



KOUGA LOCAL MUNICIPALITY

DESIGN, BUILD AND COMMISSIONING OF THE UPGRADE TO THE GILL MARCUS WATER TREATMENT WORKS

CONTRACT NO: 37/2024

VOLUME 2: TENDER DOCUMENT

SERVICE PROVIDER		
TELEPHONE / FACSIMILE		
CLOSING DATE	MONDAY, 18 MARCH 2024 AT 12H00	

ISSUED BY:

Kouga Local Municipality

Physical Address:
33 Da Gama Road
Jeffreys Bay

Postal Address:
P O Box 21
Jeffrey Bay
6330

CONTENTS

SCHEDULE OF DOCUMENTS

The following documents form part of this Contract:

Volume 1: Available from the S.A. Federation of Civil Engineering Contractors, the S.A. Institute of Civil Engineering, the S.A Bureau of Standards and the Government printers, as applicable:

1. The conditions of tender are those contained in the latest edition of SANS 10845-3, Construction Procurement – Part 3: Standard conditions of tender.
2. The Conditions of Contract for Construction comprise the "Conditions of Contract for Plant and Design Build for Electrical and Mechanical Plant, and for Building and Engineering Works, Designed by the Contractor", First Edition, 1999 (**Yellow Book**) published by the Fédération Internationale des Ingénieurs-Conseils (FIDIC).
3. S.A. Bureau of Standards Standardised Specifications for Civil Engineering Construction (SANS 1200) as amended by the Specification Data.

Volume 2: Issued to Tenderers:

Tender Document (This Document)

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TENDER

PART 1 (OF 2): TENDERING PROCEDURES

CONTENTS

T1.1 Tender Notice and Invitation to Tender

T1.2 Tender Data

T1.1: TENDER NOTICE AND INVITATION TO TENDER

KOUGA LOCAL MUNICIPALITY (EC108)

DIRECTORATE: CIVIL & WATER ENGINEERING SERVICES

NOTICE NO: 37/2024

DESIGN, BUILD AND COMMISSIONING OF THE UPGRADE TO THE GILL MARCUS WATER TREATMENT WORKS

The Kouga Municipality invites suitably qualified, capable and experienced Contractor to submit tenders for **the Design, Build and Commissioning of the Upgrade to the Gill Marcus Water Treatment Works**.

Tenders

An electronic copy of the tender document will be available on E-Tender portal www.etender.gov.za or the municipal website www.kouga.gov.za as from **Friday, 16 February 2024**. After downloading the tender document from the website each prospective bidder **MUST** ensure that a complete tender document has been printed.

A compulsory virtual clarification session will be arranged for **Tuesday, 27 February 2024 @10:00am**. Prospective bidders can use the very same link below which is direct from this advert, it will link them directly to the meeting.

The link will also be available on the municipal website.

Join Zoom Meeting

<https://kouga-gov-za.zoom.us/j/91870142249?pwd=WHVEMzRxRmFrbW9Ra3F3VzdGT1lvZz09>

Meeting ID: 918 7014 2249

Passcode: 970997

Please note:

- Telegraphic, telephonic, telex, facsimile, email or late tenders will not be accepted.
- This contract will be evaluated on the 80/20 point scoring system
- This contract will be evaluated on the 80 (price)
- The specific goals would be for a maximum point of 20 points. To claim for specific goals prospective bidders **MUST** submit proof/required documents.
- **An electronic copy of the completed tender document with returnable documents must be submitted with tender submission saved in a flash drive or CD. Failure to submit AN ORIGINAL HARD COPY AND A COPY ON EITHER USB or CD will deem the bid non-responsive.**
- **A contractor CIDB Grading of 4ME or higher is required.**
- **A minimum functional assessment score of 70% will apply to this contract.**
- A valid SARS Tax compliance Status pin may be requested to verify tax status.
- Prospective Service Providers must register on Kouga Municipality's Supplier database as per the registration requirements.
- The National Treasury Central Supplier Database Summary report must be submitted.
- In order to claim Preference points a valid originally or certified B-BBEE Status level Verification certificate or a Sworn Affidavit completed on the DTI format must be submitted to validate the claim.
- The Council reserves the right to accept any tender and, or part thereof, appoint more than one contractor, and does not bind itself to accept the lowest or any tender. The Council reserves the right to appoint any contractor.
- The validity period for submission must be 90 days from the closing date.
- Tenders that are deposited in the incorrect box or delivered to any other venue will not be considered.

Enquiries relating to this tender must be submitted in writing via e-mail to tenders@kouga.gov.za and copied to jdutoit@kouga.gov.za.

Completed documents in a sealed envelope endorsed **"NOTICE NO: 37/2024: "DESIGN, BUILD AND COMMISSIONING OF THE UPGRADE TO THE GILL MARCUS WATER TREATMENT WORKS"** must be placed in the Tender Box 21 St Croix Street (back entrance) or 16 Woltemade Street (front entrance), Jeffrey's Bay, Room 122 on or before **MONDAY, 18 MARCH 2024 at 12:00.**

C. DU PLESSIS

MUNICIPAL MANAGER

P.O. Box 21
JEFFREYS BAY
6330

For Placement: The Herald – 16 February 2024

Municipal Website/ Municipal Notice Boards in all offices/areas – 16 February 2024

T1.2: TENDER DATA

The conditions of tender are those contained in the latest edition of SANS 10845-3, Construction Procurement – Part 3: Standard conditions of tender.

SANS 10845-3 makes several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the provisions of SANS 10845-3.

Each item of data given below is cross-referenced to the clause in SANS 10845-3 to which it mainly applies.

Clause	Wording / Data
3.1	The employer is the Kouga Local Municipality.
3.2	Refer to page 1 of this document for a complete and comprehensive list of all Tender Documents.
3.4	The Employer's Representative: Mr. Andre Botha. Tel: 042-200 2200 E-mail: abotha@kouga.gov.za
4.1	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 4 ME or higher class of construction work, are eligible to have their tenders evaluated. Joint ventures are eligible to submit tenders provided that: a) Every member of the joint venture is registered with the CIDB; b) the lead partner has a contractor grading designation in the ME class of construction work; and c) 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 ME class of construction work or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations. It is estimated that tenderers should have a CIDB Contractor Grading Designation of Grade 4 ME or higher.
4.2	Add the following to this Clause: "Accept that the employer will not compensate the tenderer for any costs incurred in attending tender interviews in the office of the employer or the employer's agent."
4.7	The compulsory site clarification meeting will be virtual on Tuesday, 27 February 2024 at 10h00 am.
4.11	Add the following to this Clause: "In order to correct any errors, or to make alterations, or in the event of a mistake having been made in the Pricing Data, it shall be neatly crossed out in non-erasable ink and all signatories to the tender offer shall initial all such alterations."
4.12	All alternative tender offers shall be referred to in 3G: Details of Alternative Tenders Submitted. Should the Tenderer wish to offer alternative designs and/or construction materials, he shall include with this Tender the full details thereof, including a complete bill of quantities, formal design calculations, drawings and full details of all alternative components proposed to be included in the Works. Failure to properly comply with this clause, thereby preventing the Employer and/or the Engineer to properly assess the full implications of the alternative tender, is likely to disqualify the alternative offered

Clause	Wording / Data
	<p>from further consideration.</p> <p>Acceptance of an alternative tender offer will mean acceptance in principle of the offer. Only the alternative of the tenderer who scores the highest Preference Points on the original tender will be considered. It will be an obligation of the Contract for the Bidder, 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>No submission by the Contractor after award for additional payment or time for completion of Works relating to the alternative offer will be considered, the tendered rates submitted shall be considered to reflect the full and final cost implications of the alternative offer.</p>
4.13.1 & 4.13.3	<p>The original completed tender document (refer Claus 3.2), excluding Drawings, shall be returned with all the required information supplied, duly completed in non-erasable ink in all aspects.</p>
4.13.4	<p>Add the following to this Clause:</p> <p>"Only authorised signatories may sign the original and all copies of the tender offer where required in terms of 4.13.1.</p> <p>In the case of a One-Person Concern submitting a tender, this shall be clearly stated.</p> <p>In case of a Company submitting a tender, include a copy of a resolution by its board of directors authorising a director or other official of the company to sign the documents on behalf of the company.</p> <p>In the case of a Close Corporation submitting a tender, include a copy of a resolution by its members authorising a member or other official of the corporation to sign the documents on each member's behalf.</p> <p>In the case of a Partnership submitting a tender, all the partners shall sign the documents, unless one partner or a group of partners has been authorised to sign on behalf of each partner, in which case proof of such authorisation shall be included in the Tender.</p> <p>In the case of a Joint Venture / Consortium submitting a tender, include a resolution of each company of the Joint Venture / Consortium together with a resolution by its members authorising a member of the Joint Venture / Consortium to sign the documents on behalf of the Joint Venture / Consortium.</p> <p>Accept that failure to submit proof of authorisation to sign the tender shall result in a tender offer being regarded as non-responsive."</p>
4.13.5	<p>The identification details are:</p> <ul style="list-style-type: none"> • The Contract Number: 37/2024 • The Title / Description of the Tender or Project: DESIGN, BUILD AND COMMISSIONING OF THE UPGRADE TO THE GILL MARCUS WATER TREATMENT WORKS • The Closing Date: Monday, 18 March 2024 • The Closing Time: 12h00
4.13.5	<p>A two-envelope procedure will not be followed.</p>
4.13.6	<p>Telephonic, telegraphic, telex, facsimile, e-mailed, posted and late tender offers will not be accepted.</p>
4.14	<p>Add the following to this Clause:</p> <p>"Accept that the employer shall in the evaluation of tenders take due account of the tenderer's past performance in executing similar works of comparable magnitude and the degree to which the tenderer possesses the necessary technical, financial and other resources to enable him to complete the works successfully within the contract period.</p> <p>Satisfy the employer and Employers Agent as to his ability to perform and complete the works timeously, safely and with satisfactory quality, by furnishing details under Part 2 – Returnable Documents of the Tender Portion.</p>

Clause	Wording / Data
	<p>Accept that the employer is restricted in accordance with Regulation 4. (4) of the Constructions Regulations (2014), to only appoint a contractor who he is satisfied has the necessary competencies and resources to carry out the work safely.</p> <p>Accept that submitting inferior and inadequate information relating to health and safety, as required under Clause 4.13.4, shall be regarded as justifiable and compelling reasons not to award a contract to a tenderer."</p>
4.15	The closing date and time as well as the specified address and location of the tender box for submission of tender offers are stated in the Tender Notice and Invitation to Tender.
4.16.1	The tender offer validity period is 90 days.
4.18.2	<p>Add the following new Clause:</p> <p>"The tenderer shall, when requested by the employer to do so, submit details of all management and supervisory staff that will be employed to manage and supervise the works, including the labour intensive portion of the works (if required by the contract), together with satisfactory evidence that such staff members satisfy the eligibility requirements as required under Part 3 of the Contract Portion."</p>
4.19	Access shall be provided by the Tenderer to his premises during working hours for inspections, tests and analysis.
4.20	<p>Add the following to this Clause:</p> <p>"The tenderer is required to submit with his tender a Letter of Intent from an approved insurer undertaking to provide the Performance Guarantee / Bond to the format included under Part 2 of the Tender Portion."</p>
4.13.4	The tenderer is required to submit with his tender all the documents, schedules and certificates as listed under Part 2 of the Tender Portion.
4.23	<p>Add the following new Clause:</p> <p>"Accept that no tenderer shall make any attempt, either directly or indirectly, to canvass any of the employer's officials or the employer's agent in respect of his tender, after the opening of the tenders but prior to the employer arriving at a decision thereon.</p> <p>No tenderer shall make any attempt to obtain particulars of any relevant information, other than that disclosed at the opening of tenders."</p>
4.24	<p>Add the following new Clause:</p> <p>"Accept that the employer is prohibited to award a tender to a person:</p> <ul style="list-style-type: none"> a) who is in the service of the state; or b) if that person is not a natural person, of which any director, manager, principal shareholder or stakeholder is a person in the service of the state; or c) a person who is an advisor or consultant contracted with the municipality or municipal entity. <p>"In the service of the state" means to be:</p> <ul style="list-style-type: none"> a) a member of: <ul style="list-style-type: none"> • any municipal council; • any provincial legislature; or • 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; e) provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No 1 of 1999);

Clause	Wording / Data
	<p>f) a member of the accounting authority of any national or provincial public entity; or g) an employee of Parliament or a provincial legislature.</p> <p>In order to give effect to the above, the questionnaire for the declaration of interests in the tender for persons in service of state under Part 2 of the Tender Portion must be completed."</p>
4.25	<p>Add the following new Clause:</p> <p>"Accept that the notes to the employer's annual financial statements must disclose particulars of any award of more than R 2 000 to a person who is a spouse, child or parent of a person in the service of the state (refer definition under Clause F.2.25), or has been in the service of the state in the previous twelve months, including:</p> <p>a) the name of that person; b) the capacity in which that person is / was in the service of the state; and c) the amount of the award.</p> <p>In order to give effect to the above, the questionnaire for the declaration of interest in the tender of persons in service of state under Part 2 of the Tender Portion must be completed in full and signed."</p>
4.26	<p>Add the following new Clause:</p> <p>"Municipal Clearance Billing Certificate must be submitted"</p> <p>Accept that no contract will be awarded to a tenderer who is in arrears for more than three months (or who fails to make suitable arrangements to settle the arrears) in respect of municipal rates and other charges due any municipality.</p> <p>Should the tender amount be more than R 10 million, the period for arrears reduces to one month."</p>
5.1	<p>Amend the wording "five working days" to read "six working days."</p> <p>Working days shall be as per a normal working week, Monday to Saturday between the hours of 08h00 and 17h00 and shall exclude all gazetted public holidays as well as the year-end break as defined by SAFCEC.</p>
5.4	<p>The time and place for the opening of valid tender submissions are stated in the Tender Notice and Invitation to Tender.</p>
5.5	<p>A two-envelope procedure will not be followed.</p>
5.11.1	<p>Tenders will be evaluated in terms of the Tender Data as well as the Kouga Local Municipality's latest Supply Chain Management Policy for Infrastructure Procurement and Delivery Management.</p> <p>The method for the evaluation of responsive tenders shall be Method 3: Financial Offer and Preference as described under Clause 5.11.3.</p> <p>Tenders will be evaluated in terms of the Tender Data as well as the Kouga Local Municipality's latest Supply Chain Management Policy for Infrastructure Procurement and Delivery Management.</p> <p>The method for the evaluation of responsive tenders shall be Method 3: Financial Offer and Preference as described under Clause 5.11.3.</p>
5.11.7	<p>The financial offer shall be scored using Formula 2, within Table 1 with the value of W1 = 80.</p>

5.11.8

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

- (a) The 80/20 system for requirements with a Rand value of up to R50 000 000.00 (all applicable taxes included); and
- (b) The 90/10 system for requirements with a Rand value above R50 000 000.00 (all applicable taxes included).

1.2 The value of this bid is estimated not to exceed R50 000 000.00 and therefore the 80/20 system shall be applicable.

B-BBEE Status Level of Contributor	Number of Points for Preference (80/20)	Number of Points for Preference (90/10)
1	10	5
2	8	4
3	6	3
4	4	2
5	3	1
6	2	1
7	2	1
8	2	1
Non-compliant contributor	0	0

1.3 Preference points for this bid shall be awarded for:

- (a) Price; and
- (b) Specific Goals.

1.4 To be completed by the organ of state:

	POINTS
PRICE	80
SPECIFIC GOALS	20
Total points for Price and SPECIFIC GOALS	100

SPECIFIC GOALS

No	Specific Goals Categories	Max points allocation	Evaluation Indicators
1	B-BBE Status Level Contributor	10	As for B-BBEE points allocation table above.
2	The promotion of enterprises located in a specific province for work to be done or services to be rendered in that province.	10	10 Points= Located within the boundaries of the Kouga Local Municipality 6 Points= Located within the boundaries of Sarah Baartman District Municipality, including Nelson Mandela Bay Municipality 4 Points= Located within the boundaries of the Eastern Cape 1 Point= Outside of the boundaries of the Eastern Cape

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

The Functionality Criteria is as follows:

- i) To comply the requirements in accordance with the Quality Score Criteria for key personnel as stipulated in table below; (to be filled in Returnable Schedule 1P: Quality Scoring Criteria Schedule).

Quality shall be scored by not less than three evaluators appointed by the Employer, based on their interpretation of the comparative quality of the various tender offers. Their evaluation will be based on the information provided in the tender, in accordance with the returnable schedules referenced.

The tenderer is to submit information in respect of the criteria laid out below upon which they will be scored for quality. Failure to submit the relevant information will result in zero scores. Information not already catered for under the returnable schedules is to be inserted under this section.

The tenderer is recommended to complete the tables below as a preliminary check for achieving the minimum score. Tender's scoring will not form part of the test for non-responsiveness or the tender evaluation and non-scoring by the Tenderer will not be deemed as disqualification.

Tenderers with a score of less than 70% will be rejected as non-responsive.

A summary of the principle Quality Criteria and the maximum possible score for each is shown in Table 1. The total score allocated for Quality Criteria will be the sum of the scores allocated for each of the categories.

In order to be considered for a contract in terms of this tender, tenderers must achieve the minimum score for functionality as stated below. Verifiable proof of similar Scope of Work contracts successfully completed, must be submitted in the applicable Returnable Schedule.

The description of the functionality criteria and the maximum possible score for each is shown in the table below. The score achieved for functionality will be the sum of the scores achieved, in the evaluation process, for the individual criteria.

CRITERIA	APPLICATION OF THE CRITERIA	WEIGHT
Company Experience Schedule 1H	Demonstrated experience of the tendering entity with respect to <u>comparable projects</u> (plant design and built of water treatment package plants) by completing each row in the Returnable Schedule of work experience in full. (Project values below includes VAT) <ul style="list-style-type: none"> 4 x completed projects > R3m 3 x completed projects > R3m 2 x completed projects > R3m 1 x completed projects > R3m 	(Max 40 points) 40 points 30 points 20 points 10 points
Key Personnel Schedule P-1	Contracts Manager Built / Civil Environment Qualification: B Eng / BSc / B Tech National Diploma No Qualification (s) or CV attached Relevant Experience: <ul style="list-style-type: none"> 10+ years 6 – 10 years 3 – 5 years 0 - 2 years 	(Max 10 points) 3 points 2 points 0 points 7 points 6 points 3 points 0 points
Key Personnel	Design Engineer Water Treatment Works Process Design Experience	(Max 10 points)

		<p>Schedule P-2</p> <p>B Eng / BSc / B Tech National Diploma No Qualification (s) or CV attached</p> <p>Relevant Experience:</p> <ul style="list-style-type: none"> • 10+ years • 6 – 10 years • 3 – 5 years • 0 - 2 years 	<p>3 points 2 points 0 points</p> <p>7 points 6 points 2 points 0 points</p>
	<p>Key Personnel</p> <p>Schedule P-3</p>	<p>Construction Manager</p> <p>Relevant Experience:</p> <ul style="list-style-type: none"> • 10+ years • 6 – 10 years • 3 – 5 years • 0 - 2 years 	<p>(Max 10 points) 10 points 8 points 5 points 0 points</p>
	<p>Key Personnel</p> <p>Schedule P-4</p>	<p>OH&S Agent (SACPCMP Registered – Proof required)</p> <p>Relevant Experience:</p> <ul style="list-style-type: none"> • 10+ years • 6 – 10 years • 3 – 5 years • 1 - 2 years 	<p>(Max 10 points) 10 points 8 points 5 points 0 points</p>
		Maximum possible score for Functionality	80 points

The minimum score for functionality is **70%**. Tenderers that fail to achieve the minimum score for functionality will be declared as non-Responsive.

Where the entity tendering is a Joint Venture, the tender must be accompanied by a statement describing exactly what aspects of the work will be undertaken by each party to the joint venture (appended to Schedule 10, Part T2.2: Returnable Schedules).

Where the tenderer intends to sub-contract any of the work components listed above, full details of the intended sub-contractor and portions of work to be undertaken by them shall be provided with the tender. The verifiable experience of the sub-contractor relevant to the component of work to be performed by them will be taken into consideration when allocating scores.

Tenderers shall ensure that all relevant information has been submitted with the tender offer in the prescribed format to ensure optimal scoring of functionality points for each Evaluation Criteria. Failure to provide all information **IN THIS TENDER SUBMISSION** could result in the tenderer not being able to achieve the specified minimum scoring.

5.13	<p>Replace the entire contents and wording of Clauses 5.13 e) and 5.13 f) with the following:</p> <p>“</p> <p>e) complies with all legal requirements,</p> <p>f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest,</p> <p>g) submits an original valid Tax Clearance Certificate issued by the South African Revenue Services or has made arrangements to meet outstanding tax obligations and can provide proof thereof,</p> <p>h) submits a Letter of Intent from an approved insurer undertaking to provide the Performance Guarantee to the pro-forma format provided under Clause C1.3: Form of Guarantee of the Contract Data.</p> <p>i) is registered with and complies with the Construction Industry Development Board's Regulations in an appropriate Contractor Grading Designation,</p> <p>j) or any of its directors / shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector,</p> <p>k) has not:</p> <p style="padding-left: 40px;">(i) abused the employer's Supply Chain Management System, or</p> <p style="padding-left: 40px;">(ii) failed to perform on any previous contract and has been given a written notice to this effect,</p> <p>l) has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process and persons in the employ of the state are not permitted to submit tenders</p> <p>”</p>
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	<p>or participate in the contract,</p> <p>m) submits a letter of Good Standing from the Compensation Commissioner. If the tenderer is in the process of applying for an updated certificate, proof of payment to the Compensation Commissioner must be provided;</p> <p>n) has, in terms of the Construction Regulations (2014) and the Occupational Health and Safety Act (1993), the necessary competencies and resources to carry out the work safely,</p> <p>o) or any of its directors, partners or principals is not in arrears for more than 3 months with municipal rates and taxes and municipal service charges,</p> <p>p) has correctly completed and signed the Form of Offer and Acceptance.”</p> <p>q) Provides proof of registration and good standing with the Bargaining Council for the Civil Engineering Industry.</p>
5.17	The number of paper copies of the signed contract to be provided by the employer is one.

TENDER

PART 2 (OF 2): RETURNABLE DOCUMENTS

T2.1 List of Returnable Documents

T2.2 Returnable Schedules

T2.1: LIST OF RETURNABLE DOCUMENTS

The original completed tender document (refer clauses 3.2 and 4.13 of the Tender Data), excluding Drawings, shall be returned with all the required information supplied, duly completed in non-erasable ink in all aspects.

The following documents and schedules 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 submit, return, complete and sign **all the information, documents and schedules, as requested**.

1. Returnable Schedules Required for Tender Evaluation Purposes (Included hereafter for completion)

- 1A Status of Concern Submitting Tender
- 1B Authority for Signatory
- 1C Certificate of Attendance at Site Clarification Meeting
- 1D Declaration of Interest in Tender of Persons in the Service of the State
- 1E Compulsory Enterprise Questionnaire
- 1F Declaration of Tenders Past Supply Chain Management Practices
- 1G Preference Points Claim Form in Terms of the Preferential Procurement Regulations 2017 (MBD 6)
- 1H Schedule of Work Satisfactorily carried out by the Tenderer for Private Clients or Organs of State
- 1I Schedule of Contracts Awarded to Tenderer by Organs of State
- 1J Company Information Required for Tenders greater than R 5 million
- 1K Certificate of Independent Bid Determination
- 1L Proposed Amendments
- 1M Proof or Registration and good standing with the Bargaining Council
- 1N Proof or Registration and good standing with the Construction Industry Development Board (CIDB)
- 1O Proof of Registration with the Supplier Database
- 1P Quality Scoring Criteria Schedule

2. Other Documents Required for Tender Evaluation Purposes (To be attached with submission)

- 2A Original Valid Tax Clearance Certificate
- 2B Municipal Billing Clearance Certificate
- 2C B-BBEE Status Level Certificates / Consolidated Scorecard
- 2D Financial Standing/Bank Rating

3. Returnable Schedules that will be Incorporated in the Contract (Included hereafter for completion)

- 3A Record of Addenda to Tender Documents
- 3B Personnel Schedule
- 3C Declaration Concerning Fulfilment of the Construction Regulations
- 3D Schedule of Construction Equipment
- 3E Schedule of Proposed Subcontractors
- 3F Schedule of Tenderer's Workshop Facilities
- 3G Details of Alternative Offers Submitted
- 3H Preliminary Programme of Works
- 3I Technical Proposal

4. Other Schedules and Documents that will be incorporated into the Contract (included hereafter for completion)

- C1.1 Form of Offer and Acceptance
- C1.2 Contract Data
- C2.2 Bill of Quantities

T2.2: RETURNABLE SCHEDULES

1A: STATUS OF CONCERN SUBMITTING TENDER

1. General

State whether the tenderer is a company, a closed corporation, a partnership, a sole practitioner or a joint venture:

(Mark the appropriate option below)

Public Company

Private Company

Closed Corporation

Partnership

Sole Proprietary

Joint Venture

Co-operative

2. Information To Be Provided

If the Tendering Entity is a:		Documentation to be submitted with the tender
1	<u>Closed Corporation</u> , incorporated under the Close Corporation Act, 1984, Act 69 of 1984.	CIPRO CK1 or CK2 (Copies of the founding statement) and list of members.
2	<u>Private Company</u> incorporated with share capital, under the companies Act, 1973, Act 61 of 1973. (Including Companies incorporated under Art 53 (b)).	Copies of: a) CIPRO CM 1 - Certificate of Incorporation b) CIPRO CM 29 – Contents of Register of Directors, Auditors and Officers c) CIPRO CM 39 – Notice of Change of Directors for private companies d) Shareholders Certificates of all Members of the Company.
3	<u>Private Company</u> incorporated with share capital, under the companies Act, 1973, Act 61 of 1973 in which any, or all, <u>shares are held by another</u> Closed Corporation or company with, or without, share capital.	Copies of documents referred to in 1 and/or 2 above in respect of all such Closed Corporations and/or Companies.
4	<u>Public Company</u> incorporated with share capital, under the companies Act, 1973, Act 61 of 1973 (Including Companies incorporated under Art 21).	A signed statement of the Company's Secretary confirming that the Company is a public Company. Copy of CM 29.

If the Tendering Entity is a:		Documentation to be submitted with the tender
5	Sole Proprietary or a Partnership.	Copy of the Identity Document of: a) Such Sole Proprietary, or b) Each of the Partners in the Partnership Copy of the Partnership agreement.
6	Co-operative.	CIPRO CR2 - Copies of Company registration document. (The percentage of work to be done by each partner must clearly be indicated on Form RDB1 (or RDB2 as applicable) of the tender document: MBD6.1 Preference Points Claim Form in terms of the Preferential Procurement Regulations 2017).
7	Joint Venture.	All the documents (as described above) as applicable to each partner in the JV as well as a copy of the Joint Venture agreement. (The percentage of work to be done by each partner of the joint venture must clearly be indicated in the Joint Venture Agreement).

Note:

- 1.) If the shares are held in trust provide a copy of the Deed of Trust (only the front page and pages listing the trustees and beneficiaries are required) as well as the Letter of Authority as issued by the Master of the Supreme Court, wherein trustees have been duly appointed and authorised, must be provided.
- 2.) Include a copy of the Certificate of Change of Name (CM 9) if applicable. No. CM 9: name change certificate will be accepted as proof alone, for registration.

3. Registered for VAT Purposes In Terms Of The Value-Added Tax Act, (Act No. 89 of 1991)

(Make an X in the appropriate space below)

Yes

☐

No

☐

REGISTRATION NO:

.....

1B: 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.

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 :

- Chairman :
- Date :

NOTE:

- *Delete which is not applicable
- NB: This resolution must be signed by all the Directors/Members/Partners of the Bidding Enterprise
- Should the number of Directors/Members/Partners exceed the space available above, additional names and signatures must be supplied on a separate page.

B. Certificate for Partnership

We, the undersigned, being the key partners 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
behalf of the company.

NAME	ADDRESS	SIGNATURE	DATE

NOTE:

- *Delete which is not applicable
- NB: This resolution must be signed by all the Directors/Members/Partners of the Bidding Enterprise
- Should the number of Directors/Members/Partners exceed the space available above, additional names and signatures must be supplied on a separate page.

C. Certificate for Joint Venture and Consortia

We, the undersigned, are submitting this tender offer in a Joint Venture / Consortium and hereby authorize *Mr. /Mrs.,acting in the capacity of lead partner, and who will sign as follows:be, and is hereby, authorized to sign the Bid/Tender, and any and all documents and/or correspondence in connection with this tender and any contract resulting from it on behalf of the company.

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

NAME OF FIRM	Lead Partner (X)	ADDRESS	% of Contract Value	AUTHORISING SIGNATURE, NAME & CAPACITY

D. Certificate for Sole Proprietor

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

As witnesses :

- Signature : Sole owner :
- Date :

E. Certificate for Close Corporation

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

NAME	ADDRESS	SIGNATURE	DATE

NOTE:

- *Delete which is not applicable
- NB: This resolution must be signed by all the Directors/Members/Partners of the Bidding Enterprise
- Should the number of Directors/Members/Partners exceed the space available above, additional names and signatures must be supplied on a separate page.

1C: 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
----------------	-------------------

1D: DECLARATION OF INTEREST IN TENDER OF PERSONS IN SERVICE OF THE STATE

2. Where the tenderer is a natural person, state / declare whether the tenderer or an employee is in the service of the state, or has been in the service of the state during the past twelve months.

YES / NO (INDICATE)

If so, state particulars:

.....
...

If so and where applicable, state the date of resignation:

.....
...

3. Where the tenderer is not a natural person, state / declare whether any of its directors, managers, principal shareholders or stakeholders is in the service of the state, or have been in the service of the state during the past twelve months.

YES / NO (INDICATE)

If so, state particulars:

.....
...

4. State / declare whether a spouse, child or parent of the tenderer or any of its directors, managers, shareholders or stakeholders referred to in subparagraph 2 is in the service of the state, or have been in the service of the state during the past twelve months.

YES / NO (INDICATE)

If so, state particulars:

.....
...

5. State / declare whether the tenderer or any of its directors, managers, shareholders, stakeholders or employees referred to in subparagraph 2 is a person who is an advisor or consultant contracted with the municipality or municipal entity.

YES / NO (INDICATE)

If so, state particulars:

.....

6. State / declare whether the tenderer or any of its directors, managers, shareholders or stakeholders referred to in subparagraph 2 is involved in another entity for this particular tender.

YES / NO (INDICATE)

If so, state particulars:

.....

I, the undersigned, warrant that I am duly authorised to do so on behalf of the enterprise and confirm that the contents of this schedule are, to my personal knowledge and best belief, both true and correct.

Signed

Date

Name Position

Tenderer

1E: 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"/> 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 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"/> a member of an accounting authority of any national or provincial public entity |
| <input type="checkbox"/> an official of any municipality or municipal 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 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"/> a member of an accounting authority of any national or provincial public entity |
| <input type="checkbox"/> an official of any municipality or municipal entity | <input type="checkbox"/> an employee of Parliament or a provincial legislature |

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

* Insert separate page if necessary

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

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

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Signed

Date

Name

Position

Tenderer

1F: DECLARATION OF TENDERER'S PAST SUPPLY CHAIN MANAGEMENT PRACTISES

1. This form serves as a declaration to be used by the Employer 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.
2. The tender of any Tenderer may be rejected if that Tenderer, or any of its directors have:
 - a. abused the Municipality's / Municipal entity's supply chain management system or been guilty of any improper conduct in relation to such system;
 - b. been convicted for fraud or corruption during the past five years;
 - c. wilfully 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, 2004 (Act 12 of 2004).
3. In order to give effect to the above, this form and the questionnaire must be completed in full and signed. Failure to comply will result in the tender being disqualified.

ITEM	QUESTION	RESPONSE	
4.1	<p>Is the Tenderer or any of its directors listed on the National Treasurer's database as a company or persons prohibited from doing business with the public sector?</p> <p>(Companies for persons who are listed on this database were informed in writing of this restriction by the National Treasury after the <i>audi alteram partem</i> rule was applied)</p> <p>The Database of Restricted Suppliers now resides on the National Treasury's website(www.treasury.gov.za)</p>	Yes	No
	If so, furnish particulars:		
4.2	<p>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, 2004 (Act 12 of 2004)?</p> <p>(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)</p>	Yes	No
	If so, furnish particulars:		
4.3	<p>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?</p>	Yes	No
	If so, furnish particulars:		

4.4	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	No
	If so, furnish particulars:		
4.5	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	No
	If so, furnish particulars:		

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Signed Date

Name Position

Tenderer”

1G: FORM MDB 6.1 – PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

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

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

1. GENERAL CONDITIONS

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

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

1.2 To be completed by the organ of state

(delete whichever is not applicable for this tender).

- a) The applicable preference point system for this tender is the 80/20 preference point system.
- b) Either the 90/10 or 80/20 preference point system will be applicable in this tender. The lowest/ highest acceptable tender will be used to determine the accurate system once tenders are received.
- c) Either the 90/10 or 80/20 preference point system will be applicable in this tender. The lowest/ highest acceptable tender will be used to determine the accurate system once tenders are received.

B-BBEE Status Level of Contributor	Number of Points for Preference (80/20)	Number of Points for Preference (90/10)
1	10	5
2	8	4
3	6	3
4	4	2
5	3	1
6	2	1
7	2	1
8	2	1
Non-compliant contributor	0	0

- 1.3 Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:
- (a) Price; and
 - (b) Specific Goals.

1.4 To be completed by the organ of state:

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	80
SPECIFIC GOALS	20
Total points for Price and SPECIFIC GOALS	100

SPECIFIC GOALS

No	Specific Goals Categories	Max points allocation	Evaluation Indicators
1	B-BBE Status Level Contributor	10	As for B-BBEE points allocation table above.
2	The promotion of enterprises located in a specific province for work to be done or services to be rendered in that province.	10	10 Points= Located within the boundaries of the Kouga Local Municipality 6 Points- Located within the boundaries of Sarah Baartman District Municipality, including Nelson Mandela Bay Municipality 4 Points- Located within the boundaries of the Eastern Cape 1 Point- Outside of the boundaries of the Eastern Cape

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

2. DEFINITIONS

- (a) **“tender”** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;
- (b) **“price”** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;
- (c) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
- (d) **“tender for income-generating contracts”** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and
- (e) **“the Act”** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

3.1.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

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

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

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

3.2. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

3.2.1. POINTS AWARDED FOR PRICE

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

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

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmax = Price of highest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:

4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—

- (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or

- (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system, then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

able 1: Specific goals for the tender and points claimed are indicated per the table below.

(Note to organs of state: Where either the 90/10 or 80/20 preference point system is applicable, corresponding points must also be indicated as such.

Note to tenderers: The tenderer must indicate how they claim points for each preference point system.)

The specific goals allocated points in terms of this tender	Number of points allocated (90/10 system) (To be completed by the organ of state)	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (90/10 system) (To be completed by the tenderer)	Number of points claimed (80/20 system) (To be completed by the tenderer)

DECLARATION WITH REGARD TO COMPANY/FIRM

4.3. Name of company/firm.....

4.4. Company registration number:

4.5. TYPE OF COMPANY/ FIRM

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

[TICK APPLICABLE BOX]

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

**1H: SCHEDULE OF WORK SATISFACTORILY CARRIED OUT BY THE TENDERER FOR
PRIVATE CLIENTS OR ORGANS OF STATE**
(Organs of State include any Local, Provincial or National Government Authority)

The following is a statement of **similar work** successfully executed by myself/ourselves:

Employer, Contact Person and Telephone Number	Description of Contract	Value of Work Inclusive of VAT (Rand)	Date Completed (State current if not yet complete)

I, the undersigned, warrant that I am duly authorised to do so on behalf of the enterprise and confirm that the contents of this schedule are, to my personal knowledge and best belief, both true and correct.

Signed Date

Name Position

Tenderer

11: SCHEDULE OF CONTRACTS AWARDED TO THE TENDERER BY ORGANS OF THE STATE
(Organs of State include any Local, Provincial or National Government Authority)

In terms of Clause 21(d)(iii) of the Supply Chain Management Policy, the tenderer shall list hereunder, particulars of contracts awarded to him by any Organ of State, during the past 5 years. **Any material non-compliance or dispute concerning the execution of any of these contracts must be mentioned.**

Include only those contracts where the tenderer identified in the signature block below was directly contracted by the Employer. Tenderers must not include services provided in terms of a sub-contract agreement. Where contracts were awarded in the name of a joint venture and the tenderer formed part of that joint venture, indicate in the column entitled "Title of the contract for the service" that the contract was in joint venture and provide the name of the joint venture that contracted with the employer. In the column for the value of the contract for the service, record the value of the portion of the contract performed (or to be performed) by the tender.

Organ of state, i.e. national or provincial department, public entity, municipality or municipal entity	Title of contract for the service	Value of Work Inclusive of VAT (Rand)	Date Completed (State current if not yet complete)

Any material non-compliance or dispute concerning the execution of any of these contracts?	Yes	No
If so, furnish particulars:		

I, the undersigned, warrant that I am duly authorised to do so on behalf of the enterprise and confirm that the contents of this schedule are, to my personal knowledge and best belief, both true and correct.

Signed Date

Name Position

Tenderer

1J: COMPANY INFORMATION REQUIRED FOR TENDERS GREATER THAN R 5 MILLION

1. Is the tenderer is required by law to prepare audited annual financial statements? YES / NO
2. If so, provide audited annual financial statements:
- for the past three years; or
 - since their establishment if established during the past three years.

Indicate whether these have been included in the tender. YES / NO

3. If answer for Question No.1 is NO, does the tenderer have annual financial statements? YES / NO
4. If so, provide audited annual financial statements:
- for the past three years; or
 - since their establishment if established during the past three years.

Indicate whether the annual financial statements have been included in the tender. YES / NO

5. If answer for Question No.1 is NO, the tenderer shall attach to this form a letter from the tenderer's bank; in which the bank declares how the tenderer conducts its account. The contents of the bank's letter must state the credit rating that it accords to the tenderer for the business envisaged by this tender. The minimum acceptable credit rating applicable to tenderers for this tender is a C credit rating. The value of the bank rating must be calculated and checked with R2.5 million. Failure to provide the required letter with the tender submission may render the tenderer's offer unresponsive in terms of Clause 5.8 of the tender condition.

Indicate whether a credit rating letter from the bank has been included in the tender. YES / NO

6. Does the tenderer have any undisputed commitments for Municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days? YES / NO

If so, state particulars:

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

7. Has any contracts been awarded to the tenderer by an organ of state during the past five years? YES / NO

If so, state particulars:

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

8. Has there been any material non-compliance or dispute concerning the execution of such contract?

YES / NO

If so, state particulars:

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

9. Is any portion of the goods or services expected to be sourced out from outside the Republic?

YES / NO

If so, state what portion and whether any portion of payment from the Municipality is expected to be transferred out of the Republic.

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

I, the undersigned, warrant that I am duly authorised to do so on behalf of the enterprise and confirm that the contents of this schedule are, to my personal knowledge and best belief, both true and correct.

Signed Date

Name Position

Tenderer

1K: 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 consortium* 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;
 - (d) 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.

*** 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.**

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

1L: PROPOSED AMENDMENTS

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 3.8 of the Standard Conditions of Tender referenced in the Tender Data regarding the Employer's handling of material deviations and qualifications.

Page Number	Clause / Item	Proposal

I, the undersigned, warrant that I am duly authorised to do so on behalf of the enterprise and confirm that the contents of this schedule are, to my personal knowledge and best belief, both true and correct.

Signed Date

Name Position

Tenderer

1M: PROOF OF REGISTRATION WITH THE BARGAINING COUNCIL
--

Tenderers must attach to this page, proof of registration and good standing with the Bargaining Council. (In the case of Joint Ventures, proof must be provided for each partner).

1N: PROOF OF REGISTRATION WITH THE CONSTRUCTION INDUSTRY DEVELOPMENT BOARD

Tenderers must attach to this page, proof of registration and good standing with the CIDB. (In the case of Joint Ventures, proof must be provided for each partner).

10: PROOF OF REGISTRATION WITH THE CENTRAL SUPPLIER DATABASE (CSD)

All existing and prospective service providers/creditors to the Kouga Municipality's supplier database should note that registration with the electronic Central Suppliers Database (CSD www.csd.gov.za for self-registering), developed by National Treasury, is a requirement.

Prospective tenderers are to attach the ***Certificate of Registration with CSD*** to this page.

1P: QUALITY SCORING SCHEDULE

1P: DETAILS OF EXPERIENCE AND QUALIFICATIONS FOR CONTRACTS MANAGER, DESIGN ENGINEER, CONSTRUCTION MANAGER AND OH&S AGENT

Tenderers shall set out in the Schedules hereunder details of the Experience and Qualifications for the Contract Manager, the Construction Manager (Site Agent), General Foreman and the OHS Safety Officer Experience in work of a similar nature to that for which their Tender is submitted.

The tenderer is reminded that the information provided with this Schedule shall be used in terms of Clauses F.2.1.4.3 in Part T.1.2 Tender Data to confirm the tendering entity's eligibility to tender, and the responsiveness of the Tender submitted. The tenderer is therefore required to supply detailed information relating to previous projects, and projects to date, to clearly illustrate that the tendering entity meets key staff experience requirements stipulated in Clause F.2.1.4.3.

Note: Only the information provided on this Schedule, or attached hereto, will be considered. Failure to complete this Schedule may result in the tender being non-responsive.

RETURNABLE SCHEDULE P-1 CONTRACTS MANAGER	NAME & SURNAME : YEARS ACCRUED RELEVANT EXPERIENCE : QUALIFICATIONS :					
	CONTRACT & CLIENT	NATURE OF WORK	POSITION HELD	VALUE OF WORK R(m)	DATE COMPLETED	EMPLOYER AND CONSULTING ENGINEER (NAME, TEL No. AND FAX No.)

NOTE : Attached CV and Proof of Qualifications as per Tender's Data clause C.2.1.4.3, in order to score ANY Functionality Points.

Also add this person to the Company's Organogram structure.

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

RETURNABLE SCHEDULE P-2 DESIGN ENGINEER	NAME & SURNAME : YEARS ACCRUED RELEVANT EXPERIENCE : QUALIFICATIONS :				
CONTRACT & CLIENT	NATURE OF WORK	POSITION HELD	VALUE OF WORK R(m)	DATE COMPLETED	EMPLOYER AND CONSULTING ENGINEER (NAME, TEL No. AND FAX No.)

NOTE : Attached CV and Proof of Qualifications as per Tender's Data clause C.2.1.4.3, in order to score ANY Functionality Points.

Also add this person to the Company's Organogram structure.

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

RETURNABLE SCHEDULE P-3 CONSTRUCTION MANAGER (SITE AGENT)	NAME & SURNAME : YEARS ACCRUED RELEVANT EXPERIENCE : QUALIFICATIONS :				
	CONTRACT & CLIENT	NATURE OF WORK	POSITION HELD	VALUE OF WORK R(m)	DATE COMPLETED

NOTE : Attached CV and Proof of Qualifications as per Tender's Data clause C.2.1.4.3, in order to score ANY Functionality Points.

Also add this person to the Company's Organogram structure.

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

RETURNABLE SCHEDULE P-4 OHS SAFETY OFFICER	NAME & SURNAME : YEARS ACCRUED EXPERIENCE AS OHS SAFETY OFFICER : QUALIFICATIONS : SACPCMP REGISTRATION NO :				
CONTRACT & CLIENT	NATURE OF WORK	POSITION HELD	VALUE OF WORK R(m)	DATE COMPLETED	EMPLOYER AND CONSULTING ENGINEER (NAME, TEL No. AND FAX No.)

NOTE : Attached CV and Proof of Qualifications as per Tender's Data clause C.2.1.4.3, in order to score ANY Functionality Points.

Also add this person to the Company's Organogram structure.

2A: ORIGINAL VALID TAX CLEARANCE CERTIFICATE

In terms of Clause 43 of the Municipal Supply Chain Management Policy, tenderers must ensure that they are up-to-date with their payments of taxes.

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.

The tenderer must attach to this page an **original(s)** of a **valid** Tax Clearance Certificate(s) and the Tax compliance Status pin must be submitted.

Note:

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

2B: MUNICIPAL BILLING CLEARANCE CERTIFICATE
--

In terms of Clause 38 of the Municipal Supply Chain Management Policy, tenderers must ensure that they are up-to-date with their payments of municipal accounts.

The tenderer shall attach to this page a Municipal Billing Clearance Certificate, which provides proof that his payment of Municipal accounts is up-to-date.

These certificates are obtainable from:

Kouga Local Municipality
33 Da Gama Road
Jeffreys Bay.

Should the tenderer not be based in the Kouga Local Municipality, he shall submit a Municipal Billing Clearance Certificate issued by the municipality in which he is based.

2C: B-BBEE STATUS LEVEL CERTIFICATES / CONSOLIDATED B-BBEE SCORECARD

Bidders who qualify as EMEs in terms of the B-BBEE Act shall submit and attach to this page 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 EMEs with B-BBEE Status Level Certificates.

Bidders other than EMEs shall submit and attach to this page 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.

A trust, consortium or joint venture acting as a legal entity shall submit and attach to this page their B-BBEE status level certificate.

A trust, consortium or joint venture acting as an unincorporated entity shall submit and attach to this page their consolidated B-BBEE scorecard as if they were a group structure and such a consolidated B-BBEE scorecard shall be prepared for every separate bid.

Tertiary institutions and public entities shall submit and attach to this page their B-BBEE status level certificates in terms of the specialized scorecard contained in the B-BBEE Codes of Good Practice.

All EME / B-BBEE certificates must reflect the B-BBEE status level of the bidder and must be certified.

2D: FINANCIAL STANDING /BANK RATING

3A: RECORD OF ADDENDA TO TENDER DOCUMENTS

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

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

Attach additional pages if more space is required.

I, the undersigned, warrant that I am duly authorised to do so on behalf of the enterprise and confirm that the contents of this schedule are, to my personal knowledge and best belief, both true and correct.

Signed Date

Name Position

Tenderer

3B: PERSONNEL SCHEDULE

The tenderer shall insert the number of personnel he proposes to employ on this tender/Contract:

Personnel Schedule					
No	Designation	Name	Qualifications	Professional Registration	Years-Experience Post-Qualifications
1	Process Engineer				
2	Electrical Engineer				
3	Mechanical Engineer				
4	Civil Engineer				
5	Structural Engineer				
6	Contracts Manager				
7	Installation Foreman				
8	Electrical Technician				

I, the undersigned, warrant that I am duly authorised to do so on behalf of the enterprise and confirm that the contents of this schedule are, to my personal knowledge and best belief, both true and correct.

Signed Date

Name Position

Tenderer

3C: DECLARATION CONCERNING FULFILMENT OF THE CONSTRUCTION REGULATIONS

In terms of Regulation 4(3) of the Construction Regulations (2014), hereinafter referred to as the Regulations, promulgated on 7 February 2014 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:

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

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

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...

6. I have fully included in my tendered rates and prices (in the appropriate payment items provided in the Bill 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):

3D: SCHEDULE OF CONSTRUCTION EQUIPMENT

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 use on this Contract should my / our tender be accepted.

Quantity	Description, Size, Capacity, etc.

- (b) Details of major equipment that will be **hired in**, or acquired, for use on the Contract should my / our tender be accepted.

Quantity	Description, Size, Capacity, etc.

Attach additional pages if more space is required.

I, the undersigned, warrant that I am duly authorised to do so on behalf of the enterprise and confirm that the contents of this schedule are, to my personal knowledge and best belief, both true and correct.

Signed Date

Name Position

Tenderer

3E: SCHEDULE OF PROPOSED SUBCONTRACTORS

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

If we are awarded a Contract, we agree that this notification does not change the requirement for us to submit the names of proposed Subcontractors in accordance with requirements in the Contract for such appointments. If there are no such requirements in the Contract, then your written acceptance of this list shall be binding between us.

Name and Address of Proposed Subcontractor	Nature and Extent of Work	Previous Experience with Subcontractor

I, the undersigned, warrant that I am duly authorised to do so on behalf of the enterprise and confirm that the contents of this schedule are, to my personal knowledge and best belief, both true and correct.

Signed Date

Name Position

Tenderer

<p>3F: SCHEDULE OF TENDERER'S WORKSHOP FACILITIES</p>
--

The following is a list of workshop facilities that I/we have available for this Contract and I/we undertake that if my/our tender is accepted, such facilities will be available for the Works.

[illegible]

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

Signed Date

Name Position

Tenderer

3G: DETAILS OF ALTERNATIVE OFFERS SUBMITTED

See Conditions of Tender, Clause F2.12.

Description

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Signed Date

Name Position

Tenderer”

3H: PRELIMINARY PROGRAMME OF WORKS

The Tenderer shall provide with this schedule, a preliminary programme in Gantt Chart format, outlining the key activities and milestones of the Works, including design, approval of Contractor's Documentation, supply, fabrication, delivery, installation, construction activities, testing, commissioning, trial operation and defects liability period, with due consideration given to the Contract Data and Scope of Work.

3I: TECHNICAL PROPOSAL

The Tenderer shall provide a full technical proposal highlighting the treatment process to be used, technical data sheets, work components, design philosophy etc.

CONTRACT

PART 1 (OF 4): AGREEMENT AND CONTRACT DATA

- C1.1 Form of Offer and Acceptance**
- C1.2 Contract Data**
- C1.3 Form of Guarantee**
- C1.4 Health and Safety Agreement**
- C1.5 Disclosure Statement**
- C1.6 Adjudication Board Member Agreement**

C1.1: FORM OF OFFER AND ACCEPTANCE

(Agreement)

1. OFFER

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

NOTICE NO: 37/2024: DESIGN, BUILD AND COMMISSIONING OF THE UPGRADE TO THE GILL MARCUS WATER TREATMENT WORKS

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 terms of the Conditions of Contract identified in the Contract Data.

For the **Tenderer**:

.....
Signature

.....
Name

.....
Capacity

Name and Address of Organisation:

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

.....

Signature and Name 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 the above listed Parts.

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

The tenderer shall within two weeks after receiving a completed copy of this Agreement, including the Schedule of 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 (5) 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:

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

Signature and Name 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:

5.

Subject:

Details:

6.

Subject:

Details:

7.

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 changes to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance.

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

For the Tenderer:

..... Signature
..... Name
..... Capacity

Name and Address of Organisation

.....
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.....
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.....
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For the Employer:

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

Name and Address of Organisation

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.....
.....

..... Witness Signature
..... Witness Name
..... Date

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

4. CONFIRMATION OR RECEIPT

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

the (day)

of (month)

20 (year)

at (place)

For the **Contractor**:

.....
Signature

.....
Name

.....
Capacity

Signature and Name of Witness:

.....
Signature

.....
Name

C1.2: CONTRACT DATA (PART 1)

PART 1: DATA PROVIDED BY THE EMPLOYER

C1.2.1 CONDITIONS OF CONTRACT

The Conditions of Contract comprise the "General Conditions", which form part of the Conditions of Contract for Pant and Design Build for Electrical and Mechanical Plant, and for Building and Engineering Works, Designed by the Contractor, First Edition, 1999 (Yellow Book) published by the Fédération Internationale des Ingénieurs-Conseils (FIDIC), and the following "Particular Conditions" which include amendments and additions to such General Conditions.

The Conditions of Contract make several references to the Contract Data for specific data, which together with these conditions collectively describe the risks, liabilities and obligations of the contracting parties and the procedures for the administration of the Contract. The Contract Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Conditions of Contract.

The Conditions of Contract shall be read in conjunction with the variations, amendments and additions set out in the Particular Conditions of Contract below. Each item of data given below is cross-referenced to the clause in the Conditions of Contract to which it mainly applies.

The Contract Data and Conditions of Contract shall have precedence over the Drawings, Scope of Work and Standardised Specifications in the interpretation of any ambiguity or inconsistency between these documents.

C1.2.2 PARTICULAR CONDITIONS

The following amendments and additions to the Clauses are the contract specific data applicable to this Contract:

C1.2.2.1 Particular Conditions Applicable to the Entire Works

1.1 Definitions

1.1.1 The Contract

In Sub-Clause 1.1.1.6, delete "lists and schedules of payments and/or prices" and substitute "lists, Bills of Quantities and schedules of payments and/or prices".

In Sub-Clause 1.1.2.3, delete "in the Letter of Tender" and substitute "in the Appendix to the Tender and whose offer has been".

Delete the text of Sub-Clause 1.1.3.9 and substitute:

" "day" means a calendar day and where a specific number of days is allowed in the Contract for the performance of any act or is stipulated for the extinction of any right or the duration of any event or circumstance, the special non-working days and the days falling within the year end break as stated in the Appendix to Tender and the day from which the period concerned is stated to commence shall be excluded from the calculation of the number of days concerned. "Year" means 365 days."

Add to Sub-Clause 1.1:

"1.1.7 Terms that may be used elsewhere in other portions of the document

1.1.7.1 "Certificate of Completion" is synonymous with "Taking-over Certificate".

1.1.7.2 "Defects Liability Period" is synonymous with "Defects Notification Period".

1.1.7.3 "Performance Bond", "Guarantee" and Deed of Suretyship" are synonymous with "Performance Security".

1.1.7.5 "Final Approval Certificate" is synonymous with "Performance Certificate".

- 1.1.7.6 "Contract Price Adjustment Factor" is synonymous with "table of adjustment data" as used in Sub-Clause 13.8 [*Adjustments for Changes in Cost*].
- 1.1.7.7 "Contract Data" means the General Conditions and the "Particular Conditions".
- 1.1.7.8 "Offer" is synonymous with "Tender".
- 1.1.7.9 "Form of Offer" is synonymous with "Letter of Tender".
- 1.1.7.10 "Scope of Work" is synonymous with "Employer's Requirements".
- 1.1.7.11 "Site Agent" is synonymous with "Contractor's Representative".
- 1.1.7.12 "Plant" is synonymous with "Contractor's Equipment" where the context so indicates.

1.5 Priority of Documents

Delete Sub-Clause 1.5 and substitute:

"The documents forming the Contract are to be taken as mutually explanatory of one another. If an ambiguity or discrepancy is found, the priority shall be such as may be accorded by the governing law. The Engineer has authority to issue any instruction which he considers necessary to resolve an ambiguity or discrepancy".

1.6 Contract Agreement

Delete Sub-Clause 1.6 and substitute:

"The Parties shall enter into a Contract Agreement after the Contractor is called upon to do so by the Employer. The Agreement shall be the fully completed Form of Offer and the fully completed Agreement and Schedule of Deviations (if any) sent under cover of the Employer's Letter of Acceptance".

2.1 Right of Access to the Site

In Sub-Clause 2.1, the first paragraph, delete "Performance Security has" and substitute "Performance Security and/or proof of third-party insurance have".

3.1 Engineer's Duties and Authority

In Sub-Clause 3.1, the third paragraph, delete "Particular Conditions" and substitute "Appendix to the Tender".

3.2 Delegation by the Engineer

In Sub-Clause 3.2, the first paragraph, after "resident engineer" insert "Engineer's representative".

4.2 Performance Security

In Sub-Clause 4.2, at the end, add:

"If the Performance Security is in the form of a bank guarantee, it shall be issued either (a) by a bank located in the Country, or (b) directly by a foreign bank acceptable to the Employer. If the Performance Security is not in the form of a bank guarantee, it shall be furnished by a financial entity registered, or licensed to do business, in the Country".

4.5 Nominated Subcontractors

In Sub-Clause 4.5, delete "means a Subcontractor" and substitute "means a subcontractor named in the Contract and/or a Subcontractor".

4.6 Co-operation

See also any requirements with regard to co-operation in Part C3: Scope of Work.

4.9 Quality Assurance

In Sub-Clause 4.9, the first paragraph, delete “The system shall be in accordance with the details stated in the Contract”.

See also any requirements with regard to Quality Assurance in Part C3: Scope of Work.

4.10 Site Data

In Sub-Clause 4.10, the first paragraph, after the first sentence, add “The relevant data referred to in the previous sentence shall be the data provided in the Employer’s Requirements”.

4.12 Unforeseeable Physical Conditions

In Sub-Clause 4.12, the sixth paragraph, delete “(ii)” and substitute “(b)”.

4.21 Progress Reports

Delete the text of Sub-Clause 4.21 and substitute “Progress reports shall be prepared and submitted as specified in the Employer’s Requirements”.

5.1 General Design Obligations

In Sub-Clause 5.1, the first paragraph, delete the sentence “Unless otherwise stated in the Contract,” and substitute:

“The Contractor shall ensure that all design work to be undertaken by the Contractor or on behalf of the Contractor is undertaken by registered professionals. If required by the Engineer “.

5.2 Contractor’s Documents

In Sub-Clause 5.2, the sixth paragraph, delete subparagraph (a)(iii).

6.7 Health and Safety

In Sub-Clause 6.7, the first paragraph, delete reference to “medical staff” and “ambulance service” and add: “The Contractor shall display in a prominent position(s) the telephone numbers of an appropriate medical practitioner and ambulance service”.

In Sub-Clause 6.7, the second paragraph, delete “accident prevention officer” and substitute “Safety Officer in terms of the Occupational Health and Safety Act (Act No 85 of 1993)”.

In Sub-Clause 6.7, add at the end “See also the specification dealing with Occupational Health and Safety, if any”.

8.3 Programme

In Sub-Clause 8.3, insert the following before the first paragraph: “The sequence of the Works shall be as follows:

- a) Design the Works and submit the designs to the Engineer for approval.
- b) Manufacture, purchase, install, test and commission the Works.
- c) Operate the Works for the duration of the Trial Operation Period prior to issue of the Taking-Over Certificate.”

In Sub-Clause 8.3, the first paragraph, delete “within 28 days” and substitute “within the time stated in the Appendix to Tender”.

In Sub-Clause 8.3, add the following after the last paragraph: “The Contractor’s Programme will not take priority over any contractual condition in consideration of claims for additional compensation”.

See also any requirements with regard to Programme in Part C3: Scope of Work.

8.7 Delay Damages

In Sub-Clause 8.7, delete all references to “delay damages” and “damages” and substitute “penalties”.

9.1 Contractor’s Obligations

In Sub-Clause 9.1, the third paragraph, subparagraph (c), after “trial operation” insert “(if a trial operation is required in terms of the Appendix to the Tender or the Employer’s Requirements and for the period stated therein)”.

10.1 Taking Over of the Works and Sections

In Sub-Clause 10.1;

- (i) in the first paragraph, delete “or is deemed to have been issued”, and*
- (ii) delete the last paragraph.*

10.2 Taking Over of Parts of the Works

In Sub-Clause 10.2, the second paragraph, subparagraph (a), delete “it is used” and substitute “the trial operation ends”.

10.3 Interference with Tests on Completion

In Sub-Clause 10.3, delete the first and second paragraphs.

11.3 Extension of Defects Notification Period

In Sub-Clause 11.3, the first paragraph, delete the last sentence.

13.8 Adjustment for Changes in Cost

In Sub-Clause 13.8, the third paragraph, delete from “The formulae shall be of the following ...” up to and including the fourth paragraph and substitute:

“Contract Price Adjustment

All items in the Bill shall **not** be subject to Contract Price Adjustment.

14.3 Application for Interim Payment Certificates

In Sub-Clause 14.3,

- (i) delete subparagraph (a) and substitute:*
 - “(a) the estimated contract value of the Works executed as determined from the Bill of Quantities up to the end of the month (including Variations but excluding items described in subparagraphs (b) to (g) below.”, and*
- (ii) delete subparagraph (e).*

14.5 Plant and Materials intended for the Works

Delete Sub-Clause 14.5.

14.6 Issue of Interim Payment Certificates

In Sub-Clause 14.6, the first paragraph, delete “within 28 days” and substitute “within the time stated in the Appendix to Tender”.

14.7 Payment

In Sub-Clause 14.7, the first paragraph, sub-paragraphs (b) and (c), delete “within 56 days” and substitute “within the time stated in the Appendix to Tender”.

14.13 Issue of Final Payment Certificate

In Sub-Clause 14.13, the first paragraph, delete “within 28 days” and substitute “within the time stated in the Appendix to Tender”.

14.15 Currencies of Payment

In Sub-Clause 14.15, subparagraph (b) delete “damages” and substitute “penalties”.

15.2 Termination by Employer

In Sub-Clause 15.2, the first paragraph;

- (i) in subparagraph (a), after “Sub-Clause 4.2 [Performance Security]” add “or fails to comply with Sub-Clause 18.1 [General Requirements for Insurance] and the Employer elects not to effect the relevant insurances”, and*
- (ii) after subparagraph (f) add:*
 - “(g) the Contractor committed a corrupt or fraudulent act in relation to the Contract, or*
 - (h) an official or other role player committed any corrupt or fraudulent act that benefited the Contractor,”.*

In Sub-Clause 15.2, the second paragraph, the second sentence, delete “(e) or (f)” and substitute (e), (f), (g) or (h)”.

17.3 Employer’s Risks

In Sub-Clause 17.3, delete subparagraph (a) to (h) and substitute:

- “(a) War, invasion, act of foreign enemies, hostilities or warlike operations (whether war be declared or not) or civil war,*
- (b) Insurrection. Rebellion or revolution,*
- (c) Mutiny, military rising, military or usurped power, martial law or state of siege, or any other event or cause which determines the proclamation or maintenance of martial law or state of siege,*
- (d) Any event which, at closing date of tenders, is defined as a risk in terms of insurance offered by the South African Special Risks Insurance Association,*
- (e) Any occurrence for which a fund has been established in terms of the War Damage Insurance and Compensation Act, as amended,*
- (f) The impact of meteorites,*
- (g) Pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds,*
- (h) Ionising radiation or contamination by radioactivity from any nuclear fuel or from nuclear waste from combustion of nuclear fuels,*
- (i) The use of or occupation by the Employer or his employees or agents or other contractors (not employed by the Contractor) of any part of the Works,*
- (j) The design, specification or instruction of the Engineer, Employer or any of their employees or agents, or defects in the materials supplied by the Employer for incorporation in the Works,*
- (k) The confiscation, commandeering, nationalisation, requisition or destruction of or damage to property by an order of government, or any public or local authority,*
- (l) The fact that the value of materials, as supplied by the Employer for incorporation in the Works, exceeds the value thereof as specified by or on behalf of the Employer at the time of delivery thereof by the Employer”.*

18.1 General Requirements for Insurances

In Sub-Clause 18.1, add:

“Save as otherwise provided in the Contract, nothing herein contained shall oblige the Contractor to effect any insurance which is not generally obtainable from a registered insurer in South Africa.

The insurances shall be effected with an insurance company registered in South Africa.

The Contractor shall be liable for payment of the deductibles in respect of each claim settlement in terms of the policies effected by the Contractor.

If required, 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”.

18.2 Insurance for Works and Contractor’s Equipment

In Sub-Clause 18.2, add:

- ”(f) which are to be effected and maintained by the Contractor and endorsed to note the interests of the Employer are:
- (i) transit insurance en route to Site, including whilst in temporary storage (and intended for incorporation in the Contract),
 - (ii) professional indemnity insurance; including professional indemnity insurance of the registered professionals who carry out design work on behalf of the Contractor to adequately cover their liability for professional negligence. Proof of such insurance shall be submitted to the Engineer on demand, and
 - (iii) 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”.

18.3 Insurance against Injury to Persons and Damage to Property

In Sub-Clause 18.3, in the second paragraph, delete the sentence “if an amount is not stated shall not apply.” and substitute “If so indicated as “not applicable” in the Appendix to Tender, this Sub-Clause shall not apply”.

18.4 Insurance of Contractor’s Personnel

In Sub-Clause 18.4, add “The insurance shall be in terms of the provisions of the Compensation for Occupational Injuries and Diseases Act (Act No 130 of 1993)”.

Add the following new Sub-Clause:

18.5 Special Risks Insurance

If required in terms of the Appendix to the Tender, the Contractor shall effect and maintain, in the joint names of the Employer and the Contractor a Coupon Policy for Special Risks Insurance issued by the South African Special Risks Insurance Association”.

20 Claims, Disputes and Arbitration

Delete Sub-Clauses 20.2 to 20.8 and substitute:

20.2 Notice of Disagreement

In respect of any matter not required to be dealt with in terms of Sub-Clauses 20.1 [*Contractor’s Claims*] or 20.8 [*Special Disputes*], the Contractor shall have the right by written notice with supporting particulars to the Engineer to require him to consider any disagreement which he raises with the Engineer provided that the said written notice shall be given within 28 days after the cause of disagreement has arisen.

20.3 Engineer to Rule on Disagreements

The Engineer shall, within 28 days after the Contractor has delivered his disagreement, give effect to Sub-Clause 3.5 [*Determinations*] and give his ruling on the disagreement in writing to the Employer and the Contractor, referring specially to this Sub-Clause.

20.4 Dispute Notice

The Contractor and the Employer, hereinafter referred to as "the parties" shall have the right to dispute any ruling given by the Engineer in terms of Sub-Clause 20.1 *[Contractor's Claims]* or Sub-Clause 20.3 *[Engineer to Rule on Disagreements]*;

Provided that, unless the Contractor or the Employer shall, within 28 days after his receipt of a ruling, give written notice (hereinafter referred to as a "Dispute Notice") to the Engineer, referring to this Sub-Clause, with a copy to the other party, disputing the validity or correctness of the whole or a specified part of the ruling, he shall have no further right to dispute that ruling or the part thereof not disputed in the said notice.

If the Engineer fails to give his ruling according to Sub-Clause 20.1 *[Contractor's Claims]* or Sub-Clause 20.3 *[Engineer to Rule on Disagreements]*, the Contractor shall have the right to submit his claim or disagreement as a Dispute Notice within 28 days after the ruling should have been given. If the Contractor fails to do this within 28 days, the Employer shall be discharged from all liability in connection with the claim or disagreement.

All further references herein to a ruling shall relate to the ruling, or part thereof, set out in the Dispute Notice, as varied or added to by agreement between the Contractor and the Engineer or by the Mediator's opinion or the Adjudicator's decision to the extent that it has become binding in terms of paragraph 8 of Sub-Clauses 20.5 *[Mediation]* or Sub-Clause 20.6 *[Arbitration]*.

If either party shall have given notice in compliance with this Sub-Clause 20.2, the dispute shall be referred immediately to mediation.

Notwithstanding that the parties may, in respect of a ruling, have given a Dispute Notice, the ruling shall be of full force and carried into effect unless and until otherwise agreed by both parties in terms of paragraph 8 of Sub-Clause 20.5 *[Mediation]* or as determined in an arbitration award.

20.5 Mediation

The mediation shall be conducted by a Mediator selected by agreement between the parties or, failing such agreement within 7 days after a written request by either party for such agreement, nominated on the application of either party by the President for the time being of the South African Institute of Mechanical Engineering or the South African Institution of Civil Engineering, as appropriate.

Neither party shall be entitled to be represented at any hearing before or at any meeting or in any discussion with the Mediator except by:

- a) The party himself, if a natural person,
- b) A partner in the case of a partnership,
- c) A chief executive officer or an executive director in the case of a company,
- d) A member in the case of a close corporation,
- e) The Engineer,
- f) A bona fide employee of the party concerned,
- g) A professional engineer appointed for the purpose by the party concerned.

Such limitation shall not be construed as preventing any person from giving evidence as a witness.

The Mediator shall, as he deems fit, follow formal or informal procedure and receive evidence or submissions orally or in writing, sworn or unsworn, at joint meetings with the parties or separately or from any person whom he considers can assist in the formulation of his opinion;

Provided that:

- a) Each party shall be given reasonable opportunities of presenting evidence or submissions and of responding to evidence or submissions of the other party, and

- b) Each party shall be given full details of any evidence or submissions received by the Mediator from the other party or any other person otherwise than at a meeting where both parties are present or represented.

The Mediator shall have the power to propose to the parties compromise settlements of or agreements in disposal of the whole or portion of the dispute.

The Mediator shall, as soon as reasonably practical, give to each of the parties his written opinion on the dispute, setting out the facts and the provisions of the Contract on which the opinion is based and recording the details of any agreement reached between the parties during the mediation.

The Mediator's opinion shall become binding on the parties only to the extent that it is correctly recorded as being agreed by the parties in the Mediator's written opinion or otherwise as recorded as being agreed in writing by both parties subsequent to the receipt of the Mediator's opinion.

The dispute on any matter still unresolved after the application of the provisions of the above paragraph shall be resolved by arbitration.

Save for reference to any portion of the Mediator's opinion which has become binding in terms of paragraph 8 of this Sub-Clause, no reference shall be made by or on behalf of either party, in any proceedings subsequent to mediation, to the Mediator's opinion, or to the fact that any particular evidence was given, or to any submission, statement or admission made in the course of the mediation.

Irrespective of the nature of the Mediator's opinion:

- a) Each party shall bear his own costs arising from the mediation, and
- b) The parties shall in equal shares pay the Mediator the amount of his expenses and the amount of his fee based on a scale of fees as agreed between the Mediator and the parties before the commencement of the mediation.

20.6 Arbitration

If a dispute is still unresolved as provided in paragraph 9 of Sub-Clause 20.5 [*Mediation*] or the dispute is one to which Sub-Clause 58.8 [*Special Disputes*] refers:

The matter shall be referred to a single Arbitrator to be agreed on between the parties or, failing such agreement within 28 days after delivery to the parties of the Mediator's opinion, or the Adjudicator's decision, nominated on the application of either party by the President for the time being of the South African Institute of Mechanical Engineering or the South African Institution of Civil Engineering, as appropriate, and any such reference shall be deemed to be a submission to the arbitration of a single arbitrator in terms of the Arbitration Act (Act No 42 of 1965, as amended), or any legislation passed in substitution therefore;

In the absence of any other agreed procedure, the arbitration shall take place in accordance with the Rules for the Conduct of Arbitrations issued by the Association of Arbitrators (Southern Africa) which are current at the time of the referral to arbitration;

The Arbitrator shall, in his award, set out the facts and the provisions of the Contract on which his award is based.

20.7 Common Provisions

Nothing herein contained shall deprive the Contractor of the right to institute immediate Court proceedings in respect of failure by the Employer to pay the amount of a payment certificate on its due date or to refund any amount of retention money on its due date for refund.

No ruling or decision given by the Engineer in accordance with the provisions of the Contract shall disqualify him from being called as a witness and giving evidence before the Arbitrator or the Court on any matter whatsoever relevant to the dispute concerned.

The Arbitrator and the Court shall have full power to open up, review and revise any ruling, decision, order, instruction, certificate or valuation of the Engineer relevant to the matter in dispute and neither party shall be limited in such proceedings before such Arbitrator or Court to the evidence or arguments put before the Engineer for the purpose of obtaining his ruling.

The following provisions shall apply in respect of the appointment of a mediator or arbitrator in terms of this Clause:

- a) If, for any reason, the person appointed fails to assume or to continue in the office concerned, the provisions of this Clause shall apply with the necessary changes in the appointment of a successor, and
- b) In making his nomination in terms of the first paragraph of Sub-Clause 20.5 *[Mediation]* or the last paragraph of Sub-Clause 20.6 *[Arbitration]*, the President for the time being of the South African Institution of Civil Engineers shall, at his own discretion, act in consultation with the Presidents for the time being of the South African Association of Consulting Engineers and the South African Federation of Civil Engineering Contractors, and
- c) the President required to make a nomination in terms of this Clause shall have a direct or indirect interest in the subject matter of the dispute, the nomination shall be made by the next senior officer of the body concerned who has no such interest.

20.8 Special Disputes

Notwithstanding anything elsewhere provided in this Clause, any dispute between the Contractor and the Employer:

- a) Not relating to a ruling, decision, order, instruction or certificate by the Engineer, or
- b) Arising after the completion of the Contract or, if a Defects Notification Period is provided, after the termination of that period

shall be determined, without the application of the provisions of Sub-Clause 20.4 *[Dispute Notice]* and Sub-Clauses 20.5 *[Mediation]*, by arbitration and which may be initiated by either party, in which event the provisions of Sub-Clauses 20.6 *[Arbitration]* and 20.7 *Common Provisions]* shall apply.

20.9 Continuing Validity of Sub-Clauses 20.4 to 20.8

Sub-Clauses 20.4 to 20.8 is a separate, divisible agreement from the rest of the Contract and shall remain valid and applicable notwithstanding that the Works may have been completed or that the rest of the Contract may be void or voidable or may have been cancelled for any reason.”.

APPENDIX TO TENDER PART 1 – DATA PROVIDED BY THE EMPLOYER

<u>Sub-Clause</u>	<u>Item</u>	<u>Entry</u>
1.1.2.2 & 1.3	The Employer is:	The Employer is the Kouga Local Municipality
	The Employer's address for receipt of communications is:	<p>Telephone: (042) 200 2200</p> <p>Facsimile: (086) 529 7827</p> <p>Address (Postal) : PO BOX 21 Jeffreys Bay 6330</p> <p>Address (Physical): 33 Da Gama Road Jeffreys Bay</p>
1.1.2.4 & 1.3	The Engineer is:	Kouga Local Municipality represented by an employee duly authorised thereto in writing
	The Engineer's address for receipt of communications is:	<p>Telephone: (042) 200 2200</p> <p>Facsimile: (042) 200 8606</p> <p>Address (Postal): PO BOX 21 Jeffreys Bay 6330</p> <p>Address (Physical): 33 Da Gama Road Jeffreys Bay 6330</p>
1.1.3.3	Time for completion of the whole of the Works including the Trial Operation Period:	2.5 months and inclusive of all special non-working days.
1.1.3.7	Defects Notification Period	365 days
1.1.3.9	Special non-working days	<p>The special non-working days are:</p> <p>The SAFCEC recommended industry shutdown period in December and January. All statutory holidays.</p>
1.3	Electronic transmission systems	Formal signed correspondence may be scan-copied in PDF format and issued via email messaging for information.
1.4	Governing Law	South African law
1.4	Ruling language	English
1.4	Language for communications	English
2.1	Time for access to the Site	Access to the site will be allowed as soon as the required documentation has been submitted and approved.
3.1	Approval of Employer required for:	Not applicable
4.2	Amount of Performance Security	10% of the Accepted Contract Amount, in the currency of the Contract
4.2	Periods for submission of Performance Security	Within 14 days of Commencement Date
4.8	Periods for submission of Occupational, Health and Safety Plan	Within 14 days of Commencement Date

<u>Sub-Clause</u>	<u>Item</u>	<u>Entry</u>
5.1	Period for notifying unforeseeable errors, faults and defects in the Employer's Requirements	28 days
6.5	Normal working hours	08:00 to 17:00 on days other than locally recognised days of rest and special non-working days
6.5	Locally recognised days of rest	Saturdays and Sundays
8.3	Time for submission of programme and cash-flow	Within 14 days of Commencement Date
8.7 & 14.15(b)	Amount of penalties	The penalty for delay shall be: R5000-00 per day.
9.1	Period of Trial Operation	28 days
13.8	Adjustments for Changes in Cost; Table(s) of adjustment data	As in Part 2 of Part C1.2
14.3(c)	Percentage of retention	10% (ten percent) of the contract price
14.3(c)	Limit of Retention Money	5% (five percent) of Accepted Contract Amount. Retention Money Guarantee will be accepted
14.6	Time for Engineer to issue interim payment certificates to Employer	Within 7 days of receipt by the Engineer of Contractor's approved statement
14.6	Minimum amount of Interim Payment Certificates	Not applicable
14.7(b)	Time for payment of interim payment certificates	Within 35 days of receipt by the Engineer of Contractor's statement
14.13	Time for Engineer to issue Final Payment Certificate	Within 14 days of receipt by the Engineer of final statement
14.7(c)	Time for payment of final payment certificates	Within 28 days of receipt by the Employer of Final Payment Certificate
14.15	Currency of payments	South African Rand (ZAR)
18.1	Periods for submission of insurance: a) evidence of insurance b) relevant policies	Within 14 days of Commencement Date Within 14 days of Commencement Date
18.2(d)	Maximum amount of deductibles for insurance of the Employer's risks	R 200 000-00 per occurrence
18.2(f)(i)	Minimum amount of Professional Indemnity insurance	R 5,000,000.00 for Civil and structural R 3,000,000.00 for Mechanical and Electrical
18.3	Minimum amount of third-party insurance	R 20 000 000.00
	Minimum amount for Contractor's own employees' insurance	R 10 000 000.00
18.4	Proof of payment/or letter with respect to the Compensation for Occupational Injuries and Diseases Act (Workmen's Compensation Act)	Within 14 days of Commencement Date
18.5	Special Risks coupon policy	Required
21.1	Period for notifying unforeseeable errors, faults and defects in the Employer's Requirements	21 Days

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Signed Date

Name Position

Tenderer

C1.2: CONTRACT DATA (PART 2)

PART 2: DATA PROVIDED BY THE CONTRACTOR

APPENDIX TO TENDER PART 2 – DATA PROVIDED BY THE CONTRACTOR

Sub-Clause	Item	Entry
1.1.2.3	The Contractor is:	
	The Contractor's address for receipt of communications is:	Tel: Fax: e-mail:..... Address:
1.1.3.3	Time for completion of the whole of the Works including the Trial Operation Period:	As stated in Appendix to Tender Part 1
13.8	Adjustments for Changes in Cost; Table(s) of adjustment data	Not Applicable
13.8	Adjustments for Changes in Cost; Table(s) of adjustment data (for Imported Equipment)	Not Applicable

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Signed

Date

Name

Position

Tenderer

C1.3: FORM OF GUARANTEE

PRO FORMA PERFORMANCE GUARANTEE

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means:

Physical address:

"Employer" means:

"Contractor" means:

"Employers _____ Agent" means:

"Works" means:

"Site" means:

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

"Contract Sum" means: The accepted amount inclusive of tax of R

Amount in words:

"Guaranteed Sum" means: The maximum aggregate amount of R

Amount in words:

“Expiry Date”: This Performance Guarantee shall remain in full force and effect **until the issue of the Certificate of Completion of the Works** in terms of the Contract. (Refer Clause 2 hereunder).

CONTRACT DETAILS

Employers Agent issues: Interim Payment Certificates, Final Payment Certificate and the Certificate of 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 and including the date of issue by the Employers Agent of the **Certificate of Completion of the Works** or the date of payment in full of the Guaranteed Sum, whichever occurs first unless the Guarantor is advised in writing by the Employer of his intention to institute claims, and the particulars thereof, in which event this guarantee shall remain in full force and effect until all such claims have been paid or liquidated. The Employers Agent and / or the Employer shall inform the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.
3. The Guarantor hereby acknowledges that:
 - 3.1 any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and

- shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;
- 3.2 its obligation under this Performance Guarantee is restricted to the payment of money.
4. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:
- 4.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Employers Agent in an Interim or Final Payment Certificate has not been made in term of the Contract and failing such payment within (7) seven calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;
- 4.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.1 and the sum certified has still not been paid;
- 4.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.
5. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:
- 5.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 5; or
- 5.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and
- 5.3 the aforesaid written demand is accompanied by a copy of the notice of termination and / or the provisional / final sequestration and / or the provisional liquidation court order.
6. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.
7. Where the Guarantor has made payment in terms of 5, the Employer shall upon the date of issue of the **Final Payment Certificate** submit an **expense account** to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear zero percent (0%) interest.
8. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
9. Payment by the Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.
10. The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.
11. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
12. This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.
13. This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.
14. Where 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)

C1.4: HEALTH AND SAFETY AGREEMENT

ARTICLE OF AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL SAFETY ACT (1993)

BETWEEN

THE KOUGA LOCAL MUNICIPALITY
(Hereinafter referred to as the "EMPLOYER")

AND

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

Herein represented by in his/her capacity as, duly authorised by virtue of a resolution dated, attached hereto as Annexure A, of the said (Herein after referred to as the "CONTRACTOR")

WHEREAS the CONTRACTOR is the mandatory of the EMPLOYER as contemplated in an agreement in respect of:

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

Contract number:

AND WHEREAS section 37 of the Occupational Health and Safety Act, 1993 (Act 85 of 1993, hereinafter referred to as the "ACT"), imposes certain powers and duties upon the EMPLOYER.

AND WHEREAS the parties have agreed to enter into an agreement in terms of section 37(2) of the ACT.

NOW THEREFORE the parties agree as follows:

- (a) The CONTRACTOR undertakes to acquaint the appropriate officials and employees of the CONTRACTOR with all relevant provisions of the ACT and the regulations promulgated in terms thereof.
- (b) The CONTRACTOR undertakes that all relevant duties, obligations and prohibitions imposed in terms of the ACT and Regulations will be fully complied with. Provided that should the EMPLOYER prescribe certain arrangements and procedures, that same shall be observed and adhered to by the CONTRACTOR, his officials and employees. The CONTRACTOR shall bear the onus of acquainting himself/herself/itself with such arrangements and procedures.
- (c) The CONTRACTOR hereby accepts sole liability for such due compliance with the relevant duties, obligations, prohibitions, arrangements and procedure, if any, imposed by the ACT and Regulations and the EMPLOYER expressly absolves the EMPLOYER from itself being obliged to comply with any of the aforesaid duties, obligations, prohibitions, arrangements and procedure as the case may be.
- (d) The CONTRACTOR agrees that any duly authorised officials of the EMPLOYER shall be entitled, although not obliged, to take such steps as may be necessary to ensure that the CONTRACTOR has complied with the undertakings as more fully set out in paragraphs (a) and (b) above, which steps may include, but shall not be limited to, the right to inspect any appropriate site or premises occupied by the CONTRACTOR, or to inspect any appropriate records held by the CONTRACTOR or to take such steps it may deem necessary to remedy the default of the CONTRACTOR at the cost of the CONTRACTOR.
- (e) The CONTRACTOR shall be obliged to report forthwith to the EMPLOYER any investigations, complaint or

criminal charge which may arise as a consequence of the provisions of the ACT and Regulations, pursuant to work performed in terms of this agreement, and shall, on written demand, provide full details in writing of such an investigation, complaint or criminal charge as the case may be.

Signature(s) of authorised agents:

.....

Name(s) (in block letters):

.....

Capacity of authorized agents:

.....

for and on behalf of the Contractor:

.....
.....
.....
(Name and address of organization)

Witness:

.....
(Full name in block letters as well as signature)
.....
(Signature)

Date:

for and on behalf of the Employer:

Signature of authorized agent:

Name of authorized agent:

Capacity of authorized agent:

for the **Employer:**

**KOUGA LOCAL MUNICIPALITY
P O Box 21
Jeffreys Bay
6330**

Witness:

.....
(Full name in block letters as well as signature)

.....
(Signature)

Date:

C1.5: DISCLOSURE STATEMENT

**PRO FORMA
DISCLOSURE STATEMENT**

Date:

Contract:
(Name)

Contractor:
(Name)

Employer:
(Name)

Employers Agent:
.....
(Name)

Dear Sirs

I am willing and available to serve as (ad-hoc / standing) Adjudication Board Member in the above-mentioned Contract.

In accordance with the General Conditions of Contract for Construction Works Adjudication Board Rules relating to the disclosure statements by selected or nominated persons to the adjudication, I hereby state that:

- I shall act with complete impartiality and know of nothing at this time, which could affect my impartiality.
- I have had no previous involvement in this project.
- I do not have any financial interest in this project.
- I am not currently employed by the Contractor, Employer or Employers Agent.
- I do not have any financial connections with the Contractor, Employer or Employers Agent.
- I do not have or have not had a personal relationship with any authoritative member of the Contractor, Employer or the Employers Agent which could affect my impartiality.
- I undertake to immediately disclose to the parties any changes in the above position which could affect my impartiality or be perceived to affect same.

Should there be any deviation from the foregoing statements, details shall be given.

I further declare that I am experienced in the work which is carried out under the Contract and in interpreting the contract documentation.

Name in full:

Signature:

C1.6: ADJUDICATION BOARD MEMBER AGREEMENT
--

**PRO FORMA
ADJUDICATION BOARD MEMBER AGREEMENT**

This Agreement is entered into between:

Adjudication Board Member:

.....
Name:
Physical Address:
Postal Address:
E-mail Address:
Facsimile Number:
Telephone Number:
Mobile Number:

Contractor:

Name:
Physical Address:
Postal Address:
E-mail Address:
Facsimile Number:
Telephone Number:
Mobile Number:

Employer:

Name:
Physical Address:
Postal Address:
E-mail Address:
Facsimile Number:
Telephone Number:
Mobile Number:

The Contractor and the Employer will hereinafter be collectively referred to as the Parties.

The Parties entered into a Contract for

..... (Name of project) which provides that a dispute under or in connection with the "Conditions of Contract for Plant and Design Build for Electrical and Mechanical Plant, and for Building and Engineering Works, Designed by the Contractor", First Edition, 1999 (Yellow Book) must be referred to **ad-hoc / standing adjudication**.

The undersigned natural person has been appointed to serve as Adjudication Board Member and together with the undersigned Parties agree as follows:

1. The Adjudication Board Member accepts to perform his duties in accordance with the terms of the Contract, the General Conditions of Contract for Construction Works Adjudication Board Rules and this Agreement.
2. The Adjudicator undertakes to remain independent and impartial of the Contractor, Employer and Employers Agent for the duration of the Adjudication Board proceedings.
3. The Adjudication Board Member agrees to serve for the duration of the Adjudication Board proceedings.
4. The parties may at any time, without cause and with immediate effect, jointly terminate this Agreement.
5. Unless the Parties agree, the Adjudication Board Member shall not act as arbitrator or representative of either Party in any subsequent proceedings between the Parties under the Contract. No Party may call the Adjudication Board Member as a witness in any such subsequent proceedings.
6. The standing Adjudication Board's duties shall end upon the Adjudication Board Member(s) receiving notice from the Parties of their joint decision to disband the Adjudication Board.
7. The Adjudication Board Member shall be paid in respect of time spent upon or in connection with the adjudication including time spent travelling:
 - a. A monthly retainer of (amount) for (number) of months, and/or
 - b. A daily fee of (amount) based on a (number) hour day, and/or
 - c. An hourly fee of (amount), and/or
 - d. A non-recurrent appointment fee of (amount) which shall be accounted for in the final sums payable
8. The Adjudication Board Member's expense incurred in adjudication work shall be reimbursed at cost.

Upon submission of an invoice for fees and expenses to the Parties, the **(Contractor / Employer)** * shall pay the full amount within 28 days of receipt of the invoice and shall be reimbursed by the other party by half the amount so that fees and expenses are borne equally by the Parties. Late payment of such invoice shall attract interest at prime plus 3% points compounded monthly at a prime rate charged by the Adjudication Board Member's bank.

This Agreement is entered into by:

Contractor's signature:

Contractor's name:

Place:

Date:

Employer's signature:

Employer's name:

Place:

Date:

Adjudication Board Member's signature:

Adjudication Board Member's name:

Place:

Date:

*** Delete the inapplicable party**

THE CONTRACT

PART 2 (OF 4) : PRICING DATA

- C2.1 Pricing Instructions**
- C2.2 Bill of Quantities**
- C2.3 Summary Page for Bill of Quantities**

C2.1 : PRICING INSTRUCTIONS

C2.1.1 Mechanical and Electrical Works

- 1.1 The Bills of Quantities contain only brief descriptions to identify the salient items required and the Tenderer is referred to the Scope of Work, specifications (including the project specification), drawings and the Conditions of Contract for the full requirements.
- 1.2 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. Reasonable prices shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out.
- 1.3 A price or rate is to be entered against each item in the 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.
- 1.4 Except where rates only are required, insert all amounts to be included in the total tendered price in the "Amount" column and show the corresponding total tendered price. The total tendered price shall govern in the event of any arithmetical errors (refer to F3.9 in Part T1.3, Standard Conditions of Tender).
- 1.5 The units of measurement described in the Bills of Quantities are metric units, as well as the following:

No.	=	number
Item/Sum	=	lump sum
Prov	=	Provisional sum
%	=	per cent
Days	=	"Day" as defined in the Conditions of Contract
hrs	=	Hours
m	=	metre
cubicm	=	cubic metre
sqmm	=	square millimeter
m ³ -month	=	cubic metre per month

- 1.6 Items have been provided where any further items considered necessary by the Tenderer can be priced. The Tenderer must provide full details of what has been allowed for with his Tender under these items. Should the Tenderer be aware of any items included in the Works which are not itemised in the Bill of Quantities, these items should be added in the space provided, and hence included in the Tender price.

1.7 Prime cost Sum

- (a) Description of Item to which Prime Cost Sum Applies Unit : PC Sum
- (b) Charge Required by Contractor on Sub-item (a) above Unit : %

Sub-items (a) and (b) will be provided in the Bill of Quantities for each different item to which a Prime Cost Sum applies.

The Contractor shall be reimbursed under sub-item(s) (a) in substitution of the respective Prime Cost Sums included in the Contract, the actual price(s) paid or payable by him in respect of the goods, materials or services supplied by others, but excluding any charges for the Contractor's labour, profit, carriage, establishment or other charges related to such goods, services or materials.

The Contractor shall be paid under sub-item (b), the respective percentage, as stated by the Contractor in its Tender, of the amount certified by the Engineer for payment under the related sub-item (a). The percentages tendered by the Contractor for each respective sub-item (b) included in the Bill of Quantities shall be deemed to in full and final compensation to the Contractor in respect of any charge by the Contractor for labour, carriage profit, establishment and for any other charges related to the goods, services or materials supplied under the related sub-item (a).

If the Contractor shall have omitted within its Tender to insert a tendered percentage under sub-item (b), or tendered a zero percentage, the Contractor's tendered rate for sub-item (b) shall be deemed to be zero and the Contractor shall not be entitled to any payment under sub-item (b)."

- 1.8 If any change in design is contemplated during the course of the Contract, the Contractor will be required to provide the Engineer with a detailed breakdown of the contract price involved with a similarly detailed breakdown of the suggested revised price together with supporting quotations and other relevant documentation to satisfy the Engineer that the revised price is built up in a similar manner to the original contract price.
- 1.9 The Tenderer is referred to Sub-Clause 4.11, Sufficiency of the Accepted Contract Amount, of the Conditions of Contract.
- 1.10 The Tenderer is referred to Sub-Clause 14.1, The Contract Price, of the Conditions of Contract as amended in the Particular Conditions in Part C1.2 Contract Data.
- 1.11 References to the Conditions of Contract in the Bills of Quantities shall mean the Conditions of Contract read in conjunction with the Appendix to Tender and Particular Conditions, all as set out in Part C1.2 Contract Data.
- 1.12 The Tenderer is referred to F2.13.1 in Part T1.3 Tender Data regarding the pricing of Variations from Specification and/or Options.
- 1.13 The Tenderer is referred to Sub-Clause 13.8 of the Particular Conditions in Part C1.2 Contract Data regarding Contract Price Adjustment and Variations in Rates of exchange; regarding the latter, the Tenderer is specifically referred to the Contractor's obligation to take out forward cover. Returnable Schedule T2.2.6 is attached hereto and must be completed by the Tenderer in conjunction with pricing the relevant items in the Bills of Quantities. The Tenderer's attention is also drawn to Sub-Clauses 2.1(b) and 10.3 (b) of the Particular Conditions.
- 1.14 The Rand value of imported equipment listed in Schedule T2.1.9 shall be carried forward from column (F) and included in the price of each of the relevant items in the Bills of Quantities.
- 1.15 The quantities set out in the schedule of quantities are approximate only and the quantities of work finally accepted and certified for payment, and not the quantities given in the schedule of quantities, shall be used for determining payments to the Contractor.
- 1.16 Payment for particular items billed shall conform to the payment clauses of the Conditions of Contract as amended by the following:
- a) Unless billed separately, the tendered rates or sums shall cover the cost of drawings and instructions as required in terms of C3.2.6.
 - b) The tendered rates or sums shall cover the costs of anything not specially mentioned but which an experienced contractor can reasonably foresee as being required, (e.g. all ancillaries, including all bolts, fastenings and brackets, safety guards and any work or material or equipment required for the proper execution and installation of such apparatus and equipment, piping, valves, gauges, instruments, either severally or collectively in complete working order), to enable the apparatus and equipment to be installed and/or function safely and correctly as specified. No claims whatsoever for extras will be allowed on the grounds that a necessary piece of equipment or a part thereof is not specifically mentioned in the Bill of Quantities.
 - c) With reference to Sub-Clause 14.3 of the General Conditions the Contractor will not be entitled to any payment until the required number of copies of the Progress Statement have been submitted by him to the Engineer. The Statement shall contain an invoice of all items as billed in the Bill of Quantities and reflect the progress made on each item. If a pro forma is enclosed in the Contract Documents the Contractor's Progress Statement shall conform to it. If there is no pro forma in the document the form of the Progress Statement used by the Contract will be subject to the approval of the Engineer.

C2.2: BILL OF QUANTITIES

Item No	Short Description	Unit	Quantity	Rate	Amount R c
	SCHEDULE 1: GENERAL REQUIREMENTS AND CONDITIONS Allow for all costs and expenses in connection with the following items:				
1	Providing Performance Security	Sum	1		
2	Providing Insurances	Sum	1		
3	Detailed design of the Works and Submission of Contractor's Documents	Sum	1		
4	Establishment of Contractor's camp, including security and ablution facilities	Sum	1		
5	De-establishment of Contractor's camp, including security and ablution facilities	Sum	1		
6	Provision of water, electricity and other services	Sum	1		
7	Provision of facilities for the Engineer, as described in the Scope of Work	Sum	1		
8	General expenses incurred in complying with the requirements of C1.2 Contract Data, not included above	Sum	1		
9	General expenses incurred in complying with the requirements of T1.2 Contract Data, not included above	Sum	1		
10	Percentage mark-up on all additional work identified by the Engineer (Provisional amount R 500 000)	%	R500 000		
	Health and Safety and Environmental Management				
11	Compliance with the requirements of the Occupational Health and Safety Act 1993 and Construction Regulations 2014, including appointment of Construction Supervisor and Competent Person (in terms of F4.1 in T1.2 Tender Data - for Health and Safety Plan see separate Item).	Sum	1		
12	Provision of and adherence to a Health and Safety Plan (in terms of F4.1 in T1.2 Tender Data).	Sum	1		
13	Compliance with the Health and Safety Specification in the Scope of Work	Sum	1		
14	Liaison, co-ordination and chairing of meetings in respect of Health and Safety requirements.	Sum	1		
15	Quality management plan and quality assurance system	Sum	1		
Total Carried Forward to Summary Page					

Item No	Short Description	Unit	Quantity	Rate	Amount R c
Brought Forward					
	SCHEDULE 2: THE WORKS				
1	Treatment works (procurement of all material cables, all connections to inflow water system and sterilization equipment, all assembly, all construction, all cost included)	Sum	1		
2	Pump systems to pump water to existing reservoirs tanks etc	Sum	1		
3	Repair old, elevated tank, install level sensors and control systems, connect to Scada system in Engineers offices in Jeffreys Bay	Sum	1		
4	Service/rebuild existing pump systems on site including 12-month guarantee	Sum	2		
5	Install and connect filtration /treatment works telemetry to the Scada system to enable monitoring and operations/maintenance of the WTW remotely from the Engineering Offices in Jeffreys Bay	Sum	1		
6	Specify and price any item that has been identified as being omitted or should be included:	Sum	1		
Total Carried forward to Summary Page					

C2.3: SUMMARY PAGE FOR BILL OF QUANTITIES

BILL NO	DESCRIPTION	AMOUNT
SCHEDULE 1	GENERAL REQUIREMENTS AND CONDITIONS	
SCHEDULE 2	THE WORKS	
TOTAL OF TENDER		
PLUS ALLOWANCE FOR VAT @ 15%		
TENDER SUM CARRIED FORWARD TO FORM C1.1: FORM OF OFFER AND ACCEPTANCE		

Signed

Date

Name

Position

Tenderer

CONTRACT

PART 3 (OF 4): SCOPE OF WORK

- C3.1 Description of the Works**
- C3.2 Engineering**
- C3.3 Procurement**
- C3.4 Construction**
- C3.5 Management**
- C3.6 Civil Specifications**

C3.1: DESCRIPTION OF THE WORKS

STATUS

In the event of any discrepancy between the Scope of Work and any part of the Project Specifications, the Bill of Quantities or the Drawings, the Project Specifications shall take precedence and prevail in the Contract.

C3.1.1 EMPLOYER'S OBJECTIVES

The objective of the Employer (Kouga Local Municipality) is to upgrade and refurbish the existing Gill Marcus Water Treatment Works located in Humansdorp.

The scope of refurbishment and/or upgrade shall be carried over one financial year and shall be phased as follows:

Phase 1: Decommissioning and dismantling of disused equipment; emptying and cleaning of out structures where required; site measurements; design, preparation and submission of GA drawings.

Phase 2: Procurement, manufacture, supply and installation of new equipment.

Phase 3: Testing, commissioning, training of operators, operation and maintenance.

Final effluent to comply with SANS 241 Standard for potable water.

C3.1.2 OVERVIEW OF THE WORKS

The existing Gill Marcus Water Treatment Works was designed to treat surface water only, capacity is approximately 1 MI/day.

The design must be upgraded to deal with a blend of borehole and surface water. It is expected that the flow from the surface source (dam) is approximately 0.5 MI/d and the flow from the boreholes is approximately 1.5 MI/d.

However, the design must ensure that the capacity of the works can deal with 3.5 MI/d. The blend can vary and it is required that the works must be able to deal with a low surface water inflow and a relatively high borehole water inflow.

C3.1.3 SCOPE OF WORK

The Contractor shall be responsible for the design and construction of the Works and that the design shall be prepared by qualified engineers or other professionals.

The bulk of the work under this contract entails replacement/provision and installation of mechanical and electrical equipment on site. The required civil works to be able to deliver the required output must also be included in the design and

Some of the electrical equipment that is operational and still intact can be refurbishment and reinstated provided that it is a required part of the design.

The scope of work which shall be provided and performed by the Contractor is as follows:

- Dismantling and removal of disused equipment
- Disposal or transfer off site of disused equipment to a suitable location identified by the Employer
- Renovations/repairs of site outbuildings
- Install new treatment equipment, electrical and control equipment
- Install instrumentation

- Site lighting
- Signage
- Repair of existing fencing where required/vandalised
- Construction of valve chambers and associated pipework
- Surface localised epoxy repairs to concrete, reprofiling, crack-injection epoxy to walls and application of migrating corrosion inhibitor to existing structures where required and as instructed by the Engineer
- Install automated valves, pumps, level controls, control systems in treatment works, pump stations and reservoirs and connect to the Scada system at the Jeffreys Bay Engineering Offices to ensure remote monitoring and control.
- Repair/rehabilitate old, elevated reservoir (tank) with HDPE liner to stop leaks, install and connect level sensors to Scada in KLM Engineers' Offices, located in Jeffreys Bay.
- Install all required pumps to pump treated water to the relevant reservoirs on site.
- Service/rebuild all existing pump and pump stations on site ensuring they are operational and in working condition
- Tests on Completion
- Commissioning
- Trial Operation Period
- Training of operators of new equipment
- Operating and Maintenance Manuals.

NB: The Contractor may be exposed to criminal actions, including theft and vandalism, and shall make the necessary adequate security arrangements for the duration of the Contract.

C3.1.4 LOCATION OF THE WORKS

The Gill Marcus Water Treatment Works is situated in Kruisfontein / Humandorp. Access to the works is from Felix Street in the north or from the R102, through Arcadia in the south. The works is operated by and located within the Kouga Local Municipal area.

A locality plan is included under Part C4.1.

C3.1.5 DESCRIPTION OF SITE CONDITIONS

The following site conditions shall be taken into consideration:

- Maximum Temperature: 35°C
- Minimum Temperature: 6 °C
- Maximum Relative Humidity: 75%
- Corrosion Conditions: medium
- Lightning: Very Low
- Rainfall: ± 700 mm rain p.a. average

C3.1.6 TEMPORARY WORKS

The Contractor shall be responsible for designing and providing any temporary works required. Such temporary works shall be removed upon completion of the Works. Such works and the positioning thereof are to be approved by the Engineer before erection and operation on site.

C3.2: ENGINEERING

STATUS

In the event of any discrepancy between the Scope of Works and a part or parts of the Project Specifications, the Bill of Quantities or the Drawings, the Project Specifications shall take precedence and prevail in the Contract.

C3.2.1 DESIGN

FIDIC General Condition 5 states that the Contractor shall be responsible for the design of the Works and that the design shall be prepared by qualified engineers or other professionals.

(a) OHS Act

In addition to safety requirements during the construction of the Works on Site, the Contractor is responsible for ensuring that all of the equipment supplied, and the complete installation comply with the Occupational Health and Safety Act, Act 85 of 1993 and the regulations promulgated there under.

(b) General Safety Requirements

Safety shall be an all-important and overriding consideration and proper attention shall be paid to this aspect at the design stage. Installations which do not comply with the OHS Act shall be corrected by the Contractor at no cost to the Employer.

Equipment which is potentially dangerous shall be designed in accordance with a relevant South African or international Standard which deals with the hazard.

Hazards shall be avoided or guarded to the approval of the Engineer. Nip points shall be guarded. Sharp corners shall be rounded off. Items such as operating handles, supports and protrusions shall be kept clear of access ways or shall be marked clearly.

The Contractor shall cover all unsafe gaps and openings left in structures after installation of the equipment.

Each motor driven device shall be provided with an emergency stop station in an appropriate position.

Trip wires shall be provided along the accessible side/s of moving conveyor belts, chains, etc., irrespective of operating speed and in addition to any guards provided. These shall stop the driving motor when pulled.

(c) General requirements

Design shall ensure safety, robust construction, reliability, durability, prevention of avoidable corrosion, neatness, protection of the environment as well as ease of maintenance and operation.

The Contractor's design shall, as applicable, be based on:

- the full range of duties which can be reasonably anticipated;
- the maximum pressure or vacuum which can be produced under all conditions including blocked or closed inlet and outlet circuits;
- conservative service and safety factors based on approved standards or laid down in the printed specifications of reputable and approved manufacturers;
- twenty-four hour per day operation (unless specified otherwise);
- a minimum life of 100 000 hours before major part replacement;
- prevention of serious damage from normal operational problems such as blockages, blinding, jamming, seizure, malfunction and, as far as practical, mal-operation;
- the power and torque transmitted by the driver system under full load and stalled conditions;
- machines with non-overloading characteristics shall be selected wherever possible; e.g.: motors shall be sized so that they cannot be overloaded by the driven machine.

(d) Hazardous Locations

Equipment which is to be installed in areas with hazardous area location zoning for gasses or for dusts in terms of SANS 10108, shall comply with the requirements of that Standard.

(e) Fail Safe Operations and Protections

Where damage can occur from normal operational or other foreseeable problems, plant, equipment and systems shall be designed to be fail safe (i.e. shall have built in redundant elements) or shall be fail to safe (i.e. shall return to a safe condition where no further damage can be done in the event of a failure, malfunction, mal-operation, overload and, as far as practical, misuse). All reasonable and economically justifiable protections to prevent or limit damage to plant and equipment, particularly in high risk situations, shall be incorporated.

Protections shall:

- be directed at the source of the problem, limit forces to safe levels and act quickly enough to prevent damage (electrical thermal type overloads are inadequate);
- stop, or prevent from starting, all equipment at risk;
- activate an alarm with a labelled indicator on the control panel, HMI or SCADA mimic whenever a protection operates;
- operate reliably after long inactive periods exposed to corrosive and dirty conditions.

Contractors shall highlight equipment limitations which can be exceeded during operation and cannot be guarded against.

(f) Moving Parts

The following general requirements apply to machines and to all equipment with moving parts such as headstocks, extension spindles, swivelling davits, heavy duty hinges, pivots and the like:

- All rotating or swivelling shafts, pins and the like, shall be adequately supported, guided and restrained by lubricated or self-lubricating bearings, collars and/or bushes.
- Swivelling joints on linkages and the like shall be of the "universal" or fork and rod type with bearings or bushes fitted to the eyes or forks.
- Abrasion resistant materials and slow speed operation shall be used for abrasive applications. Raw sewage and sludge shall be regarded as abrasive.
- All applications associated with wastewater shall be regarded as corrosive and materials of construction shall be selected to suit.
- Susceptibility to fatigue failure shall be minimised by proper design and manufacturing procedures. Sharp changes in section and welding shall be avoided in components subject to fluctuating stress.
- The locking of nuts and pins in position shall be done to the approval of the Engineer.
- Wearing parts shall be designed for ease of removal and replacement.

(g) Arrangement and Mounting

The design shall take the following requirements into consideration:

- Lifting eyes, lugs, hooks, etc., shall be provided on heavy or large items to facilitate handling.
- Castings or fabrications shall have machined pads for seating and be mounted on either soleplates or baseplates as appropriate.
- Where accurate alignment is required, positioning pins and/or jacking screws shall be provided.
- The needs of operation and maintenance including neatness, access, working space, safety, cleaning, adjustment, handling, assembly, alignment, disassembly, removal, etc.
- With plant and equipment to be mounted on or against concrete or brick structures built by others, provision shall be made for adjustment in the mechanical design. Any special accuracy requirements must be specified on the Contractor's Documents.

(h) Prevention of Corrosion

The Contractor shall review all designs from a corrosion protection point of view. Any details which might have a negative effect on the corrosion protection and the future application of coatings are to be brought to the Engineer's attention for a ruling prior to commencement of work.

All items shall be designed to minimise corrosion in the environment in which they will be exposed. Particular emphasis shall be placed on accessibility for surface preparation and the application of coatings. The detailed requirements for corrosion protection are dealt with elsewhere in this document.

Mastics, sealants, insertion rubber or suitable gasket material shall be used to seal unavoidable crevices such as bolted connections; e.g. under guardrail feet.

The design of articles shall ensure that surfaces of corrodible materials, such as carbon steel, shall be accessible for initial coating and for maintenance. The use of back-to-back angles, partially open box sections or inaccessible stiffeners shall be avoided. Fabrication openings shall be of sufficient size to enable fettling, blast cleaning, painting, pickling and passivation and particular attention shall be paid to the fabrication and inspection requirements for internal weld surfaces in pipework.

(i) Valves

All valves shall comply with the following requirements:

- All underground Valves shall be anti-clockwise closing except inside pump stations where they shall be clockwise closing and shall have hand wheels (with open/close directions imprinted on the wheel) with non-rising spindles.
- Valves shall be at least class 10 or as specified in the relevant particular specification.
- Valves shall comply with the requirements of SABS 664/1974.

C3.2.2 CONTROL

(a) General

Control systems shall comply with the requirements as detailed throughout the specifications.

(b) Equipment

Equipment control and system control is specified in the equipment clauses.

C3.2.3 CONTRACTOR'S DOCUMENTS TO BE SUBMITTED FOR APPROVAL

(a) General Requirements

The Contractor's Documents shall comply with the following general requirements:

- Three copies of all documents shall be submitted.
- A register of all the Contractor's documents shall be provided with each submission.
- Drawings shall be prepared in accordance with the latest issue of SANS 10111. An equivalent international code of engineering drawing practice will also be acceptable.
- General Arrangement drawings shall be to A1 size and electronic CAD Versions shall be made available to the Engineer.
- Drawings shall be to scale, with both the scale and the drawing being large enough to clearly show all relevant components of the plant and equipment.
- In addition to the usual plan and two side elevations, sufficient additional sections shall be included to clearly show the arrangement of all plant and equipment.
- Item lists shall be provided on the drawing or on a separate parts list.

- Item descriptions shall include the material of construction, quantity and full identification information, including, as applicable, brand name, manufacturer's reference number, model number, size, rating, source, duty, quantity, etc.

(b) Required Submissions within 14 days

The Contractor shall submit the following for acceptance within 14 working days from the Commencement Date:

- Programme for The Works in Gantt chart format.
- Health and Safety Plan for approval by the Client's appointed Health and Safety Responsible Person.
- Copies of insurance policies in respect of the Works, Special Risks and Liability Insurance and evidence of payment of current premiums.
- Valid Performance Security.

(c) Required Submissions within 20 days

The Contractor shall submit the following where applicable for acceptance within max 20 days from the Commencement Date:

- Dimensioned layout drawings (preferably A1 size) of the installation showing the proposed layout and design of all plant and equipment. Sufficient sections and elevations must be shown so that the relative arrangement of all equipment is clear. This shall be done for all equipment to be supplied under this Contract.
- Process and instrumentation diagram, indicating items of equipment.
- Motor and instrumentation list
- Dimensioned arrangement drawings of all equipment requirements in respect of the building and civil structures
- Civil requirements for the new plinths
- Loading requirements for crawl beam, gantries and any other lifting equipment
- Drawings of pipe support details
- Technical data sheets for all coatings proposed
- Layout and construction drawings of all electrical distribution, starter, control, instrument and indicator panels with full details of proposed switchgear, relays, timers, instruments, indicators, trips, control switches, labelling (including wording), printing, and so forth
- Data sheets giving performance, sizing, physical and general technical data for all components of the installation
- Dimensioned drawings of motors
- Overall single line diagram
- Control system specifications
- FDS contents list
- Control philosophy
- Contents list for the Operation and Maintenance Manual
- Quality Control Plans for equipment
- Contractor's document registers

The date by which possession of the Site can be handed over to the Contractor and consequently the completion date of the Works, is dependent on the date of submission and acceptance of the documents referred to above, and also dependent on Clause 3.5.1 in Part C 3.5 (Management). Cost resulting from delays in submission of the Contractor's Documents or in correcting errors or making changes on documents not approved by the Engineer shall be for the Contractor's account.

(d) Required Submissions before Commissioning the Works

Prior to commencement of the Tests on Completion and the start of the 28-day Trial Operation Period, the Contractor shall submit:

- Pre-commissioning testing results
- Commissioning schedule
- Operator training plan
- Two copies of the Operation and Maintenance Manual as specified in the Specifications.

(e) Before Taking-Over Certificate

Before the Taking-Over Certificate is issued, the Contractor shall provide 3 copies of the approved version of the Installation, Operation and Maintenance Manual and shall also provide, on electronic data storage, all drawings supplied in terms of the Required Submissions within 42 and 70 days above, corrected where necessary to be "as built". The drawings shall be configured for AutoCAD, or equivalent. The Manual shall comply with the specifications for O&M manuals as detailed in the Specifications.

C3.2.4 APPROVALS AND INSPECTIONS

(a) Method statements

The Contractor shall be required to prepare method statements subject to the approval of the Engineer and Client for the installation of equipment on any structures, or prior to the pre-commissioning or commissioning of any equipment.

(b) Approvals before Manufacturing and Inspections

All drawings which are to be submitted in terms of the Contract shall be approved in principle by the Engineer before any manufacturing or inspection of manufactured or supplied items commences. Refer to Clause 5 of the Conditions of Contract for further information in this regard.

(c) Quality Control Plans

Quality Control Plans (QCP's) of all manufactured items shall be submitted to the Engineer for approval prior to the start of any manufacturing. The Engineer shall review these QCP's and identify any hold points which he deems necessary for the specific item of equipment. The necessary hold points identified by the Engineer shall be taken into consideration and failure to adhere to any hold points shall constitute a failure of approval and any costs incurred in this regard shall be borne by the Contractor.

(d) Inspections

Inspections will be done in accordance with sub-clause 7.4 of the Conditions of Contract. The Contractor shall arrange timeously with the Engineer for any inspections, at least 5 working days in advance. The inspections carried out by the Engineer shall not absolve the Contractor from his responsibilities with regards to the correctness of any of the Works.

C 3.2.5 DRAWINGS

The Contractor shall use only the dimensions stated in figures on the Drawings in setting out the Works, and dimensions shall not be scaled from the Drawings, unless required by the Engineer. The Engineer will, on the request of the Contractor in accordance with the provisions of the Conditions of Contract, provide such dimensions as may have been omitted from the Drawings.

The Contractor shall ensure that accurate as-built records are kept of all infrastructure installed or relocated during the Contract. The position of pipe bends, junction boxes, duct ends, and all other underground infrastructure shall be given by either co-ordinates or stake value and offset. Where necessary, levels shall also be given. A marked-up set of drawings shall also be kept and updated by the Contractor. This information shall be supplied to the Engineer's Representative on a regular basis.

All information in possession of the Contractor, required by the Engineer and/or the Engineer's Representative to complete the as-built/record drawings, must be submitted to the Engineer's Representative before a Certificate of Completion will be issued.

C3.2.6 HAZOP STUDY

Not required

C3.3: PROCUREMENT

C3.3.1 PREFERENTIAL PROCUREMENT

C3.3.1.1 Requirements

Refer to Clauses 5.11.1, 5.11.7 and 5.11.8 of the Tender Data and Form 1G: Form MBD 6: Preference Points Claim form in terms of the Preferential Procurement Regulations 2011 (80/20 version) of the Tender Data.

C3.3.1.2 Resources Standards pertaining to targeted procurement

Tenders will be evaluated in terms of the Employer's Procurement Points system. The criteria for allocation of procurement points are stated in Clauses 5.11.7 and 5.11.8 of the Tender Data.

C3.3.2 SUBCONTRACTING

C3.3.2.1 Scope of mandatory subcontract works

The Contractor shall note that the Employer is committed to local Emerging Enterprise development and this forms part of this.

The sub-contracting of work is required for all CIDB-related projects in the following ranges:

- a) R 5M>, but < R 10M requires Bidder to sub-contract 10% of the value of the project
- b) R 10M >, but < R 15M requires Bidder to sub-contract 15% of the value of the project
- c) R 15 M>, but < R20 requires Bidder to sub-contract 20% of the value of the project
- d) R 20 M >, but < R 25M requires Bidder to sub-contract 25% of the value of the project
- e) R 25 > requires Bidder to sub-contract 30% of the value of the project

IV. The sub-contracting value will be based on the estimated value of the project either determined by the director or project manager. Where the successful bidder's price falls within any other range, the sub-contracting range included in the Bid Document will be applied.

V. The municipality may include sub-contracting for any other none CIDB related project as may be requested by the Director of the Department to promote local development.

VI. Community Based Suppliers or service providers/ward-based suppliers or service providers must be considered for subcontracting by the main contractor. The first preference for subcontracting must be given to community or ward-based suppliers of that particular ward where the project is taking place. If the required skill or expertise is not available from the ward / area where the project is taking place, the main contractor is permitted to accept service provers or suppliers within the KLM jurisdiction. Those service provider or suppliers would then contract directly with the main contractor.

It is the Employer's intention for the Contractor to enter in a subcontract with a local Emerging Enterprise/s, where twenty five percent (25%) of the work shall be subcontracted in accordance with the subcontracting procedures referred to in this scope of work who are registered with the CIDB with a Contractor Grading Designation of 1-3 in an appropriate class of construction work.

C3.3.2.2 Preferred subcontractors / suppliers

Local Emerging Enterprises registered on the Kouga Local Municipality Database and/or nominated by the municipality.

C3.3.2.3 Subcontracting procedures

All matters pertaining to subcontractors and the work executed by them shall be dealt with directly between the Employer's Agent and the Contractor in the context of all subcontract work being an integral part of the Works for which the Contractor is responsible.

Subcontractors shall comply in full to all aspects of the Contract.

The Employer's Agent will not liaise directly with any subcontractors nor will he issue instructions concerning the subcontract works directly to any subcontractor.

The Contractor shall remain responsible for providing the subcontracted portion of the works as if the work had not been subcontracted.

Subcontractors shall comply in full, to all aspects of the Contract.

C3.3.2.4 Attendance on subcontractors

The Contractor shall guide, assist, advise and mentor the local EE subcontractor/s and guidance on how to establish and determine rates.

The Contractor shall be responsible for ensuring that the prospective local EE subcontractor/s fully comprehend the:

- Implications of the liabilities and responsibilities inherent in the contract into which the tenderer entered.
- Implications of the tendered rates.
- Scope and extent of the Works.
- Proper procedures for the submission of a tender.
- Procedures and basis on which tenders will be evaluated and awarded.

The Contractor shall closely manage, mentor, supervise, guide and assist the EE in all aspects of management, planning, execution and the completion of work.

The above shall include inter alia, but is not limited to, the following:

- (i) Planning and programming of the Works.
- (ii) The sourcing, ordering, purchasing, hiring all the necessary Construction Equipment, Materials, tools and accidentals necessary and required for the successful execution and completion of the Permanent as well as the Temporary Works.
- (iii) Labour relations and employment.
- (iv) Monthly measurements, costing and invoicing.
- (v) General safety, occupational health and safety matters.
- (vi) Functions of civil engineering infrastructure, structures, services and systems.
- (vii) Interpreting and understanding the contract.
- (viii) Construction and maintenance methods and procedures.
- (ix) Communication.
- (x) Cash-flow control, submitting invoices and payment certificates.
- (xi) Planning, programming, scheduling, critical path control and acceleration.
- (xii) Maintenance planning.
- (xiii) Material procurement and control.
- (xiv) Risk limitation and management.
- (xv) Quality assurance and procedures.
- (xvi) Compliances with all applicable laws, regulations, statutory provisions and agreements.
- (xvii) General Conditions of Contract and Contract Data.
- (xviii) Contractual claims, if situations arise that entitle a contractor to claims in terms of the Conditions of Contract.
- (xix) Profit and loss.
- (xx) Replacement and running costs of Construction Equipment.

The extent and level of management, mentorship, supervision, guidance and assistance to be provided by the Contractor shall be in commensuration with the expertise of the relevant EE and should be so directed as to enable the EE to achieve the successful execution and completion of the respective works.

C3.3.3 SANCTIONS

In the event that the Tenderer fails to substantiate that any failure to achieve the Contract Participation Goal (CPG) outcomes was due to quantitative under runs, the elimination of items, or any other reasons beyond the Contractor's control which may be acceptable to the Employer, the Contractor shall be liable to pay to the Employer a financial penalty calculated in the following manner:

$$P = 0,50 \times \frac{(D-D_0)}{(100)} \times N_A$$

Where D = tendered Contractor participation goal percentage.

D₀ = the Contract Participation Goal, which the Employer's Representative based on the credits passed, certifies as being achieved upon completion of the contract.

N_A = Net Amount of the Tender

P = Rand value of penalty payable.

The penalties will be calculated with each certificate, based on the information provided under the monitoring indicated in clause C3.3.4 below.

C3.3.4 MONITORING / REPORTING

The reporting requirements below will be adhered to.

CPG attainment will be monitored on a monthly basis, and for this the Contractor will supply the relevant information at a time set by the Employer's Agent.

C3.3.4.1 The Contractor shall submit all the documentation required in terms of details of his plan to achieve CPG, compliance with the contract and C3.3.4.2 timeously and, together with his programme of activities, a schedule which indicates clearly the expected commencement and completion dates of work and services to be performed by all the targeted enterprises engaged on the contract for the purpose of securing credits towards the contract participation goal. This schedule shall be updated by the Contractor whenever a change in date occurs.

C3.3.4.2 The Contractor shall prepare and attach to his claim for payment, in a form approved by the Employer, the following:

- a) a brief report which describes the commercially useful functions performed by the targeted enterprises in the performance of the contract, both over the interim period and on a cumulative basis;
- b) a schedule reflecting the estimated total value of the contracts, the cumulative value of the contracts and the value of supplies provided or work and services performed (or both) over the period for which payment is claimed in respect of each and every targeted enterprise performing commercially useful functions;

C3.3.4.3 Should random inspections conducted by the Employer's Agent on targeted enterprise activities indicate that such enterprises are not performing in accordance with the requirements of this part, the Contractor shall provide, in addition to the requirements of C3.3.4.2, separate weekly resource returns and any other relevant information in respect of such targeted enterprises in a format approved by the Employer's Agent.

C3.3.4.4 The Employer's Agent shall certify the value of the credits counted towards the contract participation goal whenever a claim for payment is issued to the employer and shall notify the Contractor of this amount.

- C3.3.4.5 The Contractor shall, upon completion of each individual targeted enterprise's contract, issue a completion certificate and certify the amount paid to such targeted enterprises. He shall submit the certificates, counter-certified by the relevant targeted enterprise, to the Employer's Agent for record-keeping purposes. The Contractor shall furnish reasons to the Employer whenever it is not possible to obtain such counter certification.

C3.3.5 CONTRACTOR'S OBLIGATIONS TO SUBCONTRACTED EEs

(1) Dispute Avoidance and Resolution Procedures

The Contractor shall at all times

- (a) apply the terms and conditions of the subcontract fairly and justly, taking due cognisance of the level of sophistication and experience of the EE subcontractor concerned.
- (b) closely monitor all EE subcontracts and issue reasonable warnings when any contravention of the terms of the subcontract has occurred or appears likely to occur. The Contractor shall give EEs reasonable opportunity to avoid or make good any such contravention.

When taking any disciplinary actions or imposing any penalties provided for in the subcontract, the Contractor shall explain fully that such actions are in accordance with the conditions of subcontract.

Should any dispute arise between the Contractor and an EE, such dispute shall be resolved in accordance with the provisions of the subcontract.

Should an EE subcontractor be terminated, the Contractor shall replace such subcontractor with a local EE subcontractor listed on the KLM database.

(2) Quality of Work and Performance of EE subcontractors

If, in the opinion of the Employer's Agent, an EE Subcontractor fails to comply with any of the criteria listed below, he/she shall issue a written warning to the Contractor stating all the areas of non-compliance.

- (a) Acceptable standard of work as set out in the subcontract specifications.
- (b) Progress in accordance with the time constraints in the subcontract.
- (c) Site safety.

The circumstances that may warrant the issue of a written warning are, however, not limited to those listed above.

A copy of the letter of warning shall be forwarded to the Employer.

C3.3.6 ISSUING OF COMPLETION CERTIFICATE

The Contractor shall, within 7 days of the completion of each subcontract completed in accordance with the provisions of this specification, issue free of charge to the EE a Certificate of Completion co-signed by the Employer's Agent and a senior representative of the Contractor who has been duly authorised to do so.

C3.3.7 MEASUREMENT AND PAYMENT

No direct payment will be made for the cost of dealing with EE's. Payment will be deemed to be covered by the rates and sums tendered and paid for the various items of work included under the contract.

C3.4: CONSTRUCTION

STATUS

In the event of any discrepancy between the Scope of Works and a part or parts of the Project Specifications, the Bill of Quantities or the Drawings, the Project Specifications shall take precedence and prevail in the Contract.

C3.4.1 EXISTING SERVICES

C3.4.1.1 Known services

A potable water supply and power supply to the site exists. The Contractor shall inform the Engineer immediately if services other than those shown on the drawings are detected.

C3.4.1.2 Prevention of contamination of existing works

The Contractor's operations shall be carried out in such a way as to minimize the formation of dust and the fouling of water in the existing works.

C3.4.1.3 Damage to services

The Contractor shall repair or arrange to immediately repair any damage to the existing services at his own cost if the damage was caused by the Contractor during the construction process.

C3.4.1.4 Reinstatement of services and structures damaged during construction

The Contractor shall immediately inform the Engineer of any damage to existing services or structures.

C3.4.2 WORKS SPECIFICATIONS

The standards division of the SABS has changed its name and will henceforth publish standards under the name Standards South Africa.

All existing standards are being re-designated as South African National Standards (SANS). This will eventually result in some numbering changes to the existing standards.

Throughout the contract documents inclusive of the above standardized specifications, the terms Scope of Works and Project Specifications are synonymous.

All works under the scope of works shall comply with the Project Specifications and the latest relevant SANS, BS or ISO standards where applicable.

C3.4.3 SITE ESTABLISHMENT

(a) Water sources

The responsible water supply authority in the area of the Site is the Kouga Local Municipality.

Should the Contractor wish to utilise such water supply, he shall himself be responsible for making his own arrangements with the responsible water supply authority for the supply of all water that he may require from such reticulation network for construction purposes as well as for domestic consumption.

If so required by the responsible water supply authority, the Contractor shall further be responsible, at his own cost, for making or otherwise providing metered connections to the available services at the positions specified by the water authority, as well as for the removal of such connections on completion of the Contract.

No warranty is offered or given by the Employer that the existing available reticulated water supply will necessarily be adequate for the Contractor's purposes nor that such supply is in any way guaranteed.

All charges as may be levied by the responsible water supply authority in respect of water consumed by the Contractor shall be for the Contractor's account and payment to the Contractor in respect thereof shall, be deemed to be included in the sums tendered by the Contractor for the various Preliminary and General items listed in the Bill of Quantities, as well as in the rates tendered by the Contractor for the various other items listed in the Bill of Quantities which require the consumption of water.

The Contractor shall, when reasonably required by the Engineer, produce documentary proof that all amounts as may have become due and payable by the Contractor to the responsible water authority have been promptly paid in full.

(b) Electricity supply

A reticulated electrical power supply is available in the vicinity of the Site.

The responsible electricity supply authority in the area of the Site is the Kouga Local Municipality.

Should the Contractor wish to avail himself of such supply, he shall, at his own cost, be responsible for making his own arrangements with the responsible electricity supply authority for the supply of all electrical power he may require from such reticulation network for construction purposes as well as for domestic consumption.

If so required by the responsible electricity supply authority, the Contractor shall, at his own cost, be responsible for making metered connections to the available services at the positions specified by the electricity supply authority, as well as for the removal of such connections on completion of the Contract.

No warranty is offered or given by the Employer that the existing available reticulated electrical power supply will necessarily be adequate for the Contractor's purposes nor that its supply is in any way guaranteed.

All charges as may be levied by the responsible electricity supply authority in respect of electrical power consumed by the Contractor shall be for the Contractor's account and payment to the Contractor in respect thereof shall, in accordance with the provisions of sub-clause C3.4.3.2(c), be deemed to be included in the sums tendered by the Contractor for the various Preliminary and General items listed in the Bill of Quantities, as well as in the rates tendered by the Contractor for the various other items listed in the Bill of Quantities which require the consumption of electricity.

The Contractor shall, when reasonably required by the Engineer, produce documentary proof that all amounts as may have become due and payable by the Contractor to the responsible electricity supply authority have been promptly paid in full.

(c) Excrement disposal

The responsible sewage disposal authority is the Kouga Local Municipality.

Should the Contractor wish to avail himself of such facility, at his own cost, be responsible for making his own arrangements with the responsible disposal authority, and for making such connections he may require to the available services.

If so required by the responsible sewage disposal authority, the Contractor shall, at his own cost, be responsible for making connections to the available services at the positions specified by the sewage disposal authority, as well as for the removal of such connections on completion of the Contract.

No warranty is offered or given by the Employer that the existing available reticulated water-borne sewage disposal will necessarily be adequate for the Contractor's purposes nor that its operation is in any way guaranteed.

All charges as may be levied by the responsible sewage disposal authority in respect of the disposal of sewage generated by the Contractor shall be for the Contractor's account and payment to the Contractor in respect thereof shall be deemed to be included in the sums tendered by the Contractor for the various Preliminary and General items listed in the Bill of Quantities.

The Contractor shall, when reasonably required by the Engineer, produce documentary proof that all amounts that may have become due and payable by the Contractor to the responsible sewage disposal authority have been promptly paid in full.

(d) Area for contractor's site establishment

The Contractor shall provide a suitable camp to locate all facilities, including, as necessary, offices and stores required for the proper performance of the Contract. The Contractor shall supply and maintain adequate and suitable protection for the storage of materials that might deteriorate if exposed to the weather. The Contractor shall be responsible for arranging, at his own cost, for the provision of all services he may require in the area, as well as elsewhere on the Site.

On completion of the Works, or when the facilities provided by the Contractor are no longer required, the Contractor shall remove these facilities and clear away all indications of their presence.

(e) Facilities for the Engineer

Not required.

(f) Security

NB: The Contractor may be exposed to criminal actions, including theft and vandalism, and shall make the necessary adequate security arrangements for the duration of the Contract. The Contractor shall, as a minimum, enclose his site camp with a security fence. The Contractor shall remove the fencing and shall rehabilitate the camp site areas on completion of the Contract.

(g) Permits and wayleaves

The Contractor shall be responsible for obtaining all of the necessary wayleaves, permissions or permits applicable to working near any existing services or other infrastructure on Site and shall abide by the safety conditions imposed by such wayleaves, permissions or permits.

The Contractor shall ensure that all wayleaves, permissions and permits are kept on site and are available for inspection by the relevant service authorities on demand.

The Contractor shall also ensure that any wayleaves in respect of electricity services are renewed timeously every three months.

(h) Access to properties

The Contractor shall organise the work to cause the least possible inconvenience to the public and to the property owners adjacent to or affected by the work, and except as hereunder provided, shall at all times provide and allow pedestrian and vehicular access to properties within or adjoining or affected by the area in which he is working. In this respect the Contractor's attention is drawn to Clause 4.13 of the Conditions of Contract.

(i) Dealing with Water

The Contractor shall deal with water on the Site so that the Works are kept sufficiently dry for their proper execution. The Contractor shall:

- a) Prevent flooding of the Works and by the Works
- b) Keep all completed Works properly drained
- c) Not inhibit surface drainage
- d) Manage and dispose of water; which shall include for by-pass arrangements, temporary earthworks, cofferdams, pumping equipment, well-pointing, de-watering equipment etc, and for dealing with all possible flows whether or not the existing flow path is being interfered with during construction

- e) Note that the Contractor under this contract shall be responsible for dewatering of the tanks during installation of mechanical equipment.

The onus to produce work that conforms in quality and accuracy of detail to the requirements of the Specifications and Drawings rests with the Contractor, and the Contractor shall, at his own expense, institute a quality control system and provide suitably qualified and experienced

C3.4.4 PLANT AND MATERIALS

C3.4.4.1 Plant and materials supplied by the employer

The Employer shall not supply any plant or materials.

C3.4.4.2 Materials, samples and shop drawings

(a) Samples

Materials or work which does not conform to the approved samples submitted in terms of Sub-clause 7.3 of the Conditions of Contract will be rejected. The Engineer reserves the right to submit samples to tests to ensure that the material represented by the sample meets the specification requirements.

The costs of any such tests conducted by or on behalf of the Engineer, the results of which indicate that the samples provided by the Contractor do not conform to the requirements of the Contract, shall, in accordance with the provisions of Sub-clause 7.5 of the Conditions of Contract, be for the Contractor's account.

C3.4.5 CONSTRUCTION EQUIPMENT

C3.4.5.1 Requirements for equipment

The Contractor shall supply all the plant and equipment required and all plant and equipment shall comply with the requirements as stipulated in the Environmental and Occupational Health and Safety Act and the Construction Regulation Act (2014).

C3.4.5.2 Equipment provided by the employer

The Employer shall supply no plant, material or equipment.

C3.4.6 SITE USAGE

Access to site shall be limited to the contractor, his personnel and authorised operational staff. The contractor shall be responsible to control unauthorized entry to the site and shall inform the Engineer of any breach of such rules. The site shall be managed and used for its intended purpose.

It must further be noted that the Kwanomzamo WWTW must perform satisfactory in terms of its effluent standards and the Employer's employees shall require access to all parts of the treatment works for normal or emergency duties and work.

C3.4.7 OTHER CONTRACTORS

The contractor shall arrange or adjust as necessary, the sequence of its work so as not to delay the programmes of the other contractors.

C3.5: MANAGEMENT

STATUS

In the event of any discrepancy between the Scope of Works and a part or parts of the Project Specifications, the Bill of Quantities or the Drawings, the Project Specifications shall take precedence and prevail in the Contract.

C3.5.1 PROGRAMMING AND PLANNING

The Construction Programme to be submitted to the Engineer, within 14 days from the commencement date, by the Contractor and shall meet the following requirements:

- a) Be in the form of a bar chart.
- b) Clearly indicate the start and end dates and duration of all construction activities and identify the critical path.
- c) Clearly identify all the major operation and maintenance activities that may have a significant impact on the day to day operations.
- d) Take full cognizance of all the Contractor's risks and obligations in terms of the Contract.
- e) Indicate key dates in respect of work to be carried out by others, and must also allow for and indicate time frames for the submitting of shop drawings to the Engineer for Approval. Allowance should be made in the Work Programme for the Engineer to scrutinize, comment and approve the drawings submitted (refer par C3.2.3 of the tender document).
- f) Indicate key dates in respect of information to be provided by the Engineer and/or others.

The said Programme and all revisions thereto shall also be provided to the Engineers in electronic digital format using the MS PROJECT software.

The programme shall be updated monthly during the contract period. In addition to the above, a monthly cash flow forecast shall also be submitted to the Engineer.

The Contractor must plan their works and order of works to allow the existing WWTW to operate satisfactorily.

C3.5.2 CONTRACTOR'S RESPONSIBILITY IN TERMS OF THE OHS ACT

The Contractor shall provide a safe and healthy working environment and shall direct activities in such a manner that employees and any other persons, who may be directly affected by these activities, are not exposed to hazards to their health and safety.

The Contractor shall comply with the Occupational Health and Safety Act (Act No. 85 of 1993) (OHS Act) and specifically the Construction Regulations 2014 issued in terms of Section 43 of the Act (GNR 84 of 7 February 2014).

For the purpose of this Contract, the Contractor is required to sign confirmation of status as mandatory and Employer for the execution of the Contract by entering into an agreement with the Employer in terms of the Occupational Health and Safety Act by executing the Agreement form C1.4 included in Section C1: Agreements and Contract Data.

C3.5.3 WORKS NOT TO INTERFERE

The Contractor is to take cognizance of the fact that the Works is to remain operational during construction and interference with the existing process must be kept to a minimum. This applies both during the construction portion of the works as well as the operation and training period.

The Contractor shall ensure that:

- The Contractor's site staff cooperate with the Employer's staff.
- The Employer's rules and requirements for operations are adhered to.

- Site staff are familiar with and comply with the Employer's emergency procedures.
- Activities of the Site staff do not adversely affect the health and safety of the Employer's staff once the Works is put into operation.

C3.5.4 UNAUTHORIZED PERSONS

The Contractor shall keep unauthorized persons from the Works at all times.

C3.5.5 MANAGEMENT MEETINGS

C3.5.5.1 Technical Meetings

Technical meetings shall be held on an ad-hoc basis as required either by the Engineer or the Contractor.

The Contractor shall arrange for the Contractor's project manager and the Contractor's Technical Supervisor to attend these meetings. The Contractor shall also arrange for the Technical Inspector to attend.

The Engineer will make notes of the decisions taken and hand these to the project manager within 5 working days. The Contractor shall attend to these items and shall provide all present with copies of the notes within one working day.

C3.5.5.2 Site Meetings

Site meetings shall be held monthly. The Contractor shall arrange for the Contractor's Representative to be present at these meetings.

The Engineer will take minutes of these meetings and distribute these to all relevant parties at least one week prior to the next site meeting.

C3.5.5.3 Health and Safety Meetings

Health and Safety Meetings / inspections / site inspection visits shall be held monthly at the H&S officer's discretion in time for the officer's monthly report to be tabled at the Site Meetings.

C3.5.5.4 HAZOP Meeting

A HAZOP Meeting will be called by the Contractor at the commencement of the Contract and prior to installation of mechanical and electrical equipment.

C3.5.6 HEALTH AND SAFETY

C3.5.6.1 Health and safety requirements and procedures

In terms of the provisions of Section 37(2) of the Occupational Health and Safety Amendment Act, 1993 (Act 85 of 1993), hereinafter referred to as the Act, the following arrangements and procedures shall apply between the Contractor and the Employer to ensure compliance by the Contractor with the provisions of the Act:

- (i) The Contractor undertakes to acquaint the appropriate officials and employees of the Contractor with all relevant provisions of the Act and the Regulations promulgated in terms of the Act.
- (ii) The Contractor undertakes that all relevant duties, obligations and prohibitions imposed in terms of the Act and Regulations on the Contractor will be fully complied with.
- (iii) The Contractor accepts sole liability for such due compliance with the relevant duties, obligations and prohibitions imposed by the Act and Regulations and expressly absolves the Employer from himself being obliged to comply with any of the aforesaid duties, obligations and prohibitions, with the exception of such duties, obligations and prohibitions expressly assigned to the Employer in terms of the Act and its associated Regulations.

- (iv) The Contractor agrees that any duly authorised officials of the Employer shall be entitled, although not obliged, to take such steps as may be necessary to monitor that the Contractor has conformed to his undertakings as described in paragraphs (i) and (ii) above, which steps may include, but will not be limited to, the right to inspect any appropriate site or premises occupied by the Contractor, or any appropriate records or safety plans held by the Contractor.
- (v) The Contractor shall be obliged to report forthwith to the Employer and Engineer any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the Act and Regulations, pursuant to work performed in terms of this Contract, and shall, on written demand, provide full details in writing, to the Employer and Engineer, of such investigation, complaint or criminal charge.
- (vi) The Contractor shall furthermore, in compliance with Construction Regulations 2014 (Notice No R84, dated 7 February 2014) to the Act acquaint himself with the requirements of the Employer's health and safety specification as laid down in regulation 5(1)(b) of the Construction Regulation 2014, and prepare a suitably and sufficiently documented health and safety plan as contemplated in regulation 7(1)(a) of the Construction Regulation 2014 for approval by the Employer or his assigned agent. The Contractor's health and safety plan and risk assessment shall be submitted for approval, to the Employer or his agent, within 14 days of the Commencement Date and shall be implemented and maintained from the commencement of the Works.
- (vii) The Contractor shall at all times be responsible for full compliance with the approved plan as well as with the Construction Regulations and no extension of time will be considered for delays due to non-compliance with the abovementioned plan or regulations.
- (viii) The Employer, or his assigned agent, reserves the right to conduct periodic audits, as contemplated in the Construction Regulations 2014, to monitor that the Contractor is compliant in respect of his obligations. Failure by the Contractor to comply with the requirements of these Regulations shall entitle the Engineer, at the request of the Employer or his agent, to suspend all or any part of the Works, with no recourse whatsoever by the Contractor for any damages incurred as a result of such suspension, until such time that the Employer or his agents are satisfied that the issues in which the Contractor has been in default have been rectified.
- (ix) The proposed type of work, materials to be used and potential hazards likely to be encountered on this Contract are detailed in the Parts C3.4 and C3.5, the Bill of Quantities, the Drawings, and in the Employers' health and safety specification (regulation 5(1)(b) of the Construction Regulations 2014), which is contained in the Particular Specifications.

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.

C3.5.6.2 Health and Safety Plan

Without limiting his obligations and liabilities in terms of the Construction Regulations, 2014 of the OHS Act, the Contractor, in his Health and Safety Plan to be submitted in terms of the Contract Data, shall inter alia deal with the safety provisions he will set up in respect of the aspects specified in the Specifications.

The Health and Safety Plan shall be neatly set out in a lever-arch type file, with labelled dividers for each section.

A copy of the approved Health and Safety Plan shall be kept on Site and made available upon request.

C3.5.6.3 Protection of the public and Employer's staff

The Contractor shall at all times ensure that his operations do not endanger any member of the public, or the Employer's staff.

Open excavations and other hazardous conditions on site shall be barricaded and precautions shall be taken to protect the public from the same in terms of the OHS Act.

If the Works are on operating pump station sites, the Contractor shall take special precautions to prevent access to any danger areas on the Works, e.g. by temporary barricades, notices and/or fencing.

The Contractor shall direct, control, facilitate and safeguard all pedestrian traffic during construction of the Works, provide all notices, and arrange for watching and lighting in accordance with the requirements of the relevant authorities.

C3.5.6.4 Working and entering confined spaces

Confined space is defined in the Occupational Health and Safety Act, Act 85, 1993, as an enclosed, restricted, or limited space in which, because of its construction, location or contents, or any work activity carried on therein, a hazardous substance may accumulate or an oxygen-deficient atmosphere may occur, and includes any chamber, tunnel, pipe, pit, sewer, container, valve, pump, sump, or similar construction, equipment, machinery or object in which a dangerous liquid or dangerous concentration of gas, vapour, dust or fumes may be present.

(a) Hazardous conditions in confined spaces could be identified as:

Hazardous atmosphere:

- Too little or too much Oxygen (too little can cause brain damage and cause the heart to stop and too much increases the risk of fire or explosion)
- Presence of Toxic gasses
- Liquids or solids inside the confined space. Liquids may produce hazardous atmosphere when it evaporates e.g. fuel
- Type of work done inside the confined space. Activities can lead to the release of harmful substances e.g. grinding, descaling etc.
- Contamination from outside/adjacent sources. A contaminant could enter the confined space through porous walls, communicating openings e.g. sewers

Explosive atmospheres:

- High concentration of Oxygen (>23%),
- Fuel e.g. Acetylene gas from leaking welding equipment;
- Methane gas and hydrogen sulphide produced by rotting organic waste in sewers;
- Hydrogen gas produced by contact between aluminum or galvanized metals and corrosive liquids;
- grain or coal dust;
- solvents such as acetone, ethanol, toluene, turpentine, and xylene which may be introduced into the space through spills) and
- Ignition sources e.g. open flames, welding arcs, chemical reaction, arcing of electrical motors etc.)

Physical hazards

- Loose and unstable material may lead to trapping or burying workers
- Slip, trip and fall hazards
- Falling objects from above
- Moving parts of equipment and machinery
- Electrical shock from defective extension cords, welding cables etc.
- Poor visibility
- Temperature extremes
- Noise
- Risk of drowning
- Rusted railings

(b) Safe work procedures for Confined Spaces shall include:

Only enter confined space after the air has been tested and evaluated by a competent person who has certified in writing that the space is safe and will remain safe for the duration of the work.

Where the confined space cannot be certified as safe steps must be taken to ensure that any confined space in which there exists or is likely to exist a hazardous gas, vapour, dust or fumes, or which has or is likely to have, an oxygen content of less than 20 per cent by volume, is entered by an employee or other person only when;

- the confined space is purged and ventilated to provide a safe atmosphere therein and measures necessary to maintain a safe atmosphere therein have been taken; and
- the confined space has been isolated from all pipes, ducts and other communicating openings by means of effective blanking other than the shutting or locking of a valve or a cock, or, if this is not practicable, only when all valves and cocks which are a potential source of danger have been locked and securely fastened by means of chains and padlocks.

In an instance where it's not possible to purge and ventilate the confined space, the following precautions must be taken:

- the confined space is entered only when the employee or person entering is using breathing apparatus of a type approved by the chief inspector and, further, that ;
- the confined space has been isolated from all pipes, ducts and other communicating openings by means of effective blanking other than the shutting or locking of a valve or a cock, or, if this is not practicable, only when all valves and cocks which are a potential source of danger have been locked and securely fastened by means of chains and padlocks
- (c) any employee or person entering the confined space is using a safety harness or other similar equipment, to which a rope is securely attached which reaches beyond the access to the confined space, and the free end of which is attended to by a person referred to in paragraph (c);
- at least one other person trained in resuscitation is and remains in attendance immediately outside the entrance of the confined space in order to assist or remove any or persons from the confined space, if necessary; and
- effective, approved apparatus for breathing and resuscitation is available immediately outside the confined space.

Ensure that everybody vacate the confined space after completion of any work therein.

Where the hazardous gas, vapour, dust or fumes are of an explosive or flammable nature, further steps must be taken to ensure that such a confined space is entered only if –

- the concentration of the gas, vapour, dust or fumes does not exceed 25 per cent of the lower explosive limit of the gas, vapour, dust or fumes concerned where the work to be performed is of such a nature that it does not create a source of ignition; or
- such concentration does not exceed 10 per cent of the lower explosive limit of the gas, vapour, dust or fumes where other work is performed

Employees required to work in confined spaces must be trained and competent in confined space procedures.

Working alone in a confined space is not permitted.

A Confined Space Entry Permit is required for entry prior to any work performed in a confined space.

A suitably trained person must undertake a written risk assessment before carrying out work involving entry into a confined space. The assessment shall take into account the following:

- the nature of the confined space;

- the work required and the methods by which the work can be done;
- the hazards involved and associated risks;
- implementation of control measures;
- the emergency and rescue procedures.

The risk assessment must be signed by all the people involved in the work to be done in the confined space. Communication between people in a confined space must be established as well as communication with any stand-by staff located outside. Rescue procedures must be established before entry into any confined space which, include a stand-by person. If working under a contractor or client's entry permit, this must be reviewed by a suitably qualified Health and Safety Specialist person to ensure adequacy of risk assessment, control measures and safe working procedures before entry.

C3.5.6.5 Health and Safety specialist

The contractor shall employ a health and safety specialist, with suitable and proven qualifications, either on full-time or part-time basis, for the duration of the Contract. This specialist shall assist with the preparation of the health and safety plan, shall provide on-going training for all construction staff (at least 1 hour per week whilst work on site is in progress, in the form of weekly tool-box talks), and shall assist with the upkeep of the health and safety plan and associated regular inspections etc.

The requirement for a weekly presence on Site necessitates that the Health and Safety Specialist be based locally, at least for the period while the Contractor is working on Site (i.e. during delivery, installation, testing and commissioning).

C3.5.6.6 Monthly health and safety reports

The health and safety specialist required in terms of C3.5.8.4 shall submit a report to the Engineer at the monthly site meetings, detailing the state of health and safety on the site over the last month, new risk assessments added, potential new risks, new precautions taken, and summarising the results of various inspections required in terms of the health and safety plan, etc. If this report is not submitted at each monthly site meeting, the Engineer shall impose a fine of R5000.00 on the Contractor, in each instance.

C3.6: CIVIL SPECIFICATIONS

VARIATIONS TO SANS 1200 SPECIFICATIONS AND ADDITIONAL CLAUSES

PSC SITE CLEARANCE. (SANS 1200 C)

PSC5 Construction

PSC5-1 Areas to be cleared and grubbed. (Subclause 5.1)

Only the approved minimum area required for the execution of the Works including areas on which material shall be stockpiled for later reuse or on which material shall be dumped and spread, shall be cleared and grubbed.

For the access and site roads the width of clearing shall only be sufficient for the construction of the road i.e. for the cut and fill operations and allowing for side slopes.

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

The vegetation cleared shall be disposed of on the Site by approved means and at places indicated by the Engineer.

All rubble on the Site shall be disposed of as directed in PSD5-2.

PSC5-2 Conservation of topsoil. (Subclause 5.6)

Topsoil up to a depth of 150 mm, if available, shall be removed from the above specified cleared areas and stockpiled. Any excess material that is not required later shall be spread and neatly trimmed on adjacent erven to a maximum depth of 75 mm.

PSC8 Measurement and payment

PSC8-1 Clear and grub. (Subclause 8.2.1)

The rate tendered for clearing and grubbing shall cover the cost of disposal of the material on the Site by approved means at places indicated by the Engineer, and for finally covering the disposal area with 150 mm of topsoil.

PSD EARTHWORKS. (SANS 1200 D)

PSD2 Interpretation

PSD2-1 Definition. (Subclause 2.3)

PSD2-1.1 Restricted excavation

All excavation will be classified as restricted excavation and measured as such.

PSD3 Materials

PSD3-1 Classes of excavation. (Subclause 3.1.2)

Notwithstanding the provisions of Subclause 3.1.2, the materials excavated, other than hard rock, will not be classified for the purposes of measurement and payment. The unit rate for excavation shall cover the cost of excavation in all materials with the only extra-over items payable being those for excavation in hard rock.

PSD5 Construction

PSD5-1 Disposal of material. (Subclauses 5.1.4.3 and 5.2.2.3)

All surplus material and all unsuitable material from excavations and clearing and grubbing operations shall be removed from the Site by the Contractor and disposed of at the site described in PS5-5.

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

PSD5-2 Topsoiling. (Subclause 5.2.4.2)

Topsoil shall be placed as directed in Subclause 5.2.4.2 on the faces of cut slopes and embankments and other flatter areas, as shown on the drawings or ordered by the Engineer, to a nominal thickness of 100 mm after light compaction.

PSD5-3 Over-excavation. (Subclause 5.2.2.1(e))

If the material in the bottom of an excavation is loosened before concrete has been cast, or if there is any over-excavation, any loose or disturbed soil shall be removed and the over-excavation shall be replaced by no-fines or mass concrete of Grade 15 MPa/19 mm (as applicable).

Unsuitable foundation material shall be excavated on the instructions of the Engineer and be replaced with mass concrete Grade 15 MPa/20 mm or clean sand compacted to 100% of MAMDD as directed by the Engineer.

PSD5-4 Backfilling around structures

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

Approved cohesionless gravel material shall be used as backfill around all structures where indicated on the drawings, up to a minimum distance of 500 mm from the structure and to within 200 mm of finished ground level. The gravel shall be compacted in layers not exceeding 300 mm thick to a minimum density of 95% of MAMDD.

Excavations beyond 500 mm from a structure may be backfilled with excavated material.

PSD8 Measurement and payment

PSD8-1 Existing services. (Subclause 8.3.8)

The provision of PSA8-8 shall apply.

PSD8-2 Restricted excavation. (Subclause 8.1.3)

The volume of restricted excavation will be calculated from the net plan dimensions as shown on the drawings.

PSD8-3 Backfilling over-excavation

Backfilling over-excavation with concrete as specified in PSD5-4 will not be measured for payment unless the over-excavation is ordered by the Engineer to remove unsuitable material, in which case the additional

excavation will be measured and paid as excavation in all materials and the concrete will be measured by volume, all to the additional dimensions ordered by the Engineer.

PSD8-4 Backfill with cohesionless material

Backfilling with an approved cohesionless material around or beneath structures, as specified in PSD5-4, shall be measured as extra-over normal excavation and backfill. Backfilling shall be measured per volume.

The rate shall cover the cost of supply, placing and compaction of an approved material as specified and, placing and compaction of a 200 mm layer selected material to bring the backfill up to ground level.

PSD8-5 Topsoiling. (Subclause 8.3.10)

The topsoiling will be measured by surface area covered.

The rate for topsoiling shall cover the cost of loading of the topsoil from stockpile, hauling, offloading, spreading to a thickness of 150 mm, compacting and making suitable provision to avoid the topsoil slipping down the slopes of embankments and cut-slopes, all to the approval of the Engineer.

PSD8-6 Freehaul and overhaul

The provision of PSA8-11 shall apply.

PSDB EARTHWORKS (PIPE TRENCHES). (SANS 1200 DB)

PSDB3 Materials

PSDB3-1 Classes of excavation. (Subclause 3.1)

For trench excavation that is required to be carried out using labour intensive methods the excavation of material will, for purposes of measurement and payment, be classified as specified in PSD3-1.

PSDB3-2 Selection. (Subclause 3.7)

Notwithstanding Subclause 3.7, in terms of which the Contractor has a choice regarding methods of selection, the Contractor is required to use selective methods of excavation. The Contractor shall selectively remove and keep separate the sandy material from unsuitable material and place it adjacent to the trench for reuse as backfill, selected fill, selected granular material or for other use as ordered by the Engineer.

Material which, in terms of Subclause 6.2 of SANS 1200 D or Subclause 6.1 of SANS 1200 LB, is too wet for immediate use in the trench (but which is otherwise suitable) will not be regarded as "unsuitable" material and, if so ordered by the Engineer, the Contractor shall spread such material in a suitable area until it has dried sufficiently for later use. Should the material which is replaced in the trench become too wet again, due to the fact that the Contractor made insufficient provision for the handling and removal of groundwater in accordance with Subclause 5.5 of SANS 1200 A, the Contractor shall replace the material at his own cost with material which is, in the opinion of the Engineer, suitable.

When preparing his programme and construction methods, the Contractor shall make allowance for selective excavation and the handling and drying out of material which is too wet for immediate use.

PSDB3-3 Geotextile blanket

The synthetic fibres of a geotextile blanket shall consist of at least 85% by mass of polypropylene, polyethylene, a polyester, a polyamide, or a copolymer of vinyl chloride and vinylidene-chloride, or any combination of these polymers, and shall contain such additives as are necessary to render the filaments resistant to the effects of ultra-violet radiation and heat. The amount of water absorbed by the geotextile after 24 hours soaking in water at 20°C shall be less than 1% by mass.

"Bidim A2" or equal, approved geotextile will be acceptable.

PSDB5 Construction

PSDB5-1 Unstable trench bottom

The Engineer may, upon consideration of the condition of the trench bottom, particularly with regard to the properties of the soil materials, order the use of a crushed stone layer in order to provide a stable platform for placing of the pipe bedding and laying the pipe in certain sections of the trenches. The stone layer shall consist of 19 mm single-sized crushed stone and shall have a specified thickness of 150 mm over the specified minimum base width.

Should the material in the trench bottom or the bedding material be of such a nature that it can penetrate the stone layer, the Engineer may instruct the Contractor to enclose the stone layer completely within a geotextile filter blanket which shall comply with the requirements of PSDB3-3, and shall have overlaps of at least 200 mm.

PSDB5-2 Depositing material excavated from trench

Unless otherwise ordered by the Engineer, all excavated material shall be kept within the pipe servitude. The toe of the bank of excavated material shall be trimmed well back from the edge of the trench so as to leave a minimum 0,6 m clearance between the toe of the bank and the edge of the trench. The Contractor shall keep this strip clear of excavated material at all times.

The Contractor shall take steps to avoid burying or contaminating topsoil which shall be set aside for replacing, as far as practical, on the surface from which it was excavated.

PSDB5-3 Excavations near structures or services

If the lack of space near existing houses, structures, fences or services restrict the use of normal vehicles, or where trench excavations in hard rock material cannot be done by means of blasting, the excavation shall be carried out by other methods.

PSDB5-4 Hand excavation

Where steep slopes (steeper than 1:4), the lack of unobstructed space or the proximity of existing services prohibits the use of a 55 kW back-acting excavator for trench excavation, the Engineer may order or permit the use of hand excavation.

PSDB5-5 Trenches for electric cables

PSDB5-5.1 General

In some places electric cables will be laid in the same trenches as watermains and in other places the cables will be laid in separate trenches.

PSDB5-5.2 Cable trenches

One cable may be laid by itself in a trench or two or three cables may be laid next to each other in the same trench. Cable trenches shall be 1,15 m deep with a base width of 600 mm.

PSDB7 Testing

PSDB7-1 Testing the compaction of backfill to trenches and reinstatement of surfaces.

(Subclause 7.1)

The Contractor shall carry out density tests as specified in TMH1, in the positions indicated by the Engineer, to determine the compaction of the backfill material in the trenches and the material used for reinstating the road construction layers. No single test result which is below the specified density will be accepted.

In the case of trenches in areas subject to traffic loads, the Contractor shall, notwithstanding the terms of the second sentence of Subclause 7.1, bear the cost of all density tests carried out except as follows. Where the test results are equal to or exceed the specified density, the Employer will bear the cost of that number of those tests ordered by the Engineer in excess of one test per 20 m³ of compacted material, based on the total volume of backfill and reinstated road layers, including the replacement of any over-excavation, in areas subject to traffic loads.

The Contractor shall also bear the cost of those density tests, carried out by the Engineer, of which the test results are below the specified density.

PSDB8 Measurement and payment

PSDB8-1 Basic principles. (Subclause 8.1.2)

In Subclause 8.1.2(c), amend the last sentence to read:

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

PSDB8-3 Hand excavation

Where hand excavation is ordered or approved in terms of PSDB5-4, the work will be measured by length of trench or by volume of material excavated by hand. The rate shall cover all costs of excavating by hand. Hand excavation for the location of services will be measured elsewhere.

PSG CONCRETE (STRUCTURAL). (SANS 1200 G)

PSG2 Interpretations

PSG2-1 Definitions. (Subclause 2.3)

Under (a) add:

"Constructional joint: a joint required on account of constraints or convenience in the method of construction and that is not a movement, contraction or expansion joint."

PSG2-2 Exposure condition. (Subclause 2.4.1)

All concrete on the Works shall be as specified for severe exposure condition.

PSG2-3 Strength concrete. (Subclause 2.4.2)

Grade 30 MPa/19 mm means strength concrete grade 30 MPa with 19 mm stone.

PSG2-4 Joints

Notwithstanding Subclause 2.4.3, "designated joints" will only be joints that are shown on the drawings. Any other joints that are required by the Contractor as a result of his construction constraints or for any other reason, whether approved by the Engineer or not, will not be considered to be designated joints as defined in Subclause 2.4.3, i.e. they will be considered to be "non-designated" joints.

PSG3 Materials

PSG3-1 Cement. (Subclause 3.2)

All cement used in the works shall be Portland cement CEM I of strength Class 42,5 complying with SANS 50197-1.

PSG3-2 Storage. (Subclause 3.2.3)

Cement shall be used in the order in which it is received.

Unless approved by the Engineer, cement kept in storage for longer than 8 weeks shall not be used in the Works.

Any cement that contains lumps that cannot easily be crumbled to powder between the fingers, may not be used.

PSG3-3 Water. (Subclause 3.3)

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

PSG3-4 Aggregates. (Subclause 3.4)

The nominal stone size specified in the concrete grade (e.g. 30 MPa/40 mm) shall mean stone conforming to the grading specified in SANS 1083 for the nearest equivalent size, i.e. 40 mm means stone that complies with SANS 1083 for 37,5 mm size.

PSG3-5 Fine aggregate. (Subclause 3.4)

The fineness modulus of the sand delivered to the mixer shall lie between 1,7 and 2,8 and the standard deviation of fineness moduli of samples of sand that is delivered to the mixer during one shift shall be not more than 0,10.

PSG3-6 Dolomitic aggregate. (Subclause 3.4)

All coarse and fine aggregate used in precast or in-situ concrete, mortar or plaster for the construction of the structures which will be subjected to sewage gases, shall be dolomitic.

PSG3-7 Aggregates for grouting. (Subclause 3.4.1)

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

TABLE 1 – SAND	
Test sieve nominal aperture size, mm	% Passing (by mass)
9,5	100
4,75	95 - 100
1,18	45 - 65
0,3	5 - 15
0,15	0 - 5

TABLE 2 - STONE OR PEA GRAVEL	
Test sieve nominal aperture size, mm	% Passing (by mass)
9,5	100
4,74	95 - 100
2,36	0 - 5

PSG3-8 Samples. (Subclause 3.4)

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

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

PSG3-9 Use of plums. (Subclause 3.4.2)

The use of plums will not be permitted.

PSG3-10 Granolithic screed

Granolithic screed shall consist of:

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

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

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

PSG3-11 Admixtures. (Subclause 3.5.1)

The use of admixtures will be subject to the approval of the Engineer. The information listed in Subclause 3.5.1 shall be provided.

PSG3-12 Joint materials

PSG3-12.1 Filler

"Flexcell" joint filler (or equal approved) will be acceptable. Impregnated softboard will not be acceptable.

PSG4 Plant

PSG4-1 Mixing plant and vibrators. (Subclauses 4.3 and 4.4)

Stand-by mixers and vibrators of adequate capacity and with an independent power unit shall be maintained on site for immediate use in the event of breakdown of the regular mixers or vibrators or failure of the power supply.

PSG4-2 Formwork ties. (Subclause 4.5.3)

The use of sleeves for formwork ties through the walls of water-retaining structures will not be permitted. Ties, when cast in, shall have some form of positive anchorage to prevent any rotation when loosening formwork.

PSG4-3 Formwork: chamfers and fillets

All exposed external angles in concrete work shall have 20 mm x 20 mm chamfers unless otherwise specified or ordered, but the top edge of a slab that is to receive an applied finish shall not be chamfered.

Internal corners in concrete work need not have fillets unless such fillets have been specified on the drawings or ordered by the Engineer.

PSG4-4 Water-bath

A temperature-controlled water-bath with a capacity to cure two hundred cubes shall be provided on site. The water-bath shall be located under cover.

PSG5 Construction

PSG5-1 Reinforcement

PSG5-1.1 Fixing. (Subclause 5.1.2)

Fixing of reinforcing bars by welding and heating of bars will not be permitted.

PSG5-1.2 Spacers

Spacers of approved design include approved plastic or other proprietary spacers, or purpose made precast mortar blocks.

Where mortar blocks are used they shall be properly shaped so as not to slip out of position and shall be made of the same mix as the mortar of the concrete in which they are to be placed. The mortar shall be well compacted by approved means into the moulds to result in blocks with a density of at least 2 300 kg/m³ and which are free from honeycombing. The mortar blocks shall be cured in water for at least 7 days. Blocks which have not been manufactured and cured strictly in accordance with these requirements or which are in any other way considered unsatisfactory by the Engineer, will be rejected and shall be removed from the Site.

PSG5-1.3 Cover. (Subclause 5.1.3)

In Subclause 5.1.3(a) amend the words "bar or stirrup" to read: "bar, secondary reinforcement, tie, stirrup, tying-wire knots or wire ends".

Add to Subclause 5.1.3: "Tying wire may not encroach on the specified minimum cover by more than a single strand thickness."

PSG5-2 Formwork

PSG5-2.1 Classification of finishes. (Subclause 5.2.1)

Formwork for formed concrete surfaces against which backfill will be placed shall be rough. Formwork for all other formed surfaces shall be smooth, except where otherwise specified.

PSG5-2.2 Special smooth finish

All concrete surfaces that will be exposed above the final ground levels shall have a special smooth finish to a Degree of Accuracy I. The formwork used shall be high-grade, unblemished and regular in size. Formwork ties shall be placed in a regular pattern. The special smooth finish shall be an off-shutter finish to the concrete such that no after treatment is required other than at the positions of formwork ties.

PSG5-3 Concrete

PSG5-3.1 General. (Subclause 5.5.1.1)

The concrete mix design for strength concrete must be prepared in an approved laboratory and the results of actual test mixes must be submitted for approval together with 7-day and 28-day strength test results. Special attention is drawn to the fact that the concrete mix must provide a very dense and impervious concrete.

No concrete shall be cast until the mix designs have been approved by the Engineer. The Engineer may call for revised mix designs at any stage during the Contract.

Any mix for use in the wall or floor of a water-retaining structure shall have a water/cement ratio not exceeding 0,5, shall contain not less than 325 kg cement per cubic metre of concrete and the proportions of the various aggregates shall be such as to produce a density of at least 2 400 kg/m³.

In order to facilitate increasing the workability of concrete in the fresh/plastic state, to ensure watertightness without increasing the water/cement ratio, the Engineer may approve the use of an additive.

The workability of concrete shall be assessed by means of the slump test. The slump shall be between 30 and 40 mm.

PSG5-3.2 Chloride content. (Subclause 5.5.1.4)

With reference to Table 4, efflorescence will not be acceptable on any exposed concrete surface.

PSG5-3.3 Durability. (Subclause 5.5.1.5)

The water/cement ratio shall be as specified in Table 5.

PSG5-3.4 Prescribed mix concrete. (Subclause 5.5.1.6)

Notwithstanding the requirements of Subclause 5.5.1.6, samples of aggregates will not be made available by the Engineer. The Contractor shall supply aggregates from commercial sources located by him, complying with the requirements of Subclause 3.4.1, for the production of prescribed mix concrete.

Unless otherwise directed by the Engineer in writing, prescribed mix concrete shall be mixed in the following proportions:

Grade	By mass			By volume		
	Cement	Sand	Stone	Cement	Sand+	Stone
25	1	2,5	3,2	1 bag ^{\$}	0,09 m ³	0,11 m ³
20	1	2,9	3,6	1 bag	0,11 m ³	0,13 m ³
15	1	3,6	4,2	1 bag	0,14 m ³	0,15 m ³
10	1	4,5	5,0	1 bag	0,17 m ³	0,17 m ³

+ Assuming 5% moisture in sand

\$ bag = 50 kg

PSG5-3.5 Strength concrete. (Subclause 5.5.1.7)

With the exception of mixes weaker than 15 MPa, all concrete for structural units/the Works shall be considered to be strength concrete in terms of Subclause 5.5.1.7.

Unless otherwise specified on the drawings or in the Schedule of Quantities, all structural concrete shall be Grade 30 MPa.

PSG5-3.6 Batching. (Subclause 5.5.2)

Batching of strength concrete shall be by mass. Prescribed concrete may be batched by volume.

PSG5-3.7 Ready-mixed concrete. (Subclauses 5.5.3.2 and 7.3)

Concrete from a central concrete production facility other than on the construction site will be permitted and, apart from test results in terms of 7.3.1, 7.3.2 and/or 7.3.3, test results obtained by such a production facility as part of its quality control system will be accepted for evaluation in terms of Subclause 7.3.4, provided they are stored and cured on site.

PSG5-3.8 Casting of concrete in excavation. (Subclause 5.5.5)

Structural concrete shall not be cast directly against the side of any excavation without the use of formwork unless prior approval has been obtained in writing from the Engineer.

Concrete used in pipe trenches for encasement may be cast directly against the side of the excavation. Concrete for thrust/anchor blocks shall be cast directly against the side of the excavation.

PSG5-3.9 Hot weather conditions. (Subclause 5.5.9.2)

No placing of concrete shall take place if the ambient temperature exceeds 32°C, or is likely to rise to above 32°C during the casting period or within eight hours after casting is completed.

If concrete is to be cast during times of high ambient temperature or hot drying winds, the Contractor shall be responsible for taking the necessary steps to keep the placement temperature as low as possible. Such steps include the spraying of the coarse aggregate with water, the painting of silos with a reflecting aluminium paint, the insulation of tanks and pipelines, and the protection of concrete ingredients against the direct rays of the sun. The area of the pour shall be shaded before and during concreting and the concrete shall be shaded from the time of mixing until eight hours after placing.

Windbreaks shall be erected if necessary.

PSG5-4 Construction joints. (Subclause 5.5.7)

PSG5-4.1 General

The edge of joints, exposed to view in the finished structure, shall be formed with suitable beads to provide a straight edge true to line and level.

All joints, other than expansion, contraction and other movement joints, shall be treated as follows:

As soon as practical, but not before 15 hours after placing, the construction joint surface shall be prepared to receive fresh concrete. This preparation, as specified in 5.5.7.3(a) to (d), shall be such as to remove all laitance or inert and strengthless material which may have formed and the specified chipping or sand blasting shall be such as to produce a roughened surface all over.

When concreting is interrupted concrete surfaces shall be protected from the sun as specified in Subclause 5.5.8(d) or by means of hessian kept damp until concreting is resumed.

All constructional joints (see PSG2-1) (both designated and non-designated, see PSG2-4), (i.e. all joints other than movement, contraction and expansion joints) shall be dealt with as specified in Subclause 5.5.7.3.

Unless construction joints between designated joints shown on the drawings are authorized by the Engineer in writing, concrete in the floor and wall shall be cast continuously between the designated joints shown on the drawings.

PSG5-4.2 Formed joints. (generally vertical or near vertical)

Formed joints will be considered to be designated joints as defined in Subclause 2.4.3. (The forming of a straight edge to a construction joint as specified in PSG5-4.1 does not constitute a formed joint).

Each joint shall be formed as shown on the drawings, complete with shear key rebates, waffle formwork, V-feature, waterstops, "Flexcell" or equal, approved joint filler, dowel bars and their PVC tubes, etc. as indicated.

PSG5-4.3 Non-designated joints

Any non-designated joints shall be identical to designated joints, as shown on the drawings, which would be used in similar positions and perform the same function.

PSG5-4.4 Joints between footings or floors and walls or columns

Construction joints between foundations, footings or floors and walls, columns or piers connected to them, shall not be made flush with the supporting surface, but shall be made at a distance above the footing or floor shown as on the drawings or approved by the Engineer. The "kicker" shall be cast as an integral part of the foundation, footing or floor.

PSG5-5 Curing and protection. (Subclause 5.5.8)

PSG5-5.1 Horizontal surfaces

Horizontal and near horizontal surfaces shall be treated in accordance with Subclause 5.5.8.

Other surfaces of the concrete shall be treated with a curing compound complying with PSG5-5.3.

PSG5-5.2 Formed surfaces

In order to improve the effectiveness of the curing treatment, the specified minimum time for the removal of the formwork shall be four days.

PSG5-5.3 Curing compound

Curing of concrete by means of curing compounds will only be permitted, where approved, on horizontal surfaces. Curing compounds will not be permitted to be used where there is a possibility of permanent discolouration being unacceptable.

PSG5-6 Concrete surfaces. (Subclause 5.5.10)

PSG5-6.1 Screeded finish

After placing and compacting, the concrete on a top (unformed) surface shall be struck off with a template to the designated grades and tamped with a tamping board to compact the surface thoroughly and to bring mortar to the surface, leaving the surface slightly ridged but generally at the required elevation. No mortar shall be added, and noticeable surface irregularities caused by the displacement of coarse aggregate shall be made good by re-screeding after the interfering aggregate has been removed or tamped.

PSG5-6.2 Wood-floated finish. (Subclause 5.5.10.1)

Where wood-floating is ordered or scheduled, the surface shall first be given a finish as specified in PSG5-6.1 and, after the concrete has hardened sufficiently, it shall be wood-floated, either by hand or machine, only sufficiently to produce a uniform surface free from screeding marks.

PSG5-6.3 Steel-floated finish

Where steel-floating is specified or scheduled, the surface shall be treated as specified in PSG5-6.1 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.

PSG5-6.4 Granolithic screeds

Before placing any granolithic screeds the base concrete shall be chipped to expose the aggregate over 100% of the area to be screeded and soaked with water for at least 24 hours.

The base concrete shall be thoroughly cleaned by scrubbing and all standing water removed after soaking. A 1:2 cement/sand grout shall then be brushed into the prepared surface followed by the granolithic screed before the grout sets. The granolithic screed shall be of the driest feasible consistency with a slump not exceeding 50 mm and shall be formed true to profile and shape as required and shown on drawings. Before placing granolithic screed against an adjacent band of granolithic screed the edge of the latter shall be prepared by chipping back to firm material, wire brushing and brushing with grout as for the base concrete.

Granolithic screed shall be compacted to remove all air and shall be screeded and finished with a steel trowel to Degree of Accuracy 1.

The trowelling shall be carried out in the following stages:-

- a) First - as soon as the granolithic screed has been compacted and screeded.
- b) Second - after 2 hours to close the surface and remove laitance.
- c) Third - after a further 4 hours.

The time intervals are estimated as appropriate to normal temperature conditions and shall be varied by the Contractor to ensure a smooth dense finish.

Granolithic screed shall be cured as specified in Subclause 5-5.8(b) but shall additionally be protected from direct sunlight and drying winds as it is being placed.

All screeding necessary to accommodate mechanical equipment shall be done under the equipment supplier's supervision and in strict accordance with his instructions. It shall be commenced as soon as the equipment supplier gives notice on completion of erection and shall be finished expeditiously.

The Contractor shall make good any damage to the mechanical equipment resulting from his personnel not following the supplier's instructions. Any spillage on the equipment shall be cleaned off immediately.

PSG5-7 Watertight concrete. (Subclause 5.5.11)

All of the water retaining structures shall be considered to be watertight concrete structures and Subclause 5.5.11 shall apply.

PSG5-8 Defects. (Subclause 5.5.14)

All defects shall be repaired as soon as possible after the formwork has been removed and the Engineer has inspected the concrete. A statement of the method to be used for each repair shall be submitted to the Engineer for his approval before any work is carried out. The Engineer may prohibit the further placing of concrete in the particular area concerned until he is satisfied that the repair has been satisfactorily executed.

PSG5-9 Casting in and grouting of equipment, structural steel columns and door frames

All holding-down bolts and other details necessary for the construction of the holding-down bolt pockets or the fixing of the bolts, (including templates) will be provided by the structural steel contractor. The Contractor shall cast in the bolts, as ordered. No bolts shall be actually cast into the concrete until set up by the Contractor and approved by the Engineer.

After the structural columns and door frames have been erected, aligned and levelled by the structural steel contractor, the Contractor shall grout up the baseplates solidly with "5 Star" non-shrink grout, mixed and placed in accordance with the manufacturer's instructions.

PSG5-10 Casting pipes and specials in concrete

Where the pipe or special is supplied by others the Contractor shall provide a box-out in the wall and cast the unit in at a later stage. When constructing such box-outs reinforcement shall not be cut but shall run through the opening. Reinforcement shall be cut and/or bent out at a later stage to suit the item being cast in. After installation of the item the remaining reinforcement shall be bent back in position.

Where entry holes for pipes/specials have been provided in the walls, the Contractor shall be responsible for the concreting in of such pipes/specials regardless of whether or not these have been supplied by others or by the Contractor.

Before commencing the positioning in holes of any pipes/specials the Contractor shall:

- a) remove all formwork and boxing remaining in the holes;
- b) make any alterations required to the position and shape of the holes and cut reinforcement to suit the item, as directed by the Engineer; and
- c) thoroughly scabble the sides of the holes so as to obtain a satisfactory bond surface for the new concrete and treat the surface as specified in Subclause 5.5.7.3.

Immediately prior to concreting being carried out by the placing of mortar and concrete around the pipes, the surface of the existing concrete shall be saturated with water. All surplus water shall be removed and the surface covered with a layer, approximately 12 mm thick, of mortar made of the same mix as the concrete in which the pipes/specials are to be placed.

The concrete ingredients shall be mixed and placed as dry as possible to obtain a dense, waterproof concrete. The concrete shall be carefully worked around the puddle flange, if any, and the pipe barrel or body of the special, and shall be vibrated in layers so as to obviate a falling away from pipe/special surfaces of the concrete already placed. The whole shall, when set, form a dense, homogeneous, and waterproof mass.

PSG7 Testing

PSG7-1 Frequency of sampling. (Subclause 7.1.2)

One sample shall consist of three concrete test cubes.

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

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

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

PSG7-2 Watertightness test

The watertightness of the relevant concrete structure shall be tested as follows:

All openings in the concrete shall be temporarily sealed by the Contractor for the duration of the testing period. The seal shall be held secure and shall not allow any seepage. Seepage as a result of the leaking seal will not be measured and shall be considered a leak in the watertight structure as calculated below.

The structure shall be filled with clean water and shall be allowed to remain filled for a period of seven days during which time any loss of water which may occur shall be made up by filling the structure to top water level. At the beginning of the test, the water level shall be recorded and the structure shall be left undisturbed for a period of not less than seven days. The structure shall be considered watertight if the drop in level, excluding losses due to evaporation, does not exceed 1/500th of the average water depth of the full structure or 10 mm in 7 days and no leakage or dampness is apparent.

The evaporation shall be measured by the mean drop in level caused by the evaporation of the water in three flat containers floating in the water being recorded.

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

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

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

PSG8 Measurement and payment

PSG8-1 Reinforcement. (Subclauses 8.1.2.2 and 8.1.2.3)

Notwithstanding the method of measuring and paying for reinforcement specified in Subclauses 8.1.2.2 and 8.1.2.3, reinforcement will be measured and paid for as scheduled.

PSG8-2 Concrete. (Subclause 8.1.3.3)

The rates for concrete shall also cover:

- a) the use of dolomitic aggregate where prescribed,
- b) the cost of the preparation of design mixes by an approved laboratory and submission for approval by the Engineer (see PSG5-3.1),
- c) the cost of non-designated joints (see PSG2-4), and
- d) screeded finish of unformed surface as specified in PSG5-6.1.

PSG8-3 Joints. (Subclause 8.5)

Only designated joints as shown on the drawings will be measured for payment according to the length of each type of joint constructed (see PSG2-4). The rate shall cover the cost of all materials, labour and plant required to construct each type of joint specified on the drawings, including the cost of all shuttering, treatment of the joint as specified in Subclause 5.5.7.3, the provision of chamfers as specified where concrete is exposed, as well as testing and repairing where necessary.

Non-designated joints will not be measured for payment.

PSG8-4 Formed joints

Formed joints will be measured by the plane area of the joint.

The rates shall cover the cost of all operations and materials specified in Subclause 5.5.7 and PSG5-4.2, and detailed on the drawings such as joint filler, waterstops, dowel bars and tubes, bitumen coats.

PSG8-5 Formwork

PSG8-5.1 Edges of blinding layer

No separate payment will be made for formwork to the edge of the blinding layer. The rates tendered for concrete to the blinding layer shall cover the cost of such formwork.

PSG8-5.2 Kickers

Formwork to the edges of kickers will be measured as plane (or circular) vertical (not as narrow widths).

PSG8-6 Unformed surface finishes (Subclause 8.4.4)

The rates for unformed surface finishes shall cover the cost of providing the respective surface finish as specified in PSG5-6.2 or PSG5-6.3.

PSG8-7 Holding down bolts

Fixing of holding down bolts will be measured by number or sum. The rate shall cover the cost of all things necessary to ensure that the bolts are effectively and rigidly held in position during casting, complete with sleeved pockets, all as detailed on the drawings.

PSG8-8 Grouting

Grouting of base plates and equipment bases will be measured by the volume of grout used.

The rate shall cover the cost of the supply and floating in of grout under the plates to ensure solid and complete filling of the gap.

The grouting in of items supplied by others (or items supplied by the Contractor and measured elsewhere) will be measured by number.

Notwithstanding Subclause 8.2.6, the rate shall cover the cost of fixing in position and casting in the item as construction proceeds, irrespective of whether the Contractor chooses to fix the item in the formwork and cast it in directly or to box out a hole and grout the item in subsequently.

PSG8-9 Special floor finish

Special floor finish will be measured by area. The rate shall cover the cost of the supply and application of the specified material, complete as specified by the manufacturer and to the approval of the Engineer. Repairs to unsatisfactory work will not be paid for.

PSG8-10 Items cast in concrete

The casting in of items cast in concrete will be measured by number separately for each type of item.

Notwithstanding Subclause 8.2.6, the rate shall cover the cost of fixing in position and casting in the item as construction proceeds, irrespective of whether the Contractor chooses to fix the item in the formwork and cast it in directly or to box out a hole and grout the item in subsequently.

Supply and delivery of the items will be measured and paid separately.

PSG8-11 Miscellaneous items (other than metal work)

An item which, in the payment clause column of the Schedule of Quantities, refers to this clause (PSG8-11), will be measured in the unit scheduled.

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

PSG8-12 Testing for tightness

An item which, in the payment clause column of the Schedule of Quantities, refers to this clause (PSG8-11), will be measured in the unit scheduled.

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

PSHA STRUCTURAL STEELWORK (SUNDRY ITEMS). (SANS 1200 HA)

PSHA3 Materials

Where the words "Structural Steelwork" appear in the heading and in other relevant Clauses, amend to read "Structural Steel".

PSHA3-1 Structural steel

All structural steel items shall be of mild steel material.

PSHA3-2 Structural steelwork

Structural steelwork shall comply with Grade 43 of BS 4360.

PSHA5 Construction

PSHA5-1 Handrails. (Subclause 5.2.6)

The handrails shall be manufactured by an approved manufacturer specializing in such work and shall be of galvanized steel tubing of nominal thickness 2,6 mm and of normal outside diameter at least 34 mm.

Stanchions shall be manufactured preformed in one piece and shall be at least 42 mm nominal outside diameter. The bases of the stanchions shall be preformed to suit the situation in which they are to be installed, and the stanchions and spheres shall be preformed to suit right angled or other angled intersections as shown on the drawings.

Stanchions shall be spaced at intervals not exceeding 2,0 m. All joints shall be welded after the erection of handrails.

PSHA5-2 Corrosion protection

The open grid flooring panels, ladders and screens shall be galvanized in accordance with the requirements of Subclause 5.9 of SANS 1200 HC.

PSHA5-3 Protective treatment. (Subclause 5.2.10)

PSHA5-3.1 General

All paintwork shall be executed by tradesmen skilled in this class of work, and in strict accordance with the manufacturer's recommendations as approved.

All steelwork, after fabrication and before removal from the place of manufacture, shall be cleaned of all adherent coatings by means of suitable solvents, then cleaned by abrasive blast as described in SANS 10064 "Code of Practice for the Preparation of Steel Surfaces for Painting" and in accordance with Swedish Standard SIS 05/59/00 and primed, and if so required, painted, as specified in PSHA5-3.2.

Where paintwork is to be completed after erection, immediately before painting the parts shall be washed down, using nylon brushes and detergent to remove all adhering coating and dirt. They shall then be washed with clean water to remove all traces of detergent and allowed to dry thoroughly before being painted as specified.

All surfaces which cannot be painted after erection shall be painted as specified herein before erection.

PSHA5-3.2 Type M protection

Steelwork shall be cleaned to Sa 2½ finish and, within four hours of final cleaning, be primed with alkyd resin-based primer and finished with two coats of gloss alkyd resin-based enamel paint. Primed steelwork shall be kept covered and protected until erected in its permanent position.

PSHA5-3.3 Repairs to paint. (Subclause 5.3.7)

Where site cutting and/or welding is required, the area for a distance of 50 mm on either side of the weld or cut shall be cleaned of all coatings, the cutting and/or welding carried out, the weld deslagged, all flux and weld spatter removed, the steelwork ground down to at least Sa 2½ and painted as specified herein.

On arrival on site, and both before and after erection, all items of steelwork shall be examined for damage to the paintwork, and damaged areas degreased, derusted and repaired. The damaged area shall be ground down to at least Sa 2½. The surrounding paintwork which is still intact shall be feathered for a distance of 20 mm beyond the damaged area. The whole shall then be repainted as specified herein. Under no circumstances will the use of wire brushes be permitted for the removal of rust or other contaminants.

PSHA8 Measurement and payment

PSHA8-1 Corrosion protection. (Subclause 8.3.6)

Notwithstanding the requirements of Subclause 8.3.6, corrosion protection (painting and galvanizing) will not be measured separately, the prices tendered for the steel items being held to include for the cost of corrosion protection as specified.

PSL MEDIUM-PRESSURE PIPELINES. (SANS 1200 L)

PSL3 Materials

PSL3-1 Watermains

PSL3-1.1 General

Pumped sewer mains shall be Class 9 PVC-U pipes and shall have a JASWIC Certificate of Acceptance. The Contractor shall, on the request of the Engineer, obtain from the manufacturer and provide to the Engineer, a schedule detailing all requirements of SANS 966-1 with which the pipes do not comply.

PSL3-2 Steel pipes

PSL3-2.1 General

Steel pipes up to 150 DN shall conform to SANS 62 heavy-duty.

Steel pipes over 150 DN shall conform to SANS 719 Grade B and have a minimum thickness of 4,5 mm.

PSL3-3 Specials

PSL3-3.1 General

All specials (except flanges) shall be suitable for working pressure of not less than 1 000 kPa.

PSL3-3.2 For PVC-U pipelines

Standard specials such as tees, flange adaptors, reducers etc. for PVC-U pipelines may be fabricated from cast iron. Unless otherwise shown on the drawings, all bends shall be PVC-U.

PSL3-3.3 Cast iron

Specials used with PVC-U mains and laid underground shall be standard cast iron, and shall be provided with standard couplings, unless otherwise specified or shown on the drawings.

PSL3-3.4 Steel. (Subclause 3.4)

PSL3-2.1 shall apply mutatis mutandis.

Mild steel specials shall have a minimum wall thickness of 4,5 mm.

PSL3-4 Flanges

Flanges shall comply with SANS 1123 and have a minimum working pressure of 1 000 kPa, except where otherwise indicated. Holes shall be drilled to Table 1000/3 of SANS 1123.

Any item of pipework or special or valve of which the flanges are incorrectly drilled, will be rejected. The reaming of bolt-holes to oversized dimensions to enable a particular item to fit will not be allowed.

All flanges shall be provided complete with bolts, nuts, washers and rubber O-rings or fibre insertions, as appropriate. Rubber O-rings dimensioned in accordance with DIN 2514 specification shall be supplied to suit suitably machined flanges. Compressed asbestos fibre insertions shall be not less than 1,5 mm thick and shall comply with BS 2815 Grade B.

PSL3-5 Gate valves. (Subclause 3.10)

Gate valves shall comply with SANS 664 Class 10 (waterworks pattern), shall carry the SABS mark, shall be of the resilient seal ("RSV") type, be clockwise closing, with non-rising spindle, and shall be drop-tight when tested in accordance with BS 5163. The direction of closing must be shown clearly on the valve. The design of the stuffing box shall be such that the O-rings can be replaced while the valve is in service without having to remove the valve dome.

Gate valves shall be fitted with cap-tops or handwheels and shall be either flanged or spigotted as scheduled. Gate valves shall be supplied with couplings and all materials necessary for complete installation.

PSL3-6 Reflux and check valves

Reflux and check valves shall close immediately the velocity in the pipeline is zero, in order to prevent any reversal of flow.

PSL3-7 Corrosion protection

PSL3-7.1 General

Unless otherwise specified or indicated on the drawings or Schedule of Quantities, all bolts, nuts and washers shall be hot dip galvanized to SANS 763 after threading. All bolts, nuts and washers within water retaining structures or exposed to rain water shall be fabricated from stainless steel.

Steel pipes and fittings up

to 150 mm nominal diameter - internal and external hot dip galvanizing as specified in Subclause 3.9.2.1.

Steel pipes and fittings over

150 mm nominal diameter - Galvanised mild steel with Fusion bonded epoxy (FBE) internally and externally

Valves - an epoxy system as specified in Subclause 3.9.2.2.(b)(1).

Puddle pipes through concrete walls - Stainless steel 304L with FBE

PSL3-7.2 Steel pipes and specials

The steel pipes and specials shall be hot dip galvanized after fabrication, in accordance with the requirements of SANS 32 for heavy duty applications. Further machining, cutting or welding after hot dip galvanizing will not be allowed.

PSL3-7.3 Fusion bonded epoxy. (Subclause 3.9.2.2(b)(4))

All valves (other than those manufactured from non-corrodible material such as stainless steel or brass) shall be coated with fusion bonded epoxy.

Such coating may only be done in a shop with a known or proven proficiency in such type of work.

The entire surface to be coated must be free of dust and moisture and must comply with the provisions of Subclause 4.1.1 of SANS 1217.

The painting shall be such that all trimmings are covered by paint for a distance of at least 5 mm to discourage bi-metal corrosion.

No field repairs of damaged paint areas (if any) are allowed.

Where parts may become distorted because of their large size when heated the Contractor shall provide full details of the alternative proposal to the Engineer's approval.

PSL3-8 Marking

All pipes, specials and valves arriving on site shall be marked clearly with the item number appearing in the Schedule of Quantities. Furthermore the nuts, bolts, washers and other ancillary equipment for each individual item shall be kept separate in a bag which shall also bear the respective reference number of that item. The cost of such marking will be held to have been included in the rates tendered for the items.

PSL3-9 Protection during handling, storage, etc.

The Contractor shall satisfy the Engineer that the manufacturers' recommendations for good practice for transporting, handling, stacking, storing and installing pipes, pipe fittings, sealing rubbers etc. are being diligently followed. The Engineer's Representative shall be given the opportunity to inspect all materials immediately prior to installation and shall have the right to reject any materials which, in his opinion, have suffered damage which may impair the long term durability or strength of said items.

Pipes and specials shall be protected against damage during all stages of manufacture, delivery, storage and handling. The ends of all steel pipes and specials shall be protected against denting. Steel pipes shall be transported and stacked in such a manner that the pipe barrel is not deformed by more than 2% of its diameter. Dents which cause a protrusion of more than 1 mm on the inside of the steel special, may result in the special being rejected.

PSL5 Construction

PSL5-1 Stringing out of pipes

Subject strictly to the requirements of Subclause 3.1 and PSL3-9 pipes may be offloaded and strung out in the servitude.

PSL5-2 Connection into existing main

Where shown on the drawing or ordered, the Contractor shall cut into the existing sewer pumping main and connect to the new pumping main.

Before commencing the excavation of pipe trenches in the vicinity of a proposed connection, the Contractor shall excavate for, expose, survey and record the position and level of the connection point on the existing sewer main.

The Contractor shall be responsible for the diversion of the raw sewage when it becomes necessary to connect into the existing sewer main.

The Contractor may cut into the existing sewer main only after he has received a written instruction from the Engineer to do so.

PSL5-3 Protection of buried joints

The Contractor shall protect all buried couplings, nuts and bolts and steel pipework against corrosion by wrapping them with an approved petroleum-based paste and adhesive tape ("Denso" tape or equal approved), in accordance with the manufacturer's instructions.

PSL5-4 Depths and cover. (Subclause 5.1.4)

Watermains shall be laid so that the minimum cover to the top of the pipe barrel from finished surface level is 1,0 m under roads and 800 mm elsewhere.

Other pipelines shall be laid to the invert levels shown on the drawings. Where no such drawings exist the invert levels will be determined by the Engineer on site.

PSL7 Testing

PSL7-1 Test pressure and time of test. (Subclause 7.3.1)

The maximum working pressure required to derive the test pressure for field testing in terms of Subclause 7.3.1.2 shall be the maximum allowable working pressure applicable to the class of pipe specified.

In the case of PVC-U pipes the test pressure for field testing shall be 1,5 times the maximum allowable working pressure applicable to the class of pipe specified.

PSL8 Measurement and payment

PSL8-1 Supply, lay and bed pipes complete with couplings.

(Subclause 8.2.1)

The rates for supplying, laying and bedding pipes shall also cover the cost of testing.

PSL8-2 Corrosion protection

Notwithstanding Subclauses 8.2.7 and 8.2.15, the rates for pipes, valves, specials and couplings shall also cover the cost of mortar lining and sheathing, mortar encasing, wrapping and all other corrosion protection as specified, including wrapping of flanges with "denso" tape.

PSL8-3 Anchor/thrust blocks and pedestals. (Subclause 8.2.11)

Notwithstanding Subclause 8.2.11 anchor/thrust blocks and pedestals will be measured only by volume of concrete to the net dimensions shown on the drawings or ordered.

The rate shall cover the cost of excavation, concrete, formwork and steel reinforcement (allowing for 0,10 t of high tensile steel per cubic metre of concrete).

PSL8-4 Repair couplings (Klamflex or VJ coupling)

Except where the rates for pipes and fittings cover the cost of couplings, repair couplings will be measured by number. The rate shall cover the cost of the supply and installation of the joint including all bolts, nuts and jointing material and for "Denso" tape wrapping as specified.

PSLB BEDDING (PIPES). (SANS 1200 LB)

PSLB3 Materials

PSLB3-1 Selected granular material. (Subclause 3.3)

In the case of flexible pipes the selected granular material shall consist of sand.

PSLB5 Construction

PSLB5-1 Class of bedding

PSLB5-1.1 Sewer pumping pipelines

Sewer pipes for pumping mains shall be bedded as specified for flexible pipe bedding unless otherwise indicated on the drawings or ordered by the Engineer.

PSLB5-1.2 Sewer pipes (gravity)

Sewer gravity pipes shall be bedded as specified for flexible pipe bedding unless otherwise indicated on the drawings or ordered by the Engineer.

PSLB8 Measurement and payment

PSLB8-1 Volume of bedding materials. (Subclause 8.1.3)

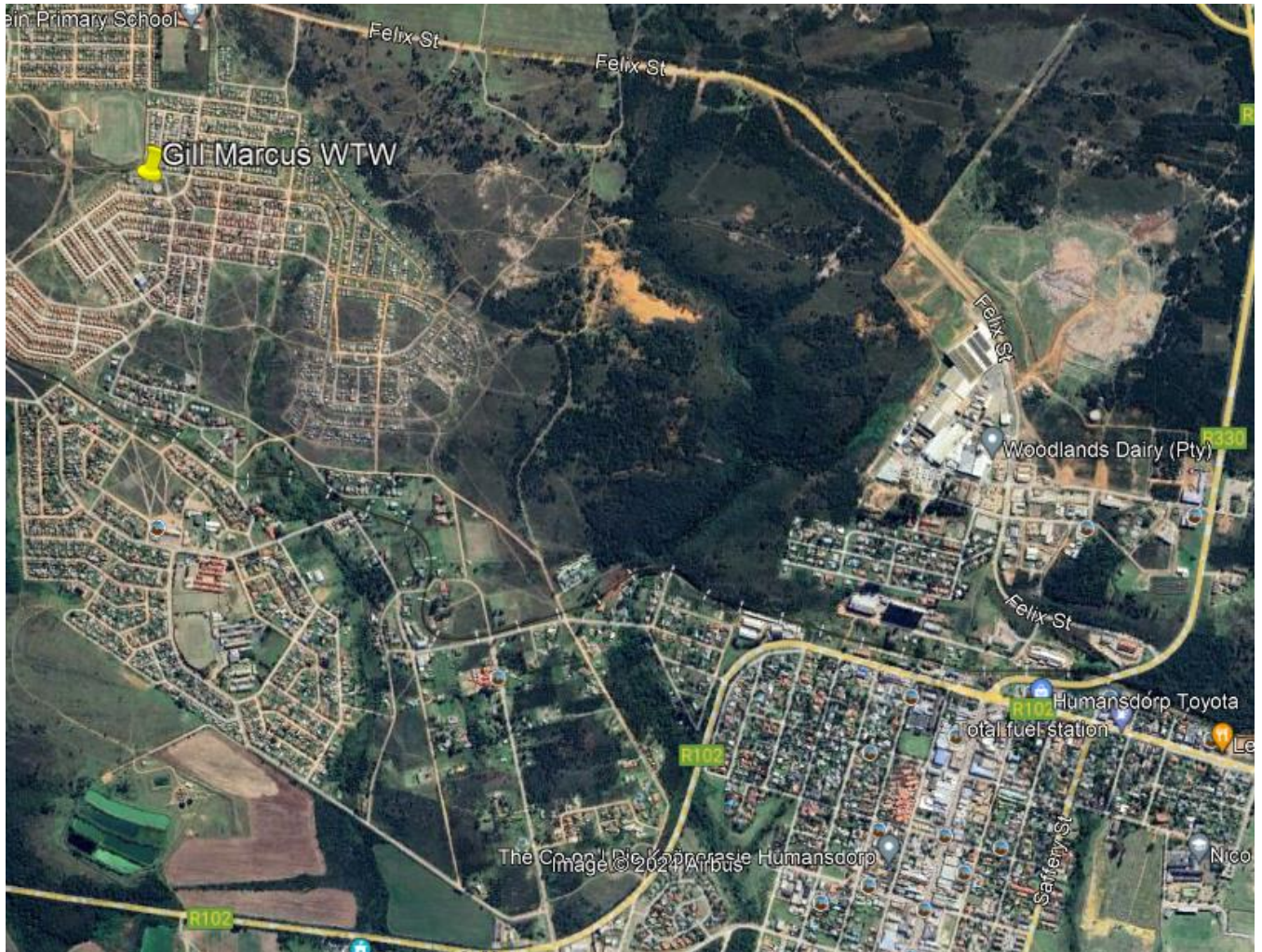
The volume of bedding material will be measured net, excluding the volume occupied by the pipe.

THE CONTRACT

PART 4 (OF 4): SITE INFORMATION

C4.1 Locality Plan

C4.1: LOCALITY PLAN



Locality: Latitude: -34.012220°
Longitude: 24.744480°