifications are described in the section "Applicable SANS 1200 standardised specifications."

The SANS 1200 Standardised Specifications for civil engineering construction applicable to this contract are stated in Section C3.4 : Construction.

C3.5.1.2 Particular / Generic specifications

The following particular and generic specifications are applicable to this contract :

- i) Environmental Management Plan
- ii) Occupational Health and Safety Specifications

i. Planning and programming

It is a prerequisite of this contract that minimal disruption of the public is ensured during construction. Construction methods must be of such a nature that no property or life is endangered. The Employer accepts no responsibility for any work done outside the site boundaries without the Engineer's approval.

Before handing over of a structure to the Mechanical Contractor, for the installation of mechanical and electrical equipment, the Contractor shall ensure the absence of scaffolding, formwork, building materials, rubble or open trenches, which may delay the mechanical contract and obstruct access to such structure. The structure shall also be clean and dry on the inside.

The Contractor shall draw up his programme to ensure that no delays are experienced on contract.

The Contractor himself is responsible for liaison and arrangements with the Engineer in connection with the finalisation and approval of the construction programme.

Sufficient digital photographs of all existing structures and obstructions in the pipe line routes must be taken by the Contractor, compiled electronically, indexed and handed over to the Engineer before construction commences.

The Contractor shall submit his programme of work to the Engineer not later than fourteen (14) days after the Contractor has been notified of the acceptance of his Tender and only after discussions with the Engineer. If necessary, the Engineer may instruct the Contractor to adjust his programme to suit other activities.

The programme shall be in the form of a bar chart only, and shall clearly show the anticipated quantities, the production rates and value of work to be performed each month.

A network-based programme according to the precedence method shall also be provided showing the various activities and critical path 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.

Failure to comply with these requirements will entitle the Engineer to use a programme based on his own assumptions for the purpose of evaluating claims for extension of time or additional payments.

The compilation of the construction programme and any amendments thereto during the course of construction shall be at the cost of the Contractor and shall not be measured elsewhere in the contract.

C3.5.2 Construction Program and Methods

The Contractor shall programme the works.

The Contractor shall indicate in his construction programme the number of construction teams he envisage will be required including the date when each team will start, position where each team will commence from and the estimated period for which each team will be engaged.

Construction methods must be of such nature that no property or life on site or adjacent to the works is endangered. The Employer accepts no responsibility for work that is done outside the site boundaries without the Engineer's approval.

All open excavations on site must be clearly demarcated and safeguarded before it is left overnight, during weekends and on public holidays. All excavations shall be backfilled and finished to the complete satisfaction of the Engineer.

The Contractor shall program separately for the detection, exposing and modification of existing services at the start of the contract at least fourteen (14) days prior to the proposed crossings. The position and levels thereof must be recorded and forwarded to the Engineer so that any adjustments to the design can be made if necessary. No extension of time arising out of any delay in completing this work will be considered.

The Contractor shall submit within two (2) weeks after site-handover to the Engineer an updated construction program indicating all construction activities, phasing, handing over of sections, resources, timelines, monthly expenditure and critical path with specific reference to criteria in C3.5.1 for the duration of the construction period indicated for approval. The Contractor will not be allowed to commence with any work before this program has been agreed upon and approved by the Engineer.

The Contractor himself is responsible for liaison and the necessary arrangements with property owners, relevant local and road authorities, Eskom, Telkom and Neotel in respect of service crossings and the finalisation and approval of the works program.

The compilation of the construction program and any amendments thereto during the course of construction shall be at the cost of the Contractor and shall not be measured elsewhere in this contract.

The Contractor shall record progress against the program. The Contractor shall draw the Engineer's attention immediately to any activities that fall behind program and shall inform the Engineer how he proposes to get back on program. Progress meetings shall be held monthly on site.

The Contractor himself is responsible for liaison with property owners with regards to the programming of construction activities through private properties and the crossing of access ways

to properties at least fourteen (14) days before such construction activities commence. No additional payment will be made in this regard.

Sufficient photos of existing structures, walls and areas that have to be crossed must be taken by the Contractor and handed over to the Engineer before such operations commence. No payment will be made in this regard and it shall be deemed to be covered in the preliminary and general items.

C3.5.2.1 Methods and procedures

C3.5.2.1.1 Maintenance of accesses and streets

The operation of construction vehicles on existing roads or streets, or on streets which have been completed to the level of sub-base or base or bituminous surface treatment, shall be limited to traffic with an axle load not exceeding that allowed by the Road Traffic Ordinance of the authority concerned, or any amendment thereof. Hauling is strictly forbidden on sections of streets that have been completed as described above. The Contractor shall make use of temporary haul roads, or where not practically possible, programme his work in such a manner that the haulage of materials shall be restricted to that required for the particular section of street. No additional payment shall be made for the use of temporary haul roads and all relevant costs shall be deemed to be covered by the appropriate rates.

The Contractor must note that no additional payment will be made for the construction of temporary access roads to the construction site, borrow areas or to the spoil sites.

If the Contractor does make use of existing streets for the hauling of materials to or from the site, he shall be held responsible to clear any spillage caused by his activities on or near the roads by whatever means necessary, within one (1) day after such spillage has occurred. No additional payment will be made for the clearance of spillage and all relevant costs will be deemed to be covered under the relevant items.

C3.5.2.1.2 Blasting operation

Any blasting required shall be carried out by a competent, registered blaster. All permits required to purchase, transport, use and dispose of unused, blasting material shall be obtained and copies given to the Engineer before any blasting may take place. The commander of the local South African Police Services (SAPS) shall be informed of the time and date that blasting operations will take place at least 6 hours before blasting.

No blasting operations may take place on weekends or holidays or after 17:00 on week days.

The Contractor shall ensure that sufficient suitable cover material, to the satisfaction of the blaster, is available and in place before a blast is initiated.

C3.5.2.1.3 Interference with Municipal staff and operations

The Contractor shall ensure that none of his staff interfere in any way with any municipal staff member or their functions or with the operation of the wastewater treatment works.

Any member of the Contractors staff found to be interfering with municipal staff or operations in any way shall be removed from the site and shall not be allowed to return.

C3.5.2.1.4 Access for other Contractors

The Contractor shall provide reasonable access to other Contractors carrying out work on the site from time to time, as and when such access is required. The Contractor is entitled to request reasonable notification of at least 24 hrs before access by others is required.

C3.5.2.1.5 Giving notice of work to be covered up

The Contractor shall give the Engineer reasonable time to accommodate examinations in his program, in which case times for inspections can be agreed on. Requests for examination of work shall be made in the site request book 72 hrs before the examination is required.

If the Engineer attends with the purpose of examining any part or materials of the works at the time and date as agreed upon with the Contractor, and it is found that the works or materials are not yet ready for inspection, the Contractor shall be responsible for the costs of such a visit by the Engineer.

C3.5.2.1.6 Cost of test specimens and tests

It is deemed that the Contractor has made provision in his tender for all such services and tests that are required from him. It is the duty of the Contractor to, at his own cost and by means of the necessary tests, prove to the Engineer that the works and compaction where prescribed, comply with the specification.

C3.5.2.2 Sequence of the works

Sequencing of the works shall be agreed to between the Contractor, the Engineer and the Mechanical/Electrical Contractor.

C3.5.2.3 Quality plans and control (Testing)

Refer SANS 1200 A : General

C3.5.3 Engineering method statements

The Contractor shall issue the Engineer with engineering method statements at least fourteen (14) days prior to the commencement of construction activities for the following:

- Method statements for:
 - Concreting activities (inlet works, discharge slab etc)
 - Anaerobic pond
 - Access Road

The compilation of the above method statements shall be deemed to be covered in the preliminary and general items and no additional costs in this regard shall be entertained.

C3.5.4 Quality plans and control

The Contractor shall have a well-documented Quality Assurance system depicting his approach to guarantee quality control and the procedures for preventative and corrective actions in order to ensure compliance with the specified standards and requirements of this contract.

The Contractor is required to carry out his own control testing, but if he so wishes, and agrees to abide by the results of the Engineer's check test, he may dispense with his own tests. However, should the Contractor wish to use the Engineer's testing facilities, he will be charged for the various tests at the rates ruling at the time.

Any additional tests requested by the Contractor or any retests required, due to failure of the initial tests, will be charged to the Contractor at the rates ruling at the time.

The Contractor shall inform the Engineer of any control testing to be done at least 48 hours before such tests are required and must allow in his program for the time necessary for the tests and the processing of the results thereof.

C3.5.5 Products and materials used

All products and materials used that forms part of the permanent works of this contract shall comply with the applicable SANS standards.

C3.5.6 Finishing and Tidying

Progressive and systematic finishing and tidying will form an essential part of this Contract. Under no circumstances shall spoil, rubble, materials, equipment or unfinished operations be allowed to accumulate.

Finishing and tidying must not be left to the end of the Contract. All finishing and tidying shall be carried out to the best advantage of the project as a whole and in close co-operation with, and under the direction of the Engineer.

C3.5.7 Normal working hours

Normal working hours shall be between 07:00 and 17:00 on weekdays from Mondays to Fridays and between 07:00 and 13:00 on Saturdays, should the Contractor choose to work on Saturdays, excluding Public holidays.

C3.5.8 Accommodation of Traffic on Public Roads Occupied by The Contractor

SANS 1921-5, Construction and management requirements for works contracts Part 2: Accommodation of traffic on public roads occupied by the Contractor, is the generic specification applicable to work to be undertaken within the road reserve.

C3.5.9 Testing, Completion, Commissioning, and Correction of Defects

All testing will be done in accordance with the relevant clauses of SANS 1200.

Completion, commissioning and correction of defects will be done in accordance with the SANS 1200 following the contractual procedures of the General Conditions of Contract for Construction Works (Third Edition, 2015).

C3.5.10 Recording of weather

Accurate rain gauging shall be taken at a suitable point on the Site and the Contractor shall at his own expense, take all necessary precautions to ensure that rain gauges cannot be interfered with by unauthorized persons. The rain gauge shall be provided and installed by the Contractor at his own cost.

The Contractor shall erect a rain gauge on site or agree with the Engineer to use statistics from an approved weather station in the area.

The Contractor shall record any rainy and windy periods which may adversely affect the contractual time of completion in terms of Clause 5.12 of the General Conditions of Contract (2015).

C3.5.11 Extension of Time Resulting From Abnormal Climatic Conditions

Refer to Contract Data (Part 1), Clause 5.12.2.2.

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 abnormal climatic conditions 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 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 due to inclement weather (i.e. Industrial Council/ Safety Officer, 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.

Also refer to Part C4: Site Information, Clause C4.2.

C3.5.12 Format of communications

All communications regarding the contract shall be channeled through the Engineer and/or his duly authorized representative.

The Contractor shall supply a site instruction book (triplicate) which must be available on site at all times. The site instruction book forms part of the official contract documentation.

A "Progress Report", "Labour on Site" and "Plant on Site" must be submitted at each site meeting.

C3.5.13 Key Personnel

The Contractor shall furnish satisfactory evidence that he dispose of sufficient staff and workmen with the necessary experience in work of a similar nature as that described in this document.

C3.5.14 Management meetings

Management (site) meetings shall be held once a month for the duration of the project on times and dates to be agreed.

Technical meetings shall be held once a month for the duration of the project on times and dates to be agreed.

Health and Safety management meetings will be arranged by the appointed Health and Safety Officer (HSO) for the duration of the contract.

Environment management meetings will be arranged by the appointed Environmental Control Officer (ECO) for the duration of the contract.

C3.5.15 Forms For Contract Administration

Typical standard forms for contract administration purposes will be made available to the successful Contractor. The forms will be available in electronic format.

C3.5.16 Daily Records

The Contractor will be required to keep a daily record of the site activities (including plant, personnel, site and weather conditions) in the Site Diary, which will be inspected during each management meeting and when the Engineer or Employer visits the site.

C3.5.17 Payment certificates

The date of measurement of the monthly payment certificate will be agreed at the first site meeting. All quantities must be agreed with the Resident Engineer/Clerk of Works before a payment certificate is submitted.

No retention money will be certified for payment unless the list setting out the work to be completed to justify the issue of the Certificate of Completion, has been fully complied with.

The quantities in the Bill of Quantities are provisional only and do not necessarily represent the actual and final amount of work to be done. Unless otherwise stated, items will be measured nett in accordance with the drawings and no allowance will be made for waste.

The Contract amount for the completed contract shall be computed from the actual measured quantities of authorised work done to the satisfaction of the Engineer, valued at prices tendered against the respective items in the Bill of Quantities.

C3.5.18 “Record Drawings”

As the work progresses, the Contractor shall keep full records of all amendments to and deviations from the drawings as issued to the Contractor at the start of the contract. The Contractor must submit this information monthly with his payment certificate to the Engineer. The true positions, invert levels and ground levels of all services shall be indicated on the drawings, for which purpose the Contractor shall receive a separate complete set of drawings from the Engineer at no cost. The actual position and depth of any future connections, as well as any previously unknown existing services shall also be provided.

The completion certificate shall only be issued after the Engineer has received a properly completed set of “record” drawings from the Contractor. No separate payment shall be made for this service as all costs related thereto shall be deemed to be included in the relevant items.

C3.5.19 SITE ESTABLISHMENT

C3.5.19.1 Services and facilities provided by the Employer

(i) Source of Water Supply

The Contractor may make application to the Local Authorities for a clean water supply point, but shall bear all the costs for the installation of such supply point. Water used by the Contractor from the Employer’s mains will be charged for at the tariffs ruling at the time of use.

The Contractor shall make himself thoroughly acquainted with the regulations relating to the use of water and shall take adequate measures to prevent the wastage of water.

The Employer accepts no responsibility for the shortage of water due to any cause whatsoever, nor additional costs incurred by the Contractor as a result of such shortage.

The Contractor shall take note that no direct payment will be made for any costs incurred for the provision of a water supply point nor for the cost of water drawn. Payment for the aforementioned shall be deemed to be covered by the rates and prices tendered and paid for the various items of work included under the Contract.

(ii) Source of Power Supply

The Contractor is to make his own arrangements with the Electrical Service Provider for electricity supply, if required, and shall pay establishment and consumption costs at the tariffs ruling at the time.

(iii) Location of Site Camp, Materials Storage and Temporary Stockpiling Area

The position of the site camp, designated area for materials storage and temporary stockpiling shall be submitted to the Engineer for approval.

The Contractor shall confine his camp and storage of materials to the designated areas. On completion of the construction works the surface of the areas utilised shall be re-instated to the original state.

C3.5.19.2 Facilities provided by the Contractor

(i) Sanitary Facilities

The Contractor shall supply chemical toilets for use by his workmen. The number of toilets shall be based on one toilet per fifteen (15) personnel on site.

Under no circumstances will the Contractor's staff be allowed to use public toilet facilities.

(ii) 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 respects 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.

(iii) Advertising rights

The Contractor will be permitted to erect a maximum of two (2) of his own name boards in positions approved by the Engineer. The Engineer reserves the right to order the removal of these boards if they are not kept in good repair.

C3.5.20 Health and Safety

C3.5.20.1 Health and Safety Requirements and Procedures

Both the "Factories, Machinery and Building Work Act (Act 22 of 1941) and the "Machinery and Occupational Safety Act (Act 6 of 1983)" must, wherever they appear in the SANS 1200 standardised specifications, be substituted by the "Occupational Health and Safety Act and Regulations (Act 85 of 1993)".

The Contractor shall apply suitable proven methods for construction complying with the OHS Act so that his activities will not constitute a hazard to his work force, the public or any adjacent property. All excavations shall be suitable safeguarded and barricaded especially during night-time, weekends or holidays and any other day of inactivity by the Contractor. The Contractor shall also ensure that excavations are shored or otherwise made safe.

The camp and construction site will be locked after hours to ensure safety of passers-by. No additional payment will be made to the Contractor for complying with these requirements.

The proposed type of work, materials to be used and potential hazards likely to be encountered on this Contract are detailed in the C3.4: Construction, the Bill of Quantities, the Drawings, and in the Employers' Health and Safety Specification regulation 4(1) of the Construction Regulations 2014), which is attached as Annexure D.

Payment items are included in the Bill of Quantities to cover the Contractor's cost for compliance with the OHS Act and the abovementioned regulations.

The Occupational Health and Safety Specification for this Contract is included in Part C3.6, as Annexure D.

C3.5.21 Protection of The Public

The Contractor shall at all times ensure that his operations do not endanger any member of the public. The Contractor shall take special precautions to prevent public access to any work areas on the Works, by temporary barricades and/or fencing.

C3.5.22 Barricades and Lightning

During the construction or any other miscellaneous operations, all necessary barricades, suitable and sufficient lights, danger signals, signs and other traffic control devices shall be erected and maintained and all necessary precautions for the protection of the works and safety shall be taken. This work shall be carried out in consultation with and to the satisfaction of the relevant road authority.

C3.5.23 Environmental Management Plan

Payment items are included in the Bill of Quantities to cover the Contractor's cost for compliance with the Environmental Management Plan.

The Environmental Management Plan for this Contract is included Part C3.6, as Annexure E.

C3.5.23.1.1 Demarcation of the site

For the purpose of the EMP, the site shall be divided into two areas identified by the Engineer and the Contractor:

- (i) The construction camp comprising all buildings, hostels, offices, lay down yards, vehicle wash areas, fuel and material storage areas, batching areas and other infrastructure that is required for the running of the job.
- (ii) The working area in which construction activity is permitted to take place. No infrastructure, permanent lay down or storage areas shall be established in this working area unless specified in the project specification or prior approval is obtained from the Engineer.

C3.5.23.1.2 Construction camp

The construction camp shall be planned in such a way so as to affect as small an area as practically possible. The Engineer shall approve the location and layout of the construction camp prior to establishment.

C3.5.23.1.3 Fencing of the site

If a temporary fence is required, the Contractor shall erect and maintain such a fence (demarcating the boundary of the working area, construction camp and access roads) to the satisfaction of the Engineer. The erection of this fence shall be one of the first tasks undertaken by the Contractor after the commencement date. The boundaries between the construction camp area and the working area within the site shall also be fenced. The Contractor shall ensure that the erection of the fencing causes minimal disturbance to flora, fauna, natural, historical and cultural features. A method statement shall be submitted to the Engineer prior to erection to ensure proper positioning of the fence.

All material left over from fencing operations shall be collected after the fence has been erected and removed from site. Fences shall not be moved or removed without the written consent of the Engineer. The Contractor throughout the construction period shall maintain fences.

C3.5.23.1.4 Workshops

Any workshops shall be located inside the demarcated construction camp area. The exact location and design of the workshop shall be as approved by the Engineer prior to establishment.

The workshop shall have a smooth impermeable (concrete) floor. The floor shall be bunded and sloped towards an oil trap or sump to contain any spillages of substances (e.g. oil). When servicing equipment, drip trays shall be used to collect the waste oil and other lubricants. All waste material shall be disposed of in accordance with national, regional and local laws, regulations and by-laws. This waste material shall be regularly removed off site and disposed of at an approved waste site.

C3.5.23.1.5 Eating areas

The Contractor's employees shall eat in the designated eating area indicated on the Contractor's drawing of the construction camp that has been approved by the Engineer. No changes to the eating area shall be made without the approval of the Engineer. The Contractor shall provide shade and adequate scavenger-proof and weatherproof refuse bins in this area. Any cooking on site shall only be undertaken in the eating area and be done on well maintained gas cookers with fire extinguishers present. No cooking shall be done anywhere else on site and no fires are permitted.

C3.5.23.1.6 Watchmen

The Contractor shall ensure that a watchman is present on site during all non-working hours, including public holidays unless otherwise agreed with the Engineer to ensure the safety of sensitive areas.

C3.5.23.1.7 Ablution facilities

The exact location of the toilets shall be as approved by the Engineer. The Contractor shall provide toilets and shall be responsible for their maintenance and servicing on a daily basis. The contractor shall ensure that no spillage occurs when the toilets are cleaned or emptied. Burial of waste from toilets on site is strictly prohibited. The toilets shall be maintained in a clean state. Performing ablutions anywhere other than in toilets is strictly prohibited. Leaking toilets shall be repaired immediately or removed from site.

C3.5.23.1.8 Solid waste collection areas

"Solid waste" refers to all solid waste, including construction debris, chemical waste, excess cement/concrete, wrapping materials, timber, tins and cans, drums, wire, nails, food and domestic waste (e.g. plastic packets and wrappers).

The Contractor shall set up a waste control and removal system. The Contractor shall submit a method statement for waste control and removal to the Engineer for approval prior to commencement. Bins shall be closed, weatherproof and scavenger-proof.

Waste shall be collected from these bins on a daily basis and shall be stored in a central collection area prior to removal off-site. This central collection area shall have appropriate storage containers (closed and weatherproof) bunded and lined with plastic or concrete. The waste from this central collection area shall be disposed of off-site at an approved waste site. Waste shall be removed from site on a regular basis as approved by the Engineer. Waste shall not be burnt or buried on site or in the surrounding area. Where possible, appropriate material shall be reused or recycled.

C3.5.23.1.9 Wastewater

Water shall be used sparingly on site and where possible wastewater shall be recycled. A wastewater management plan shall be submitted to the Engineer for approval 10 days prior to commencement date. This management plan shall detail the expected extent of contamination of each wastewater stream and how the Contractor plans to deal with each wastewater stream.

C3.5.23.1.10 Fuel storage areas

Fuels required for use during construction shall be stored in a depot at the construction camp at a location as agreed upon by the Engineer. The Contractor shall ensure that all liquid fuels (petrol and diesel) are stored in tanks with lids, which are kept firmly shut. The tanks shall be situated on a smooth impermeable (plastic or concrete) base with an earth bund. The impermeable lining shall extend to the crest of the bund and the volume inside the bund shall be 1,5 x the total capacity of the storage tanks. The bunded area shall be emptied of water following rainfall events. The floor of the bund shall be sloped towards an oil trap or sump to enable any spilled fuel and / or fuel-soaked water to be removed.

The Contractor shall keep fuel under lock and key at all times.

C3.5.23.1.11 Concrete batching area

Cement and concrete are regarded as hazardous to the environment due to the high pH of the material and the chemicals it contains.

The Contractor shall submit a method statement for mixing of concrete for approval by the Engineer indicating where the mixing will take place and the methods to ensure that waste water and materials are contained in the batching area and disposed of correctly. Concrete shall not be mixed directly on the ground.

C3.5.23.1.12 Equipment maintenance and storage

All vehicles and equipment shall be kept in good working order and serviced regularly. Leaking equipment shall be repaired immediately or removed from the site. Where possible, all maintenance of equipment and vehicles shall be performed in the workshop. If it is necessary to do maintenance outside of the workshop area, the Contractor shall obtain agreement from the Engineer prior to commencing activities.

The Contractor shall demarcate an area in which equipment and vehicles may be stored. The location of this area shall be as approved by the Engineer. The Contractor shall take measures to ensure that there is no pollution of this storage area by leaks or drips.

C3.5.23.1.13 Materials handling, use and storage

The Contractor is responsible for ensuring that any material delivery drivers are informed of all procedures and restrictions (e.g. which access roads to use, "no go" areas, speed limits, dust control, etc) required to comply with the EMP before they arrive at site and off load any materials. The Contractor shall ensure that the delivery drivers are supervised during off-loading by someone with an adequate understanding of the requirements of the EMP, so as to ensure that all relevant requirements of the EMP are followed.

Hazardous Substances

The Contractor shall comply with all relevant national, regional and local legislation with regard to the transport, use and disposal of hazardous materials.

The Contractor shall provide the Engineer with a list of all hazardous materials to be used on site, together with the storage, handling and disposal procedures of the materials. This information shall be available to all personnel on site.

The location of the hazardous material store shall be within the demarcated construction camp area. The location and design of the store within this area shall be approved by the Engineer prior to establishment.

Fuel (Petrol and Diesel) and Oil

Where possible, the Contractor shall ensure the refuelling of vehicles takes place only at the fuel storage area in the construction camp. Where this is not possible, the Contractor shall notify the Engineer to get his approval of the refuelling method to be used. The surface under the refuelling

area shall be protected against pollution to the satisfaction of the Engineer prior to any refuelling activities. All equipment that leaks shall be repaired immediately or removed from the site. Refuelling shall be carried out by means of pumps, rather than funnels.

C3.5.23.1.14 Emergency procedures

The Contractor shall ensure that emergency procedures for the following situations are submitted for approval to the Engineer prior to establishment of the site.

Fire

The Contractor shall advise the relevant authority of a fire as soon as one starts and shall not wait until he can no longer control it. The Contractor shall ensure that his staff and the staff of Subcontractors are aware of the procedure to be followed in the event of a fire.

Accidental leaks and spillages

The Contractor shall ensure that his staff and the staff of Subcontractors are aware of the procedure to be followed for dealing with spills and leaks, which will include notifying the Engineer and relevant authorities. The Contractor shall also ensure that the necessary materials and equipment for dealing with spills and leaks are present on site at all times. The clean up of spills and any damage caused by the spill or leak shall be for the Contractor's account. The Contractor shall submit a method statement for management of accidental leaks and spillage's of any liquid material to the Engineer for approval.

C3.5.23.1.15 Care of surrounding areas

The Contractor shall ensure that no contamination of or damage to the surrounding areas or watercourses shall occur as a result of any of his activities during construction.

Care shall be taken to ensure no accidental spillage or leakage occurs whilst temporary bypass facilities are in use. Should any spillage or leakage occur the Contractor shall immediately stop his operations and clean up the spillage. He shall then rectify the cause of the spillage or leakage before proceeding further to ensure that no further spillages occur.

The clean up of spillage and any damage caused by the spillage or leakage shall be for the Contractor's account. The Contractor shall submit a method statement for management of accidental leaks and spillages of any sewage to the Engineer for approval.

The Contractor shall ensure that no pollution of the surrounding areas occurs due to wind-blown or other litter emanating from the site or from his activities during construction. No fires are permitted, neither is the cutting down of or any damage to trees and other vegetation (especially

C3.5.24 OCCUPATIONAL HEALTH AND SAFETY SPECIFICATIONS

C3.5.24.1 Background

In terms of the Construction Regulations [Regulation 4 (1) (a)] of the Occupational Health and Safety Act, No 85 of 1993, the Employer is required to compile an Occupational Health and Safety specification for each of its projects and the Principle Contractor, appointed by the Employer in terms of Regulation 4 (1) (c), is required to prepare an Occupational Health and Safety plan. This plan has to be prepared in terms of Regulation 5 (1) as well as the Employer's Occupational Health & Safety specification. In terms of Regulation 4 (2), the Employer and the Principal Contractor are required to agree on the Occupational Health and Safety Plan before any work may commence.

C3.5.24.2 Framework for an occupational health and safety plan

C3.5.24.2.1 Introduction

The Principal Contractor has to demonstrate to the Employer that it has a suitable and sufficiently documented Occupational Health and Safety plan as well as the necessary competencies, experience and resources to perform the construction work safely. The Principal Contractor could be required to submit the following documentation for perusal and verification by the Employer:

- Management structure.
- Quality plan.
- Human resources plan.
- Registered workplace skills plan.
- "Letter of good standing" from the Compensation Commissioner or licensed compensation insurer.
- Proof of Induction and other training of employees.
- Example copy minutes of previous Occupational Health and Safety Committee meetings and copies of Incident Investigation reports.

The following specifications are supplied as a guide only. The Employer's Health and Safety Agent may amend and/or expand on the specifications by means of an addendum to Tender or after the award of the Contract.

C3.5.24.2.2 OH&S plan at tender stage

Tenderers shall submit an OH&S plan with their tender document. This shall be a preliminary plan that may be expanded on and finalised after the award of the contract. The OH&S Plan should be based on the following principles:

- A proper risk assessment of the construction work.
- Pro-active identification of potential hazards and unsafe working conditions.
- Informing and/or training of employees in hazards and risk areas.
- Provision of a safe-working environment and safety equipment.
- Ensuring the safety of sub-contractors through their safety plans.

- Monitoring the health and safety on the construction works on a regular basis.
- Using competent safety officers.

C3.5.24.3 Contents of an occupational health and safety plan

C3.5.24.3.1 Occupational Health and Safety Management Programme

- Management of Occupational Health and Safety risks.
- Occupational Health and Safety structures and appointments.
- Programme of Occupational Health and Safety inspections.
- Occupational Health and Safety Representatives.
- Occupational Health and Safety committee.

C3.5.24.3.2 Communication and management of the work

- Management structure and responsibilities.
- Details of the construction supervision and his appointed assistants.
- Details of the Construction Safety Officer.
- Occupational Health and Safety goals for the project and arrangements for monitoring and review of Occupational Health and Safety performance.
- Arrangements for:
 - Regular liaison between parties on site.
 - Consultation with the workforce.
 - The exchange of design information between the Employer, designers, supervisors and contractors on site.
 - Handling design changes during the project.
 - Selection and control of contractors.
 - The exchange of Occupational Health and Safety information between all contractors.
 - Security.
 - Site induction and onsite training.
 - Facilities and first-aid.
 - The reporting and investigation of accidents and incidents.
 - The production and approval of risk assessments and method statements.
 - Site OH&S rules.
 - Fire and emergency procedures.

- Reporting to the Employer i.e. results of Occupational Health and Safety inspections, incident and incident investigations and committee meetings.
- Reporting of incidents to the Department of Labour and Compensation insurer where appropriate.

C3.5.24.3.3 Arrangements for controlling significant site risks

The following are some examples of the arrangements for controlling the most significant site risks:

C3.5.24.3.4 Safety risks

- Services, including temporary electrical installations.
- Preventing employees from falling into excavations, from trucks etc.
- Work with, on or near fragile materials.
- Control of lifting operations.
- The maintenance of plant and equipment.
- Traffic routes and segregation of vehicles and pedestrians.
- Traffic control during pipeline crossing of existing roads.
- Handling and storage of hazardous materials.
- Dealing with existing unstable structures/land.
- Working in confined spaces.
- Working at elevated heights (> 3,0 m).
- Other significant safety risks as and when identified.
- Working in excavations to a depth of 7,0 metres.

C3.5.24.3.5 Health risks

- Working environment.
- Handling, storage and use of hazardous chemical substances.
- Dust containing cement, silica and other hazardous substances.
- Dealing with contaminated land or material.
- Manual handling.
- Reducing noise and vibration.
- Provision of adequate lighting.
- Ventilation considerations.
- Extreme heat and cold temperature considerations.
- Dealing with HIV/Aids and other illnesses.
- Provision of and maintaining ablution and eating facilities.
- Other significant health risks as and when identified.

C3.5.24.4 Special risks

Contractors are to take note of the special risks that may be encountered during the project and to include these special risks in the OH&S plan.

C3.5.24.4.1 Working environment

- Trench excavations between 2 to 7 metres in depth.
- Rotating machinery (and pumps if required).
- Electrical infrastructure not indicated on "As Built" drawings.
- Electrical storms during summer months.
- Traffic control during pipeline crossings of existing roads.

C3.5.24.4.2 Installation work

- Use of electricity may be hazardous in wet conditions.
- Working space may be limited.
- Lifting and placing of heavy equipment, pipes and manhole rings and covers.

C3.5.24.5 Preparation of an occupational health and safety operational reference file/manual

The Principal Contractor shall open and maintain an OH&S file for the duration of the contract. On completion of the contract the Principal Contractor shall hand the OH&S file to the Employer.

C3.5.24.5.1 The following are some of the requirements to be addressed

- Layout, format and content requirements.
- Arrangement for the collection and gathering of information.
- Storage and archiving of all the information.
- Copy to the Client at completion of project.
- Appointment of a health and safety officer in writing.

C3.5.24.5.2 Contents of an OH&S file/manual

- OH&S Policy.
- Notice of new project.
- Site start-up.
- Security measures.
- Written designations and appointments.
- Arrangements with contractors/mandataries.
- OH&S rules and procedures.
- Induction.
- OH&S training.
- OH&S promotion.
- OH&S representatives.
- OH&S committees.
- Workplace facilities e.g. ablutions, sheltered eating areas etc.
- Protective equipment.
- Workplace inspections and audits.
- Investigation and reporting of incidents/accidents.
- Mechanical safeguarding.
- Electrical safeguarding.
- Safeguarding against trench excavations with depths ranging between 2 to 7 metres.
- Safeguarding against hazardous substances.
- Lifting machinery and equipment.
- Construction vehicles and mobile plant.

- Welding, heating and flame cutting.
- Protection of the environment affected by construction activities.
- Keeping of records in terms of the OH&S Act (85 of 1993).
- General details of construction methods and materials used.
- Details of equipment and maintenance facilities within the structures.
- Maintenance requirements and procedures for structures / equipment / plant.
- Manuals produced by suppliers and specialist contractors, including operating and maintenance procedures and schedules for plant and equipment.
- Details of the location and nature of utilities and services, including emergency and fire-fighting systems.

C3.5.24.6 Notice of construction work

The Contractor shall complete Notification of Construction Work of Regulation 3 of the Construction Regulations 2003.

The original shall be forwarded to the office of the Department of Labour closest to the site. A copy of the original must be kept on site at all times.

C3.5.24.6.1 Protection of the public

The Contractor shall at all times ensure that his operations do not endanger any member of the public.

As the area is adjacent to a residential area the Contractor shall take special precautions to prevent public access to any danger areas on the Works, e.g. by temporary barricades and/or fencing.

C3.6 SAFETY ON SITE

C3.6.1.1 Access to site by public

The Contractor shall erect fences and employ sufficient security personnel to prevent unauthorised access to the site by members of the public. Notices prohibiting access to the site shall be clearly displayed at all access points.

The notices shall be in English, Afrikaans and the most commonly used local language.

C3.6.1.2 Barricades and lighting

All excavations and openings in walls and slabs into or through which a person may fall shall be securely barricaded at all times in accordance with the requirements of the applicable OH&S regulations.

KAREEBERG MUNICIPALITY
UPGRADING OF CARNARVON OXIDATION PONDS
PHASE 1: CONSTRUCTION OF INLET WORKS AND ANAEROBIC POND
TENDER NO.: KBM 11-2026

3.6 OHS CONTRACTOR SPECIFICATION

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1. **SCOPE**

This Specification is intended for all Service Providers and Contractors

2. **OBJECTIVE**

- To ensure that Service Providers and Contractors comply with the requirements of the Occupational Health and Safety Act No. 85 of 1993 and the Construction Regulations (2014) and thereto including any relevant standards and SABS codes of practice that may apply.
- To minimise and eliminate contractor's health and safety risks.
- To ensure that contractors submitting tenders make provision for the cost of health and safety measures to be implemented during the duration of the contract /during the construction process.

3. **DEFINITIONS**

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

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

Biological Agent means any micro-organism, cell culture or human endoparasite, including any which have been genetically modified, which may cause an infection , allergy, or toxicity , or otherwise create a hazard to human health

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

"client" means any person for whom construction work is being performed;

"competent person" means a person who has, in respect of the work or task to be performed, the required knowledge, training and experience and, where applicable, qualifications, specific to that work or task: Provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualification Framework Act, 2000 (Act No.67 of 2000), those qualifications and that training must be regarded as the required qualifications and training; and is familiar with the Act and with the applicable regulations made under the Act;

"construction manager" means a competent person responsible for the management of the physical construction processes and the coordination, administration and management of resources on a construction site;

"construction site" means a work place where construction work is being performed;

"construction supervisor" means a competent person responsible for supervising construction activities on a construction site;

"construction vehicle" means a vehicle used as a means of conveyance for transporting persons or material, or persons and material, on and off the construction site for the purposes of performing construction work;

"construction work" means any work in connection with-

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

- b) the construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system; or the moving of earth, clearing of land, the making of excavation, piling, or any similar civil engineering structure or type of work ;

"construction work permit" means a document issued in terms of regulation 3;

"contractor" means an employer who performs construction work;

"demolition work" means a method to dismantle, wreck, break, pull down or knock down of a structure or part thereof by way of manual labour, machinery, or the use of explosives;

"design" in relation to any structure, includes drawings, calculations, design details and specifications;

"designer" means a competent person who-

- a) prepares a design;
- b) checks and approves a design;
- c) arranges for a person at work under his or her control to prepare a design, including an employee of that person where he or she is the employer; or
- d) designs temporary work, including its components;
- e) an architect or engineer contributing to, or having overall responsibility for a design;
- f) a building services engineer designing details for fixed plant;
- g) a surveyor specifying articles or drawing up specifications;
- h) a contractor carrying out design work as part of a design and building project; or
- i) an interior designer, shop-fitter or landscape architect;

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

"explosive actuated fastening device" means a tool that is activated by an explosive charge and that is used for driving bolts, nails and similar objects for the purpose of providing fixing;

"fall arrest equipment" means equipment used to arrest a person in a fall, including personal equipment, a body harness, lanyards, deceleration devices, lifelines or similar equipment.

"fall prevention equipment" means equipment used to prevent persons from falling from a fall risk position, including personal equipment, a body harness, lanyards, lifelines or physical equipment such as guard-rails, screens, barricades, anchorages or similar equipment.

"fall protection plan" means a documented plan, which includes and provides for -

- a) all risks relating to working from a fall risk position, considering the nature of work undertaken.
- b) the procedures and methods to be applied in order to eliminate the risk of falling; and
- c) a rescue plan and procedures;

"fall risk" means any potential exposure to falling either from, off or into;

"health and safety file" means a file, or other record containing the information in writing required by these Regulations;

"health and safety plan" means a site, activity or project specific documented plan in accordance with the client's health and safety specification;

"health and safety specification" means a site, activity or project specific document prepared by the client pertaining to all health and safety requirements related to construction work;

"material hoist" means a hoist used to lower or raise material and equipment, excluding passengers;

"medical certificate of fitness" means a certificate contemplated in regulation 7(8);

"mobile plant" means any machinery, appliance or other similar device that is able to move independently, and is used for the purpose of performing construction work on a construction site;

"National Building Regulations" means the National Building Regulations made under the National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977), and promulgated by Government Notice No. R. 2378 of 30 July 1990, as amended by Government Notices No's R. 432 of 8 March 1991, R. 919 of 30 July 1999 and R. 547 of 30 May 2008;

"person day" means one normal working shift of carrying out construction work by a person on a construction site;

"principal contractor" means an employer appointed by the client to perform construction work;

"Professional Engineer or Professional Certificated Engineer" means a person holding registration as either a Professional Engineer or Professional Certificated Engineer in terms of the Engineering Profession Act, 2000 (Act No. 46 of 2000);

"Professional Technologist" means a person holding registration as a Professional Engineering Technologist in terms of the Engineering Profession Act, 2000;

"Provincial director" means the provincial director as defined in regulation 1 of the General Administrative Regulations, 2003.

"scaffold" means a temporary elevated platform and supporting structure used for providing access to and supporting workmen or materials or both;

"shoring" means a system used to support the sides of an excavation and which is intended to prevent the cave-in or the collapse of the sides of an excavation.

"structure" means-

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

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

"temporary works" means any false work, formwork, support work, scaffold, shoring or other temporary structure designed to provide support or means of access during construction work;

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

"tunnelling" means the construction of any tunnel beneath the natural surface of the earth for a purpose other than the searching for or winning of a mineral.

4. NOTIFICATION OF CONSTRUCTION

Any contractor who intends to carry out any construction work other than work contemplated in regulation 3(1), must at least 7 days before that work is to be carried out notify the provincial director in writing in a form similar to Annexure 2 if the intended construction work will—

- a) include excavation work;
- b) include working at a height where there is risk of falling;
- c) include the demolition of a structure; or
- d) include the use of explosives to perform construction work.

5. REGISTRATION WITH THE WORKMEN'S COMPENSATION OR LICENSED INSURER

Contractors shall ensure that the client is provided with a letter of good standing including a registration number with the Compensation for Occupational Injury and Diseases Fund or an alternative scheme approved in writing by the Commissioner to the COID Fund at least 3 days prior commencement of construction work.

6. MANDATORY FORM

Not applicable

7. ASSIGNED PERSON IN TERMS OF OCCUPATIONAL HEALTH & SAFETY ACT OF 1993 & ITS REGULATIONS

A written letter of appointment shall be forwarded to the client duly signed by responsible persons at least 3 days prior commencement of construction work for the following duties:

- (a) Chief Executive Officer (OSHACT 16(1))
- (b) Contract Director/Manager (OSHACT 16(2))
- (c) Construction Manager (CR 8(1))
- (d) Construction Supervisor (CR 8(7))
- (e) Assistant Construction Supervisor (CR 8(8))
- (f) Construction Safety Officer (CR 8(5))
- (g) Safety Representative (where > 20 employees on site)
- (h) Construction risk assessor (CR 9(1))
- (i) Excavation Supervisor (CR13(1)(a))
- (j) Demolition Supervisor (CR14(1))
- (k) Scaffold Supervisor (CR16(1))
- (l) Housekeeping supervisor (CR27)
- (m) Construction Vehicle and Mobile Plant Operator (CR23(1)(d)(i))
- (n) Controller of Temporary Electrical Installations (CR24(c))
- (o) Stacking Supervisor (CR28(a))
- (p) Fire Extinguishing Equipment Inspector (CR29(h))
- (q) Fire warden (ER9)
- (r) Fall Protection Plan Developer (CR 10(1)(a))
- (s) Incident Investigator (OSHACT 9(2))
- (t) First Aider GAR3
- (u) Occupational medicine practitioner AAR 17(2))

8. HEALTH AND SAFETY PLAN

A contractor shall provide the client with a Health and Safety Plan document that shall include the following during tendering process, before commencement of construction work and during construction:

8.1 Contractor's Health & Safety Policy

A Contractor shall submit their Health and Safety Policy, prior to construction commencement, signed by the Chief Executive Officer. The Policy must outline objectives and how they will be achieved and implemented within the company operations.

8.2 Health and Safety Organogram

A Contractor shall provide a health & safety organogram which outlines the team leaders, 16.2 appointees, construction work supervisor, assistant construction work supervisor, safety representatives, safety committee members and other related appointments in terms of the OHS Act. The contact numbers should also be provided for easy reference.

8.3 Risk assessment

A risk assessment shall be conducted by a competent person, this includes:

1. identification of risks and hazards to which persons may be exposed; this is also to include ergonomic related
2. hazard analysis and evaluation of the identified risks and hazards;
3. a documented plan of safe work procedure to mitigate, reduce or control the risks and hazards that have been identified;
4. a monitoring and review plan of risks and hazards
5. relevant personal protective equipment or clothing to be provided which is SABS approved
6. fall protection plan for work carried in elevated position(s)

The contractor shall ensure that all employees are informed, instructed and trained by a competent person regarding any hazard and the related procedure before any work commences.

8.4 Fall Protection Plan

A contractor shall submit a risk assessment conducted by a competent person outlining the procedure and methods used to address all risks identified per location. A contractor shall ensure that employees working in such elevated positions undergo a medical examination conducted by a registered occupational health practitioner. A certificate of fitness (that is employee's physical and psychological fitness) valid for a year, shall be submitted prior commencement of construction. A contractor shall ensure that employees working from elevated positions receive proper training and such records are kept on file for reference purposes.

A contractor shall ensure that no person works in an elevated position, unless such work is performed safely as if working from a scaffold or ladder.

A contractor shall ensure that fall prevention and fall arrest equipment is inspected for its suitability and strength before use to ensure that it is safe for use and such inspections shall be recorded and kept on file for reference.

A contractor shall ensure that fall arrest equipment is used only if not reasonably practicable to use fall prevention equipment. Precautionary measures shall be taken by the contractor to ensure that in

the event of fall by any person, the fall arrest equipment or the surrounding environment does not cause injury to the person.

8.5 Health and Safety Representatives

A contractor shall ensure that Health and Safety Representative(s) is/are elected and delegated in writing and necessary training has been provided by a competent person. A proof of training certificate shall be provided to THE CLIENT prior commencement of construction work.

Health and Safety Representatives shall conduct regular inspections by completing a mutually acceptable form of checklist developed by the contractor. Safety defects noted shall be recorded and reported to the supervisor for remedial action. Health and Safety Representative Inspection findings shall be made available to THE CLIENT for reference and audits purposes.

Health and Safety Representatives and their reports shall form part of the safety committee which shall meet on a regular bases as stated by the contractor.

8.6 Health and Safety Committee

A contractor shall hold health and safety meetings on site. Minutes of such meetings and action taken by management shall be kept on file and made available to THE CLIENT for reference purposes. Members of the committee shall receive proper training and a proof of such training shall be made available.

The contractor shall ensure that THE CLIENT Safety Department is invited to such meetings. These meetings do not substitute for Contractor's Site meetings.

8.7 HEALTH & SAFETY TRAINING

ENVIRONMENTAL HEALTH & SAFETY INDUCTION

A Contractor shall quarterly conduct a training needs analysis to ascertain what health and safety training is required. A plan of action should be devised and forwarded to the Client for records. Once the identified people have attended the training, the Contractor must provide the Client with copies of certificates obtained.

INDUCTION CONDUCTED BY CONTRACTOR & COMPETENT PERSON

A contractor must make sure that their personnel and persons visiting the site undergo an induction conducted by a competent person prior commencement of construction work. Every employee on site shall be in a possession of proof of the health and safety induction training

A contractor shall ensure that all visitors to a construction site undergo health and safety induction pertaining to the hazards prevalent on the site.

A manual /copy of such training shall be provided to THE CLIENT for reference purposes.

As a risk assessment determines, a contractor shall ensure that all employees under his/her control are trained by a competent person and a proof of such training is kept on file for reference.

Toolbox Talks

A Contractor shall ensure that employees attend a formal Toolbox conducted at least on a weekly basis. Toolbox Talks shall cover a wide variety of topics related to health and safety. An attendance register shall be completed by employees who attended such Talks. The register shall indicate the topic covered, presenter, date and signatures of employees attended. Records for Toolbox Talks shall be kept in a health and safety file and be made available to THE CLIENT for perusal.

First Aid Training

A contractor shall appoint First Aider(s) in writing. A letter of appointment shall be kept on file for reference made available to THE CLIENT Safety. Duly designated First Aider(s) shall undergo for training conducted by an accredited institution prior commencement of construction work and a proof of certificate be submitted to THE CLIENT for reference.

The Contractor shall ensure that the first aid box(es) is/are controlled by qualified First Aider(s) and kept fully stocked with necessary first aid contents related to the hazards and risks identified. A first aid box must be accessible and location of such boxes) is clearly displayed on site.

8.8 Fire prevention and Protection

A contractor shall ensure that adequate fire equipment is provided in strategic places (that is, where there is a mobile distribution board, flammable liquids, vessels under pressure, confined spaces, hot work etc). A contractor shall ensure that such equipment is inspected by a competent person on a regular basis and such inspections are recorded on a register. A contractor shall ensure that all fire equipment is serviceable and person(s) have been properly trained on how to use the equipment. A proof of such training shall be provided prior commencement of construction work.

8.9 EMERGENCY PREPAREDNESS

A contractor shall provide THE CLIENT with an emergency plan and procedure which will include, but not limited to emergencies such as fire, bomb threat, civil unrest, medical treatment, environmental incidents, accidents to employees and other persons other than their employees.

Emergency procedure shall be communicated to employees and a proof of such training shall be kept on file for reference. A list of emergency contact numbers shall be conspicuously displayed on site for ease reference. An evacuation plan shall be displayed in strategic places.

A contractor shall provide THE CLIENT Safety with a full record of any incidents which may occur on site.

8.10 Incidents/Accidents Reporting and Investigation

A Contractor shall ensure that all incidents/accidents (this includes near miss, first aid cases and section 24 cases) are reported by employees immediately to the Construction Work Supervisor for further investigation and remedial action. A Contractor shall ensure that all section 24 incidents/accidents and incidents other than employees are reported to the Department of Labour immediately and preliminary investigation is conducted by a competent person within seven days. If construction work will be finished within 3 days after occurrence, an investigation shall be conducted before such construction work is ceased. Proof of such records shall be submitted to THE CLIENT immediately or within 24 hours.

8.11 Personal Protective Clothing/Equipment

A contractor shall ensure that personal protective equipment or clothing needs analysis is conducted and incorporated into the risk assessment. Records shall be provided by the contractor prior commencement of construction work. A contractor shall ensure that SABS approved personal protective equipment or clothing is provided to personnel. The contractor shall ensure that no personnel are allowed to work on site without necessary personal protective equipment or clothing. A contractor shall ensure that PPE or Clothing is kept in good working order.

A contractor shall clearly stipulate procedures to be followed when PPE or Clothing is lost or stolen, worn or damaged. THE CLIENT shall remove any person from construction site who is working without necessary personal protective equipment and/or clothing. Worn or tattered personal protective clothing shall not be permitted on the site.

9. GENERAL HEALTH & SAFETY REQUIREMENTS

9.1 Roof Work

A contractor shall ensure that all necessary health and safety precautions stated in the General Safety Regulations and Construction Regulations are taken into consideration when conducting any roof work. A contractor shall ensure that no person(s) is /are permitted to work on roof during inclement weather conditions.

9.2 Structure

A contractor shall provide THE CLIENT with necessary precautionary safety measures to be taken as stipulated in Construction Regulation 11 to obviate any uncontrolled collapse of new structure or existing structure or any part thereof which may become unstable or is in temporary state of weakness or instability due to carrying out of construction work.

9.3 Designer

The designer shall conduct regular inspections to ensure that a contractor is erecting a structure according to the designs and records of inspections shall be kept on site for reference. The frequency of inspections shall be determined by the nature of construction.

A designer can stop any contractor from executing any construction work which is not in accordance with the relevant design. A certificate of commissioning shall be issued by the designer after completion of structure.

9.4 Scaffolding Erection/Dismantling

A contractor shall ensure that scaffolding is erected and dismantled under the supervision of a competent person. A letter of appointment of the scaffold erector and inspector and their proof of competency shall be provided prior commencement of work. A contractor shall ensure that all safety standards stipulated in Construction Regulation are adhered to.

A proof of weekly inspections and inspection conducted after inclement weather shall be kept on file for reference.

9.5 Excavation Work

A contractor shall ensure excavation work is conducted under supervision of a competent person who has been appointed in writing. A letter of appointment shall be provided to THE CLIENT Safety prior commencement of work. A risk assessment outlining safe work procedures to be adhered to if excavation is more than 1.5m deep must be provided to THE CLIENT prior commencement of work. A contractor shall ensure that no person works in an excavation which is not adequately braced or shored. Other safety precautions stated in annexure A should be taken into consideration.

A contractor shall ensure that every excavation including bracing and shoring are inspected daily prior each shift starts and such records are kept on site for reference.

A contractor shall ensure that all precautionary measure as stipulated for confined spaces as stated in the General Safety Regulation are complied with when entering any excavation. A contractor shall ensure that warning signs are conspicuously displayed where excavation work involves the use of explosives and a method statement developed by a competent person is provided to THE CLIENT prior commencement.

A contractor shall communicate, train and enforce safe work procedures pertaining to excavation work to his/her employees.

9.6 Demolition Work

A contractor shall ensure that a detailed structural engineering survey is conducted by a competent person and a method statement on the procedure to be followed is provided to THE CLIENT Safety. A contractor shall ensure that demolition work is conducted under the supervision of a competent person appointed in writing.

A contractor shall ensure that safety precautionary measures stipulated in Asbestos Regulations is adhered to if demolition work involves asbestos material and that asbestos work is conducted under the supervision of a registered Asbestos Contractor.

9.7 Water Environments

A contractor must ensure that where construction work is done over or in close proximity to water, provision is made for preventing persons from falling into water; and the rescuing of persons in danger of drowning.

A contractor must ensure that where a person is exposed to the risk of drowning by falling into the water, the person is provided with and wears a lifejacket.

9.8 Explosive Power Tools

A contractor shall ensure that no person uses explosive power tools unless they have been properly trained, tools are properly guarded and inspected daily before use by a competent person who has been appointed in writing. A proof of such appointment and competency is kept on file for reference. A contractor shall ensure that warning signs are conspicuously displayed when explosive power tools are in use. A contractor shall ensure that all safety precautions are adhered to as stipulated in the Explosive Regulations and Construction Regulations

9.9 Portable Electrical Tools and Electrical Installation

A contractor shall ensure that all portable electrical tools are properly maintained, inspected before use by a competent person who is appointed in writing to perform such duties.

A contractor shall ensure that the electrical power tools are provided with earth leakage protection and are of double insulated type.

A contractor shall ensure that portable electrical tools are numbered and identified and entered onto a register. Regular inspections shall be recorded onto a register and kept on site.

A contractor shall ensure that prior notice is given to THE CLIENT Electrical Engineer of any work involving electrical isolation. A lock-out certificate shall be issued to the relevant Contractor. A contractor shall ensure that a lock-out procedure is adhered to by his/her employees whenever required. A contractor shall ensure that safety measures stipulated in the Electrical Installation Regulations, Machinery Regulations, General Machinery Regulations and Construction Regulations are adhered to at all times.

9.10 Lifting Equipment, Tackle, Material Hoist & Cranes

A contractor shall ensure that all lifting equipment and tackle is inspected before use and a monthly register is completed by a competent person. Proof of such inspections shall be recorded and kept on file for reference. A contractor shall ensure that a safe working load is conspicuously displayed on lifting equipment and tackle and service certificate is provided prior commencement of work. A contractor shall ensure operators are properly trained on how to operate the above equipment and a proof of competency is provided prior commencement of work.

A Contractor shall provide information on procedures to be followed in the case of:

- (a) the malfunctioning of equipment; and

(b) the discovery of a suspected defect in the equipment

A contractor shall ensure that safety measures stipulated in Driven Machinery Regulation and Construction Regulation with regard to above equipment are adhered to at all times.

9.11 Ladders

A contractor shall ensure that all ladders are numbered, inspected before use and weekly inspections are recorded in a register. A contractor shall ensure that a competent person who carries the above inspections is appointed in writing. It should be noted that Aluminium ladders are preferred to wooden ladders.

9.12 Storage of Flammable Liquids

A contractor shall ensure that a competent person is designated in writing to control the storage and usage of Hazardous Chemical Substances (HCS). A letter of appointment shall be provided prior commencement of construction work.

A contractor shall ensure that material safety data sheets (MSDS) of chemical substances brought on site are kept on site and such documents have been communicated to the chemical substance users and First Aiders.

A contractor shall ensure that safety measures stated in Hazardous Chemical Substances Regulations, General Safety Regulation, Construction Regulation and Community Safety Fire By-law are applied at all times.

9.13 Vessels Under Pressure

A contractor shall ensure that vessels under pressure are identified, numbered and entered in a register. A contractor shall ensure that a competent person is designated to supervise the use and maintenance of vessels under pressure. A contractor shall ensure that inspections are carried out and test of certificates are available and kept on file.

9.14 Employees exposed to excessive noise

A contractor shall ensure that all employees exposed to excessive noise (equal or above 85 dB(A)) have undergone a baseline audiometric test prior commencement of construction work and SABS approved ear protection is provided and worn at all times.

9.15 Stacking and Storage

A contractor shall ensure a competent person is appointed in writing with a duty of supervising all stacking and storage on a construction work or site. A proof of such appointment shall be provided prior commencement of construction work. A contractor shall ensure that stacking is conducted under supervision and good housekeeping is maintained at all times

9.16 Ablutions/Changing/Eating Facility

A contractor shall ensure that sufficient shower, sanitary, changing facilities for each sex and sheltered eating area(s) are provided for the employees. The above facilities must be kept in a clean, hygiene, safe condition and in good state of repair.

9.17 Housekeeping on Sites

A contractor shall ensure that good housekeeping is maintained and enforced at all times. A contractor shall ensure that safety precautionary measures stipulated in Environmental Regulations for Workplaces and Construction Regulations and Construction Environmental Specification are adhered to at all times.

9.18 Public Safety & Security

A contractor shall ensure that notices and signs are conspicuously displayed at the entrance and along the perimeter fence indicating “No Unauthorised Entry”, “Visitors to report to office”, “helmet and safety shoes” etc

A contractor shall ensure that nets, canopies, fans etc are provided to protect the public passing or entering the site. A contractor shall ensure that Security guard is provided where necessary and provided with a way of communication and an access control measures or register is in place.

A contractor shall ensure that all visitors to a construction site undergo health and safety induction pertaining to the hazards prevalent on the site.

9.19 Night Work

A contractor shall ensure that necessary arrangements have been made with THE CLIENT before conducting any night work. A contractor shall ensure that there is adequate lighting for any work conducted at night and failure to do so shall result in work being stopped.

9.20 Hot Work

A contractor shall ensure that Fire & Rescue Department is notified of any hot work to be conducted during construction work. A hot work permit accompanied with a gas free certificate shall be issued to the relevant contractor by THE CLIENT Fire & Rescue Department when satisfied that the area is safe and that the Contractor understands the procedure. A contractor shall ensure that a hot work procedure is adhered to at all time by his/her employees.

9.21 Construction Vehicles

A contractor shall ensure that all construction vehicles are maintained in a good working order, regular inspections are conducted and such records are kept on site. A contractor shall ensure that construction vehicle(s) is/are operated by only certified competent and authorised persons. A contractor shall ensure that s/he complies with the safety measures stipulated in Construction Regulation and National Road Transport Regulations, 2000.

9.22 Hired Plant and Machinery

A contractor shall ensure that any hired plant and/or machinery brought to site is inspected by a competent person before use and records confirming that it is safe for use are provided prior usage of such equipment. A contractor shall ensure that such plant or machinery complies with the requirements of the Occupational Health & Safety Act. A contractor shall ensure that hired operators receive induction prior commencement of work. A contractor shall ensure that hired operators have proof of competency. A Contractor shall provide information on procedures to be followed in the case of:

- (a) the malfunctioning of equipment; and
- (b) the discovery of a suspected defect in the equipment

9.23 Road Construction Work

A contractor shall ensure that construction work conducted on the public road is done in a safe manner that is not detrimental to the safety of the public road users. A contractor shall ensure that all necessary caution signage are strategically and conspicuously displayed within 150 m from the actual construction work and things like cones, flag man etc are also provided where necessary.

10. OCCUPATIONAL HEALTH MEDICAL SERVICES

A contractor shall ensure that when a hazard identification and risk assessment (HIRA) is conducted occupational health hazards are clearly identified and health & hygiene measures are clearly outlined to ensure compliance. A contractor shall ensure that where certificate of fitness is required is provided prior commencement of construction work.

A contractor shall be provided with a number to be used for medical emergencies.

11. LIQUOR, DRUGS, DANGEROUS WEAPONS, FIREARMS

A contractor shall ensure that no person is allowed on site that appears to be under the influence of intoxicating liquor or drugs. A contractor shall encourage his/her workforce to disclose medication that pose a health and safety threat towards his/her fellow employees.

No person shall be allowed to enter the site and work if the side effects of such medication do constitute a threat to the health or safety of the person concerned or others at such workplace. No dangerous or firearms shall be allowed on construction site.

12. INTERNAL/EXTERNAL AUDITS

A contractor shall conduct weekly safety, health and environment audits and such records shall be kept on site. A contractor shall ensure that corrective measures are taken to ensure compliance.

THE CLIENT shall conduct regular audits and defects noted shall be reported to the relevant contractor for remedial action. Inspections shall be conducted by THE CLIENT and non-conformances noted shall be recorded and provided to the relevant contractor for remedial action. THE CLIENT shall stop any contractor from executing any construction work which is not in accordance with the health and safety plan.

A contractor shall ensure that all necessary documents stipulated in this document are kept on the health and safety file and made available when requested.

Activity	Name	Signature	Date
Prepared by			
Approval			
Authorisation			

KAREEBERG MUNICIPALITY
UPGRADING OF CARNARVON OXIDATION PONDS
PHASE 1: CONSTRUCTION OF INLET WORKS AND ANAEROBIC POND
TENDER NO.: KBM 11-2026

C3.7: ANNEXES

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UPGRADING OF CARNARVON OXIDATION PONDS
PHASE 1: CONSTRUCTION OF INLET WORKS AND ANAEROBIC POND
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ANNEX A: LOCALITY PLAN



Figure 2: Locality Plan

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ANNEX B: STANDARD DRAWINGS

N/A

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ANNEX C: TENDER DRAWINGS

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ANNEX D: GEOTECHNICAL REPORT

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ANNEX E: ENVIRONMENTAL MANAGEMENT PLAN

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UPGRADING OF CARNARVON OXIDATION PONDS
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PART C4: SITE INFORMATION

- C4.1 Scope
- C4.2 Site Inspection
- C4.3 Subsoil Investigation
- C4.4 Features Requiring Special Attention
- C4.5 Nature of Physical Conditions on Site

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C4: SITE INFORMATION

C4.1 SCOPE

The documentation included in this section describes the site as at the time of tender to enable the tenderer to price his tender and to decide upon his method of working and programming.

Only actual information about physical conditions on the site and its surroundings has been included in this section and interpretation is a matter for the tenderers.

C4.2 SITE INSPECTION

The Tenderer shall be deemed to have examined the site conditions, restricted nature of working space, limited means of access to site and the conditions under which the work is to be done and acquainted himself with any limitations or restrictions that may be imposed upon him during the compulsory site visit/clarification meeting and is to provide for any additional costs involved thereby.

No claim will be recognised after submission of a tender on the grounds of a lack of knowledge of any of the foregoing.

C4.3 SUBSOIL INVESTIGATIONS, BOREHOLE RECORDS AND TEST RESULTS

Appendix D : Soil survey contains details of the geotechnical investigations at the site of works.

No claims whatsoever that may arise because of unforeseen ground and subsoil conditions will be considered. It is the responsibility for the Contractor to ascertain for himself the nature of the ground and subsoil as well as the conditions on site.

It is the Contractor's responsibility to supply and deliver all materials that comply with the minimum standards as well as for the building and maintaining of access roads to the works on site, haul areas or dumping sites. No additional payment will be applicable to the above-mentioned other than the relevant items in the schedule of quantities.

C4.4 FEATURES REQUIRING SPECIAL ATTENTION

C4.4.1 RAINFALL

In respect of extension of time due to inclement weather, the following information regarding existing rainfall records obtained from a rainfall station near the site, is given below:

Month	Nn (days)	Rn (mm)	Month	Nn (days)	Rn (mm)
January	3	32	July	1	7
February	3	34	August	1	4
March	3	30	September	1	5

April	2	23	October	1	8
May	1	13	November	1	8
June	1	12	December	3	26
Mean Annual Precipitation					29.67

Source of information : worldweatheronline.com

C4.5 NATURE OF PHYSICAL CONDITIONS ON SITE

The Contractor shall familiarise himself in all respects with the physical conditions on site and the surroundings.

It is the Contractor's responsibility to supply and deliver all materials that comply with the minimum standards as well as the building and maintaining of access roads to the works on site, haul areas and dump/spoil sites.

No additional payment will be applicable to the abovementioned other than the relevant items in the bills of quantities.

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APPENDIX A
STANDARD CONDITIONS OF TENDER

KAREEBERG MUNICIPALITY
UPGRADING OF CARNARVON OXIDATION PONDS
PHASE 1: CONSTRUCTION OF INLET WORKS AND ANAEROBIC POND

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CIDB STANDARD CONDITIONS OF TENDER

As published, in the CIDB Standard for Uniformity for construction Procurement, Board Notice 136 Government Gazette No 38960 of 10 July 2015

F.1 GENERAL

F.1.1 Actions

F.1.1.1 The employer and each tenderer submitting a tender offer shall comply with these conditions of tender. In their dealings with each other, they shall discharge their duties and obligations as set out in 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.

F.1.1.2 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.

Note:

- 1) *A conflict of interest may arise due to a conflict of roles which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his or her position even if no improper acts result.*
- 2) *Conflicts of interest in respect of those engaged in the procurement process include direct, indirect or family interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance or loyalty which would in any way affect any decisions taken.*

F.1.1.3 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.

F.1.2 TENDER DOCUMENTS

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

F.1.3 INTERPRETATION

F.1.3.1 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.

F.1.3.2 These conditions of tender, the tender data and tender schedules which are only required for tender evaluation purposes, shall not form part of any contract arising from the invitation to tender.

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

- a) **conflict of interest** means any situation in which:
 - i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfill his or her duties impartially;
 - ii) an individual or organisation is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or
 - iii) incompatibility or contradictory interests exist between an employee and the organisation which employs that employee.
- b) **comparative offer** means the price after the factors of a non-firm price and all unconditional discounts it can be utilised to have been taken into consideration;
- c) **corrupt practice** means the offering, giving, receiving or soliciting of anything of value to influence the action of the employer or his staff or agents in the tender process;
- d) **fraudulent practice** means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels;
- e) **organization** means a company, firm, enterprise, association or other legal entity, whether incorporated or not, or a public body;
- f) **functionality** means the measurement according to the predetermined norms of a service or commodity designed to be practical and useful, working or operating, taking into account quality, reliability, viability and durability of a service and technical capacity and ability of a tenderer.

F.1.4 COMMUNICATION AND EMPLOYER'S AGENT

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

F.1.5 CANCELLATION AND RE-INVITATION OF TENDERS

F1.5.1 An organ of state may, prior to the award of the tender, cancel a tender if-

- (a) due to changed circumstances, there is no longer a need for the services, works or goods requested; or
- (b) funds are no longer available to cover the total envisaged expenditure; or
- (c) no acceptable tenders are received.

F1.5.2 The decision to cancel a tender must be published in the cidb website and in the government Tender Bulletin for the media in which the original tender invitation was advertised.

F.1.6 PROCUREMENT PROCEDURES

F.1.6.1 General

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.

F.1.6.2 COMPETITIVE NEGOTIATION PROCEDURE

F.1.6.2.1 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.

F.1.6.2.2 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.

F.1.6.2.3 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.

F.1.6.2.4 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.

F.1.6.3 PROPOSAL PROCEDURE USING THE TWO STAGE-SYSTEM

F.1.6.3.1 Option 1

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.

F.1.6.3.2 OPTION 2

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.

F.1.6.3.2.2 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.

F.2 TENDERER'S OBLIGATIONS

F.2.1 Eligibility

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

F.2.1.2 Notify the employer of any proposed material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used by the employer as the basis in a prior process to invite the tenderer to submit a tender offer and obtain the employer's written approval to do so prior to the closing time for tenders.

F.2.2 COST OF TENDERING

F2.2.1 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.

F2.2.2 The cost of the tender documents charged by the employer shall be limited to the actual cost incurred by the employer for printing the documents. Employers must attempt to make available the tender documents on its website so as not to incur any costs pertaining to the printing of the tender documents.

F.2.3 CHECK DOCUMENTS

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

F.2.4 CONFIDENTIALITY AND COPYRIGHT OF DOCUMENTS

Treat as confidential all matters arising in connection with the tender. Use and copy the documents issued by the employer only for the purpose of preparing and submitting a tender offer in response to the invitation.

F.2.5 REFERENCE DOCUMENTS

Obtain, as necessary for submitting a tender offer, copies of the latest versions of standards, specifications, conditions of contract and other publications, which are not attached but which are incorporated into the tender documents by reference.

F.2.6 ACKNOWLEDGE ADDENDA

Acknowledge receipt of addenda to the tender documents, which the employer may issue, and if necessary apply for an extension to the closing time stated in the tender data, in order to take the addenda into account.

F.2.7 CLARIFICATION MEETING

Attend, where required, a clarification meeting at which tenderers may familiarize themselves with aspects of the proposed work, services or supply and raise questions. Details of the meeting(s) are stated in the tender data.

F.2.8 SEEK CLARIFICATION

Request clarification of the tender documents, if necessary, by notifying the employer at least five working days before the closing time stated in the tender data.

F.2.9 INSURANCE

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

F.2.10 PRICING THE TENDER OFFER

F.2.10.1 Include in the rates, prices, and the tendered total of the prices (if any) all duties, taxes (except Value Added Tax (VAT), and other levies payable by the successful tenderer, such duties, taxes and levies being those applicable 14 days before the closing time stated in the tender data.

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

F.2.10.3 Provide rates and prices that are fixed for the duration of the contract and not subject to adjustment except as provided for in the conditions of contract identified in the contract data.

F.2.10.4 State the rates and prices in 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.

F.2.11 ALTERATIONS TO DOCUMENTS

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

F.2.12 ALTERNATIVE TENDER OFFERS

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

F.2.12.2 Accept that an alternative tender offer may be based only on the criteria stated in the tender data or criteria otherwise acceptable to the employer.

F.2.12.3 An alternative tender offer may only be considered in the event that the main tender offer is the winning tender.

F.2.13 SUBMITTING A TENDER OFFER

F.2.13.1 Submit one tender offer only, either as a single tendering entity or as a member in a joint venture to provide the whole of the works, services or supply identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.

F.2.13.2 Return all returnable documents to the employer after completing them in their entirety, either electronically (if they were issued in electronic format) or by writing legibly in non-erasable ink.

F.2.13.3 Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the employer.

F.2.13.4 Sign the original and all copies of the tender offer where required in terms of the tender data. The employer will hold all authorized signatories liable on behalf of the tenderer. Signatories for tenderers proposing to contract as joint ventures shall state which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer.

F.2.13.5 Seal the original and each copy of the tender offer as separate packages marking the packages as "ORIGINAL" and "COPY". Each package shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.

F.2.13.6 Where a two-envelope system is required in terms of the tender data, place and seal the returnable

documents listed in the tender data in an envelope marked “financial proposal” and place the remaining returnable documents in an envelope marked “technical proposal”. Each envelope shall state on the outside the employer’s address and identification details stated in the tender data, as well as the tenderer’s name and contact address.

F.2.13.7 Seal the original tender offer and copy packages together in an outer package that states on the outside only the employer’s address and identification details as stated in the tender data.

F.2.13.8 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.

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

F.2.14 INFORMATION AND DATA TO BE COMPLETED IN ALL RESPECTS

Accept that tender offers, which do not provide all the data or information requested completely and in the form required, may be regarded by the employer as non-responsive.

F.2.15 CLOSING TIME

F.2.15.1 Ensure that the employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Accept that proof of posting shall not be accepted as proof of delivery.

F.2.15.2 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.

F.2.16 TENDER OFFER VALIDITY

F.2.16.1 Hold the tender offer(s) valid for acceptance by the employer at any time during the validity period stated in the tender data after the closing time stated in the tender data.

F.2.16.2 If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period with or without any conditions attached to such extension.

F.2.16.3 Accept that a tender submission that has been submitted to the employer may only be withdrawn or substituted by giving the employer’s agent written notice before the closing time for tenders that a tender is to be withdrawn or substituted.

F.2.16.4 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”.

F.2.17 CLARIFICATION OF TENDER OFFER AFTER SUBMISSION

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

Note: *Sub-clause 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.*

F.2.18 PROVIDE OTHER MATERIAL

F.2.18.1 Provide, on request by the employer, any other material that has a bearing on the tender offer, the tenderer's commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the employer for the purpose of a full and fair risk assessment. Should the tenderer not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the employer's request, the employer may regard the tender offer as non-responsive.

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

F.2.19 INSPECTIONS, TESTS AND ANALYSIS

Provide access during working hours to premises for inspections, tests and analysis as provided for in the tender data.

F.2.20 SUBMIT SECURITIES, BONDS AND POLICIES

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.

F.2.21 CHECK FINAL DRAFT

Check the final draft of the contract provided by the employer within the time available for the employer to issue the contract.

F.2.22 RETURN OF OTHER TENDER DOCUMENTS

If so instructed by the employer, return all retained tender documents within 28 days after the expiry of the validity period stated in the tender data.

F.2.23 CERTIFICATES

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

F.3 THE EMPLOYER'S UNDERTAKINGS

F.3.1 Respond to requests from the tenderer

F.3.1.1 Unless otherwise stated in the tender Data, respond to a request for clarification received up to five working days before the tender closing time stated in the Tender Data and notify all tenderers who drew procurement documents.

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

- a) an individual firm, or a joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements;
- b) the new partners to a joint venture were not prequalified in the first instance, either as individual firms or as another joint venture; or
- c) in the opinion of the Employer, acceptance of the material change would compromise the outcome

of the prequalification process.

F.3.2 ISSUE ADDENDA

If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date that tender documents are available until three days before the tender closing time stated in the Tender Data. If, as a result a tenderer applies for an extension to the closing time stated in the Tender Data, the Employer may grant such extension and, shall then notify all tenderers who drew documents.

F.3.3 RETURN LATE TENDER OFFERS

Return tender offers received after the closing time stated in the Tender Data, unopened, (unless it is necessary to open a tender submission to obtain a forwarding address), to the tenderer concerned.

F.3.4 OPENING OF TENDER SUBMISSIONS

F.3.4.1 Unless the two-envelope system is to be followed, open valid tender submissions in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data. Tender submissions for which acceptable reasons for withdrawal have been submitted will not be opened.

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

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

F.3.5 TWO-ENVELOPE SYSTEM

F.3.5.1 Where stated in the tender data that a two-envelope system is to be followed, open only the technical proposal of valid tenders in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data and announce the name of each tenderer whose technical proposal is opened.

F.3.5.2 Evaluate functionality 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 functionality evaluation more than the minimum number of points for functionality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any points claimed on BBEE status level. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for functionality.

F.3.6 NON-DISCLOSURE

Not disclose to tenderers, or to any other person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation price and recommendations for the award of a contract, until after the award of the contract to the successful tenderer.

F.3.7 GROUNDS FOR REJECTION AND DISQUALIFICATION

Determine whether there has been any effort by a tenderer to influence the processing of tender offers and instantly disqualify a tenderer (and his tender offer) if it is established that he engaged in corrupt or fraudulent practices.

F.3.8 TEST FOR RESPONSIVENESS

F.3.8.1 Determine, after opening and before detailed evaluation, whether each tender offer properly

received:

- a) complies with the requirements of these Conditions of Tender,
- b) has been properly and fully completed and signed, and
- c) is responsive to the other requirements of the tender documents.

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

- a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
- b) significantly change the Employer's or the tenderer's risks and responsibilities under the contract, or
- c) affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified.

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

F.3.9 ARITHMETICAL ERRORS, OMISSIONS AND DISCREPANCIES

F.3.9.1 Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with F.3.11 for:

- a) the gross misplacement of the decimal point in any unit rate;
- b) omissions made in completing the pricing schedule or bills of quantities; or
- c) arithmetic errors in:
 - i) line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or
 - ii) the summation of the prices.

F3.9.2 The employer must correct the arithmetical errors in the following manner:

- a) Where there is a discrepancy between the amounts in words and amounts in figures, the amount in words shall govern.
- b) 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.
- c) 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.

Consider the rejection of a tender offer if the tenderer does not correct or accept the correction of the arithmetical error in the manner described above.

F.3.10 CLARIFICATION OF A TENDER OFFER

Obtain clarification from a tenderer on any matter that could give rise to ambiguity in a contract arising from the tender offer.

F.3.11 EVALUATION OF TENDER OFFERS

F.3.11.1 General

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

F.3.11.2 METHOD 1: PRICE AND PREFERENCE

In the case of a price and preference:

- 1) Score tender evaluation points for price
- 2) Score points for BBBEE contribution
- 3) Add the points scored for price and BBBEE.

F.3.11.3 METHOD 2: FUNCTIONALITY, PRICE AND PREFERENCE

In the case of a functionality, price and preference:

- 1) Score functionality, rejecting all tender offers that fail to achieve the minimum number of points for functionality as stated in the Tender Data.
- 2) No tender must be regarded as an acceptable tender if it fails to achieve the minimum qualifying score for functionality as indicated in the tender invitation.
- 3) Tenders that have achieved the minimum qualification score for functionality must be evaluated further in terms of the preference points system prescribed in paragraphs 4 and 4 and 5 below.

The 80/20 preference point system for acquisition of services, works or goods up to Rand value of R1 million

- 4) (a)(i) The following formula must be used to calculate the points for price in respect of tenders(including price quotation) with a rand value equal to, or above R 30 000 and up to Rand value of R 1 000 000 (all applicable taxes included):

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

Where

Ps = Points scored for comparative price of tender or offer under consideration;

Pt = Comparative price of tender or offer under consideration; and

Pmin = Comparative price of lowest acceptable tender or offer.

(4)(b)(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
1	20
2	18
3	16
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 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.

THE 90/ 10 PREFERENCE POINTS SYSTEM FOR ACQUISITION OF SERVICES, WORKS OR GOODS WITH A RAND VALUE ABOVE R 1 MILLION

(5)(a) The following formula must be used to calculate the points for price in respect of tenders with a Rand value above R1 000 000 (all applicable taxes included):

90/10

$$P_s = 90 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$$

Where

Ps = Points scored for comparative price of tender or offer under consideration;

Pt = Comparative price of tender or offer under consideration;
and

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

(5)(b) Subject to subparagraph(5)(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
1	10
2	9
3	8
4	5
5	4
6	3
7	2
8	1
Non-compliant contributor	0

(5)(c) A maximum of 10 points may be allocated in accordance with subparagraph (5)(b).

(5)(d) The points scored by tender in respect of B-BBEE contribution contemplated in contemplated in subparagraph (5) (b) must be added to the points scored for price as calculated in accordance with subparagraph (5)(a).

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

F.3.11.6 DECIMAL PLACES

Score price, preference and functionality, as relevant, to two decimal places.

F.3.11.7 SCORING PRICE

Score price of remaining responsive tender offers using the following formula:

$$N_{FO} = W_1 \times A$$

where:

N_{FO} is the number of tender evaluation points awarded for price.

W_1 is the maximum possible number of tender evaluation points awarded for price as stated in the Tender Data.

A is a number calculated using the formula and option described in Table F.1 as stated in the Tender Data.

Table F.1: Formulae for calculating the value of A

Formula	Comparison aimed at achieving	Option 1 ^a	Option 2 ^a

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

F.3.11.8 SCORING PREFERENCES

Confirm that tenderers are eligible for the preferences claimed in accordance with the provisions of the tender data and reject all claims for preferences where tenderers are not eligible for such preferences.

Calculate the total number of tender evaluation points for preferences claimed in accordance with the provisions of the tender data.

F.3.11.9 SCORING FUNCTIONALITY

Score each of the criteria and subcriteria for quality in accordance with the provisions of the Tender Data.

Calculate the total number of tender evaluation points for quality using the following formula:

$$N_Q = W_2 \times S_o / M_s$$

where: S_o is the score for quality allocated to the submission under consideration;

M_s is the maximum possible score for quality in respect of a submission; and

W_2 is the maximum possible number of tender evaluation points awarded for the quality as stated in the tender data

F.3.12 INSURANCE PROVIDED BY THE EMPLOYER

If requested by the proposed successful tenderer, submit for the tenderer's information the policies and / or certificates of insurance which the conditions of contract identified in the contract data, require the employer to provide.

F.3.13 ACCEPTANCE OF TENDER OFFER

Accept the tender offer, if in the opinion of the employer, it does not present any risk and only if the tenderer:

- a) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement,
- b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and 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,
- c) has the legal capacity to enter into the contract,
- d) is not insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act, 2008, bankrupt or being wound up, has his affairs administered by a court or a judicial officer,

has suspended his business activities, or is subject to legal proceedings in respect of any of the foregoing,

- e) complies with the legal requirements, if any, stated in the tender data, and
- f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest.

F.3.14 PREPARE CONTRACT DOCUMENTS

F.3.14.1 If necessary, revise documents that shall form part of the contract and that were issued by the employer as part of the tender documents to take account of:

- a) addenda issued during the tender period,
- b) inclusion of some of the returnable documents, and
- c) other revisions agreed between the employer and the successful tenderer.

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

F.3.15 COMPLETE ADJUDICATOR'S CONTRACT

Unless alternative arrangements have been agreed or otherwise provided for in the contract, arrange for both parties to complete formalities for appointing the selected adjudicator at the same time as the main contract is signed.

F.3.16 NOTICE TO UNSUCCESSFUL TENDERERS

F.3.16.1 Notify the successful tenderer of the employer's acceptance of his tender offer by completing and returning one copy of the form of offer and acceptance before the expiry of the validity period stated in the tender data, or agreed additional period.

F.3.16.2 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.

F.3.17 PROVIDE COPIES OF THE CONTRACTS

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.

F.3.18 PROVIDE WRITTEN REASONS FOR ACTIONS TAKEN

Provide upon request written reasons to tenderers for any action that is taken in applying these conditions 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 or might prejudice fair competition between tenderers.

F3.19 TRANSPARENCY IN THE PROCUREMENT PROCESS

F3.19.1 The cidb prescripts require that tenders must be advertised and be registered on the cidb i.Tender system.

F3.19.2 The employer must adopt a transparency model that incorporates the disclosure and accountability as transparency requirements in the procurement process.

F3.19.3 The transparency model must identify the criteria for selection of projects, project information template and the threshold value of the projects to be disclosed in the public domain at various intervals of delivery of infrastructure projects.

F3.19.4 The client must publish the information on a quarterly basis which contains the following information:

- Procurement planning process
- Procurement method and evaluation process
- Contract type
- Contract status
- Number of firms tendering
- Cost estimate
- Contract title
- Contract firm(s)
- Contract price
- Contract scope of work
- Contract start date and duration
- Contract evaluation reports

F3.19.5 The employer must establish a Consultative Forum which will conduct a random audit in the implementation of the transparency requirements in the procurement process.

F3.19.6 Consultative Forum must be an independent structure from the bid committees. **F3.19.7** The information must be published on the employer's website.

F 3.19.8 Records of such disclosed information must be retained for audit purposes.