UPGRADING OF WHITE RIVER WASTE WATER TREATMENT WORKS

TENDER NUMBER: COM 24/2023

TENDERER:	

CLOSING DATE: 22 March 2023 AT 11:00AM

CSD REG NUMBER: MAAA……

CLIENT	**ENGINEER**
City of Mbombela PO Box 45 Mbombela 1200 Tel: 013-759 2358 Fax: 013-753 4444	**LIHUZU PROJECTS (Pty) Ltd** Unit 45 003 Central Park Suikerriet Street Mbombela 1200 Tel : 013-744 6070 E-mail : info@lihuzu.co.za

UPRADING OF WHITE RIVER WASTE WATER TREATMENT WORKS

SUMMARY FOR TENDER OPENING PURPOSES

NAME OF TENDERER :_____

ADDRESS :_____

_____

_____

_____

TELEPHONE NUMBER :_____

FAX NUMBER :_____

E-MAIL ADDRESS :_____

CLOSING DATE :_____

TENDERED AMOUNT :_____

Signed by authorised representative of the TENDERER: _____

DATE: _____

* Should any discrepancy occur between this figure and that stated in the Form of Offer and Acceptance, the latter shall take precedence and shall apply.

IMPORTANT INFORMATION

PLEASE READ CAREFULLY BEFORE COMPLETING DOCUMENT.

1. Notice to all tenderers.
2. Standards applied in this document.

1. NOTICE TO ALL TENDERERS

This is an original document:

1. It may not be re-typed or altered in any way.
2. It must be completed in black ink (non-erasable) – in an eligible handwriting. Mistakes are to be corrected by drawing a line through it and writing the correct information above it. Tenderer to sign next to the correction. The use of erasing fluid or strips is not allowed.
3. It may not be taken apart.
4. It is not available in electronic format except PDF.
5. Bidders are required to attach returnable documents to the relative pages (where requested) and encouraged to use file fasteners and binding tape or any other similar method to ensure there are no loose pages. **Any other form of presentation (loose pages or separate documents) will not be accepted.**

2. STANDARDS APPLICABLE TO THIS DOCUMENT

Available from the S.A. Federation of Civil Engineering Contractors, the S.A. Institution of Civil Engineering and the S.A. Bureau of Standards, as applicable:

1.	CIDB	***CIDB Standard for uniformity in Construction Procurement,*** *10 July 2015, as amended.*
2.	SANS 10845-1	*Processes, methods and procedures.*
3.	SANS 10845-2	*Formatting and compilation of procurement documentation.*
4.	SANS 10845-3	*Standard conditions of tender.*
5.	GCC	*General Conditions of Contract for Construction Works, Third Edition (2015) issued by the South African institution of Civil Engineering.*
6.	SANS1200	*Standard specifications for Civil Engineering Construction*
7.	This Document, as presented.	

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THE TENDER

THE CONTRACT

PART T1: TENDERING PROCEDURES

PART T2: RETURNABLE DOCUMENTS

PART T1 TENDERING PROCEDURES

T1.1 TENDER NOTICE AND INVITATION FOR PROPOSALS

Bids are hereby invited from experienced services providers for UPGRADING OF WHITE RIVER WASTE WATER TREATMENTS WORKS**.**

Tender No	Description	CIDB Grading	Compulsory Meeting and Site Inspection Date	Closing Date
COM 24/2023	**REFURBISHMENT OF WHITE RIVER WASTE WATER TREATMENT WORKS**	**6ME**	**17 February 2023** **White River Waste Water Treatment Works** **At 11:00AM** **25°18'54.61"S** **31° 2'50.65"E**	**22 MARCH 2023 AT 11:00**

It is compulsory that service providers download a copy of the bid document that will ONLY be available as from 10 FEBRUARY 2023 on the municipal website: www.mbombela.gov.za on the tenders and notices folder and National e-Tender Portal: www.etenders.gov.za, free of charge.

Duly completed bid documents and supporting documents which are, COPY OF TAX COMPLIANCE STATUS, CERTIFIED COPY OF B-BBEE CERTIFICATE OR SWORN AFFIDAVIT FOR B-BBEE TO CLAIM B-BBEE POINTS, MUNICIPAL RATES AND TAXES CLEARANCE FOR BOTH THE COMPANY AND ITS DIRECTORS FROM RELEVANT LOCAL AUTHORITY OR PROOF OF RESIDENCE FROM A TRIBAL AUTHORITY OR LEASE AGREEMENT ACCOMPANIED WITH THE LESSOR'S MUNICIPAL RATES AND TAXES CERTIFICATE, CSD REGISTRATION FULL REPORT (Summary Report will not be considered) and a copy of the COMPANY REGISTRATION CERTIFICATE, together with the bid document must be sealed in an envelope clearly marked: **"BID NO.:COM24/2023, REFURBISHMENT OF WHITE RIVER WASTE WATER TREATMENT WORKS** with the name of the bidder shall be placed in the bid box at MBOMBELA CIVIC CENTRE at 1 NEL STREET, MBOMBELA, before 11:00 on the closing date

Bidders are advised not to commit fraudulent activities or forge documents. All abusers of the SCM system, including forging or faking of returnable documents, may be reported to SAPS and restricted from doing business with any Public Institutions for a period NOT exceeding 10 years which is in line with section 28 and 29 of the Prevention and Combating of Corrupt Activities Act 12 of 2004.

A preferential point system shall apply whereby this contract will be allocated to a bidder in accordance with the **Preferential Procurement Policy Framework Act**, No **5 of 2000** and as defined in the conditions of bid in the bid document, read in conjunction with the Preferential Procurement Regulations, 2022, where 80 points will be allocated in respect of price and 20 points in respect of **Targeted Goals**.

Procurement Enquiries	:	Nomsa Ndukuya	(013) 759 9052
Technical Enquires	:	Khehla Ngomane	(013) 759 9121
Employer	:	City Manager, City of Mbombela P. O. Box 45 1200 Mbombela	Mr. Wiseman Khumalo

VISIT OUR WEBSITE –

www.mbombela.gov.za

NB: the results of this bid will be published on council's website as prescribed on section 75(1)(g) of the MFMA and section 23(c) of the SCM Regulations

T1.2 TENDER DATA

The conditions of tender are the standard conditions of tender as contained in SANS 10845-3 Construction procurement, Part 3: Standard conditions of tender that apply specifically to this tender.

The Tender Data shall be read with the Standard Conditions of Tender in order to expand on the Tenderer's obligations and the Employer's undertakings in administering the tender process in respect of the project under construction.

The Tender Data hereafter shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender.

Each item of data given below is cross-referenced to the clause in the standard conditions of tender to which it mainly applies.

Clause Number	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.
3.1	The Employer is: **City of Mbombela, 1 Nel Street, Mbombela, 1200**
	The tender documents issued by the Employer comprise: THE TENDER Part T1 Tendering Procedures Part T1.1 Tender Notice and Invitation to Tender (white) Part T1.2 Tender Data (pink) Part T1.3 Preferential Procurement Policy of City of Mbombela (pink) Part T2 Returnable Documents Part T2.1 List of Returnable Documents (yellow) Part T2.2 Returnable Schedules to be completed by the Contractor (yellow) Part T2.3 Returnable Schedules II (yellow) **THE CONTRACT** **Part C1 Agreement and Contract Data** C1.1 Form of Offer and Acceptance (pink) C1.2 Contract Data (yellow) C1.3 Form of Guarantee (white) C1.4 Agreement in terms of Occupational Health and Safety Act, 1993 (white) C1.5 Authority for Signatory in Terms of OH&S Act, 1993 (white) **Part C2 Pricing Data** C2.1 Pricing Assumptions (yellow) C2.2 Bill of Quantities and Information Sheets (yellow)

<table>
<tr><td>3.2</td><td>
Part C3 Scope of Works
C3.1 Scope of Works (blue)
C3.2 Engineering (blue)
C3.3 Procurement (blue)
C3.4 Construction (blue)
C3.5 Management (blue)
C3.6 Health and Safety (blue)
Part C4 Site Information
C4 Site Information (green)

Appendices
Annexure A Health and Safety Specification (white)
Annexure B Drawings for Tender Purposes (white)
</td></tr>
<tr><td>3.4</td><td>
The Employer's Agent is:
Name: Lihuzu Projects (Pty) Ltd
Address: Unit 45.0.3 Central Park
12 Suikurriet Street
Nelspruit 1201
Tel: 013 744 6070
E-mail: info@lihuzu.co.za
</td></tr>
<tr><td>3.5</td><td>The language for communications is English.</td></tr>
<tr><td>3.6</td><td>The competitive negotiation procedure shall not be applied.</td></tr>
<tr><td>4.1</td><td>
Only those tenderers who satisfy the following eligibility criteria and who provide the required evidence in their tender submissions are eligible to submit tenders and have their tenders evaluated:
a) CIDB registration

Only those tenderers who are registered with the CIDB, or are capable of being registered prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25 (7A) of the Construction Industry Development Regulations, for a 6ME or higher of construction work, are eligible to have their tenders evaluated.

Tenderers registered as potentially emerging enterprises but with a CIDB contractor grading designation lower 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, are not eligible to have their tenders evaluated.

For the sake of clarity and subject to satisfactory proof of a tenderer’s ability to perform the work specified at the tendered value, the Employer lists in the table below the margins it considers reasonable. However, in the event that the sum tendered exceeds the margins shown then such tender shall be deemed non-responsive.

<table>
<tr><th>Category of tender</th><th>Upper limits per CIDB Table 8 Regulation 17</th></tr>
<tr><td>ME 5</td><td>R10m</td></tr>
<tr><td>ME 6</td><td>R20m</td></tr>
<tr><td>ME 7</td><td>R60m</td></tr>
<tr><td>ME 8</td><td>R200m</td></tr>
</table>
Joint Ventures are eligible to submit bids provided that:
(1) every member of the joint venture is registered with the CIDB;
(2) 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 6 ME or Higher class of construction work or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations.
</td></tr>
</table>

	b) Key Personnel In order to be considered for an appointment in terms of this tender, the tenderer must have in its permanent employment key personnel who will be the single point accountability and responsibility for the management of the construction works. Alternatively, a signed undertaking from an organization having the required personnel, stating that they will undertake the necessary work on behalf of the tenderer in terms of a sub-contractor agreement, will be acceptable. Such undertaking must be attached to Forms T of the Returnable Schedules. Individuals must be identified for each of the key personnel listed under Forms T. Where the key personnel are no longer available to undertake the necessary work after the award of the tender, the contractor shall within a period of 14 working days replace the key personnel listed in Forms T with personnel with equivalent competencies and subject to approval by the Employer. Such approval shall not be unreasonably withheld. The key person shall be a suitably qualified and experienced contracts manager who will be the single point accountability and responsibility for the management of the construction works, and who is registered with SACPCMP as Pr.CM or ECSA as Pr.Eng or Pr.Tech.Eng shall be required as a minimum. Where the Contracts Manager will not be employed on the Works full time, his powers will be delegated to the approved construction manager. Failure to comply with the requirements or to complete Form T may render the tender non- responsive.
4.6	Bidders are encouraged to revisit the City's website regularly prior the closing date particularly on this project folder to ensure that all addenda/ erratum that may be issued are adhered to. Failure to apply instructions contained in addenda may render a tenderer's offer non-responsive in terms of Condition of Tender 5.8.
4.7	The arrangements for the compulsory clarification meeting are as stated in the tender notice and invitation to tender. The onus rests with the tenderer to ensure that the person attending the clarification meeting on its behalf is appropriately qualified to understand all directives and clarifications given at that meeting. The clarification meeting shall start strictly at the time advertised. Only then will the Employer's Representative circulate the attendance register for completion by those present. During this time latecomers may complete the register. On completion by all present the Employer's Representative will: (a) read out from the collected lists calling for confirmation that all have signed; The signature on the attendance register and duly completed and signed Form A shall be considered proof that the tenderer attended the whole meeting and was available to hear all directives and clarifications given at the meeting. Tenderers must sign the attendance list in the name of the tendering entity. Addenda will be issued to and tenders will be received only from those tendering entities appearing on the attendance list. **The City will not take responsibility for incorrect information provided by the bidder on the attendance register.**
4.8	Request clarifications at least 7 working days before the closing time.
4.10	Tenderers are required to state the rates and currencies in Rand.
	An alternative tender offer will only be considered if a main tender offer, strictly in accordance with all the requirements of the tender documented is also submitted. If the tenderer wishes to submit an alternative tender offer, the only criteria permitted for such alternative tender offer is that it demonstrate the Employer's standards and requirements, the details of which may be obtained from the Employer's Agent.

4.12	Calculations, drawings and all other pertinent technical information and characteristics as well as modified or proposed Pricing Data must be submitted with the alternative tender offer to enable the Employer to evaluate the efficacy of the alternative and its principal elements, to take a view on the degree to which the alternative and to evaluate the acceptability of the pricing proposals. Calculations must be set out in a clear and logical sequence and must clearly reflect all design assumptions. Pricing Data must reflect all assumptions in the development of the pricing proposal. Acceptance of an alternative tender offer will mean acceptance in principle of the offer. It will be an obligation of the contract for the tenderer, in the event that the alternative is accepted, to accept full responsibility and liability that the alternative offer complies in all respects with the Employer's standards and requirements. The modified Tender Data must include an amount equal to 5% of the amount tendered for the alternative offer to cover the Employer's costs of confirming the acceptability of the detailed design before it is constructed.
4.13.1	Parts of each tender offer communicated on paper shall be submitted as an <u>original</u>, no copies are required. The signed print-out shall be taken as the valid submission.
4.13 4.15	The Employer's address for delivery of tender offers and identification details to be shown on each tender offer package are: Location of tender box: City of Mbombela Physical address: 1 Nel Street, Mbombela 1200 Identification details: Tender COM 24/2023, UPGRADING OF WHITE RIVER WASTE WATER TREATMENT WORKS Tenders can be submitted 24 hours a day from Monday to Friday at the Employer's address. It is in the tenderer's interest to ensure that the delivery of the tender offer is recorded in the Employer's tenders received register.
4.13.4	The tenderer is required to submit all certificates as listed in the Schedule of Tender Compliance (Form U).
4.13.5	Place and seal the printed and completed tender document in an envelope clearly marked "TENDER" and bearing the Employer's name, the contract number and description, the tenderer's authorised representative's name, the tenderer's postal address and contact telephone numbers.
4.13.5	A two-envelope procedure will not be followed.
4.13.6	Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted.
4.15	The closing time for submission of tender offer is as stated in the Tender Notice and Invitation to Tender.
4.16.1	The tender offer validity period is 90 days.
4.16.2	Where a tenderer, at any time after the opening of his tender offer but prior to entering into a contract based on his tender offer: a) withdraws his tender; b) gives notice of his inability to execute the contract in terms of his tender; or c) fails to comply with a request made in terms of 4.17, 4.18 or 5.9, such tenderer shall be barred from tendering on any of the Employer's future tenders for a period to be determined by the Employer, but not less than six (6) months, from the date of tender closure. The Employer may fully or partly exempt a tenderer from the provisions of this condition if he is of the opinion that the circumstances justify the exemption.
4.18	Any additional information requested under this clause must be provided within 5 (five) working days of date of request.
4.20	The tenderer is required to submit with his tender a letter of intent from an approved insurer undertaking to provide the Performance Bond to the format included in Part C1.8 of this Procurement document.

5.1	The employer shall respond to clarifications received up to 7 working days before tender closing time.
5.2	The employer shall issue an addenda until **7 working days** before tender closing time.
5.4	All bid responses must be submitted before the Bid Closing date and time as stipulated on the tender invitation.
5.7	In the event of disqualification, the Employer may, at its sole discretion, impose a specified period during which tender offers will not be accepted from the offending tenderer and report same to CIDB and National Treasury.
5.9	Arithmetical errors, omissions, discrepancies and imbalanced unit rates Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount appearing in the summary to the Pricing Schedule shall govern. Check responsive tender offers for: a) the gross misplacement of the decimal point in any unit rate; b) omissions made in completing the pricing schedule or bills of quantities; or c) arithmetic errors in: i) line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or ii) the summation of the prices. d) imbalanced unit rates. Notify shortlisted tenderers of all errors, omissions or imbalanced rates that are identified in their tender offers. Where the tenderer elects to confirm the errors, omissions or re-balancing of imbalanced rates the tender offer shall be corrected as follows: a) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the unit rate shall govern, and the line item total shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted and the unit rate shall be corrected. b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall be corrected. c) Where the unit rates are imbalanced adjust such rates by increasing or decreasing them and selected others while retaining the total of the prices derived after any other corrections made under (a) and (b) above. Where there is an omission of a line item, no correction is possible, and the offer may be declared non-responsive. Declare as non-responsive and reject any offer from a tenderer who elects not to accept the corrections proposed and subject the tenderer to the sanction under 4.16.2. The tenderer is required to submit balanced unit rates for rate only items in the pricing schedule. The rates submitted for these items will be taken into account in the evaluation of tenders.

5.10	**List of disqualifying factors of this tender are as follows:** A bid not complying with the requirements stated hereunder will be regarded as "Non Responsive", and as such will be rejected/disqualified for further evaluation • Submit company registration certificate • Submit Tax Compliance Status issued by SARS • Full CSD report **NOT** older than **30 days** from the closing date **,** Summary report will **NOT** be considered • Submit Joint venture agreement in case of JV. • Authority for Signatory, duly signed and dated original or certified copy on the Company(s) Letterhead. This condition will not apply to companies owned by one director / member / sole • Submit copies of relevant Annual Financial Statements (last 3 Financial Years). For JV, relevant Annual Financial Statements from all parties are required. Failure to provide for all the service Providers will results in disqualification. • Submit copy of an active CIDB contractor grading designation of 6 ME or higher. **For JV, a combined CIDB grading is required.** • Tenderer must provide valid copy of municipal rates and taxes for both the company and for the active directors including JV/Consortium partners, Copies of latest municipal rates and taxes certificates from relevant local authority / proof of residential from tribal authority (if the business is operating or the directors are residing in rural areas) / lease agreement with the lessor's up-to-date municipal rates and taxes for both the business and all business directors. Prospective bidders should ensure that the physical address details of the company and directors reflected on the CSD is similar to the one reflected on the company registration certificate. The municipality reserves the right to verify both the municipal rates and taxes of the company details reflected on the CSD and company registration certificates. The municipality further reserves the right to use ID numbers of the directors to verify if any municipal rates and taxes are not owned by each director. It is prudent and remains the responsibilities of the prospective bidders to ensure that each director, lessor and company rates are cleared with regards to the municipal rates and taxes. A bid will be rejected if any municipal rates and taxes owed by the bidder or any of its directors to the municipality, or to any other municipality or municipal entity, are in arrears for more than three months (90 days) • Fully completed and signed where applicable in the Returnable Schedules. • Failure to apply instructions contained in addenda that may be issued. • Submissions from bidders who did not attend a compulsory briefing session will not be acceptable. • Prospective service providers may not make any alterations or additions to the Bid document, except to comply with instructions issued by the employer. The tender document must be furnished with non-erasable black ink and all corrections made by the service provider should be dated and signed by the authorised signatory. Erasures and the use of masking fluid, tippex, pencil or erasable ink are prohibited and failure to adhere to this condition will render your submission non responsive.
5.11	The procedure for the evaluation of responsive tenders is Method 4: Financial offer, quality and preferences. Method 4 Financial offer, quality and preferences is scored as follows: a) Score each tender in respect of the financial offer made and preferences claimed, if any. b) Calculate the total number of tender evaluation points (TEV) in accordance with the following formula: $T_{EV} = N_{FO} + N_P + N_Q$

5.11.5

where: N_{FO} is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;

N_P is the number of tender evaluation points awarded for preferences claimed in accordance with F.3.11.8.

N_Q is the number of tender evaluation points awarded for quality claimed in accordance with F.3.11.9.

c) Rank tender offers from the highest number of tender evaluation points to the lowest.

d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.

e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points, and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this sub-clause is repeated.

f) Compelling and justifiable reasons not to recommend a tenderer are inter alia tenderers who:

- do not meet the minimum requirements listed in Part T2.1, List of Returnable Documents and/or
- failed to complete the tender document comprehensively with all the required information.

5.11.7

The financial offer will be scored using the following formula: $N_{FO} =$

$W_1 \times A$

Where:

N_{FO} = the number of evaluation points awarded for the financial offer W_1

= the maximum possible number of bid evaluation points awarded for the financial offer and will be:

(i) 90 where the financial value inclusive of VAT of all responsive tenders received have a value in excess of R 50,000,000; or

(ii) 80 where the financial value inclusive of VAT of one or more responsive tender offers equals or is less than R 50,000,000.

A = the number calculated using Formula 2 (Option 1) Table

1: Formulae for calculating the value of A_a

Formula	Comparison aimed at achieving	Option 1[a]	Option 2[a]
1	Highest price or discount	$A = (1 + \frac{(P - P_m)}{P_m})$	$A = P / P_m$
2	Lowest price or percentage commission /fee '	$A = (1 - \frac{(P - P_m)}{P_m})$	$A = P_m / P$

[a] P_m is the comparative offer of the most favorable comparative offer.
P is the comparative offer of the tender offer under consideration.

	Scoring preferences. Up to 100 minus W_1 tender evaluation points will be awarded to tenderers who submit Responsive tenders and who are found to be eligible for the preference claimed. Points are based on a tenderer's scorecard measured in terms of the Broad-Based Black Economic Empowerment Act (B-BBEE, Act 53 of 2003) and the Regulations (2022) to the Preferential Procurement Policy Framework Act (PPPFA, Act 5 of 2000).

5.11.9	

Description of quality criteria	**Maximum number of points**
Company Experience (Wastewater Treatment Works, Water Treatment Works, Sewer pump stations and Bulk Sewer projects)	50
Plant and Equipment's	15
Key Personnel	35
Total evaluation points for quality (Ms)	**100**

Tender offers will only be considered responsive if the minimum quality requirement of **70 points** is achieved.

Tenderers are required to demonstrate their ability to undertake the work and provide proof of previous experience, expertise and availability of plant and equipment to undertake a project of this nature. Tenderers are therefore required to meet a minimum Quality Score of 70% (70 points out of 100) based on the criteria listed below. A score of less than 70 out of 100 points for Quality will render the tender non-responsive. The onus rests with the Tenderer to supply sufficient information to allow for evaluation and award of points detailed below. If insufficient information is provided, zero points will be awarded for that particular item.

Note that Quality points are only used to determine responsiveness and will not be used further in the evaluation.

i) Company Experience **(**Waste water treatment works, sewer reticulation and bulk sewer infrastructure Experience (Maximum 50 points)

Details of waste water treatment works, sewer reticulation and bulk sewer infrastructure related projects & supporting information in terms of the points to be claimed in terms of quality, must be entered in Form R in the Returnable Schedule.

ii). Plant and Equipment (Maximum 15 points)

Details of owned and hired plant and equipment are to be entered in Form S of the Returnable Schedules.

iii). Key Personnel (Maximum 35 points)

Details of key personnel and their experience and qualifications are to be entered in Form T of the Returnable Schedules.

5.13	**In addition to the requirements of the Condition of Tender, offers will only be accepted if:** • the tenderer is registered on the Central Supplier Database (CSD) for the South African government (see https://secure.csd.gov.za/). CSD is compulsory for any company to bid. **The full report should be submitted, not the summary.** • the tenderer is in good standing with SARS according to the Central Supplier Database. • the tenderer submits an **Origina**l letter of intent from an approved insurer undertaking to provide the Performance Bond to the format included in Form S of this procurement document. • the tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation. • the tenderer 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; • the tenderer has not: i) abused the Employer's Supply Chain Management System; or ii) failed to perform on any previous contract and has been given a written notice to this effect; • the tenderer has completed the Compulsory Declaration 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; • the tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer; • the employer is reasonably satisfied that the tenderer has in terms of the Construction Regulations, 2014, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely. • No Tippex has been used on the bid document. • The tenderer has not used an erasable pen and completed the bid document with a pencil.
5.17	The number of paper copies of the signed contract to be provided by the employer is One.
5.19	All requests shall be in writing.

CHECKLIST FOR RETURNABLE DOCUMENTS STIPULATED UNDER SPECIAL CONDITIONS OF TENDER DOCUMENTS AS MANDATORY REQUIREMENTS. THIS DOCUMENT SHALL BE APPLICABLE TO ALL TENDER DOCUMENTS OF THE CITY.

Preamble

The objective of this checklist is aimed at ensuring that interpretation and application of the special conditions and other mandatory requirements at Bid Evaluation Committee (BEC) & Bid Adjudication Committee (BAC) are aligned as envisaged by the Bid Specification Committee (BSC). This will enhance consistency and uniformity in the entire bid committee system whilst promoting "user friendly" principles by simplifying tender requirements to all interested prospective bidders.

ITEM NO:	DESCRIPTION / RETURNABLE DOCUMENTS	NOTES	FOR OFFICE USE ONLY	
			CHECKLIST	YES or NO or N/A
1.	Company Registration Certificate	a) It's a certificate issued by the Companies and Intellectual Property Commission in line with section 14 of the Companies Act 78 of 2008 b) A Certificate issued by CIPRO in line with section 2 of the Close Corporation Act 69 of 1984 NB: The registration of Close Corporations (CCs) was replaced by introduction of the New Companies Act which came to effect in April 2011. CCs to be recognized as valid registration certificate will be up to 2010.	Has the bidders attached a valid company registration document in line with the applicable legislation?	
2.	Company Profile	a) A Company Profile is a professional introduction of your Business that aims to inform Clients about its purpose, vision, trustworthiness, products and services, and experience of your Company. It is basically a "CV for your Business/Company"	Has the bidder attached a company profile and its experience is relevant to add value on this project?	

3.	Certification of documents to be submitted together with the tender document. I.e. ID Copies of business owners, qualifications, Licenses and certificates, accreditation by professional bodies, proof of ownership document, appointment letters, completion certificates, etc.	a) The certification of documents must be done by a commissioner of oath as prescribed in the Justice of the Peace and Commissioners of Oaths Act 16 of 1963 and its Regulations. b) Acceptable certified copies are copies originally certified from any police station, post office, Lawyers or notary public (who are members of a recognized professional body), Actuaries or accountants (who are members of a recognized professional body), Members of the judiciary, Directors, managers or company secretaries of a banks or regulated financial services business. *c) Commissioner of Oaths stamps can be purchased at Stationary shops, but it can be custom made following the below example:* CERTIFIED TRUE COPY OF THE ORIGINAL DOCUMENT. THERE ARE NO INDICATIONS THAT THE ORIGINAL DOCUMENT HAS BEEN ALTERED BY UNAUTHORISED PERSONS. Designation (rank) ……ex officio: RSA Date: …… Place …… Business Address: …… …… Commissioner of Oaths …… Signature Full Names NB: All certified copies must NOT exceed three months and be originally certified.	Has the bidder certified all documents to be certified as per special conditions of bid? Check validity on the date, check if the commissioner of oaths stamp is compliant as per example copied from the Regulations.	
4.	Central Supplier Database (CSD) Full report, (Summary report will **NOT** be acceptable). **N/B CSD Report date should not be more than 30 days before Bid closing date.**	a) The City requires that all prospective bidders should be registered on CSD. This is aimed at verification of email addresses, phone numbers, banking details, company registration numbers, tax status with SARS, state employees, etc.	Has the bidder attached a full CSD report, are tax matters in good order, are the directors not in the employment of any state and the CSD report is not older than 30 days from the closing date?	
5.	Tax Compliant Status (TCS)	a) Prospective bidders are required to attach a valid TCS together with the tender document.	Has the bidder attached a valid (not expired) TCS? The designated official should verify the bidder's tax compliance	

			status prior to finalization of the award of a bid or prize quotation. Where the recommended bidder is not tax compliant, the bidders should be notified of their non-compliant status and the bidder must be requested to submit to the City within 7 working days, written proof from SARS of their tax compliance status or proof from SARS that they have made arrangements to meet their outstanding tax obligations. The proof of tax compliance status submitted by the bidder to the City must be verified via the CSD report or e-Filing. The City should reject a bid submitted by the bidder if such a bidder fails to provide proof of tax compliance status within the timeframe stated above **(See MFMA Circular No: 90).**	
6.	Certified copy of B-BBEE Certificate / affidavit for B-BBEE status level of contributor (**to claim points only).**	a) EMEs in terms of the B-BBEE Act 53 of 2003 may submit a sworn affidavit confirming annual total revenue and level of black ownership or Certified Copy of B-BBEE Certificate. b) Bidders other than EMEs and QSEs **MUST** submit their certified copies of valid B-BBEE status level verification certificate, substantiating their B-BBEE rating issued by a registered auditor approved by IRBA or a verification agency accredited by SANAS. c) A trust, consortium or joint venture will qualify for points for their B-BBEE status level as an	Is the copy B-BBEE Certificate valid? Is the sworn affidavit for EME / QSE in line with the threshold for EME and EME and valid? If the tendering entity is a JV / Consortium / Large company, has the bidder attached a certified copy of a valid and consolidated B-BBEE certificate in order to claim points as prescribed by the MSCM Regulations?	

		unincorporated entity, provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such a consolidated B-BBEE scorecard is prepared for every separate bid. NB: There is NO consolidated affidavit for B-BBEE status level of contributor. Only consolidated B-BBEE certificate will be considered for JVs / Consortium & large companies that are making an annual turnover in access of R50 million including value added tax (VAT). *This is not a disqualifying factor, non-adherence will lead to no allocation of B-BBEE points.*	Is the copy of B-BEE certificate certified by the Commissioner of Oaths reflects as prescribe on the regulations of the Act? Is the affidavit for B-BBEE stamped and signed by commissioner of oaths? I.e. full names and signature, force/practice number, designation / rank, date and address. Is the certification date not older than 3 months and original ink is clear on the document to confirm if it is originally certified?	
7.	Formal agreement must be attached in case of a joint venture (JV) or consortium.	a) The JV/consortium must amongst others, reflect clear profit and loses sharing percentages. It is compulsory that the lead partner must have at least 51% majority shares in the JV/consortium.	If the tendering entity / bidder is a JV/Consortium, has the bidder attached a detailed JV/Consortium agreement with all critical information?	
8.	In bids where Consortia / Joint Ventures / Sub-contractors are involved, each party must submit separate required returnable documents.	a) This will not be applicable to functionality and B-BBEE requirements.	If the tendering entity / bidder is a JV/Consortium, have the parties involved attached all individual required documents as per special condition of bid?	
9.	Latest municipal rates and taxes certificates from relevant local authority for the business and all business directors OR Proof of resident from tribal authority for the business and all business directors	a) If the business is operated and its director(s) are residing within a municipal area, bidders are expected to attach latest municipal rate and taxes certificates for the business and ALL its directors. b) If the business is operated and its director(s) are residing within a tribal authority. Bidders are expected to attach proof of resident for the business and ALL its directors.	Has the bidder attached latest municipal rates and taxes from relevant local authority for the company / business and all company directors / owners? In case of lease, has the bidders attached lease agreements and lessor's proof of res from a tribal	

	OR Lease agreement with the Lessor's latest municipal rates and taxes certificates from relevant local authority. NB: All accounts owing any municipality for more than 90 days will be disqualified as prescribed on the MSCM Regulations.	c) If the business directors are leasing a facility for residential purposes, they are required to attach individual lease agreement with lessor's latest municipal rates and taxes for a facility is within a Municipal boundary and if the business is renting office / business facility, the bidders are required to attach lease agreement for the business with lessor's latest municipal rates and taxes for a facility within a municipal boundary. If the facility leased is in a rural area, lease agreement will be accompanied with the lessor's proof of residential from a tribal authority. NB: *Domicilium citandi at executandi*: Domicilium citandi et executandi is a Latin legal term meaning the address nominated by a bidder in a legal contract where legal notices may be sent. Bidders are encouraged to update their addresses when they relocate their businesses and the preferred address on the CSD should be in line with the address on the Company Registration Document. It is the responsibility of the bidder to ensure that all physical addresses reflected either on the company registration document and CSD are not owing any municipal rates and taxes for more than three months including the Lessor's municipal account in case of lease. The rationale behind this requirement is the enhance revenue in RSA municipalities as enshrined on the Municipal Systems Act 32, 2000. Failure to attach is an immediate disqualification but failure to align addresses will not be a disqualifying factor, however all addresses reflected on the both the CSD and company registration document will be subjected to this requirement.	authority or latest municipal rates and taxes certificate? Is the account not in areas for more than 90 days (3 months)?	
10.	**<u>Forging of documents/certificates</u>** The City has noted that prospective bidders are allegedly submitting	Section 34(1)(b) of the Prevention and Combating of Corrupt Activities Act 12 of 2004, stipulates that: *"any person who holds a position of authority and who knows or*	Are there any suspicious / alleged fraudulent or forged documents?	

	fraudulent and forged documents when bidding for tenders. Bidders are advised not to commit fraudulent activities and forge documents. The City will ensure that this Act is adhered to by reporting all abusers of the SCM system to SAPS and enlist them on the Register of Tender Defaulters as prescribed on section 29 of the Prevention and Combating of Corrupt Activities Act 12 of 2004. Abusers of the SCM system, amongst other penalties, may be restricted to do business with any Public Institutions for a period NOT exceeding 10 years (**see section 28 of this Act**).	*ought reasonably to have known or suspected that any other person has committed the offence of theft, fraud, extortion, **forgery** or uttering a forged document involving an amount of R100 000 or more, must report such knowledge or suspicion or cause such knowledge or suspicion to be reported to any police official".* Section 34(2) of the same Act stipulates that: *"subject to the provision of section 37(2), any person who fails to comply with subsection (1), is guilty of an offence".*	If yes, has the matter been reported to the nearest SAPS following correct institutional protocol? Has the matter been registered with the Registrar to enable due processes and per the Act? NB: The minutes of the BEC / BAC should detail all the elements of alleged fraud and forged documents.	

PART T2 RETURNABLE DOCUMENTS

PART T2: RETURNABLE DOCUMENTS

1. Failure to fully complete the **compulsory** returnable documents shall render such a tender offer unresponsive.
2. Tenderers shall note that their signatures appended to each returnable form **represents a declaration that they vouch for the accuracy and correctness of the information provided**, including the information provided by candidates proposed for the specified key positions.
3. Notwithstanding any check or audit conducted by or on behalf of the Employer, the information provided in the returnable documents is accepted in good faith and as justification for entering into a contract with a tenderer. **If subsequently any information is found to be incorrect such discovery shall be taken as willful misrepresentation by that tenderer to induce the contract**. In such event the Employer has the discretionary right under contract condition 9.2 to terminate the contract.

The Tenderer must complete the following returnable Schedules:

Returnable Schedules required for Tender evaluation purposes

COMPULSORY TENDER DOCUMENTS	
FORM A	CERTIFICATE OF ATTENDANCE AT CLARIFICATION MEETING
FORM B	RECORD OF ADDENDA TO TENDER DOCUMENTS
FORM C	PROPOSED AMENDMENTS, QUALIFICATIONS AND ALTERNATIVES
FORM D	PREFERENCING SCHEDULE: BROAD BASED BLACK ECONOMIC EMPOWERMENT STATUS
FORM E	COMPULSORY DECLARATION
FORM F	MUNICIPAL DECLARATION AND RETURNABLE DOCUMENTS
FORM G	CERTIFICATE OF INDEPENDENT TENDER
FORM H	DECLARATION OF GOOD STANDING REGARDING TAX
FORM I	DECLARATION OF TENDERER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES
FORM J	REGISTRATION ON NATIONAL TREASURY CENTRAL SUPPLIER DATABASE
FORM K	DECLARATION OF TENDERER'S LITIGATION HISTORY
FORM L	AUTHORITY OF SIGNATORY
FORM M	SCHEDULE OF SPECIALIST SUBCONTRACTORS
FORM N	PROOF OF GOOD STANDING WITH COMPENSATION COMMISSIONER
FORM O	SCHEDULE OF CURRENT COMMITMENTS
FORM P	REGISTRATION WITH CIDB
FORM Q	FINANCIAL RESOURCES
RETURNABLE FOR QUALITY CRITERIA	
FORM R	COMPANY EXPERIENCE IN RELATION TO SCOPE OF WORKS
FORM S	PLANT & EQUIPMENT
FORM T	MANAGERIAL CAPACITY, EXPERIENCE AND QUALIFICATIONS
CERTIFICATE FOR TENDER COMPLIANCE	
FORM W	SCHEDULE OF TENDER COMPLIANCE

COMPULSORY TENDER DOCUMENTS

FORM A: CERTIFICATE OF ATTENDANCE AT CLARIFICATION MEETING

Notes to Tenderer:

1. Unless the attendee's name, details and signature also appear on the attendance register this Certificate of Attendance shall not be accepted and the tenderer's offer shall be deemed non- responsive.

This is to certify that I, ...

representative of (tenderer) .....

of (address) .....

.....

.....

telephone number .....

fax number .....

e-mail .....

attended the clarification meeting on (date) .....

Signature of Representative: _____

Signature of Project Manager: _____

FORM B: RECORD OF ADDENDA TO TENDER DOCUMENTS(SIPDM)

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

	Date	**Title or Details**
▪		
▪		
▪		
▪		
▪		
▪		
▪		
▪		
▪		

Attach additional pages if more space is required.

Signed ..... Date .....

Name ..... Position .....

FORM C: PROPOSED AMENDMENTS, QUALIFICATIONS AND ALTERNATIVES(SIPDM)

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 5.8 of SANS 10845-3 regarding the employer's handling of material deviations and qualifications.

(a) AMENDMENTS

Page, Clause or Item No	Proposed Amendment

Note: (1) Amendments to the General and Special Conditions of Contract are not acceptable.
(2) The Tenderer must give full details of all the financial implications of the amendments and qualifications in a covering letter attached to his tender.

(**This is not an invitation for alternatives** but should the Tenderer desire to make any departures for the provisions of this contract he shall set out his proposals clearly hereunder.

(b) ALTERNATIVES

Proposed Alternative	Description of Alternative

Note: (1) Individual alternative items that do not justify an alternative tender, and an alternative offer for time for completion should be listed here.

(2) In the case of a major alternative to any part of the work, a separate Bill of Quantities, programme, etc. and a detailed statement setting out the salient features of the proposed alternatives must accompany the tender.

(3) Alternative tenders involving technical modifications to the design of the works and methods of construction shall be treated separately from the main tender offer.

Signed ..... Date .....

Name ..... Position .....

FORM D: PREFERENTIAL PROCUREMENT REGULATIONS 2022

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

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1. GENERAL CONDITIONS

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

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

1.2 **To be completed by the organ of state**

a) The applicable preference point system for this tender is the 80/20 preference point system.

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 / TARGETED GOALS	20
Total points for Price and SPECIFIC GOALS	**100**

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:

80/20 **or** **90/10**

$$Ps = 80\left(1 - \frac{Pt - P\,min}{P\,min}\right) \text{ or } \quad Ps = 90\left(1 - \frac{Pt - P\,min}{P\,min}\right)$$

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:

80/20 **or** **90/10**

$$Ps = 80\left(1 + \frac{Pt - P\,max}{P\,max}\right) \text{ or } \quad Ps = 90\left(1 + \frac{Pt - P\,max}{Pmax}\right)$$

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.

Table 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.)

Item no.	The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system)	Number of points claimed (80/20 system) (To be completed by the tenderer)
1.	100% Black owned enterprises within the definition of the HDI	2	
2.	At least 30% women owned enterprises	2	
3.	At least 30% youth owned enterprises	2	
4.	At least 30% enterprises people living with disabilities	2	
5.	Enterprises regarded as EMEs located within the City of Mbombela	2	
6	Enterprise who will sub-contract minimum of 30% of the contract value to EME's in the ward or local communities where the services to be rendered of works to be undertaken (Bidders shall list sub-contracting works or items)	2	
7	Corporate Social Investment (CSI) Plan. (see notes below)	5	
8	B-BBEE level 1 contribution (SANAS verified B-BBEE certificate for generic enterprise, and for EME and SME a sworn affidavit or CIPC issued certificate confirming annual turnover and level of Black Ownership	3	

The City will utilise the CSD report for the above-mentioned information

Corporate Social Investment (CSI)

NB: The minimum total value of the CSI should not be less than 2% of the total project value excluding vat and contingencies. The CSI project should be delivered concurrently with the project. The final product should be delivered prior to the issuing of completion certificate. The nature of the CSI project must benefit the community at large. (1 page, Arial font size 12) Prospective bidders will be expected to provide the City with a written explanation on how to implement the Corporate Service Investment on that particular ward, community or region. The investment must benefit the community at large. In order to claim points, a detailed one page report must be included in the list of returnable documents. The corporate social investment initiates must be implemented by the company/successful bidder. The final details of the CSI project will be finalized prior to the signing of the contract in consultations with relevant stakeholders.

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.

.....
SIGNATURE(S) OF TENDERER(S)

SURNAME AND NAME: .....
DATE: .....

ADDRESS: .....

.....

.....
.....

4 Declaration

The tenderer declares that

a) the tendering entity is a level contributor as stated in the submitted evidence of qualification as at the closing date for submissions

b) the tendering entity has been measured in terms of the following code (tick applicable box)

□ Generic code of good practice

□ Other – specify .....

c) the contents of the declarations made in terms of a) and b) above 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 authorized to do so on behalf of the tenderer, confirms that he / she understands the conditions under which such preferences are granted and confirms that the tenderer satisfies the conditions pertaining to the granting of tender preferences.

Signature: .....

Name: .....

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

Telephone: .....

Fax: ..... Date: .....

Name of witness ..... Signature of witness .....

Note:

1) Failure to complete the declaration will lead to the rejection of a claim for a preference.
2) Supporting documentation of the abovementioned claim for a preference must be submitted with the tender submission to be eligible for a preference. (see Clause 5.11.8 in Tender Data)

FORM E: COMPULSORY DECLARATION (SIPDM) (GBD 4)

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

Section 1: Enterprise Details

Name of Enterprise

Name of enterprise:	
Contact person:	
Email:	
Telephone:	
Cell no	
Fax:	
Physical address	
Postal address	

Section 2: Particulars of companies and close corporations Company / Close Corporation registration number.

Section 3: SARS Information

Tax reference number	
VAT registration number	*State Not registered if Not Registered for VAT*

Section 5: National Treasury Central Supplier Database

Supplier number	
Unique registration reference number	

Section 6: Particulars of principals

principal: means a natural person who is a partner in a partnership, a sole proprietor, a director of a company established in terms of the Companies Act of 2008 (Act No. 71 of 2008) or a member of a close corporation registered in terms of the Close Corporation Act, 1984, (Act No. 69 of 1984).

Full name of principal	Identity number	Personal tax reference number

*insert separate page if necessary

Section 7: Record in the service of the state

Indicate by marking the relevant boxes with a cross, if any principal is currently or has been within the last 12 months in the service of any of the following:

a) a member of any municipal council	☐	an employee of any department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act of 1999 (Act No. 1 of 1999)	☐
b) a member of any provincial legislature	☐		
c) a member of the National Assembly or the National Council of Province	☐	member of an accounting authority of any national or provincial public entity	☐
1. a member of the board of directors of any municipal entity	☐		
2. an official of any municipality or municipal entity	☐	an employee of Parliament or an employee of Parliament or a provincial legislature	☐

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

Name of principal	**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 8: Record of family member in the service of the state

family member: a person's spouse, whether in a marriage or in a customary union according to indigenous law, domestic partner in a civil union, or child, parent, brother, sister, whether such a relationship results from birth, marriage or adoption.

Indicate by marking the relevant boxes with a cross, if any family member of a principal as defined in section 5 is currently or has been within the last 12 months been in the service of any of the following:

d) a member of any municipal council	☐	an employee of any department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act of 1999 (Act No. 1 of 1999)	☐
e) a member of any provincial legislature	☐		
f) a member of the National Assembly or the National Council of Province	☐	member of an accounting authority of any national or provincial public entity	☐
3. a member of the board of directors of any municipal entity	☐		
4. an official of any municipality or municipal entity	☐	an employee of Parliament or an employee of Parliament or a provincial legislature	☐

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

Name of principal	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 9: Record of termination of previous contracts with an organ of state

Was any contract between the tendering entity including any of its joint venture partners terminated during the past 5 years for reasons other than the employer no longer requiring such works or the employer failing to make payment in terms of the contract.

☐ Yes ☐ No (Tick appropriate box)

If yes, provide particulars (insert separate page if necessary)

Section 10: Declaration

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the tendering entity confirms that the contents of this Declaration are within my personal knowledge, and save where stated otherwise in an attachment hereto, are to the best of my belief both true and correct, and:

neither the name of the tendering entity or any of its principals appears on:

a) the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004 (Act No. 12 of 2004).

National Treasury's Database of Restricted Suppliers (see www.treasury.gov.za)

ii) neither the tendering entity of any of its principals has within the last five years been convicted of fraud or corruption by a court of law (including a court outside of the Republic of South Africa);

iii) any principal who is presently employed by the state has the necessary permission to undertake remunerative work outside such employment (attach permission to this declaration);

iv) the tendering entity is not associated, linked or involved with any other tendering entities submitting tender offers

v) has not engaged in any prohibited restrictive horizontal practices including consultation, communication, agreement, or arrangement with any competing or potential tendering entity regarding prices, geographical areas in which goods and services will be rendered, approaches to determining prices or pricing parameters, intentions to submit a tender or not, the content of the submission (specification, timing, conditions of contract etc.) or intention to not win a tender;

vi) has 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;

vii) neither the tenderer or any of its principals owes municipal rates and taxes or municipal service charges to any municipality or a municipal entity and are not in arrears for more than 3 months;

SARS may, on an on-going basis during the term of the contract, disclose the tenderer's tax compliance status to the Employer and when called upon to do so, obtain the written consent of any subcontractors who are subcontracted to execute a portion of the contract that is entered into in excess of the threshold prescribed by the National Treasury, for SARS to do likewise.

Signed: _____ Date: _____

Name: _____ Position: _____

NOTE 1 The Standard Conditions of Tender contained in SANS 10845-3 prohibits anticompetitive practices (clause 3.1) and requires that tenderers avoid conflicts of interest, only submit a tender offer if the tenderer or any of his principals is not under any restriction to do business with employer (4.1.1) and submit only one tender either as a single tendering entity or as a member in a joint venture (clause 4.13.1). Clause 5.7 also empowers the Employer to disqualify any tenderer who engages in fraudulent and corrupt practice. Clause 3.1 also requires tenderers to comply with all legal obligations.

NOTE 2: Section 30(1) of the Public Service Act, 1994, prohibits an employee (person who is employed in posts on the establishment of departments) from performing or engaging remunerative work outside his or her employment in the relevant department, except with the written permission of the executive authority of the department. When in operation, Section 8(2) of the Public Administration Management Act, 2014, will prohibit an employee of the public administration (i.e. organs of state and all national departments, national government components listed in Part A of Schedule 3 to the Public Service Act, provincial departments including the office of the premier listed in Schedule 1 of the Public Service Act and provincial departments listed in schedule 2 of the Public Service Act, and provincial government components listed in Part B of schedule 3 of the Public Service Act) or persons contracted to executive authorities in accordance with the provisions of section 12A of the Public Service Act of 1994 or persons performing similar functions in organs of state from conducting business with the State or to be a director of a public or private company conducting business with the State. The offence for doing so is a fine or imprisonment for a period not exceeding 5 years or both. It is also a serious misconduct which may result in the termination of employment by the employer.

NOTE 3: Regulation 44 of Supply Chain Management regulations issued in terms of the Municipal Finance Management Act of 2003 requires that organs of state and municipal entities not award a contract to a person who is the service of the state, a director, manager or principal shareholder in the service of the state or who has been in the service of the state in the previous twelve months.

NOTE: 4: Regulation 45 of Supply Chain Management regulations requires a municipality or municipal entity to disclose in the notes to the annual statements particulars of any award made to a close family member in the service of the state.

NOTE: 5 Corrupt activities which give rise to an offence in terms of the Prevention and Combating of Corrupt Activities Act of 2004) include improperly influencing in any way the procurement of any contract, the fixing of the price, consideration or other moneys stipulated or otherwise provided for in any contract and the manipulating by any means of the award of a tender.

NOTE: 6 Section 4 of the Competition Act of 1998 prohibits restrictive horizontal practice including agreements between parties in a horizontal relationship which have the effect of substantially preventing or lessening competition, directly or indirectly fixing prices or dividing markets or constitute collusive tendering. Section 5 also prohibits restrictive vertical practices. Any restrictive practices that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties.

ATTACH THE FOLLOWING DOCUMENTS TO THIS PAGE

- **For Closed Corporations**

CK1 or CK2 as applicable (Founding Statement) Certified Copies of the ID's of the Directors Certified Shareholders Certificate

OR

- **For Companies**

A copy of the Certificate of Incorporation Certified Copies of the ID's of the Directors, and Certified shareholders' register

OR

- **For Joint Venture Agreements**
- Joint Venture Agreement between all the parties,
- as well as the documents in (1) or (2) of each Joint Venture member.

OR

- **For Partnership**

1. Certified Copies of the ID's of the partners

OR

- **One person Business / Sole trader**

2. Certified Copy of ID

FORM F: MUNICIPAL DECLARATION AND RETURNABLE DOCUMENTS

(SIPDM)

The following particulars must be furnished in relation to tenders for municipalities and municipal entities where:

a) contractors are required; and

b) goods, services or a combination thereof where the estimated total of the prices exceeds R 10 million including VAT.

In the case of a joint venture, separate municipal declarations and returnable documents shall be submitted in respect of each partner.

Section 1: Enterprise Details / Name of enterprise:

Name of enterprise:	
Contact person:	
Email:	
Telephone:	
Cell no	
Fax:	
Physical address	
Postal address	

Section 2: Declaration for Contractor's services:

The enterprise has been awarded the following contract services by an organ of state during the last five years.

Name of organ of state	Estimated value of contracts	Nature of service e.g. quantity surveying	Service number similar to required service (yes / no)?

Attach separate page as necessary

Section 3: Goods, services or a combination thereof where the estimated total of the prices exceeds R 10 million including VAT

I / we certify that

1) (tick one of the boxes):

☐ the enterprise is not required by law to prepare annual financial statements for auditing.

☐ the enterprise is required by law to have audited annual financial statements and attached the audited financial statements for the past three financial years, or since the establishment as the enterprise was established within the past three years.

2) the enterprise and its directors has / have no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days (i.e.: all municipal accounts are paid up to date) Attach Municipal Utility Account;

3) source of goods and / or services:

(tick one of the boxes and insert percentages if applicable):

☐ goods and / or services are sourced only from within the Republic of South Africa

☐ [ ] % of the total cost of goods and / or services will be sourced from outside the Republic of South Africa and the percentage of payment from the municipality or municipal entity which is expected to be transferred out of the Republic is [ ] %

I furthermore confirm that the following contracts were awarded to the enterprise by an organ of state during the last five years and attached particulars of any material non-compliance or dispute concerning the execution of such contracts:

Name of organ of state	**Estimated number of contracts**	**Nature of contracts**

*Attach separate page as necessary

I, the undersigned who warrants that I am duly authorised on behalf of the tendering entity, hereby declare that the contents of this Declaration are within my personal knowledge, and save where stated otherwise are to the best of my belief both true and correct.

Signed: _____ Date: _____

Name: _____ Position: _____

ATTACHED HERETO AN ORIGINAL OR CERTIFIED COPY OF THE LATEST MUNICIPAL UTILITY ACCOUNT

FORM G: CERTIFICATE OF INDEPENDENT TENDER (GBD 9)

Notes to tenderer:

a) This certificate conforms to Treasury Regulation 16A9 and the requirement of section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, that prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms if it is between parties in a horizontal relationship and if it involves collusive tendering.

b) Collusive tendering is a conspiracy between businesses that would normally be expected to compete, to agree not to compete, in a tender process.

c) This certificate serves as a declaration by the tenderer that the tender submitted is free from any collusion with a competitor.

CERTIFICATE OF INDEPENDENT TENDER DETERMINATION

I, the undersigned, in submitting the accompanying tender:

_____

(Tender Number and Description) in response to the invitation for the tender 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 Tenderer)

i) I have read and I understand the contents of this Certificate;

ii) I understand that the accompanying tender will be disqualified if this Certificate is found not to be true and complete in every respect;

iii) I am authorized by the tenderer to sign this Certificate, and to submit the accompanying tender, on behalf of the tenderer;

iv) Each person whose signature appears on the accompanying tender has been authorized by the tenderer to determine the terms of, and to sign, the tender, on behalf of the tenderer;

v) For the purposes of this Certificate and the accompanying tender, I understand that the word “competitor” shall include any individual or organization, other than the tenderer, whether or not affiliated with the tenderer, who:

(a) has been requested to submit a tender in response to this tender invitation;

(b) could potentially submit a tender in response to this tender invitation, based on their qualifications, abilities or experience; and

(c) provides the same goods and services as the tenderer and/or is in the same line of business as the tenderer

vi) The tenderer has arrived at the accompanying tender independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium[3] will not be construed as collusive bidding.

vii) 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 tender;
e) the submission of a tender which does not meet the specifications and conditions of the tender; or
f) bidding with the intention not to win the tender.

viii) 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 tender invitation relates.

ix) The terms of the accompanying tender have not been, and will not be, disclosed by the tenderer, directly or indirectly, to any competitor, prior to the date and time of the official tender opening or of the awarding of the contract.

x) I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to tenders and contracts, tenders 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
Capacity under which Tender is Signed	Name of Tenderer

FORM H: DECLARATION OF GOOD STANDING REGARDING TAX (GBD 2)

ATTACH VALID TAX CLEARANCE CERTIFICATE AND TAX COMPLIANCE STATUS (TCS) PIN TO THIS PAGE

The Tax Clearance Certificate and Tax Compliance Status (TCS) PIN must be submitted together with the tender. Failure to submit the above-mentioned documentation will result in the invalidation of the tender.

In tenders where Consortia / Joint Ventures / Sub-contractors are involved, each party must submit a separate Tax Clearance Certificate, and Tax Compliance Status (TCS) PIN.

FORM I: DECLARATION OF TENDERER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES (GBD 8)

Notes to tenderer:

1. This tender document must form part of all tenders invited.
2. This form serves as a declaration to be used by institutions in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
3. The tender of any tenderer may be disregarded if that tenderer or any of its directors have;
   a. abused the institution's supply chain management system;
   b. committed fraud or any other improper conduct in relation to such system;
   c. failed to perform on any previous contract.
4. In order to give effect to the above, the following questionnaire must be completed and submitted with this tender.

Item	Question	Yes	No
4.1	**Is the tenderer or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector?** **(Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the *audi alteram partem* rule was applied).** **The Database of Restricted Suppliers now resides on the National Treasury's website(www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.**	Yes ☐	No ☐
4.1.1	If so, furnish particulars:		
4.2	Is the tenderer or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? **for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.**	Yes ☐	No ☐
4.2.1	If so, furnish particulars:		
4.3	Was the tenderer or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes ☐	No ☐
4.3.1	If so, furnish particulars:		

4.4	Does the tenderer or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?	Yes ☐	No ☐
4.4.1	If so, furnish particulars:		
4.5	Was any contract between the tenderer and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes ☐	No ☐
4.7.1	If so, furnish particulars:		

CERTIFICATION

I, THE UNDERSIGNED (FULL NAME) ……

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

I ACCEPT THAT, IN ADDITION TO CANCELLATION OF A CONTRACT, ACTION MAY BE TAKEN AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

Signature	Date
Capacity under which Tender is Signed	Name of Tenderer

FORM J: REGISTRATION ON NATIONAL TREASURY CENTRAL SUPPLIER DATABASE

The tenderer shall provide a printed copy of the Active Supplier Listing on the National Treasury Central Supplier Database. (www.treasury.gov.za). Tenderers who are not registered on the Central Supplier Database should attach proof of their application for registration (refer to Tender Data Clause 4.1). In the case of a Joint Venture, a printed copy of the Active Supplier Listing must be provided for each member of the Joint Venture.

Name of Contractor:

.....

Central Supplier Database Supplier Number:

.....

Affix Proof of the National Treasury Central Supplier Database to this page

(Full CSD required, not summary)

FORM K: DECLARATION OF TENDERER'S LITIGATION HISTORY

Does the tenderer have any litigation with which tenderer (including its directors, shareholders or other senior members in previous companies) have been involved with any organ of state or state department within the last ten years?

YES	NO

If yes, furnish your details in table below.

NB: It is compulsory for all bidders to sign this form

The tenderer shall list below details of any litigation with which the tenderer (including its directors, shareholders or other senior members in previous companies) has been involved with any organ of state or state department within the last ten years. The details must include the year, the litigating parties, the subject matter of the dispute, the value of any award or estimated award if the litigation is current and in whose favour the award, if any, was made.

Client	Other Litigating Party	Dispute	Award Value	Date Resolved

Signature

Date

Capacity under which Tender is Signed

Name of Tenderer

FORM L: AUTHORITY OF SIGNATORY

Details of person responsible for tender process:

Name: ----------

Contact number: ----------

Office address: ----------

Signatories for close corporations and companies shall confirm their authority by attaching to this form **a duly signed and dated original or certified copy on the Company Letterhead** of the relevant resolution of their members or their board of directors, as the case may be.

PRO-FORMA FOR COMPANIES AND CLOSE CORPORATIONS:

"By resolution of the board of directors passed on *(date)*

Mr……

has been duly authorized to sign all documents in connection with the Tender for Contract Number/Name

……and any Contract which may arise there from on behalf of

……

(BLOCK CAPITALS) SIGNED ON BEHALF OF THE COMPANY

IN HIS CAPACITY AS .....……

DATE .....……

FULL NAMES OF SIGNATORY ……

SIGNATURE .....……

AS WITNESSES: 1. NAME …… SIGNATURE ……

2. NAME …… SIGNATURE ……

PRO-FORMA FOR JOINT VENTURES:

Certificate of Authority for Joint Ventures

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

NAME OF FIRM	ADDRESS	DULY AUTHORISED SIGNATORY
		Signature: …….. Name: ……. Designation: ……..
		Signature: …….. Name: ……. Designation: ……..
		Signature: …….. Name: ……. Designation: ……..
		Signature: …….. Name: ……. Designation: ……..

ATTACHED HERETO THE DULY SIGNED AND DATED ORIGINAL OR CERTIFIED COPY OF AUTHORITY OF SIGNATORY ON COMPANY LETTERHEAD

FORM M: SCHEDULE OF SPECIALIST SUBCONTRACTORS

Notes to tenderer:

1. The tenderer shall list below the specialist items of work on this contract. Alternatives may be mentioned.
2. The tenderer shall state whether he intends to carry out any specialised work himself.

Acceptance of this tender shall not be construed as approval of all or any of the listed specialist subcontractors. Should any or all of the specialist subcontractors not be approved subsequent to the acceptance of the tender, it shall in no way invalidate this tender, and the tendered unit rates for the various items of work shall remain final and binding, even in the event of a subcontractor not listed below being approved by the engineer.

SPECIALISED ITEM	**INDICATE IF SUB-CONTRACTED (Tick correct option)**	
	YES	NO

In order to complete the Works under this Contract, I/we propose to employ the following sub-contractors to carry out the portion/type of work as detailed. **Affix Original or Certified proof of 3 previous projects for each sub-contractor.**

(Note: All proposed sub-contractors must be listed).

Sub-contractor: Name, Address and Telephone No.	**Portion/type of work to be undertaken**	
_____ _____ **(____)_____**		**Previous value of work:** **Previous Experience:**
_____ _____ **(____)_____**		**Previous value of work:** **Previous Experience:**

_____ _____ (____)_____		**Previous value of work:** **Previous Experience:**
_____ _____ (____)_____		**Previous value of work:** **Previous Experience:**

FORM N: PROOF OF GOOD STANDING WITH COMPENSATION COMMISSIONER

Notes to tenderer:

1. Discovery that the tenderer has failed to make proper disclosure may result in the City of Mbombela terminating a contract that flows from this tender on the ground that it has been rendered invalid by the tenderer's misrepresentation.

2. The tenderer shall attach to this Form evidence that he is registered and in good standing with the compensation fund or with a licensed compensation insurer who is approved by Department of Labour in terms of section 80 of the Compensation for Injury and Disease Act 1993 (COID) (Act 130 of 1993).

Affix certified Proof of Good Standing with Compensation Commissioner to this page

FORM O: SCHEDULE OF CURRENT COMMITMENTS

Notes to tenderer:

(a) The tenderer shall list below all contracts currently under construction or awarded and about to commence and tenders for which offers have been submitted but awards not yet made.
(b) In the event of a joint venture enterprise, details of all the members of the joint venture shall similarly be attached to this form.
(c) The lists must be restricted to not more than 5 contracts and 5 tenders. If a tenderer's actual commitments or potential commitments are greater than 5 each, those listed should be in descending order of expected final contract value or sum tendered.

Contracts Awarded				
Employer	Project	Expected Value of contract (Inclusive of VAT)	Durations (Months)	Expected Completion Date

Tenders not Yet Awarded				
Employer	Project	Tendered Amount (Inclusive of VAT)	Tendered Durations (Months)	Expected Commencement Date

Signature

Date

Capacity under which Tender is Signed

Name of Tenderer

FORM P: REGISTRATION WITH CIDB

The tenderer shall provide a printed copy of the Active Contractor's Listing off the CIDB website. (www.cidb.org.za). Tenderers whose CIDB registration expires within 21 days after close of tender should attach proof of their application for re-registration (refer to Tender Data Clause 4.1). In the case of a Joint Venture, a printed copy of the Active Contractor's Listing must be provided for each member of the Joint Venture.

Name of Contractor: .....

Contractor Grading Designation: .....

CIDB Contractor Registration Number: .....

Expiry Date: .....

FORM Q: FINANCIAL RESOURCES BANKING INFORMATION

DETAILS OF TENDERERS BANKING INFORMATION

Notes to tenderer:

- The tenderer shall attach to this form a letter of intent for 10% guarantee from a financial institution.
- In the event that the tenderer is a joint venture enterprise, the bank guarantee will be expected from the lead partner.

BANK NAME:	
ACCOUNT NAME: *(e.g. ABC Civil Construction cc)*	
ACCOUNT TYPE: *(e.g. Savings, Cheque etc.)*	
ACCOUNT NO:	
ADDRESS OF BANK:	
CONTACT PERSON:	
TEL. NO. OF BANK / CONTACT:	
How long has this account been in existence:	0-6 months ☐ 7-12 months ☐ 13-24 months ☐ More than 24 months ☐ (Tick which is appropriate)

FORM Q: FINANCIAL RESOURCES DECLARATION OF PROCUREMENT ABOVE R 10 MILLION (GBD5)

For all procurement expected to exceed R10 million (all applicable taxes included), tenderer must complete the following questionnaire:

- Are you by law required to prepare annual financial statements for auditing?

  YES / NO

1.1. If yes, submit audited financial statements for the past three years or since the date of establishment if established during the past three years.

……..

……..

2. Do you have any outstanding undisputed commitments for municipal services towards any municipal for more than three months or any other service provider in respect of which payments is overdue for more than 30 days?

YES / NO

……

……

2.1 If no, this serves to certify that the tenderer has no undisputed commitments for municipal services towards any municipality for more than three months or other service provider in respect of which payment is overdue for then 30 days?

……..……..……

……..…

2.2 If yes, please provide particulars

……

……

2.1 Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract?

YES / NO

.....

……

a. If yes, furnish particulars

……

……

4.1 Will any portion of goods or services be sourced from outside the Republic, and, if so, what portion of payment from the municipality / /municipal entity is expected to be transferred out of the Republic?

YES / NO

4.1 If yes, furnish particulars

……

……

CERTIFICATION

I, THE UNDERSIGNED (NAME) ……..……..…

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

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

Signature	Date
Capacity under which Tender is Signed	Name of Tenderer

FORM Q: FINANCIAL RESOURCES
DOCUMENTATION OF INTENT TO PROVIDE A PERFORMANCE GUARANTEE

*The Tenderer must attach hereto an **Original Letter** from a financial institution with whom he has made the necessary arrangements, to the effect that the said financial institution will be prepared to provide the required performance guarantee when asked to do so. (Letter of Intent)*

A Pro forma follows herewith for the tenderer to use.

PRO-FORMA FOR A PERFORMANCE GUARANTEE PERFORMANCE GUARANTEE

Employer

(Name and Address) _____

_____

Contract No _____

Contract Title _____

WHEREAS _____

(hereinafter referred to as "the Employer") entered into, a Contract with:

_____

(hereinafter called "the Contractor") on the _____ day of _____ 20 _____ for the construction of (Contract Title)

_____

at _____

AND WHEREAS it is provided by such Contract that the Contractor shall provide the Employer with security by way of a guarantee for the due and faithful fulfilment of such Contract by the Contractor;

AND WHEREAS WE _____ (hereinafter referred to as the Guarantor") has/have at the request of the Contractor, agreed to give such guarantee;

NOW THEREFORE WE do hereby guarantee and bind ourselves jointly and severally as Guarantor and Co-Principal Debtor to the Employer under renunciation of the benefits of division and exclusion for the due and faithful performance by the Contractor of all the terms and conditions of the said Contract, subject to the following conditions:

1) The Employer shall, without reference and/or notice to us, have complete liberty of action to act in any manner authorized and/or contemplated by the terms of the said Contract, and/or to agree to any modifications, variations, alterations, directions or extension of the Completion Data of the Works under the said Contract, and that its rights under this guarantee shall in no way be prejudiced nor or liability hereunder be affected by reason of any steps which the Employer may take under such Contract, or of any modification, variation, alterations of the Completion Date which the Employer may make, give, concede or agree to under the said Contract.

2) This guarantee shall be limited to payment of a sum of money.

3) The Employer shall be entitled, without reference to us, to release any guarantee held by it, and to give time to or compound or make any other arrangement with the Contractor.

However, upon receipt by us of an authenticated copy of the Certificate of Completion in terms of the Contract, the amount of liability shall be reduced by 50% which shall be in force until the issue of the Final Approval Certificate at expiry of the Defects Liability Period

This guarantee shall remain in full force and effect until the issue of the Certificate of Completion in terms of the Contract, unless we are advised in writing by the Employer before the issue of the said Certificate of Completion

4) 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 of liquidated,

5) Our total liability hereunder shall not exceed the sum of

_____

_____ (in words)

R _____(in figures)

(10% of the tender sum) that amount I/we agree to hold at your disposal.

6) The Guarantor reserves the right to withdraw from this guarantee by depositing the Guaranteed Sum with the beneficiary, whereupon the Guarantor's liability hereunder shall cease.

I/We declare that I/we, on behalf of the Guarantor, waive the legal exceptions available to a guarantor and undertake to pay the said amount or such portion thereof as may be demanded, immediately on receipt of a written demand from you.

A certificate under your hand shall be sufficient and satisfactory evidence as to the amount of the Guarantor's liability for the purpose of enabling provisional sentence or any similar relief to be obtained against the Guarantor.

This guarantee is neither negotiable nor transferable, and must be surrendered to the Guarantor in the event of the full amount of the Guarantee being paid to the Employer.

7) I/We hereby choose our address for the serving of all notices for all purposes arising here from as

_____

_____

IN WITNESS WHERE OF this guarantee has been executed by us at _____

_____ on the _____ day of _____ 20

As witness:

1. _____ Signature _____

2. _____ Signature _____

Duly authorized to sign on behalf of
(Guarantor) _____

Address _____

_____

_____

RETURNABLES FOR QUALITY CRITERIA

FORM R: COMPANY EXPERIENCE IN RELATION TO SCOPE OF WORKS

The Tenderer will receive a maximum of 50 points based on information provided in this schedule.

The following is a statement of work of similar (waste water treatment, water treatment, sewer pump stations sewer reticulation and bulk sewer infrastructure) nature and size recently successfully executed by myself / ourselves:

1 Points will be given for projects completed of similar nature and size.

2 The tenderer scores **10 points** per project with a value of more than R10 million but less than R20 million, completed in the last 5 years.

3 The tenderer scores **15 points** per project with a value of more than R20 million but less than R30 million completed in the last 5 years.

4 The tenderer scores **20 points** per project with a value of more than R30 million completed in the last 5 years.

5 The tenderer may list only 5 projects of similar nature and size.

6 The maximum Quality points for each criterion are listed below.

7 Points for completion certificates attached will be given for similar projects.

8 Failure to submit all relevant information per project will result in the forfeiture of all points for that relevant project.

9 The experience of the Tenderer or joint venture partners in a consortium will be evaluated based on experience in similar projects or similar areas and conditions in relation to the scope of work required for this project.

10 Documents requested above must be certified and not older than 3 months. Failure to adhere to the directive zero points will be allocated.

NB: Similar project (construction of waste water treatment works, sewer reticulation and bulk sewer infrastructure)

Certified Appointment letter as well as Completion Certificate (signed by client, contractor and engineer) of Relevant Work (to be attached – zero points if any is not attached)	**Consulting Engineer: Contact Person and Telephone Number**	**Employer: Contact Person and Telephone Number**	**Value of Work** (inclusive of VAT)	**Date Completed (Attach Certified Completion Certificate)**
*Attach additional pages if more space is required		Total Points		

FORM S: PLANT & EQUIPMENT

The tenderer will receive a maximum of 15 points based on information provided in this schedule.

1. 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.

2. The tenderer will receive Quality points for listing of plant available for this specific contract as follows:
   - Major plant for construction works if well identified and 100% is owned and available at start of contract maximum points will be as stated in allocated points if owned column.
   - 50% points will be allocated for hired plant as indicated in the Allocate points for hired plant column on the table below.
   - Points for the plant correctly identified and owned will be calculated according to the allocated points based on the quantities under the Quantities Required column.

3. Proof of ownership to be submitted: Natis to be attached.

4. Documents requested above must be certified and not older than 3 months. Failure to adhere to the directive zero points will be allocated

Description, size, capacity, etc.	**Allocate Points if owned**	**Quantity Required**	**Quantity owned**	**Points Scored**
Excavator (20 ton)	3.0	1		
Vibratory Roller	2.0	2		
Water Tanker (8000 Littre)	2.0	1		
Tipper Truck (10 m^3 or above)	4.0	4		
TLB (48 kw Capacity)	1.0	1		
Mobile crane	3.0	1		
Total	**15.0**			
Total Points Allocated				

*Attached additional pages if more space is required.

FORM T: KEY PERSONNEL EXPERIENCE AND QUALIFICATIONS

The Tenderer will receive a maximum of 35 points based on information provided in this Schedule

Notes to tenderer:

1. The intention of this form is to demonstrate the tenderer's project structure, as well as the lines of responsibility between members of the project team and the overall company structure. Attach own organogram to this form.
2. Joint Venture tenders require each element of the venture to submit separate organograms that show the individual structure of each member company and the lines of responsibility of the proposed personnel involved in the project. In addition, there must also be a combined organogram that indicates how the joint venture itself will function and the proposed share of the work will become a contractual obligation between the members of the joint venture.
3. State the city or town where the company's head office is located. The locality of regional or satellite offices, regardless of degree of autonomy or size is not required. Only submit the number of offices other than the head office. Do not count offices outside RSA.
4. Registered professional engineers, technicians or technologists means those who are involved in the construction of roads and streets with related storm water structures. Registered professionals of other disciplines (e.g. mechanical) are considered as employees only.

5. For all foreign nationals must attach SAQA accreditation and certified proof of work permit

CONSTRUCTION PERSONNEL

i) Contract manager

Contract manager is required to have a minimum of NQF Level 7 in Civil engineering or equivalent and a minimum of 10 years in waste water treatment, sewer reticulation and bulk sewer infrastructure, as indicated below:

EXPERIENCE IN WASTE WATER TREATMENT WORKS	**10**	**11**	**12**	**13**	**14**
POINTS	**1**	**5**	**7**	**8**	**10**

ii) Site Agent

Site Agent is required to have a minimum of N.D Civil engineering or equivalent to a NQF 6 qualification and a minimum of 10 years in waste water treatment works, sewer reticulation and bulk sewer infrastructure, as indicated below:

EXPERIENCE IN WASTE WATER TREATMENT WORKS	**10**	**11**	**12**	**13**	**14**
POINTS	**1**	**5**	**7**	**8**	**10**

iii) Site Foreman

Site Foreman on permanent/contract basis, with at least NQF 4 qualification or related qualification with experience in Waste water treatment works, sewer reticulation and bulk sewer infrastructure of not less than seven (7) years. Points will be allocated on a pro-rata basis for experience between 7 to 10 years, as indicated below:

EXPERIENCE IN WASTE WATER TREATMENT WORKS	**7**	**8**	**9**	**10**
POINTS	**2**	**5**	**8**	**10**

iv) Safety Officer

Safety officer on permanent/contract basis, with a valid certificate issued by SACPCMP and with experience in waste water treatment works, sewer reticulation and bulk sewer infrastructure projects of not less than three (3) years. Points will be allocated on a pro-rata basis for experience between 3 to 5 years, as indicated below:

EXPERIENCE IN WASTE WATER TREATMENT WORKS	**3**	**4**	**5**
POINTS	**2**	**3**	**5**

Experience	Points
Provide detailed CVs and **certified** qualifications for all Key Personnel for each category stated above.	**35**

N.B Points to be allocated based on the CV's provided. The appointed contractor is to provide such personnel as attached or one with equivalent qualifications and experience. Failure to do so will result in zero points.

ATTACH CV'S AND CERTIFIED QUALIFICATIONS OF KEY PERSONNEL TO THIS PAGE

Note: Only CV's and Certified Qualifications of Key personnel that were named and shown on the organogram to be attached.

COMPETENCE ACHIEVEMENT SCHEDULE (QUALITY)

		MAXIMUM POINTS TO BE ALLOCATED	POINTS CLAIMED BY TENDERER	ALLOCATED POINTS
Company Experience:	Form R	50		
Plant and Equipment:	Form S	15		
Key Personnel:	Form T	35		
Sub- Total		100		
TOTAL		**100**		

Note:

Total allocated for Quality is 100 points. The minimum threshold required to qualify for the next stage of evaluation is 70 points. Only those tenders that achieve the minimum number will proceed to the price and preference evaluation stage**.**

SUPPLY CHAIN POLICY USING 80/20 PREFERENCE POINT SYSTEM

1	MAXIMUM POINTS TO BE ALLOCATED
Price	**80**
B-BBEE Status Level of Contribution	**20**
TOTAL	**100**

FORM W: SCHEDULE OF TENDER COMPLIANCE

Note to tenderer:

This Table has been created as an aid to ensure a tenderer's compliance with the completion of the returnable forms and schedules and subsequent placement in the correct envelope.

FORM NO / GBD NO	FORM DESCRIPTION	TICK IF COMPLETED
A	CERTIFICATE OF ATTENDANCE AT CLARIFICATION MEETING	
B	RECORD OF ADDENDA TO TENDER DOCUMENTS	
C	PROPOSED AMENDMENTS AND QUALIFICATIONS	
D	PREFERENCING SCHEDULE: BROAD BASED BLACK ECONOMIC EMPOWERMENT STATUS	
E	COMPULSORY DECLARATION	
F	MUNICIPAL DECLARATION AND RETURNABLE DOCUMENTS	
G	CERTIFICATE OF INDEPENDENT TENDER	
H	DECLARATION OF GOOD STANDING REGARDING TAX	
I	DECLARATION OF TENDERER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES	
J	REGISTRATION ON NATIONAL TREASURY CENTRAL SUPPLIER DATABASE	
K	DECLARATION OF TENDERER'S LITIGATION HISTORY	
L	AUTHORITY OF SIGNATORY	
M	SCHEDULE OF SPECIALIST SUBCONTRACTORS	
N	PROOF OF GOOD STANDING WITH COMPENSATION COMMISSIONER	
O	SCHEDULE OF CURRENT COMMITMENTS	
P	REGISTRATION WITH CIDB	
Q	FINANCIAL RESOURCES	
R	COMPANY EXPERIENCE IN RELATION TO SCOPE OF WORKS	
S	PLANT & EQUIPMENT	
T	KEY PERSONNEL, EXPERIENCE AND QUALIFICATIONS	

THE CONTRACT

PART C1 AGREEMENT AND CONTRACT DATA

PART C2 PRICING DATA

PART C3 SCOPE OF WORKS

PART C4 SITE INFORMATION

PART C1 AGREEMENT AND CONTRACT DATA

CONTENTS **PAGE(S)**

C1.1 FORM OF OFFER

C1.2 FORM OF ACCEPTANCE

C1.3 SCHEDULE OF DEVIATIONS

C 1.1: FORM of OFFER

OFFER

The employer, identified in the acceptance signature block, has solicited offers to enter into a contract for the procurement of: **UPGRADING OF WHITE RIVER WASTE WATER TREATMENT WORKS**

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

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

The offered total of the prices, inclusive of any value added tax or sales tax which the law requires the employer to pay, is _____

_____(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 the contract identified in the contract data.

for the TENDERER

Signature: _____

Name: _____

Capacity: _____

Witness:

Name: _____

Signature:_____

Date: _____

C1.2: FORM of ACCEPTANCE

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 C 1: Agreements and contract data, (which includes this agreement) Part C 2:

Pricing data
Part C 3: Scope of work.
Part C 4: Site information

and drawings and documents or parts thereof, which may be incorporated by reference into Parts C1 to C4 above.

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as listed in the tender schedules, as well as any changes to the terms of the offer agreed by the tenderer and the employer during this process of offer and acceptance, are contained in the schedule of deviations attached to and forming part of this agreement. No amendments to or deviations from said documents are valid unless contained in this schedule.

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

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

for the EMPLOYER

Signature: _____ Date: _____

Name: _____

Capacity: _____

Witness:

Name: _____

Signature: _____ Date: _____

C1.3: SCHEDULE of DEVIATIONS

1 Subject
Details
2 Subject
Details
3 Subject
Details
4 Subject
Details

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

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

for the TENDERER

Signature: _____

Name: _____

Capacity: _____

for the EMPLOYER

Name: _____

Signature: _____ Date: _____

Capacity: _____

Witness:

Name: _____

Signature: _____ Date: _____

C1.4 CONTRACT DATA

C1.4: CONTRACT DATA

CONDITIONS OF CONTRACT

PART 1: DATA PROVIDED BY THE EMPLOYER

CONDITIONS OF CONTRACT

The General Conditions of Contract for Construction Works, Third Edition, 2015, published by the South African Institution of Civil Engineering, Private Bag X200, Halfway House, 1685, are applicable to this contract and is obtainable form www.saice.org.za.

CONTRACT SPECIFIC DATA

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

PART 1: DATA PROVIDED BY THE EMPLOYER

The following contract specific data are applicable to this Contract:

Clause	Description
1.1.1.13	The Defects Liability Period is **12 months**
1.1.1.15	The Name of the Employer is the **City of Mbombela**.
1.1.1.16	The Name of the Employer's Agent is **Lihuzu Projects (Ltd) Pty**
1.1.1.26	The pricing strategy: **Re-Measurement Contract**
1.2.1.2	The Employer's address for receipt of communications is: Physical address: **1 Nel Street MBOMBELA 1200** Postal address: **PO Box 45 MBOMBELA 1200** Telephone: **013 759 9111** Fax: **013 759 2070** E-mail: khehla.ngomane@mbombela.gov.za
1.2.1.2	The address of the Employer's Agent is: Physical address: **Unit 45.0.03 Central Park 12 Suikerriet Street Mbombela 1201** Postal address: **P.O. Box 654 Shongwe Mission 1331** Telephone: **013 744 6070** E-mail: **info@lihuzu.co.za**
2.4	**Variations to the Conditions of Contract are:** Add the following at the end of sub clause 2.4.1: " The several documents forming the Contract shall rank in the following order of precedence: 1. Contract Agreement, 2. Form of Offer and Acceptance,

Clause	Description
	3. Contract Data, 4. Specification Data, 5. Standardized Specifications, 6. Drawings, 7. Bill of Quantities, 8. Statutory Regulations, 9. Other standard specifications. If the contents of any part of the documents contradict any other part, the document in the highest position on the above order of precedence shall have preference and apply.”
4.3.3	Add the following at the end of sub clause 4.3.2: "4.3.3 The Employer and the Contractor hereby agree, 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', that the following arrangements and procedures shall apply between them 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 authorized 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 Employer’s Agent 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 Employer’s Agent, of such investigation, complaint or criminal charge. The Contractor shall furthermore, in compliance with Constructional Regulations 2003 to the Act: (vi) Acquaint himself with the requirements of the Employer’s health and safety specification as laid down in regulation 5(1) of the Construction Regulation 2014, and prepare a suitably and sufficiently documented health and safety plan as contemplated in regulation 6(1) 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 to the Employer for approval within seven (7) days after acceptance of the bid. and shall be implemented and maintained from the Commencement of the Works.

Clause	Description
	(vii) The Employer, or his assigned agent, reserves the right to conduct periodic audits, as contemplated in the Construction Regulations 2003, to ensure 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 Employer's Agent, 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." **(viii) Acquaint himself with the requirements of COVID-19 OCCUPATIONAL HEALTH AND SAFETY MEASURES IN WORKPLACES COVID-19 (C19 OHS), 2020, and prepare a suitably and sufficiently documented COVID-19 health and safety plan as contemplated in COVID-19 (C19 OHS), 2020 for approval by the Employer or his assigned agent. The Contractor's health and safety plan and risk assessment which includes the COVID-19 safety plan shall be submitted to the Employer for approval within seven (7) days after acceptance of the bid. The COVID-19 safety plan shall be implemented and maintained from the Commencement of the Works for as long as the declaration of a national disaster published in *Government Gazette* 43096 on 15 March 2020 remains in force.** The Employer and Contractor agree that the Contractor will comply with the provisions of "The Mine Health and Safety Act, (Act 29 0f 1996) as amended by the Mine Health and Safety Amendment Act (Act 72 of 1997). The following arrangements and procedures will apply: (i) The Contractor shall himself obtain the Mining Authorization for the sites. (ii) Contractor shall assume responsibility for the Environmental Management Programs (EMP) in respect of the sites and shall ensure that the sites are rehabilitated at the conclusion of the Contract. (iii) The Contractor shall comply with the provisions of the Act and the requirements of the Director: Mineral Development of the Department of Minerals and Energy in making the necessary financial provisions to mine optimally and safety and to rehabilitate the surface of the land concerned satisfactory and to carry out the EMP. All costs incurred in providing a guarantee or other financial provision shall be borne by the Contract. (iv) This Agreement shall hold good from the date on which the Mining Authorization is issued until the date on which a Closure Certificate is issued in terms of the Minerals Act, 1991. (v) Nothing in this Agreement shall exonerate the Contractor from compliance with any requirements of the Employer's Agent regarding the rehabilitation of sites prior to the issue of a Final Approval Certificate in terms of clause 5.16.2 of the General Conditions of Contract (2010). (vi) The Contractor shall undertake all the duties and accept all the responsibilities of the owner in compliance with the requirements of the Act as amended. (vii) The Contractor accepts responsibility for compliance with the Act, as amended, by all his sub-contractors whether or not selected and/or approved by the Employer.
5.3.1	The documentation required before commencement with Works execution are: • Health and Safety Plan (refer to clause 4.3.1) • Initial programme (Refer to clause 5.6.1) • Security (Refer to clause 6.2.1) • Insurance (Refer to Clause 8.6.1)
5.3.2	The time to submit the documentation required, before commencement with Works execution is **14 calendar days**.
5.4.2	The access and possession of site shall not be exclusive to the Contractor.

Clause	Description
5.8.1	The non-working days are public holidays and Sundays. The special non-working days are: The year-end break from **22-Dec-2023 to 08-Jan-2024 OR AS PER SAFCEC TBA**
5.13.1	The penalty for failing to complete the Works is: is **0.05 %** of the Total Tender Sum per Calendar Day
5.14.1	Practical completion is reached when: The completed paving streets can be opened to traffic for use.
5.16.3	The latent defect period is **10 years** after date of completion
6.5.1.2.3	The percentage allowances to cover all charges for the Contractor's and subcontractor's profits, timekeeping, clerical work, insurance, establishment, superintendence and the use of hand tools is **15%**.
6.8.2	This contract does include for contract price adjustment
6.8.3	Price adjustments for variations in the costs of special materials are **not** allowed.
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is **80%**
6.10.3	The limit of retention money is **10%**
8.6.1.1.2	Not required.
8.6.1.1.3	The amount to cover professional fees for repairing damage and loss to be included in the insurance sum will be calculated at **12%** of the claim value.
8.6.1.2	A coupon policy for Special Risks Insurance issued by the South African Special Risks Insurances Association is required.
8.6.1.3	The limit of indemnity for liability insurance is R 5 000 000.00 for any single liability claim
10.5.2	Dispute resolution shall be **ad-hoc** adjudication.
10.5.3	The number of Adjudication Board Members to be appointed is **one**.
10.7.1	The determination of disputes shall be by **arbitration.**
Special Clause	The Contractor’s CIDB grading must remain active at the same of higher level as at time of appointment, should the grading be suspended, downgraded and or expire the Contractor will only be allowed 21 days to remedy such and failure could result in termination of the Contract.

PART 2: DATA PROVIDED BY THE CONTRACTOR

The Contractor is advised to read the *General Conditions of Contract for Construction Works,* Third Edition (2015) published by the South African Institution of Civil Engineering, in order to understand the implications of this Data which is required to be completed.

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

<table>
<tr><th>Clause</th><th>Description</th></tr>
<tr><td>1.1.1.9

1.2.1.2</td><td>The Contractor is ……..

……..

The Contractor's address for receipt of communications is:

Physical address: Postal address:

…….. …….

…….. …….

…….. ……

…….. …….

Telephone: ……..……..……

Fax: ……. ……..……..

E-mail: ……...</td></tr>
<tr><td>1.1.1.14</td><td>The time for achieving Practical Completion of the whole of the Works is.....weeks after Commencement Date (site handover).</td></tr>
<tr><td>6.2.1</td><td>The security to be provided by the Contractor shall be one of the following

<table><tr><th>Type of Security</th><th>Contractor to choose: Indicate “ Yes” or “ No”</th></tr><tr><td>Cash deposit of 10% of the contract sum</td><td></td></tr><tr><td>Performance guarantee of 10% of the contract sum</td><td></td></tr></table></td></tr>
</table>

C1.5 FORM OF GUARANTEE

PRO FORMA PERFORMANCE

GUARANTEE

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means: .....

Physical address: .....

"Employer" means: .....

"Contractor" means: .....

"Employer's 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" means.....

CONTRACT DETAILS

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

PERFORMANCE GUARANTEE

1. The Guarantor's liability shall be limited to the amount of the Guaranteed Sum.
2. The Guarantor's period of liability shall be from and including the date of issue of this Performance Guarantee and up to and including the Expiry Date or the date of issue by the Employer's Agent of the Certificate of Completion of the Works or the date of payment in full of the Guaranteed Sum, whichever occurs first. The Employer's Agent and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.
3. 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 Employer's Agent in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;

4.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.1 and the sum certified has still not been paid;

4.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.

5. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:

5.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 5; or

5.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and

5.3 the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.

6. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.

7. Where the Guarantor has made payment in terms of 5, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.

8. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.

9. Payment by the Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.

10. The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.

11. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.

12. This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.

13. This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.

14. Where 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 .....

Date .....

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

Capacity .....

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

Capacity .....

Witness signatory (1) .....

Witness signatory (2) .....

C1.6 AGREEMENT IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO 85 OF 1993)

AGREEMENT IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO 85 OF 1993)

THIS AGREEMENT made at .....

on this the ..... day of ..... in the year …….....

between CITY OF MBOMBELA (hereinafter called "the Employer") of the one part, herein represented by

in his capacity as .....

and .....

(hereinafter called "the Mandatory") of the other part, herein represented by .....

.....

in his capacity as .....

WHEREAS the Employer is desirous that certain works be constructed, Upgrading of Violet Street - Ward 13 and has accepted a Tender by the Mandatory for the construction, completion and maintenance of such Works and whereas the Employer and the Mandatory have agreed to certain arrangements and procedures to be followed in order to ensure compliance by the Mandatory with the provisions of the Occupational Health and Safety Act, 1993 (Act 85 of 1993);

NOW THEREFORE THIS AGREEMENT WITNESSETH AS FOLLOWS:

1 The Mandatory shall execute the work in accordance with the Contract Documents pertaining to this Contract.

2 This Agreement shall hold good from its Commencement Date, which shall be the date of a written notice from the Employer or Employer's Agent requiring him to commence the execution of the Works, to either

(a) the date of the Final Approval Certificate issued in terms of Clause 52.1 of the General Conditions of Contract (hereinafter referred to as "the GCC"),

(b) the date of termination of the Contract in terms of Clauses 54, 55 or 56 of the GCC.

3 The Mandatory declares himself to be conversant with the following:

(a) All the requirements, regulations and standards of the Occupational Health and Safety Act (Act 85 of 1993), hereinafter referred to as "The Act", together with its amendments and with special reference to the following Sections of The Act:

(i) Section 8 : General duties of employers to their employees;
(ii) Section 9 : General duties of employers and self-employed persons to persons other than employees;
(iii) Section 37 : Acts or omissions by employees or Mandatory, and
(iv) Subsection 37(2) relating to the purpose and meaning of this Agreement.

(b) The procedures and safety rules of the Employer as pertaining to the Mandatory and to all his subcontractors.

(c) All the requirements, regulations and standards of the COVID-19 Occupational Health and Safety Measures in Workplaces, COVID-19 (C19 OHS), 2020.

4 In addition to the requirements of Clause 33 of the GCC and all relevant requirements of the above-mentioned Volume 3, the Mandatory agrees to execute all the Works forming part of this Contract and to operate and utilise all machinery, plant and equipment in accordance with the Act.

5 The Mandatory is responsible for the compliance with the Act by all his subcontractors, whether or not selected and/or approved by the Employer.

The Mandatory warrants that all his and his subcontractors' workmen are covered in terms of the Compensation for Occupational Injuries and Diseases Act, 1993, which cover, shall remain in force whilst any such workmen are present on site. A letter of good standing from the Compensation Commissioner to this effect must be produced to the Employer upon signature of the agreement.

6 The Mandatory undertakes to ensure that he and/or subcontractors and/or their respective employers will at all times comply with the following conditions:

(a) The Mandatory shall assume the responsibility in terms of Section 16.1 of the Occupational Health and Safety Act. The Mandatory shall not delegate any duty in terms of Section 16.2 of this Act without the prior written approval of the Employer. If the Mandatory obtains such approval and delegates any duty in terms of section 16.2 a copy of such written delegation shall immediately be forwarded to the Employer.

(b) All incidents referred to in the Occupational Health and Safety Act shall be reported by the Mandatory to the Department of Labour as well as to the Employer. The Employer will further be provided with copies of all written documentation relating to any incident.

(c) The Employer hereby obtains an interest in the issue of any formal inquiry conducted in terms of section 32 of the Occupational Health and Safety Act into any incident involving the Mandatory and/or his employees and/or his subcontractors.

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

SIGNED FOR AND ON BEHALF OF THE EMPLOYER: _____

WITNESS 1_____ 2_____

NAME 1_____ 2 _____

(IN CAPITALS)

SIGNED FOR AND ON BEHALF OF THE MANDATORY: _____

WITNESS 1_____ 2 _____

NAME 1_____ 2_____

(IN CAPITALS)

C1.7 CERTIFICATE OF AUTHORITY FOR SIGNATORY TO AGREEMENT IN TERMS OF OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO 85 OF 1993)

CERTIFICATE OF AUTHORITY FOR SIGNATORY TO AGREEMENT IN TERMS OF OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO 85 OF 1993)

The signatory for the company that is the Contractor in terms of the above-mentioned Contract and the Mandatory in terms of the above-mentioned Act shall confirm his or her authority thereto by attaching to this page a duly signed and dated copy of the relevant resolution of the Board of Directors.

An example is given below:

"By resolution of the Board of Directors passed at a meeting held on _____ 20____,

Mr/Ms _____ whose signature

appears below, has been duly authorised to sign the AGREEMENT in terms of THE OCCUPATIONAL

HEALTH AND SAFETY ACT, 1993 (ACT 85 of 1993) on behalf of:

_____

_____

SIGNED ON BEHALF OF THE

COMPANY: _____

_____

IN HIS CAPACITY

AS: _____

_____

DATE: _____

SIGNATURE OF SIGNATORY: _____

WITNESS: 1. _____ 2. _____

NAME (in capitals): 1. _____ 2. _____

PART C2 PRICING DATA

C2.1 PRICING INSTRUCTIONS

C2.1: PRICING INSTRUCTIONS

1 The Tender Data, the Contract Data, the Scope of Work, the Site Information and the Drawings shall be read in conjunction with the Schedule of Quantities.

2 The Schedule comprises items covering the Contractor's profit and costs of general liabilities and of the construction of Temporary and Permanent Works.

Although the Tenderer is at liberty to insert a rate of his own choosing for each item in the Schedule, he should note the fact that the Contractor is entitled, under various circumstances, to payment for additional work carried out and that the Employer's Agent is obliged to base his assessment of the rates to be paid for such additional work on the rates the Contractor inserted in the Schedule.

The measurement and payment clauses of each Specification, read together with the relevant clauses of the Specification Data, all set out which ancillary or associated activities are included in the rates for the specified operations.

3 Descriptions in the Schedule of Quantities are abbreviated and may differ from those in the Standardized and Specification Data. No consideration will be given to any claim by the Contractor submitted on such a basis. The Schedule has been drawn up generally in accordance with the latest issue of Civil Engineering Quantities[1]. Should any requirement of the measurement and payment clause of the appropriate Standardized or Specification Data be contrary to the terms of the Schedule or, when relevant, to the Civil Engineering Quantities, the requirement of the appropriate Standardized Specification or Specification Data as the case may be, shall prevail.

4 Unless stated to the contrary, items are measured and paid for net, in accordance with the Drawings, without any allowance having been made for waste.

5 The amounts and rates to be inserted in the Schedule of Quantities shall be the full inclusive amounts to the Employer for the work described under the several items. Such amounts shall cover all the costs and expenses that may be required in and for the construction of the work described, and shall cover the costs of all general risks, profits, taxes (but excluding value-added tax), liabilities and obligations set forth or implied in the documents on which the Tender is based.

6 An amount or rate shall be entered against each item in the Schedule of Quantities, whether or not quantities are stated. An item against which no amount or rate is entered will be considered to be covered by the other amounts or rates in the Schedule.

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

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

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

7 The quantities of work as measured and accepted and certified for payment in accordance with the General Conditions of Contract, and not the quantities stated in the Schedule of Quantities, will be used to determine payments to the Contractor. The validity of the Contract shall in no way be affected by **any** differences between the quantities in the Schedule of Quantities and the quantities certified for payment.

The ordering of materials shall **not** be based on the quantities in the Schedule of Quantities. Materials ordered from the Schedule of Quantities without prior confirmation by the Employer's Agent shall be at the risk of the Contractor. No compensation shall be paid for materials ordered erroneously and all costs shall be borne by the Contractor.

---

1 The standard system of measurement of civil engineering quantities published by the South African Institution of Civil Engineers.

8 The quantities of work as measured and accepted and certified for payment in accordance with the General Conditions of Contract, and not the quantities stated in the Schedule of Quantities, will be used to determine payments to the Contractor. The validity of the Contract shall in no way be affected by **any** differences between the quantities in the Schedule of Quantities and the quantities certified for payment.

The ordering of materials shall **not** be based on the quantities in the Schedule of Quantities. Materials ordered from the Schedule of Quantities without prior confirmation by the Employer's Agent shall be at the risk of the Contractor. No compensation shall be paid for materials ordered erroneously and all costs shall be borne by the Contractor.

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

Unit : The unit of measurement for each item of work as defined in the COLTO Standardized Specification for Road and Bridge Works for State Authorities (1998 edition) or the Specification Data.

Quantity: The number of units of work for each item

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

: The quantity of an item multiplied by the tender rate of the (same) item Sum :

An amount tender for an item, the extent of which is described in the Schedule of Quantities, the Specifications or elsewhere, but of which the quantity of work is not measured in units

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

mm	=	millimetre
m	=	meter
km	=	kilometre
km-pass	=	kilometre-pass
m^2	=	square metre
m^2-pass	=	square meter-pass
ha	=	hectare
m^3	=	cubic meter
m^3-km	=	cubic meter kilometre
kW	=	kilowatt
kN	=	kilo-Newton
kg	=	kilogram
l	=	litre
kl	=	kilolitre
Ml	=	mega litre
t	=	ton (1 000 kg)
%	=	per cent
MN	=	mega-Newton
MN-m	=	mega-Newton-meter
PC Sum	=	Prime Cost Sum
Prov Sum	=	Provisional Sum
Sum	=	Lump Sum

C2.2: BILL OFQUANTITIES

SCHEDULE OF QUANTITIES

SCHEDULE 1 : PRELIMINARY AND GENERAL						
ITEM NO.	DESCRIPTION		UNIT	QUANT	RATE	AMOUNT
1	**P & G's**					
	-					
	NOTE: A rate or price must be entered in the amount column for each item. Items which are included should have the word "included" written in the appropriate amount column.					
	FIXED-CHARGE ITEMS & VALUE RELATED ITEMS					
	a)	Contractual requirements	Sum	1		
	Establish Facilities on the Site:					
	Facilities for Engineer					
	a)	Name boards (1no)	Sum	1		
	b)	Offices for Engineer (12m2)	Sum	1		
	Facilities for Contractor					
	a)	Offices and storage sheds	Sum	1		
	b)	Ablution and latrine facilities	Sum	1		
	c)	Tool and equipment	Sum	1		
	d)	Water supplies, electric power, and communications	Sum	1		
	e)	Dealing with water	Sum	1		
	f)	Access	Sum	1		
	h)	Plant	Sum	1		
	Other fixed-charge obligations					
		Removal of site establishment on completion	Sum	1		
	CONSTRUCTION REGULATIONS - OHS ACT					
		Compliance with OHS Act and Regulations (including the Construction Regulations 2014)	Sum	1		
	TIME-RELATED ITEMS					
		Contractual requirements				
		Operations and maintenance of facilities on site				
	Facilities for Engineer					
	a)	Name boards (1no)	Sum	1		
	b)	Offices for Engineer (12m2)	Sum	1		
	Facilities for Contractor					
	a)	Offices and storage sheds	Sum	1		
	b)	Ablution and latrine facilities	Sum	1		
	c)	Tool and equipment	Sum	1		
	d)	Water supplies, electric power, and communications	Sum	1		
TOTAL SCHEDULE 1 CARRIED FORWARD						

AMOUNT BROUGHT FORWARD						
	e)	Dealing with water (see 5.5)	Sum	1		
	f)	Access (see 5.8)	Sum	1		
	h)	Plant	Sum	1		
		Supervision for duration of Construction	Sum	1		
		Company and head office overhead costs for the duration of the Construction	Sum	1		
		Other time-related obligations	Sum	1		
	SUMS STATED PROVISIONALLY BY ENGINEER					
		Plant Component Testing by Specialist as an when required by the Engineer during the Contract	Sum	1	R100 000	R100 000
		Overhead costs on item above	%			
		Whole Plant Operational manual (O &M)	Sum	1	R300 000	R300 000
		Overhead costs on item above	%			
		Training of Plant Operators and Municipal Officials	Sum	1	R50 000	R50 000
		Overhead costs on item above	%			
		Detailed Plant Asset Register of in terms of asset management practices entire White River WWTW	Sum	1	R380 000	R380 000
		Overhead costs on item above	%			
		Community Liaison Officer	Sum	1	R90 000	R90 000
		Overhead costs on item above	%			
	Provisional Allowances for Training		Prov.Sum	1	R80 000	R80 000
		Basic Life Skills Training for targeted labour				
	CONSTRUCTION REGULATIONS - OHS ACT					
		Compliance with OHS Act and Regulations (including the Construction Regulations 2003)	Sum	1		
Total Carried to Summary						**R**

SCHEDULE 2 : INLET WORKS						
ITEM NO.	**DESCRIPTION**		**UNIT**	**QUANT**	**RATE**	**AMOUNT**
2	**Inlet Works**					
		-				
	a)	Supply deliver and install mechanical screen including all grit and measurement flow meters for 6 Ml/day S/S304	No	2		
	b)	Control Panel and Electrical wires for new 6Ml/day mechanical screens S/S303	No	1		
	d)	Pressure pump for wash water to screen	No	1		
	e)	Supply and Install flow meters all 3 meters	Prov.Sum	1	R380 000	R380 000
		Overhead costs on item above	%			
Total Carried to Summary						**R**

ITEM NO.		DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
SCHEDULE 3 : AERATION BASIN						
3		**Aeration Basin**				
		- -				
		Phase 1: Old Module 1.5Ml/day				
	a)	Supply, Deliver , Install and commission 15kW Aeration pumps all complete including gearbox and shaft	No	2		
	b)	Supply, Deliver , Install and commission 22kW Aeration pumps all complete including gearbox and shaft	No	2		
	c)	Supply, Deliver, Install and Commission of 2.2kW mixers pump all complete including gear box and shaft	No	6		
	d)	Supply and Install Dissolved Oxygen meter **Anaerobic** zone to handle a flow of 2.5Ml/day complete with all electrical connection	**No**	1		
	e)	Supply and Install Dissolved oxygen meter **Aerobic** zone to handle a flow of 2.5Ml/day complete with all electrical connection	No	1		
	f)	Desludging and dewatering of aeration tanks and repair works	Prov.Sum	1	300 000	300 000
		Overhead costs on item above	%			
		Phase 2: Module 1.5Ml/day				
	a)	Supply, Deliver, Install and commission of Mixed liquor main (A) recirculation pump(Flyght NP3102 LT -423	No	3		
	b)	Supply, Deliver, Install and commission of Mixed liquor secondary (R) recirculation pump(Flyght CP3085 MT 438)	No	2		
	c)	Supply, Deliver , Install and commission 15kW Aeration pumps all complete including gearbox	No	2		
	d)	Supply, Deliver , Install and commission 22kW Aeration pumps all complete including gearbox	No	2		
	e)	Supply, Deliver, Install and Commission of 2.2kW mixers pump all complete including gear box	No	6		
		TOTAL SCHEDULE 3 CARRIED FORWARD				

		AMOUNT BROUGHT FORWARD				
	f)	Supply and Install Dissolved Oxygen meter Anaerobic zone to handle a flow of 2.5Ml/day complete with all electrical connection	No	1		
	g)	Supply and Install Dissolved oxygen meter Aerobic zone to handle a flow of 2.5Ml/day complete with all electrical connection	No	1		
	h)	Desludging and dewatering of aeration tanks and repair works	Prov.Sum	1	300 000	300 000
		Overhead costs on item above	%			
	Phase 3: Module 3Ml/day					
		Supply, Deliver , Install and commission 30kW Aeration pumps all complete including gearbox and shaft				
		Full services/repairs of one Aeration pump including gearbox and shalf	Sum	1		
		Supply, Deliver, Install and Commission of 3kW mixers pump all complete including gear box and shaft	No	2		
		Full service/repairs of two Mixes 3kW 3 including gearbox and shaft	Sum	1		
		Full service/repairs of all four recycling pumps including gearboxes and shaft	Sum	1		
Total Carried to Summary						

ITEM NO.	DESCRIPTION		UNIT	QUANT	RATE	AMOUNT
SCHEDULE 4 : CLARIFIERS						
4	**Clarifiers**					
	a)	Desludging of clarifiers, actuated desludge valve outlet desludge pipe from SST	**Prov.Sum**	1	190 000	190 000
		Overhead costs on item above	%			
	b)	Conversion of suction lift clarifier to peripheral drive bottom scrapper for sludge to centre collection sludge hopper for settling tank that handles a 2.5Ml/day flow , Complete with all mechanical and electrical equipment's for the Phase 1 Plant and Phase 2 Plant	**No**	2		
Total Carried to Summary						

ITEM NO.	DESCRIPTION		UNIT	QUANT	RATE	AMOUNT
SCHEDULE 5 : CHLORINATION						
5	**Disinfection**					
		-				
	a)	Install new chlorine dosing equipment all complete with control panel for a 6Ml/day Plant	Sum	1		
	b)	Desludging of chlorine contact tank	Sum	1		
Total Carried to Summary						

ITEM NO.		DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
SCHEDULE 6 : DRYING BEDS						
6		**Sludge Beds**				
		-				
	a)	Repair and refurbish of all sludge drying beds. Including replacing pipes, meters and sand, Complete to handle a flow of 6Ml/day and deluding and cleaning for all sludge drying bed	no	12		
Total Carried to Summary						

ITEM NO.		DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
SCHEDULE 7 : ELECTRICAL WORK						
7		**Electrical**				
		Supply,Deliver,Installation, Testing and Commissioning for the following equipment as measured under a separate schedule				
		LV SWITCHBOARDS				
		MCC's fully equipped , complete with doors, frames, sub-frames, chassis, fixtures, busbars, switchgear, control equipment, terminations, wiring, identification, labeling, legend cards and spare space, as specified.				
		Supply & Deliver MCCs to site (incl. off-loading and storage) and Installation and testing and commissioning				
		Treatment Works MCC Phase 2 (MCC-WWTW) For the Old Phase 1 2.5 Ml/day and Phase 2 2.5 Ml/day as per the Mechanical inputs in section 3	No	2		
		LV POWER CABLES				
		600/1000 V PVC/PVC/SWA/PVC stranded copper cable laid in open				
		trenches, drawn in sleeves, fixed to cable rack or on surface including				
		strapping or clamping, supports, etc. as necessary.				
		Cable terminations to include glands, shrouds, lugs, connections,				
		testing and commissioning.				
		NB. Cable trench excavations and cable supports are measured separately.				
		Supply & Deliver Cables to site (Incl. off-loading and storage)				
		Multi-core LV PVC/PVC/SWA/PVC:				
		6 mm², 4C	m	120		
		4 mm², 4C	m	120		
		2.5 mm², 4C	m	252		
		1.5 mm², 4C	m	365		
		Generators				
		Service Generators on Site	Sum	1		R 150,000.00
		Overhead costs on item above	%			
		TOTAL SCHEDULE 7 CARRIED FORWARD				

ITEM NO.		DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
SCHEDULE 8 : Building works						
8		**Building Works**				
	a)	Renovation of plant Offices, Changing rooms and Control Room including electrical and permanent furniture's	Prov.Sum	1	R400 000	R400 000
		Overhead costs on item above	%			
	a)	Supply and Install 6m CVN Steel Container Complete with ablution facilities, Geyser, air conditioner and COC certificate	Prov.Sum	1	R200 000	R200 000
		Overhead costs on item above	%			
Total Carried to Summary						

SUMMARY OF SCHEDULE OF QUANTITIES

UPGRADING OF WHITE RIVER WASTE WATER TREATMENT WRKS - SUMMARY	
DESCRIPTION	**AMOUNT**
SCDHEDULE 1 P& G	R -
SCHEDULE 2 : INLET WORKS	R -
SCHEDULE 3 : AERATION BASIN	R -
SCHEDULE 4 : CLARIFIERS	R -
SCHEDULE 5 : CHLORINATION	R -
SCHEDULE 6 : DRYING BEDS	R -
SCHEDULE 7 : ELECTRICAL WORK	R -
SCHEDULE 8 : BUILDING WORKS	R -
SUBTOTAL A	R -
Add 15% contingencies on subtotal A	R -
SUBTOTAL B:	**R -**
Add 15% VAT on Sub-total B	
Total Carried to Form of Offer	

SIGNED ON BEHALF OF TENDERER:…… Date:……..

PART C3 SCOPE OF WORKS

PART C3: SCOPE of WORK

CONTENTS

C3.1: DESCRIPTION of WORKS

C3.1 DESCRIPTION OF THE WORKS

C3.1.1 EMPLOYER'S OBJECTIVES

The City of Mbombela intends to upgrade the existing White River Sanitation Infrastructure in terms of the existing Waste Water Treat Works (WWTW)

The sanitation infrastructure is currently operating over its design capacity due to new Townships that were developed in the recent years. This further puts strain on the existing infrastructure which resulted in its constant break down of pumps, in-let works etc. The refurbishment of the sanitation infrastructure within the White River is now required and this will stop the pollution of the environment and improve efficiency

The Employer desires that the work required be of a high standard and be completed in the shortest practical time whilst creating jobs for local labourers and contractors.

Thirty percent (30%) of the project need to be executed by local sub-contractor/s as far as

C3.1.2 OVERVIEW OF THE WORKS

The contract comprises of the Upgrading of White River waste water treatment works.

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

Local labourers must be appointed for the project at a remuneration rate in accordance with the latest SAFCEC rates.

The contractor shall be responsible to comply with the specifications and statutory requirements.

C3.1.3 EXTENT OF WORKS

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

C3.1.3.1 Upgrading of the treatment Plant

White River WWTW

1. **Inlet Works**
   - 2.1. Supply deliver and Install two mechanical screens
   - 2.2. Control Panels screens
   - 2.3. Pressure pump for wash water to screen
   - 2.4. Replace Mobrey Level sensor
2. **Aeration Basins**
   - 3.1. Phase one: Supply Deliver Installation of 4x11kw Aerators all complete
   - 3.2. Phase one : Supply, Deliver Installation of 3x 1.1 kw Mixers all complete
   - 3.3. Phase one: Desludging of aeration tanks and repair works
   - 3.4. Phase one: Supply and Install DO Sensors in Aeration dams
   - 3.5. Phase one : Supply and Install PH meters in Aeration Tanks
   - 3.6. Phase one: Supply and Installation of 5x5.7kw recycling pumps
   - 3.7. Phase Two: Supply and Installation of DO Sensors in Aeration dams
   - 3.8. Phase Two : Supply and Installation PH meters in Aeration Tanks
   - 3.9. Phase Two: Supply and Installation of 5x5.7kw recycling pumps

     Phase Two: Desludging of aeration tanks and repair works

     Phase Three: Supply, Installation and commissioning of 5 x5.7 kw recycling pumps

     Supply, Deliver ,Install and commission 11kw Aeration pumps all complete
3. **Clarifiers**
   - 7.1. Phase one: Desludging of clarifiers
   - 7.2. Phase one: Refurbishing steel bridges and scrappers
   - 7.3. Phase one: Replacing overflow weir plates
   - 7.4. Phase one :Replacing bridge motors
   - 7.5. Phase one: Install new submersible pumps to replace screw pump
   - 7.6. Phase one: Replace pipe from Aeration tanks to Clarifiers

4. Disinfection

5.1. Install new chlorine dosing equipment all complete with control panel
5.2. Desludging of chlorine contact tank

5. Sludge Dam

6.1. 8x Repair and refurbish sludge drying beds. Including replacing pipes and sand

6. Electrical Works

7.1. Upgrading control panel to accommodate additional pumps, screen and aerators

Approximate quantities of each type of work are given in the Schedule of Quantities.

C3.1.4 LOCATION OF THE WORKS

The project area itself falls within the White River area which is located approximately 19km from Nelspruit. See figure 1 for the locality plan. Access for the project can be gained from both the R40/R538 roads and via the Danie Joubert St.

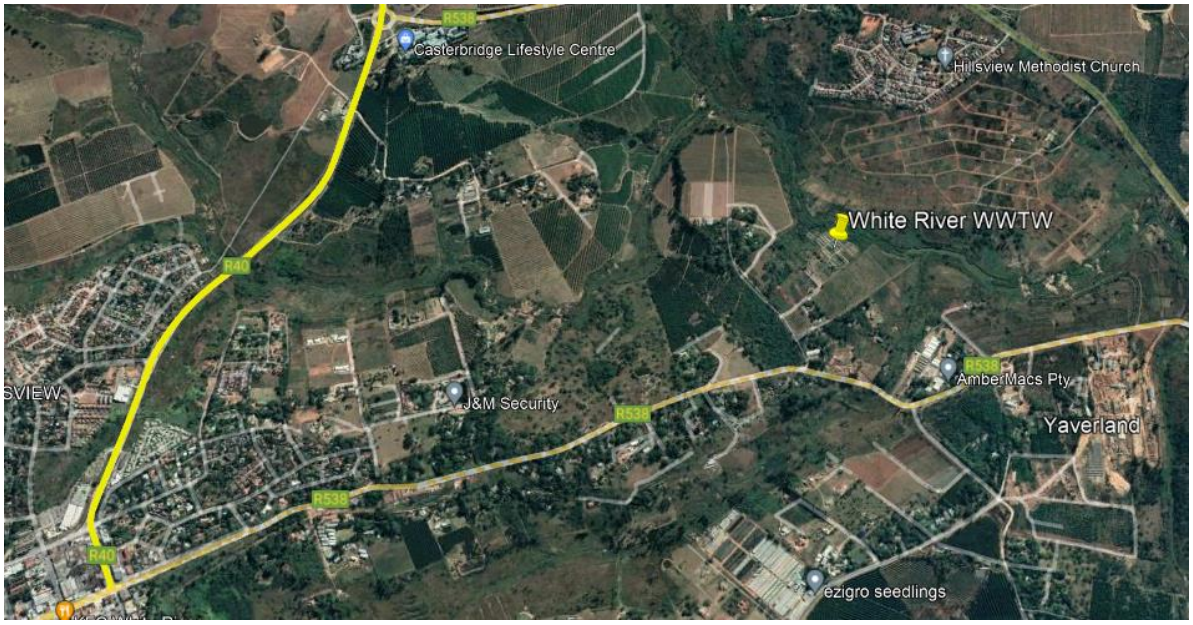

Figure 1: LOCATION OF WHITE RIVER WWTW

Project Name	Latitude	Longitude	District Municipality	Local Municipality
White River WWTW	25°18'52.80"S	31° 2'53.32"E	Ehlanzeni	City of Mbombela

C3.1.5 TEMPORARY WORKS

The Contractor shall, as relevant,

a) provide temporary drainage works, temporary pumps and other equipment as might be necessary for the protection, draining and dewatering of the works; and

b) Construct and maintain haulage, temporary access and construction roads, subject to the approval of the Employer, and permit the Employer, other Contractors, statutory bodies or any other person who might require legitimate access to or through the site for the purpose of executing legitimate business, free and unhindered usage of such roads.

c) Temporary water connections, Contractor's offices, storage sheds, latrines, barricading of Works shall be located in an approved position and subject to the approval of all authorities concerned.

d) Safety and Security of the Contractors' temporary works shall be at the Contractors' discretion.

e) The camp shall be adequately guarded during or outside working hours.

C3.2: ENGINEERING

C3.2 ENGINEERING

C3.2.1 DESIGN

(a) The Employer is responsible for the design of the permanent Works as reflected in the Contract Documents unless otherwise stated.

(b) The Contractor is responsible for the design of the temporary Works (if applicable) and their compatibility with the permanent Works.

(c) The Contractor shall supply all details necessary to assist the Engineer in the compilation of the record drawings.

C3.2.2 EMPLOYER'S DESIGN

The Employer's Design is contained in the Tender Documentation and Drawings. Amendments to the design, if necessary, will be issued during the construction phase.

C3.2.3 CONTRACTOR'S DESIGN

Where the Contractor is to supply the design of designated parts of the permanent Works or temporary Works, he shall supply full working drawings supported by a professional engineer's design certificate.

C3.2.4 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 Employer's Agent. The Employer's Agent 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 Employer's Agent's Representative on a regular basis.

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

The Drawings prepared by the Employer for the permanent Works are listed below and are bound in a separate document or is attached at the back of this volume. The Employer reserves the right to issue and/or amended additional drawings during the Contract.

C3.2.5 DESIGN PROCEDURES

Not applicable.

C3.3: PROCUREMENT

C3.3 PROCUREMENT

C3.3.1 PREFERENTIAL PROCUREMENT

C3.3.1.1 Requirements

Tenders will be evaluated in terms of the City of Mbombela Preferential Procurement Policy. Points will be awarded for price and specific contract participation goals as contained in the Tender Data.

C3.3.1.2 Resource standard pertaining to targeted procurement

The Preferential Procurement Policy (PPP) of the City of Mbombela is applicable to this project. Refer to the Tender Data.

C3.3.2 SUBCONTRACTING

C3.3.2.1 Preferred subcontractors/suppliers

Where possible, local subcontractors should be considered for subcontract work provided they are capable.

C3.3.2.2 Subcontracting procedures

The contractor is solely responsible for negotiating with local subcontractors.

C3.3.2.3 Attendance on subcontractors

Not applicable.

C3.4: CONSTRUCTION

C3.4 CONSTRUCTION

C3.4.1 WORKS SPECIFICATIONS

The following specifications shall apply for the construction of the Works.

C3.4.1.1 Standard Specifications

The Standard specification, are carried out strictly in accordance with SANS 1200 "Standard Specification for Civil Engineering Construction" as approved by the Council of the South African National Standards.

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

SANS 1200

A	-	PRELIMINARY AND GENERAL
ab	-	engineer’s office
C	-	Site clearance
DA	-	Earthworks (small works)
DB	-	Earthworks (pipe trenches)
G	-	CONCRETE (STRUCTURAL)
GB	-	CONCRETE (ORDINARY BUILDINGS)
L	-	MEDIUM PRESSURE PIPELINES
LB	-	Bedding (pipes)

C3.4.1.2 National and International Standards

The SANS Specifications and Codes of Practice shall apply for the construction of the Works.

Wherever any reference is made to the South African National Standards (SANS) in either these Bill of Quantities or the Specification of Materials and Methods to be used, this reference shall be deemed to read “SANS or equivalent standard.

The term “project specifications” appearing in any of the SANS 1200 standardised specifications must be replaced with the terms “scope of work”.

References from, and variations and additions to the Standard Specifications and Particular Specifications are included in section C3.4.1.4

C3.4.1.3 Particular Specifications

The following variations and additions to the Standard and Particular Specifications will be applicable to this Contract.

The various documents listed in section C3.4.1 shall be treated as mutually explanatory. However, should any requirement of section C3.4.2 conflict with any requirement of the Standardised Specifications or with any requirement of the Particular Specifications, then the requirement of section C3.4.1.4 shall prevail.

C3.4.1.4 Variations and Additions to Standard and Particular Specifications

C3.4.2 EPWP labour intensive specification

C3.4.2.1Labour intensive competencies of supervisory and management staff

Contractors having a CIDB contractor grading designation of 4CE and higher shall only engage supervisory and management staff in labour intensive works who have either completed, or are registered for training towards, the skills programme outlined in Table 1.

Table 1: Skills programme for supervisory and management staff

Personnel	NQF level	Unit standard titles	Skills programme description
Team leader / supervisor	2	Apply Labour Intensive Construction Systems and Techniques to Work Activities	This unit standard must be completed, and
		Use Labour Intensive Construction Methods to Construct and Maintain Roads and Stormwater Drainage	Any one of these 3 unit standards
		Use Labour Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
		Use Labour Intensive Construction Methods to Construct, Repair and Maintain Structures	
Foreman/ supervisor	4	Implement labour Intensive Construction Systems and Techniques	This unit standard must be completed, and
		Use Labour Intensive Construction Methods to Construct and Maintain Roads and Stormwater Drainage	Any one of these 3 unit standards
		Use Labour Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
		Use Labour Intensive Construction Methods to Construct, Repair and Maintain Structures	
Site Agent / Manager (i.e. the contractor's	5	Manage Labour Intensive Construction Processes	Skills Programme against this single unit standard

most senior representative that is resident on the site)			

C3.4.3.2 Employment of unskilled and semi-skilled workers in labour-intensive works

C3.4.3.2.1 Requirements for the sourcing and engagement of labour

C3.4.2.2.1 Requirements for the sourcing and engagement of labour.

Unskilled and semi-skilled labour required for the execution of all labour intensive works shall be engaged strictly in accordance with prevailing legislation and SANS 1914-5, Participation of Targeted Labour.

The rate of pay set for the SPWP to be obtained from the Municipality.

Tasks established by the contractor must be such that:

the average worker completes 5 tasks per week in 40 hours or less;
and,
the weakest worker completes 5 tasks per week in 55 hours or less.

4. The contractor must revise the time taken to complete a task whenever it is established that the time taken to complete a weekly task is not within the requirements of C3.4.3.2.1.3.

5. The Contractor shall, through all available community structures, inform the local community of the labour intensive works and the employment opportunities presented thereby. Preference must be given to people with previous practical experience in construction and / or who come from households:

a) where the head of the household has less than a primary school education;
b) that has less than one full time person earning an income;
where subsistence agriculture is the source of income.
d) those who are not in receipt of any social security pension income

The Contractor shall endeavour to ensure that the expenditure on the employment of temporary workers is in the following proportions:

a) 60 % women;
b) 20% youth who are between the ages of 18 and 25; and
c) 2% on persons with disabilities.

C3.4.3.3 Specific provisions pertaining to SANS 1914-5

Definitions

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

Contract participation goals

Is no specified contract participation goal for the contract. The contract participation goal shall be measured in the performance of the contract to enable the employment provided to targeted labour to be quantified.

The wages and allowances used to calculate the contract participation goal shall, with respect to both time-rated and task rated workers, comprise all wages paid and any training allowance paid in respect of agreed training programmes.

C3.4.2.4 Terms and conditions for the engagement of targeted labour

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

C3.4.3.5 Variations to SANS 1914-5

The definition for net amount shall be amended as follows:

Financial value of the contract upon completion, exclusive of any value added tax or sales tax, which the law requires the employer to pay the contractor.

The schedule referred to in 5.2 shall in addition reflect the status of targeted labour as women, youth and persons with disabilities and the number of days of formal training provided to targeted labour.

C3.4.3.6 Training of targeted labour

1. The contractor shall provide all the necessary on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the contract in a manner that does not compromise worker health and safety.

2. The cost of the formal training of targeted labour will be funded by the provincial office of the Department of Labour. This training should take place as close to the project site as practically possible. The contractor, must access this training by informing the relevant provincial office of the Department of Labour in writing, within 14 days of being awarded the contract, of the likely number of persons that will undergo training and when such training is required. The employer must be furnished with a copy of this request.

3. A copy of this training request made by the contractor to the DOL provincial office must also be faxed to the EPWP Training Director in the Department of Public Works.

4. The contractor shall be responsible for scheduling the training of workers and shall take all reasonable steps to ensure that each beneficiary is provided with a minimum of six (6) days of formal training if he/she is employed for 3 months or less and a minimum of ten (10) days if he she is employed for 4 months or more.

5. The contractor shall do nothing to dissuade targeted labour from participating in training programmes. An allowance equal to 100% of the task rate or daily rate shall be paid by the contractor to workers who attend formal training, in terms of C3.4.3.6.2 above.

Proof of compliance with the requirements of items above must be provided by the Contractor to the Employer prior to submission of the final payment certificate

Variations and Additions to Standard Specifications

SANS 1200 A: GENERAL

PSA 1 QUALITY OF MATERIALS (Sub clause 3.1)

Add the following:

All materials used in this Contract shall be the official SANS mark where applicable. All materials shall be new and of the best quality available unless otherwise specified.

PSA 2 CONTRACTOR'S OFFICES, STORES AND SERVICES (Clause 4.2)

Add the following to the provisions of Clause 4.2.

The location of the Contractor's offices, stores and services on site shall be subject to approval by the Engineer.

The Contractor's office is to include a facility with furniture suitable for the use during site meetings, accommodating 8 persons.

The Contractor's designated site agent shall be in possession of a cellular telephone.

No additional payment is made for this service, and shall be deemed to be included in the preliminary and general.

PSA 3 SETTING OUT OF THE WORKS (Clause 5.1.1)

Substitute the first sentence of Clause 5.1.1 with the following. The engineer will provide information for setting out of the works.

Add the following:

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

PSA 4 WATCHING, BARRICADING, LIGHTING AND TRAFFIC CROSSINGS (Clause 5.2)

The Contractor shall make adequate provision for the supply of temporary warning signs, barriers drums etc to the satisfaction of the Engineer for the entire duration of the contract. Road and traffic signs shall comply with the requirements of the "South African Road Traffic Manual".

PSA 5 LOCATION AND PROTECTION OF EXISTING SERVICES (Clause 5.4)

Add the following provisions of Clause 5.4.1

PSA 5.1 Location of existing services

Before underground or excavation work is carried out, the Contractor shall ascertain the presence and position of all services likely to be damaged or interfered with by his activities. He shall obtain up-to-date plans from the Engineer for this purpose, showing the position of services in the area where he intends to work.

As services can often not be reliably located from such plans, the Contractor shall determine the exact position of such services by means of suitable detecting equipment and afterwards by careful hand excavation where necessary in order to expose the services at the positions of possible interference by his activities. This procedure shall also be followed in respect of services not shown on the plans but believed to be present.

All such services, the positions of which have been located at the critical points, shall be designates as “known” services and their positions shall be indicated on a separate set of Drawings, a copy of which shall be furnished to the Engineer.

While he is occupying the Site, the Contractor shall be liable for all damage caused by him to known services as well as for consequential damage, whether caused directly by his operations or by the lack of proper protection.

PSA 6 ACCOMMODATION OF TRAFFIC (New clause 5.9)

Temporary traffic signs shall be erected at all diversions.

The number and layout of the traffic signs shall comply with the Site Manual entitled “Safety at Roadwork’s in Urban Areas”, as published by the Department of Transport.

Traffic signs shall have a yellow background with either a red / black border.

PSA 7 TOLERANCES

PSA 7.1 General (New subclause 6.4)

No guarantee is given that the full specified tolerance will be available independently of each other, and the Contractor is cautioned that the liberal or full use of any one or more of the tolerances may deprive him of the full or any use of tolerances relating to other aspects of the work.

Except where the contrary is specified or then clearly not applicable all quantities for measurement and payment shall be determined from the “authorised” dimensions. These are specified dimensions or those shown on the Drawings or, if changed, as finally prescribed by the Engineers, without any allowances for the specified tolerances.

Except if otherwise specified, all measurements for determining quantities for payment will be based on the “authorised” dimensions.

If the work is therefore constructed in accordance with the “authorised” dimensions plus or minus the tolerances allowed, quantities will be based on the “authorised dimensions regardless of the actual dimensions to which the work has been constructed.

When the work is not constructed in accordance with the “authorised” dimensions plus or minus the tolerances allowed, the Engineers may nevertheless, at his sole discretion, accept the work for payment. In such cases no payment shall be made for quantities of work or material in excess of those calculated for the “authorised” dimensions, and where the actual dimensions are less than the “authorised” dimensions minus the tolerance allowed quantities for payment shall be based on the actual dimensions as constructed.

PSA 9 MEASUREMENT AND PAYMENT

PSA 9.1 Contractual Requirements (sub clause 8.3.1)

Add to sub-clause 8.3.1:

“In addition, the sum tendered shall cover all initial costs incurred in complying with the requirements of the Special Conditions of Contract.

PSA 9.2 Contractual Requirements (sub clause 8.4.1)

The Contractor shall tender a lump sum in the Schedule of Quantities to cover his time-related

establishment costs. The amount tendered and paid shall be full compensation to the Contractor for:

(i) The maintenance of his whole organisation as established for this Contract.
(ii) The maintenance of all insurances, indemnities and guarantees required in terms of the Conditions of Contract or Tender where applicable.

(iii) Compliance with all general conditions and requirements, which are not specifically, measured elsewhere for payment in these Contract Documents.

The Contractor shall tender a lump sum for the abovementioned items.

Payment of the lump sum shall be made monthly in compliance with the method laid down in Sub-clause 8.2.2 of SANS 1200:A.

The Contractor will not be paid Time-Related Preliminary and General charges for any Special Non-Working Days, as stipulated in the Appendix, which shall be deemed to have been allowed for in his rates.

PSA 9.3 Adjusted Payment for Time-Related Items

The payment to the Contractor for Time-Related Items shall be adjusted in accordance with the following formula in the event of the Contract being extended by means of a variation order:

$$\text{Sum of Tendered amounts for Time Related Items} \times \frac{\text{Extension of Time authorised by variation order}}{\text{Tender contract period}}$$

*For the purposes of applying this formula "Extension of Time" will exclude the Contractor's December/January close-down period, if applicable.

The abovementioned adjustment of the payment for Time-Related Items shall be made in the Completion Payment Certificate and shall be the only payment for additional Time-Related costs irrespective of the actual period required to complete the Contract including its authorised extensions.

In the case of fixed price contracts, the amount by which the Time-Related Items is adjusted shall not be subject to the Contract Price Adjustment formula.

In the case of contracts subject to Contract Price Adjustment the amount by which the time-related items are adjusted shall be subject to the Contract Price Adjustment formula.

PSA 9.4 Compliance with OHS Act and Regulations
(Including The Construction Regulations 2014) unit: sum

The tendered sum shall include full compensation to the Contractor for compliance with all the requirements of the OHS Act and Regulations (including the Construction Regulations 2014) at all times for the full duration of the Contract.

This sum will be paid to the contractor in equal monthly amounts subject to proper/substantial compliance

PSA 9.5 Accommodation of Traffic (Clause 8.8.2)

Where the new works interferes with the existing roads, the Contractor shall construct these sections of the works under traffic. The work will involve catering for the safe and easy passage of public traffic in all weather, both day and night for the full traffic control and signposting.

The Contractor may alternatively make his own arrangement for detours to be constructed, all subject to the Engineers approval.

Add the following after the first paragraph:

“All temporary road signs, devices, sequences, layouts and spacing shall comply with the requirements of the Road Traffic Act, 1996 (Act 93 of 1996), the National Road Traffic Regulations, 2000, the South African Road Traffic Signs Manual and the requirements of the relevant road authority. All temporary traffic control facilities shall also comply with the guidelines set in SA Road Traffic Signs Manual, Volume 2, Chapter 13: Road works Signing, (SARTSM, June 1999, obtainable from the Government Printer, Pretoria)”

SANS 1200 A: PRELIMINARY AND GENERAL

PSA 3.1Quality of Samples

All materials used shall be suitable for the purposes for which they are intended. Materials shall comply with the requirements of the South African Bureau of Standards, where such standards are available.

PSA 5 CONSTRUCTION

PSA 5.1Setting out of the work and protection of beacons (Sub-clause 5.1)

The Contractor shall be responsible for the true and proper setting out of the Works from the basic control points shown on the Drawings or indicated by the Employer's Agent Representative on site and shall ensure the correct location of the Works in relation to such points. The Contractor has to ascertain himself of the correctness of the pegs and benchmarks in the field. Any discrepancy shall be immediately reported to the Employer's Agent Any costs arising from failure to do so, shall be the responsibility of the Contractor. The Employer's Agent may alter any part of the works to suit local conditions if necessary. No claim for incorrect setting out will be considered. Clause PS 10.6 shall also apply.

PSA 5.1.1 Services (Sub-clause 5.2)

All excavations to expose existing known services shall be excavated by hand in all materials by the contractor. Any existing service in the road reserve or municipal servitude that is damaged as a result of negligence by the contractor will be repaired by the contractor to the satisfaction of the Employer's Agent at his own cost. Clause PS 10.1 shall also apply.

PSA 5.2 Watching Barricading, lighting and traffic crossings, (Clause 5.2)

All open excavations shall be properly demarcated with reflective tape, barricading and any other requirements that the Local Authority has.

PSA 5.3 Protection of Structures (Clause 5.3)

The contractor must contact house owners at least two weeks prior to working in close proximity to existing buildings and to inspect buildings before and after work had been completed. Clause PS 10.2 shall also apply.

PSA 5.7 Safety

Add the following:

The Contractor shall at all times observe adequate safety precautions on Site to ensure the safety of his own staff as well as that of the public and other persons engaged in or about the Works. In this respect he shall observe all laws, ordinances and regulations pertaining to his work.

The Contractor's attention is specifically drawn to the following Acts, and particularly to the relevant regulations under each Act, copies of which shall at all times be kept by him on the Site:

The Factories, Machinery and Building Work Act (Act 22 of 1941)
The Explosives Act (Act 26 of 1956)
The Mines and Works Act (Act 27 of 1956)

The Occupational Health and Safety Act (Act 85 of 1993)

The Contractor is also required to comply with the safety precautions set out in the following publications, copies of which shall also be kept by him on the Site:

The Code of Practice relating to the safety of men in civil engineering inspection pits and small – diameter vertical shafts. (Transactions of the South African Institution of Civil Engineers, Vol. 2, No. 11, November 1960, obtaining from the Secretary, S.A. Institution of Civil Engineers, PO Box 93495, Yeoville, 2143).
The Contractor shall provide suitable and safe access by way of ladders, gangways, etc. to all parts of the Works as may be required for construction purposes or for inspection by the Employer's Agent or the authorised Inspectors in terms of the above-mentioned Acts.
All precautions shall be taken to protect workmen against falling material and/or objects and other dangers whilst they are carrying out their duties. Trenches shall in every way be made and kept safe for persons working therein.
All persons working, inspecting or supervising in places where falling material and/or objects could be encountered shall be provided by the Contractor with hard hats of a type approved by the Inspector of Mines, the use of which shall be strictly enforced.
The Contractor shall provide a properly equipped first-aid box, which shall be accessible at all times.
Where adequate safety precautions are not being observed, the Employer's Agent may order the Contractor to comply with minimum safety requirements at the latter's expense. Compliance with such order will not absolve the Contractor from any of his responsibilities and obligations under the Contract.
The Contractor shall display on a prominent place the following emergency information:

Local Police: Telephone number
Local Ambulance: Telephone number
Local Fire Brigade: Telephone number
Nearest Doctor
Name
Telephone number (office hours)
Telephone number (after hours)
Consulting room street address

The Contractor shall furthermore comply with the requirements of the "Safety Instructions" contained at the end of this Document.

PSA 6.2 Degree of accuracy (Sub-clause 6.2)

Degree of Accuracy shall apply to all components of the Works except where otherwise specified in the Schedule of Quantities and/or Drawings and provided that the minimum permissible deviation given for an element will prevail where more than one deviation can be interpreted in Clause 6.2.3(d).

PSA 7 Testing (Sub-clause 7)

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

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

The Contractor's attention is drawn to the provisions of the various sections of the Specifications regarding the minimum frequency of the testing that will be required for process control. The Contractor shall at his own discretion increase the frequency where necessary to ensure adequate control.

The Contractor shall submit to the Employer's Agent the results of all relevant tests, measurements

and levels indicating compliance with the specifications on completion of every part of the work for examination.

Should the results of any of these tests fall below the required standards as specified in the specifications, the cost of any additional tests required by the Employer's Agent will be to the account of the Contractor.

PSA 7.2 Laboratory (Sub-clause 5.2)

A Laboratory for the use of the Employer's Agent Representative is not required on site. A commercial laboratory approved by the Employer's Agent and appointed by the Contractor shall do all acceptance control tests required in terms of the Contract. All tests must be done according to the tests prescribed in the SANS 1200 under the relevant sections.

PSA 7.4 Statistical analysis of control tests (Sub-Clause 7.4)

Statistical control methods will not be applied under this contract.

SANS 1200 AB: ENGINEER'S OFFICE

PSAB 1 NAMEBOARDS (Clause 3.1)

Substitute the first paragraph of Clause 3.1 with the following.

The Contractor must supply and erect one name board at an approved site, and shall comply as regards site, painting and details municipalities standard name board. A sample is attached as Appendix 2

PSAB 2 SURVEY ASSISTANTS (Clause 5.5)

Substitute "two or more suitable educated survey labourers" in this paragraph with "one semi-skilled labourer".

The Engineer's Representative will occasionally need the assistance of a survey labourer to help with testing, survey, etc., envisaged at approximately 4 hours (non-consecutive) per week.

PSAB 3 SURVEY EQUIPMENT

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

One automatic level plus tripod,
One level staff, all graduated metrically and
One 5m and one 25m-tape measure.

The above-mentioned equipment may, by arrangement be shared between the Contractor and the Engineer's Representative. The Contractor shall keep the equipment insured against any loss; damage or breakage and he shall indemnify the Engineer and the Employer against any claims in this regard.

PSAB 4 MEASUREMENT AND PAYMENT

PSAB 4.1 Survey Assistant ((New Clause)

Payment for the survey assistant shall be at the tendered day work rates for the hours worked in assisting the Engineer's Representative. No payment shall be made for the survey equipment all costs shall be deemed to be covered by the rates tendered for the Contractor's facilities. No payment shall be made for the survey equipment or survey assistant and all costs shall be deemed to be covered by the rates tendered for the Contractor's facilities.

SANS 1200 C: SITE CLEARANCE

PSC 1 SCOPE (Clause 1.1)

Add the following:

“The specification also covers the removal of unreinforced and reinforced concrete, existing pipe culverts and existing roadway and layerworks, (at tie-ins and road widening), and saw cutting of existing road surfacing.”

PSC 2 MATERIALS

Disposal of Material (Subclause 3.1)

“Debris arising from clearing operations or from the demolition of existing structures that are not suitable for re-use in the works or for landscaping in areas designated by the Engineer, shall be removed by the Contractor and disposed of at the approved tip site. Transport of such material shall not be paid separately, but shall be included in the relevant items for clearing

The rates tendered shall allow for any fees to be paid at the tip site.”

PSC 3 MEASUREMENT AND PAYMENT

PSC 3.1 Clear And Grub (sub - clause 8.2.1)

The location of disposal or dumping sites shall be the Contractor's responsibility and no overhaul shall be payable to the Contractor for loading, temporary and dumping of material thus cleared under this scheduled item.
Unit of measurement for "clear and grub”, for road works shall be the square metre, and clearing for sewer and storm-water routes shall be metre.

PSC 3.2 Removal of Brickwork, Reinforced And Unreinforced Concrete
(New Clause) unit: m3

Separate items are scheduled. Measurement shall be net in place before removal. The rates shall cover the cost of complete demolition, all necessary excavation and associated works and disposal as per PSC 3.1.

SANS 1200 DA: EARTHWORKS (SMALL WORKS)

PSDA 1 CLASSIFICATION FOR EXCAVATION PURPOSES (Clause 3.1)

Delete Sub-Clause 3.1.1 and 3.1.2 and replace with the following:

PSDA 1.1 Method of Classifying

The Contractor may use any method he chooses to excavate any class of material but his chosen method of excavation shall not determine the classification of the excavation. The Engineer or his Representative will decide on the classification of materials. In the first instance classification will be based on inspection of the material to be excavated and on the criteria given in PSDA 1.2 (a) and (c).

PSDA 1.2 Classes of Excavation

All materials encountered in any excavation for any purpose including restricted excavation will be classified as follows:

(a) Soft Excavation

Any material, which can be removed by bulldozers or backhoes, shall be classified as soft excavation.

Soft excavation shall be material not falling into the category of hard rock excavation.

(c) Hard rock excavation

Hard rock excavation shall be excavation in material (including undecomposed boulders exceeding 0.17 cubic metre in individual volume) that cannot be efficiently removed without blasting, wedging and splitting, or hydraulic hammers.

This classification includes materials such as:

solid unfractured rock occurring in bulk
solid ledges thicker than 200mm
igneous rock intrusions
cemented sedimentary rocks.

PSDA2 CONSTRUCTION

PSDA2.1 Conservation of Topsoil (5.2.1.2)

Add the following to Subclause 5.2.1.2:

“Topsoil shall not be stockpiled higher than 2,0m. Care shall be exercised to prevent the compaction of topsoil in any way especially by vehicles travelling over such material.”

SANS 1200 DB: EARTHWORKS (PIPE TRENCHES)

PSDB 1 CLASSES OF EXCAVATION (Clause 3.1)

The excavation of material, for the purposes of measurement and payment shall be classified as specified in PSDA 1.

SANS 1200 DM: EARTHWORKS (ROADS, SUBGRADE)

PSDM 1 DEFINITIONS AND ABBREVIATIONS (Clause 2.3)

Add the following:

“The Contractor's attention is drawn to the definitions of formation level as defined in SANS 1200 M.”

PSDM 2 CLASSIFICATION OF EXCAVATION (Clause 3.1)

Clause PSDA 1 will apply for this clause.

PSDM 3 SUBGRADE

The minimum CBR of the sub grade layers at 93% modified AASHTO maximum density shall be 15.

PSDM 4 CONSTRUCTION (Clause 5)

PSDM 4.1 Treatment of Road Bed (Sub Clause 5.2.2.3)

(a) Preparation and Compaction of Road Bed

Add the following:

“Where road bed preparation takes place in sand the in-situ sand layer is to be watered and compacted to 100% Modified. AASHTO density. The surface of the in-situ sand layer is to be firm and smooth in order to receive the subsequent S.S.G. or subbase layer, as the case may be. To this end the Engineer may order that unnecessary construction traffic remain off the finished in-situ sand layer until the subsequent layer has been completed.”

PSDM 5 USE OF MATERIALS (Sub Clause 5.2.2.3 & 8.3.4)

In addition to the requirements of Clause 5.2.2.3, the order of excavating cuts shall be arranged to minimise the double handling of material.

PSDM 6 TRIMMING, GRADING AND COMPACTING OF SIDEWALKS (New Clause)

After completion of the road layers, including the premix surface, and after construction of the necessary kerbs, including the satisfactory backfilling behind the kerb, the sidewalk shall be finished off to the lines and levels shown on the drawings or as directed.

Shortfall material shall be imported from the designated borrow pit and mixed with the existing, reshaped and compacted to levels as directed.

The Contractor shall be responsible for taking the necessary precautions and measures to control the dust nuisance, which may arise due to his operations on the sidewalk, whether from the natural ground surface or topsoil layer, until the Engineer accepts the verge.

PSDM 7 TRANSPORT

PSDM 7.1 Free haul (Clause 5.2.8.1)

Notwithstanding the provisions of Clause 5.2.8.1, all movements of cut and fill material shall be free haul.

PSDM 8 MEASUREMENT AND PAYMENT (Clause 8)

PSDM 8.1 (a) Cut to Fill, Borrow to Fill

Add to Subclause 8.3.4(1) the following:

"Where fill material is borrowed from trench excavations the rate shall include the selection from the sides of trenches, transporting, if necessary, stockpiling, preparing, processing, shaping (including forming side channels and benching if applicable), watering, mixing, compacting to the densities specified and finishing the slopes of fills."

The fill material from commercial sources required for formation levels and undercuts shall be a minimum G7 quality material

PSDM 8.2 PSDM 8.3 Surface Finishes

Add to Subclause 8.3.13 the following subclause (c):

"The major earthworks required to bring the verge to the required level and the additional depth of excavation or reduction in fill height as ordered for the topsoil operation shall be measured and paid for under item 8.3.4.

PSDM 8.3 Construct Selected Layers using Imported Material Compacted to 95% Modified AASHTO (New Clause)

The rate shall cover the cost of locating the source, complying with all the relevant precautions required in terms of Clause 5.1, SANS 1200 D, procuring the material, basic selection, transporting from source to point of deposition on the road, spreading, watering, compacting, final grading and complying with the tolerances and testing.

SABS 1200 G: CONCRETE (STRUCTURAL)

PSG 1 MATERIALS

PSG 1.1 Applicable Specifications (3.2.1)

Add the following:

All cement types shall comply with the requirements of SABS ENV 197-1

For this contract only OPC CEM I, Class 42.5, cement shall be used.

PSG 1.2 CEMENT (3.2.1 and 3.2.2)

The grade of concrete shall be as specified on the drawings or schedule of quantities. Cement shall not be kept in storage for longer than four weeks and shall be used in the order in which it has been stored.

PSG 2 PLANT

PSG 2.1 Ties (4.5.3)

Add the following:

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

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

PSG 3 CONSTRUCTION

PSG 3.1 Fixing (5.1.2)

The welding and the use of heat in cutting high tensile deformed bars (Y bars) shall not be permitted without the approval of the Engineer.

PSG 3.2 Cover (5.1.3)

The reinforcement shall be fixed with the minimum cover as specified on the drawings.

In the case of walls, columns, roof slabs, the minimum specified cover should be attained by one of the following methods, or as approved by the Engineer.

by using “cover block” manufactured from dense, strong cement/sand formed in a block with wire ties, cured under water for a minimum period of 7 days.

by the use of plastic spacers, set in an orientation so that no pockets pf air can be trapped beneath them during vibration of the concrete.

PSG 4 FORMWORK

PSG 4.1 Design Of Forms

Forms shall conform accurately to the shape, lines, levels and dimensions of the concrete as shown

on the drawings.

The design of formwork and supports shall be the responsibility of the Contractor.

Forms shall be designed as to support their mass, the load exerted by wet concrete and the vibration, construction or other loads that they may be subjected.

All timber shall be free from holes, loose knots, cracks, splits, warps or other defects likely to affect the strength or appearance of the finished structures.

Wedges and clamps shall be used in preference to nails for securing the form components and wire ties or tie bolts in reinforced concrete, and must be capable of removal after use, except as otherwise specified.

PSG 4.2 Classification of Finishes (5.2.1)

Notwithstanding Sub-clause 5.2.1, finishes shall be classified as rough or smooth, as follows:

Rough

Concealed surfaces and surfaces more than 200mm below final ground level

(b) Smooth

All surfaces not classified as “rough” in paragraph (a) shall be classified as “smooth”. All exposed areas, unless other indicated, shall be chamfered 20mm x 20mm by means of a fillet fixed to the formwork.

PSG 4.3 Removal of Formwork (5.2.5)

Add the following:

Removal of forms shall be determined by means of cubes cast with the concrete and cured in accordance with S.A.B.S. 863. The removal shall be carried out under the personal supervision of the Foreman, only after the permission of the Engineer has been obtained and in such a manner that the concrete is not jarred, vibrated or otherwise damaged.

Where test cubes to determine stripping times are not made, the minimum periods which shall elapse between the time of the placing of the concrete and the time of removal of the forms, shall otherwise agreed with the Engineer, be in accordance with the table hereunder, where each day covers a full 24 hour period.

Delete Table 2 and replace with the following:

Minimum stripping Times in Days

	CEM I	CEM I	CEM II	CEM II	CEM III	CEM III
Type of structural Member of Formwork	Normal Weather (Above 15o C)*	Cold weather (Below 5oC)*	Normal Weather (Above 15o C)*	Cold weather (Below 5oC)*	Normal Weather (Above 15o C)*	Cold weather (Below 5oC)*
Beam sides, wall or unloaded cols	1	2	2	4	2	6
Slabs, with props left underneath	4	7	5	8	6	10
Beam soffits. Props left underneath	7	12	8	14	10	17

Removal of Slab Props	10	17	10	17	12	21
Removal of beam Props	14	21	14	21	18	28

*Average daily temperature of the atmosphere adjacent to the concrete as measured by a maximum and minimum thermometer.

PSG 5 CONCRETE

PSG 5.1 General (5.5.1.1)

Concrete shall comply with the requirements for strength concrete. (See clause 5.5.1.7)

The maximum cement contact for all grades of concrete shall not exceed 450kg per m3 without the permission of the Engineer. In addition, the following will be applicable for this project:

The concrete must be resistant to mild acid with a PH of approximately 6.
This may be facilitated by slowing the progress of the reaction by using a calcareous aggregate (e.g. limestone) which is susceptible to acid attack and will help to neutralize the acid.
Coarse aggregate used must be as large as possible i.e. 26.5 mm to reduce the proportion of paste in the concrete which is vulnerable to acid attack.
Fine aggregate must be well graded and able to produce a dense, impermeable matrix that will resist the ingress of aggressive materials. The grading curve given in Fulton's concrete technology and referred to as the preferred grading must be used and not the grading given in SANS 1083.
A high proportion of cement i.e. a minimum of 350 kg/m3 must be used to ensure a sufficient content of Ca(OH)2 which is vulnerable to acid attack. This minimum cement content must be used irrespective of the water/cement ratio requirement for a 35 MPa concrete.
The concrete must be resistant to attack by sulphates which are present in sewage.
A cement must be used which is resistant to expansive reactions due to sulphates. The best cement available for this purpose will be a 50/50 blend of ground granulated blast furnace slag and clinker cement.

Curing of concrete

Curing of concrete by means of surface water retention or use of an acceptable curing compound must be included to improve the impermeably of the concrete surface to chemical ingress.

Permeability and resistance to chemical attack can be enhanced by using the various proprietary materials available for the purpose which can be used as a coating, either barrier or penetrating. Information must be obtained from the manufacturer/supplier and included in your submission.

PSG 5.2 Sample and Trial Concrete mixes

The concrete mixes for the grade of strength shall be designed by an approved design laboratory. The Contractor at his own cost shall supply to the laboratory samples of the cement and aggregate he proposes to use for the works. The proposed slumps and proportions of the materials to be used for each grade of concrete shall be submitted to the Engineer for his approval.

No structural concrete shall be placed on the job until the Contractor has satisfied the Engineer as to the suitability of the mixes concerned.

Trial panels for durability concrete (W class concrete)

As part of the durability class concrete mix design approval process, trial panels shall be constructed on the site (or at the laboratory) before construction of structural elements commences, to ensure that the contractor can successfully achieve the oxygen permeability and sorptivity targets set for the in-situ concrete with method of construction to be adopted. Each trial panel shall be constructed using the

same type of concrete mix, shuttering type, placing and curing methods (including application rates of curing compounds if applicable) as to be used on the final structural element to be constructed. The dimensions of such a trial panel shall be 0.40m wide, 0.60m high and 150mm thick. The panel shall be constructed vertically. It is suggested that 2 lifting hooks be cast into the panel to facilitate lifting, moving or disposal of panel. It most likely will be that one trial panel will be required for substructures (piers, columns, retaining walls, etc) if the same grade concrete is specified for all substructures.

The test area for taking of cores (taken in horizontal direction) shall not be less than 100mm from all horizontal and vertical edges. The number of cores to be extracted and tested is described below.

Test panels for durability concrete (W class concrete)

During casting of concrete on site, test panels shall be constructed on the site adjacent to where the concrete element is being placed. Each test panel shall be constructed with the same concrete, shutter type, compaction and curing methods being used in the element being cast (including same vibrator frequency and curing compound application rates), and be left to cure for 28 days adjacent to the concrete element. Thereafter it shall either be cored on site or transported to the laboratory for testing of the required durability parameters. The dimensions of the test panels shall be 0,4m wide, 0,6m high and 150mm thick and be cast vertically to simulate vertical casts of the substructures and vertical faces of all structures. It is suggested that 2 lifting hooks be installed at both top ends of the test panel to assist with transport. For precast concrete, test panels will not be constructed, as cores will be drilled from the concrete elements at the Precast yard before being placed at its final location. For the horizontal faces of Columns/Surface Bed Slabs, Water Retaining Walls and All bases/foundations, test panels will also not be constructed. Instead cores will be extracted from the top surface of the test panels.

The frequency of the testing and number of cores to be extracted is described under below.

The test area for the taking of cores (taken in a horizontal direction) shall not be less than 100mm all horizontal and vertical edges.

Testing for concrete durability

Durability predictions for durability concrete prefixed ‘W’ will be based on the following tests that shall be carried out by an accredited laboratory approved by the Engineer:

Oxygen permeability
Water sorptivity
Chloride conductivity

Notes:
The test methods shall be as described below.

For test no’s (i) and (ii) (and (iii) when required), cores of 70 ± 2mm diameter shall be extracted from the test panels when the concrete reaches the age of at least 28 days and tested.

Test No. (iii) may only be required where specified (e.g. within a chloride environment along the coast or where chlorides are present in ground water).

NUMBER OF CORE RESULTS REQUIRED FOR A SINGLE SAMPLE FOR DURABILITY TESTING

Durability Parameter	No. of Core Results
a. Sorptivity	1

b. Oxygen Permeability	2
c. Chloride conductivity	1

* Test undertaken only if specified and within a chloride environment.

Number of test panels required for durability testing

Element	No. of Test Panels to be taken
Water Retaining walls	1 (per element/pour)2
All bases/foundations	1 (per element/pour)2
Columns/Surface Bed Slabs	1 (per element/pour)2

Note:
Test panels required to be cast vertically. Additional cores required to be extracted from roof slabs/beams, i.e. in-situ cores.
Note that where group of elements are cast on the same day, only one test panel will be required, but only if the same grade concrete is used.

For cores to be extracted from precast elements, the engineer will indicate the positions at which the cores will be extracted. Filling of the holes left by the drilling of the cores shall be the responsibility of the contractor and shall be carried out using an approved proprietary non-shrink repair mortar so as to restore structural integrity and durability of the structural element tested.

The methodology and latest revisions for the durability index tests are available at the University of Cape Town's web address at www.civil.uct.ac.za.

Testing for concrete cover

Concrete cover testing shall be conducted using an approved calibrated electromagnetic cover meter, able to comply to requirements as defined in linear and block scans and has the ability to save and calculate data measured.

The testing (non-destructive) shall be conducted to confirm that the specified depth of concrete cover has been achieved. The cover meter tests shall cover at least 1m2 for every 20m2 surface area of concrete placed. Readings shall be taken to identify individual bars, with at least 3 readings at 100mm spacing on every single bar within 1m². The cover meter must be calibrated whenever being used to test for cover on each project. Standard Calibration block must be used on each project, and where substantial testing is required, the calibration block shall be kept on site. Cover meters shall comply with the relevant modern standards (e.g. EN55011, 50082-1, 6100-6-1, 6100-6-2, 6100-6-3, 6100-6-4 and BS18881 Part 204).

Critical elements for cover surveys are Columns/Surface Bed Slabs, Water Retaining Walls and All bases/foundations. The engineer will identify other critical areas required to be surveyed. Should any of these areas shows deficiencies, the engineer may order additional cover tests on other areas at the contractor's costs.

The procedure for testing for depth of reinforcement from concrete surface shall be in accordance with the manufacturer's requirements for the relevant electromagnetic cover meter. All cover meters shall be calibrated on site under the control of the engineer. The number of readings taken of the layer of rebar closest to the concrete surface to each 1m2 to be tested shall be such that an accurate average cover can be determined for the tested area. For the purposes of calculating the average depth of

cover bars that have covers 15mm or greater than what is specified shall be capped at specified cover plus 15mm in the calculations.

Example, where Specified cover = 40mm, test as 35mm, then apply limits, 85% * 35 = 30mm.

Quick Scan readings are to be taken perpendicular to the layer of rebar closest to the concrete surface for each scan area (+/- 30 per m2), so that an average cover to reinforcement can be determined for the tested area.

Readings are to be taken to identify individual bars within each 1m2. At least three cover readings, at 150mm spacing, per an individual bar shall be shown in the test results but only overall cover measurement would be used for payment purposes. Reports generated by the equipment shall be used for determining payment. Where more than 10% of readings are below specified lower limit, the area shall be re-scanned, by Image, Block or Grid scan method, to verify the average cover.

Cognizance to be taken of the effect to cover depth measured, where spliced bars are measured in same area as single bars. The size of rebar shall be corrected manually on the device by means of applying the following formula (approximately 1.41 x diameter of rebar as shown in design).

Where insufficient cover are established before placing of concrete, e.g. Starter bars from base not correct position, remedial action to be performed before continuing with next concreting – these actions to be

clearly recorded and area identified.

SABS 1200 GB: CONCRETE (ORDINARY BUILDINGS)

PSGB 1 SCOPE (Clause 1.1)

This section includes specifications for various aspects of concrete referred to in other sections of the standard specifications as well as the construction of cement screeds and waterproofing of concrete roof slabs.

PSGB 2 GENERAL

PSGB 2.1 WATERPROOFING

Waterproofing materials shall be transported, handled and stored with care and laid strictly in accordance with the manufacturer’s instruction. A clean, dry, smooth, firm and structurally adequate base with a fall of at least 1 in 50 (depending on the material selected) is required with drainage to gutters and/or rainwater outlets on roof edges, as relevant. Attention shall be given to the detailed design of openings, projections, gutters, down pipes and finishes to make adequate provision for run-off water and to minimise blockages.

Corners and edges shall be covered or angle-rounded. Run-off over the edges of slabs shall be eliminated as this causes stains to the building. Fillets of 75 x 75 mm shall be provided at upstand corners.

The necessary gradient for waterproof membranes are normally provided on top of structures in low-density screeds and then finished, if necessary, with a cement/mortar topping.

PSGB 2.2 CEMENT SCREEDS

CEMENT

The grade of concrete shall be as specified on the drawings or schedule of quantities. Cement shall not be kept in storage for longer than four weeks and shall be used in the order in which it has been stored.

Mechanised plant e.g. scabblers or abrasive blasters must be used for complete removal of all laitance from the existing surface of the floor slab. Dust pollution should be kept to a minimum during these operations. Once the coarse aggregate of the slab is exposed, all dust and debris should be removed, surface thoroughly wetted and maintained for approximately 12 hours. A bond coat (1:1 mix of cement and fine sand) should be spread evenly over the surface using a stiff fibre brush. The screed must be laid and compacted in 1 layer.

Screeds and toppings shall be of sufficient quality to provide a firm base. The following screed characteristics are suggested for waterproofing purposes:

Compressive strength of at least 25Mpa at 28 days;

Steel-trowel finish (light);

Drying shrinkage of less than 0.2% when tested in accordance with the testing conditions specified in SABS 836;

Minimum screed thickness of 40mm;

Maximum moisture content of screeds:

Applications with a density of less than 500 kg/m3 : 10%

Applications with a density exceeding 500 kg/ m3 : 7%

The screed should be cast or sawn into panels that do not exceed 9m2 to cater for drying shrinkage and to control cracking.

PSGB 3 MEASUREMENT AND PAYMENT

PSGB 3.1 Cement Screeds for:

(a) 25mm screed on floors unit: m2

(b) 25mm screed on roof slabs unit: m2

The unit of measurement shall be the square metre of exposed surfaces to be screed.

The tendered rate shall include all costs for supplying, delivering, storing on site, handling, etc of the materials necessary for the screed, including mixing and laying of screeds currents and falls and forming of sundry items such as fillets, etc complete. The tendered rate shall also cover the cost for forming of screeds around outlets, waste and of all scaffolding, temporary supports, hoisting facilities, etc.

PSGB 3.2 Waterproofing of roof slabs with Derbigum or similar approved unit: m2

The unit of measurement shall be the square metre of the horizontal and vertical surfaces of waterproofing to the approval of the Engineers. All turn-ups and turn-downs will be deemed to be

included in the area measured for the waterproofing and will not be paid for separately.

The tendered rate shall include all costs for supplying, delivering, storing on site, handling, moving, installing and fixing the waterproofing system complete with all necessary sundry items, such as flashing strips, dressing waterproofing around pipes and into outlets and channels. The tendered rate shall also cover the cost of cutting and waste and for scaffolding, hoisting facilities, etc.

SANS 1200 GA: CONCRETE (SMALL WORKS)

PSGA 1 SCOPE (Clause 1.1)

This section includes specifications for various aspects of concrete referred to in other sections of the standard specifications.

PSGA 2 CEMENT (3.2.1 and 3.2.2)

The grade of concrete shall be as specified on the drawings or schedule of quantities. Cement shall not be kept in storage for longer than four weeks and shall be used in the order in which it has been stored.

SANS 1200 LB: BEDDING (PIPES)

PSLB 1 SCOPE (Clause 1.1)

This section includes bedding for pipelines.

PSLB 2 BEDDING MATERIALS (Clause 3.4.1)

PSLB 2.1 Source of material

It is anticipated that selected fill will have to be obtained from commercial sources.

PSLB 2.2 Selective excavation for bedding materials

Notwithstanding the requirements of Clause 3.7 of SANS 1200 DB and Clause 3.4.1 of SANS 1200 LB regarding the use of selective methods of excavation, selective method of excavation and plant shall be adopted by the Contractor as to enable him to avoid burring or contaminating material that is suitable and is required for bedding. The details contained in SANS 1200 LB shall be used for all relevant bedding details as applicable.

PSLB 3 CRUSHED STONE BEDDING (New clause)

Where the conditions on the trench bottom are so wet that the use of selected granular material is not practical, use will be made of 13.2 or 19mm single sized crushed stone material from commercial sources. The use of such stone will be entirely at the Engineer’s discretion.

PSLB 4 FREEHAUL (Clause 8.1.6)

All material for bedding cradle and selected fill obtained from excavations on site shall be regarded as free haul. No overhaul will be payable for obtaining bedding material from within the site.

SANS 1200 LE: STORMWATER DRAINAGE

PSLE 1 SCOPE (Clause 1.1)

This section includes for the supply and installation of storm water drains pipes and all inlet and outlet to the drainage system. This section also includes for the construction of channels and berms, and subsoil drainage.

PSLE 2 MATERIALS (Clause 3.1)

The storm water pipes including couplings shall be concrete pipes (various sizes as indicated in the schedule of quantities) to SANS 677 manufactured with OGEE type joints. The Contractor at each joint shall provide a 300 mm wide wrapping, or rubber collar.

PSLE 4 CONSTRUCTION

PSLE 4.1 PIPES INTO MANHOLES/CATCHPITS (New Clause)

Pipes may protrude up to 300mm into a manhole/catch pit. This relaxation will only be permitted if the pipe does not have to be cut. The “dead space” formed at the end of the manhole is to be suitably benched off to prevent the collection of silt and rubbish.

PSLE4.2 “AS-BUILT” DETAILS (New Clause)

The Contractor shall submit as-built levels, distances between manholes and the grades of pipelines for which he requires payment; at the time he submits his monthly payment claim. A sample form is obtained from the Engineer.

PSLE 5 MEASUREMENT AND PAYMENT

PSLE 5.1 Supply and Install Manholes, Catch pits, etc. (Subclause 8.2.8)

Delete the words “but excluding excavation and backfilling, which will be measured separately” and replace with “including dealing with any excavation in all materials (including disposal of surplus) which is additional to that measured under the item for pipe trench excavation (see subclause 8.2.3 of SANS 1200 DB)”.

PSLE 6 SUBSOIL DRAINAGE

PSLE 6.1 General

Details of subsoil drainage are shown on the relevant drawings.

Subsoil drainage will be provided where shown on the drawing and/or where directed by the Engineer and at downstream ends of sections, subsoil pipes will be connected into stormwater catchpits or manholes.

PSLE 6.2 Materials

Subsoil pipes will be HDPe with the materials complying with the relevant requirements of SANS 533 and will have push fit couplings. Three rows of water intake slots, 1.2mm wide, will be symmetrically arranged around the apex of the pipe (220º) with a flow channel at the bottom of 140º.

The pipe must be able to withstand loads in excess of 70kN/m with a minimum infiltration rate area of 5000mm2 /m with a minimum ring stiffness of 450kPa.

Geotextile will be as specified in Clause 3 of SANS 1200 LE Stormwater Drainage and shall be needle-punched Grade E (160 g/m2), or equivalent approved products.

Sand backfill to subsoil drains will consist of sand conforming to Table 1 of SANS 1083, compacted to 100% modified AASHTO maximum density.

Stone surround to the subsoil pipe shall consist of 19.0mm coarse aggregate.

PSLE 6.3 Construction

Trench bottom preparation will be in accordance with the applicable requirements of SANS 1200 DB Earthworks (Pipe Trenches). Unless amended by the Engineer, the pipe perforations are to be positioned at the invert of the pipe.

Pipes will be laid with a minimum fall of 1 in 100 and will be jointed strictly in accordance with the pipe suppliers' instructions.

Geotextile will be wrapped around the stone which surrounds the pipe (as shown on the drawings), with a minimum overlap of 200mm, and will be fastened in such a way that it remains correctly wrapped after the sand backfill is placed.

At the upper end of the subsoil drain, the pipe will be closed with an impermeable cap or rodding-eye that can be removed for the purpose of testing and cleaning the subsoil drain. At the lower end, where the pipe connects to a catch pit or manhole, the pipe connection through the wall of the drainage structure will be neatly finished off, with the geotextile folded in, to contain the stone.

Sand bedding, stone and backfill will be placed as specified in the applicable sections of SANS 1200 DB Earthworks (Pipe Trenches).

PSLE 6.4 Tolerances

Tolerances will be as for SANS 1200 LE (Stormwater Drainage)

PSLE 6.5 Testing

Density testing of the sand backfill will be as specified in Clause 7 of SANS 1200 DB Earthworks (Pipe Trenches).

PSLE 6.6 PSLE 6.6 Measurement and Payment
Excavation will be as for SANS 1200 DB (Pipe Trenches).

PSLE 6.6.1 PSLE 6.6.1 Subsoil pipes unit: m

The rate will cover the supply of the pipes complete with couplings and jointing materials, their inspection, transport and handling, laying of pipes, provision of rodding-eyes, jointing, building pipes into manholes, inlets or other rigid structures and all cutting and wastage of materials.

PSLE 6.6.2 19.0mmStoneLayer unit: m3

The volume will be computed from the dimensions shown on the drawings.

The rate will cover the supply of the stone (no haulage payable separately) and placing of the stone around the pipe to the required dimensions.

PSLE 6.6.3 Sand backfill unit: m3

The volume will be computed from the specified trench width, the length called for, and the depth instructed on site, with the volume of the pipe and stone being deducted.

The rate will cover the supply of the sand (no haulage payable separately), placing of the sand in the required stages (which will include raising the height of the sand backfill in separate operations to match the levels of the pavement layers as they are placed), and compaction, trimming and wastage.

PSLE 6.6.5 Geotextile blanket unit: m2

The area will be computed from the perimeter of the wrapped stone plus the overlap multiplied by the length.

The rate will cover the supply, handling, wrapping, trimming and wastage.

SANS 1200 LD: SEWERS

PSLD 1 SCOPE (Clause 1.1)

This section provides for the supply and installation of minimum 160mm diameter internal and bulk sewers with appurtenant manholes and connections.

PSLD 2 TYPES OF PIPES, PIPE JOINTS AND FITTINGS (Clause 3.1)

PSLD 2.1 The sewer pipes and couplings shall be of the following as detailed on the relevant drawings and included in the Schedule of Quantities:

Minimum 160mm diameter heavy duty uPVC pipes with flexible coupling to SABS 791 and appurtenant plain junctions.

PSLD 3 STEP IRONS (Clause 3.5.7)

The provision of step irons is not required.

PSLD 4 MANHOLE COVERS AND FRAMES (Clause 3.5.8)

Manhole covers located in roadways or as directed by the Engineer must be supplied with Type (2A) – 153 kg heavy-duty Polymer Concrete manhole covers and frames cast integrally with the top slab. (National Manhole Covers Product No. 119105 or similar approved).

PSLD 5 CONNECTIONS TO MANHOLES (Clause 5.4)

Notwithstanding the provisions of clause 5.4, Drawing No. LD-2 (a) shall apply to uPVC pipes. In addition, the short pipe that is built into the manhole shall have clean coarse sand glued to the outside surface to facilitate a watertight bond.

PSLD 5.1 Finished Cover Levels (New Clause)

Unless otherwise ordered or dimensioned explicitly on the working drawings, the level of the top surface of the cover shall be

flush with the final surface of a carriageway, footway or any paved areas

50 mm above the surface of a grassed or gravelled verge, or service lane

250 mm above the finished ground level for manholes situated at the mid block of private or municipal property.

500 mm above ground level in undeveloped open space.

PSLD 6 WATERTIGHTNESS OF MANHOLES (Clause 7.2.6)

All manholes will be subjected to a test for water tightness.

PSLD 7 TOLERANCES (Clause 6.0)

PSLD 7.1 The permissible deviation of the location in plan, of the centre line of the sewer and of the position of manholes and junctions, from the designated location shall be $\pm$ 50mm.

PSLD 7.2 The permissible deviation from the designated level to the invert at each manhole shall be ± 5mm and the fall between successive manholes shall be at least 90% of that specified.

PSLD 8 TESTING (Clause 7.0)

PSLD 8.1 Torch and Mirror Test (New Clause)

For the pipeline to be acceptable the visibility of the plug/reflector shall be at least 50% of its area.

PSLD 8.2 Acceptance Criteria (New Clause)

The acceptance of the pipe length or manhole shall depend upon whether it satisfies the criteria set out in SABS 1200 LD clauses 6 and 7.

Where pipes other than vitro clay pipes are laid, only tests carried out on the pipelines after completion of the backfilling to ground level (excluding surface restoration) and completion of the construction of manholes to roof height, including benching, will be considered for acceptance purposes.

In the case where vitro clay pipes are being laid, no pipelines are to be covered prior to inspection and approval by the Engineer. Once the pipeline has been laid and bedded in the compacted bedding cradle (to half pipe) between control points, the Engineer must be called out to inspect the installation. The Contractor is to provide the necessary equipment in order for the Engineer to adequately assess that the pipeline has been laid to the specified tolerances. Further, an air test, in accordance with the specifications, is to be conducted and witnessed by the Engineer prior to the placing of the Fill Blanket.

PSLD 8 CONNECTIONS TO EXISTING SEWERS AT MANHOLES (New clause)

The contractor shall under no circumstances connect the new reticulation into the existing without the prior written instruction of the Engineer. This instruction will only be given after acceptance, by the Engineer, of the sewer lines and manholes of the new reticulation upstream of the connection point.

The rate for this item shall allow for accommodation of flow in existing sewer mains and all other incidental labour and material required while making connections into and altering benching in existing manholes.

PSL SANS 1200 L: MEDIUM PRESSURE PIPELINES

PSL 1 SCOPE

All water pipelines in this contract shall be deemed to be medium pressure pipelines.

PSL 2 MATERIALS (Sub-clause 3.1)

PSL 1.1 CI PIPES FITTINGS AND SPECIALS

Add: " All cast iron fittings to be cement mortar or coated with Rilsan or fusion-bonded epoxy"

PSL 1.2 STEEL PIPES, FITTINGS AND SPECIALS

Delete sub items 3.4.2 and 3.4.3 and replace with the following:

"All steel pipes, fittings and specials, larger than 150mm diameter to be 4.5mm wall thickness, grade B steel to SANS 719/1971.
All steel pipes, fittings and specials, 150mm diameter and smaller to be heavy duty to SANS 62.
All bolts, nuts and washers to be stainless steel.
All steel pipes, fittings and specials to be Rilsan coated. "

PSL 1.3 uPVC PIPES AND SPECIALS

uPVC pipes and specials to comply with to SANS 966 part 1 specification.

PSL 1.4 FLEXIBLE COUPLINGS

Add: "The shortest length of pipe which may be used in the pipeline is 0,5m, thus the shortening of an adjacent pipe may be necessary so as to ensure compliance with the position of the specials. When pipes of 1,0m or less, in length, are used they shall be jointed by means of C.I. short collar detachable couplings".

PSL 1.5 Flanges and Accessories

Add to sub-clause 3.8.3:

"The insertion piece shall be such as to cover the full face of the flange (i.e. the O/D). Bolts and nuts shall comply with SANS 135. Drilling shall conform to BS4504 Table 16/11".

PSL 1.6 Loose Flanges

With regard to sub-clause 3.8.4 the following standard shall apply:

"Bolts and nuts shall comply with requirements of SANS 135".

PSL 1.7 VALVES

Delete the contents of this Sub-clause and replace by:

"Only one type of valves is acceptable:

a) Wedge gate type valve

Valves shall comply with the requirements of SANS 664-1989 as amended, and shall bear the SANS quality mark. A test certificate as per Clause 3.5.20 of compliance with SANS 664 will be acceptable.

Valves shall display the following features;
A minimum of 250 microns coating of Rilsan Nylon 11.
Class 16

Clockwise closing
Non- rising spindle type with cap.
May have spigotted, socketted or flanged end connections. When flanged valves are specified, the drilling shall be to Table 16/11 of BS 4504".

PSL 2 CONSTRUCTION (Sub clause 5)

PSL 2.1 General

Add to sub-clause 5.1.1

"The center line of the pipeline shall normally be 2,5m from the road reserve boundary inside the road reserve. The pipeline is to be laid continuously and leaving gaps for fittings will not be allowed.

PSL 2.2 Depths and Cover

Unless otherwise shown on the drawings or instructed by the Engineer, cover to pipes shall be as follows: -

During Construction:

Where construction traffic is liable to cross over pipes, they shall be laid so that there is not less than 0,75m of cover over the pipe. Road crossings shall be constructed after the construction of the road layers has reached the stage where 0,75m cover is available.

Pipes beneath Verges and Open Spaces:

The tops of pipes beneath verges shall be not less than 0,75m and not more than 1,25m below the final verge level.

Supply Connection:

The tops of pipes shall not be less than 450mm and not more than 600mm below the final road surface.

Pipes beneath existing roadways:

The tops of pipes beneath a road shall not be less than 1m and not more than 1,25m below the road level.

PSL 2.3 SETTING OF VALVES, SPECIALS AND FITTINGS

Add to Clause 5.3:

"The hydrant shall be bolted to the tee such that the outlet is in line with the pipeline. Valves shall be

positioned opposite the erf splay peg at intersections".

PSL 3 TOLERANCES

PSL 3.1 CONTROL POINTS

Add: "Valves shall be located as indicated on the plan layout opposite the boundary peg of the erf, and to within a longitudinal tolerance of 100mm."

PSL 3.2 ALIGNMENT (PLAN AND LEVEL)

Add to last sentence: "provided this does not result in a reversal of the grade of the pipeline."

PSL 3.3 Testing of pipelines

PSL 3.3.1 Test pressure (sub-clause 7.3.1)

All pipes shall for test purposes be assumed to have a working pressure of 600kPA for class 6 pipes,

900kPA for class 9 pipes, 1200kPA for class 12 pipes and 1600kPA for class 16 pipes. Test pressure for field-testing shall be 1.25 times the working pressure. The Contractor shall allow for the testing of pipes in short sections so that the difference in minimum and maximum pipe elevation does not exceed 60m for class 6 pipes, 90m for class 9 pipes, 120m for class 12 pipes and 160m for class 16 pipes.

PSL 3.3.2 Method of testing

The Contractor shall provide an approved test pump, an accurate water meter, sealed pressure gauge, tested and certified by an independent testing organization, and all other equipment, materials and labour required for the test.

The section of pipeline to be tested shall be clean and closed off at the ends by isolating valves, end caps or approved end-closure pieces. Free ends shall be firmly strutted against solid supports or trust blocks designed to withstand safely 2 times the calculated and thrust under maximum test pressure. It shall be incumbent on the Contractor to establish the need for blank flanges or isolating valve flanges in order to limit leakage rates past gates, blades and seals.

During this initial filling stage, the pipeline joints and all specials, fittings and valves shall be visually inspected for visible leaks and same rectified before proceeding with the test.

The pressure shall be maintained for one hour and if a pressure drop occurs, more water shall be added to reinstate the test pressure and the valve closed again. The quantity of water added shall be measured by recording the readings before and after pumping.

This procedure shall be repeated for a period of 24 hours, with water added at hourly intervals where necessary to reinstate pressure and water meter reading recorded. At the end of the 24-hour period, the aggregate quantity of water required to reinstate pressure over 24 hours shall be determined.

The contractor shall give the Engineer 48 hours written notice of his intention to commence pressure testing and the Engineer may attend and supervise all or any part of tests. All records and recording charts shall be handed to the Engineer as soon as tests over any section have been completed.

All valves, specials, fittings and exposed joints, shall be inspected visually during the 24 hours pipeline test and all visible signs of leaks, sweating and distress shall be reported and attended to without

delay.

PSL 3.3.3 Remedial Measures

Should the maximum leakage limits as specified be exceeded; the contractor shall determine the position and cause of the leaks and shall take remedial measures at his own expense and to the satisfaction of the Engineer to stop such leaks to ensure the specified degree of water tightness.

If during the contract period of maintenance, the number of leaks and other defects is considered by the Engineer to be more than could reasonably be expected from a well-laid pipeline operating under normal conditions, he may order the contractor to retest parts or the whole of the pipeline at the Contractors own expense and no claims for escalation in costs or for whatever other reasons the Contractor might consider to submit claims shall be considered, except where such retests are the result from damages caused to the pipeline by the Employer.

PSL 3.4 Anchor / thrust blocks and pedestals

Dimensions at all anchor / thrust blocks shall be supplied by the Engineer as and when required. The Contractor shall request such information not less than seven (7) calendar days in advance.

PSL 4 MEASUREMENTS AND PAYMENT

PSL 4.1 Supply, lay and bed of pipes complete with couplings Unit: m

Notwithstanding the provision of sub clause 8.2.4, 8.2.6 & 8.2.7, separate items will not be scheduled for the cutting of pipes. The rates tendered shall include the supply & fixing of extra coupling, supply &

installing joints special couplings, and the encasing of joints.

PSL 4.2 Extra over PSL 4.1 for the supply lay and bed of fittings and specials complete with couplings

Notwithstanding the provision of sub-clause 8.2.4, 8.2.6 and 8.2.7, separate items will not be scheduled for the cutting of the pipe. The supply and fixing of the extra couplings, supply and installing joints with machined collars and special coupling, and the encasing of joints will therefore be deemed to be included in the rates tendered.

SANS 1200 ME: SUBBASE

PSME 1 SCOPE (Clause 1.1)

This section also covers the construction of 150 mm thick G5 gravel subbase layer in roadway.

PSME 2 SUBBASE MATERIALS (Clause 3.2.1)

Delete subclause (a) to (c) and replace with:

“(a) The subbase material required shall be a G6 quality material as specified in Table 3B (under SANS 1200 M: Roads (General))

PSME 3 PLACING (Subclause 5.4.1)

The subbase layer shall be 150mm thick unless shown otherwise on the drawings.

SANS 1200 MF: BASE

PSMF 1 SCOPE (Clause 1.1)

This section covers the construction of a 150mm thick C4 sbalised G5 material.

PSMF 2 MATERIAL (Clause 3.1)

The base material shall consist of a graded, gravel aggregate from a commercial source, which shall comply with the requirements specified in PSMF3

SANS 1200 MM: ANCILLARY ROAD WORKS

PSMM 1 SCOPE

Add the following clause 1.1(d):

(d) This specification also covers the construction of Flora or similar approved protection works.

PSMM 2 MATERIALS

PSMM 2.1 300mm Block (New Clause 3.5)

Due to the numerous proprietary brands of gravity earth retaining systems, all with their particular design parameters, the gravity earth wall design is based on the Flora Block retaining system, with the following requirements: -

The blocks shall be cast in concrete with a minimum 28 days cube strength of 25 Mpa. All aggregates, and the concrete in general, shall conform to the requirements of GA: Concrete (small works)

The Block shall be of the “open back” type.

The proposed blocks shall have a unit mass equivalent to that as set out below:

Block	Equivalent Unit Mass Requirements
Flora B 300	500kg/m2

The block shall be able to resist sliding shear of 14kN per linear meter by means of a shear nib cast monolithic with the block.

The Engineer and any person authorised by him shall at all times have access to the works and to the pre-casting yard.

The blocks shall be delivered to site in such a manner that they do not become damaged. Any damaged, cracked, or blocks with any other defects shall be rejected by the Engineer’s representative.

PSMM 3 SUPPLY AND INSTALL 300 GRAVITY RETAINING BLOCKS (Clause 8.6)

unit: m2

The rate shall include for its supply, cutting and waste.

PARTICULAR Specifications – MECHANCIAL AND ELECTRICAL

MECHANICAL
Pricing

The limits of the mechanical engineering scope of the works are to the outside of the steel fittings were converted to uPVC which includes the steel to uPVC adaptor on all mechanical installations. This includes all internal pipe work, valves pumps and fittings to specifications the specifications laid out below and in the bill of quantities.

The civil contractor is to construct the units allowing boxouts or recesses were required to the mechanical contractors' requirements. The onus is on the mechanical engineer to ensure pre inspection of such openings to ensure correctness prior to required installation date.

All pricing to include

All health and safety standards referred to as the SANS 10142-1 and government gazette requirements relating there to.
The preparation of and supply for approval of GA drawings.
Supply, manufacture, store and deliver to site.
Installation and Commission and up-hold the Hand Screen for 12 months retention period.
The Tenderer/Contractor to submit the technical data on the equipment.
The Tenderer/Contractor must include in his prices all O&M training on the supplied & installed equipment.
The Tenderer/Contractor must only price IE3 premium efficiency motors for the equipment.

Training

The training of clients proposed staff to meet the requirements of operator levels inclusive of recognized NQF level of certification for position of employment
The training of staff in O&M during the 12-month retention period on the special characteristics the supplied & installed equipment.

Mechanical Specifications
Iron and Steel Specifications

All steel in contact or proximity to the water/wastewater to be stainless steel grade 304 inclusive of bolts washers and other fixings
All peripheral steel to be pre-manufactured prior to being hot dipped galvanized to EN 10240:1999 and ISO 1461:1999 on coatings on fabricated iron and steel articles
Iron and Steel Pipe work

All mild steel pipes shall be spirally, and butt welded
For the design of pipe fittings and specials, care must be taken to allow adequate spacing for bolts, flange adaptors, anchor blocks, etc.
All mild steel pipes and fittings/specials shall be designed, manufactured, tested and inspected in accordance with the latest issues and specifications of - SANS 719: Steel Grades A, B and C - SANS 1431: Steel Grades 300 WA and 350 WA - API 5L: Steel Grades X42, X46, X52, X56 and X60 - EN 10025-2: Steel Grade S355JR + AR (where specified for specials)

All mild steel pipes and fittings shall be externally coated and internally lined, a two-component cross linked epoxy that complies with the requirements of SABS 1217. The Target Thickness of lining must be (minimum 500 µm and maximum thickness 800 µm). Maximum dry film thickness per coat of 125

µm to 250 µm must be achieved. The pipe material must be prepared as required in the epoxy manufacturer's specifications.
Flexible couplings shall be manufactured from hot rolled asymmetric steel T sections with a profiled rolled steel sleeve and accommodated with an EPDM gasket. All bolts shall be of D cup head low carbon steel. All flexible couplings shall be fusion bonded powder coated.
All flanges shall be manufactured from mild steel in accordance with SANS Table 1123 and finished to an acceptable machined finish. 1.1.5. Bolts and nuts for flanges / couplings All bolts and nuts shall be SANS 1700 Gr 8.8 mild steel or hot dipped galvanised to SANS 763.
Valves

Isolating valves

All valves shall be anticlockwise, LEFT-HAND closing. All sizes are nominal (DN) with a minimum working pressure rating of 16 bar (PN) which are suitable for dealing with a maximum working pressure of 1 600 kPa.

All gate valves shall be the RSV type (AVK, or similar approved, PN 16 minimum pressure, to SABS 664, cap top, non-rising spindle and anti-clockwise closing and shall be internally and externally epoxy-coated

Butterfly valves

Butterfly valves (Sal valve, Bermas, Gurnick Ainsworth should be considered in cases where the pipe diameter is greater than 300 mm, with approval from the engineer.

Butterfly valves shall be of the gearbox-operated system, flanged and drilled to SABS 1123.

Butterfly valves shall be of the worm gear operated system. The valve body shall be cast from SG 42 iron with integral shaft hubs and an operator mounting flange in stainless steel. The valve disc offset shall be of a single eccentric type with a highly efficient hydrofoil profile to maximize the open flow area and cast from the same material as the body. The valve seals
shall be precision injection molded from Nitrile rubber and fitted within the body perimeter. Valve bearings shall be of the low friction PTFE type where no lubrication will be needed. Manual gear operators shall be of quadrant worm reducers, keyed to the valve shaft and fitted with hand wheel or cap top positioning bolts for disc adjustment. Valves may be painted
with a primer coat and a final enamel, but preferably fusion bond powder coated.

Pressure and Flow Control Valves

All PRV's and FCV's (Cal-Val, Bermas or similar approved and shall be properly designed and installed and housed in a reinforced concrete chamber.
Valves Material Standards

The typical reduction ratio of PRV's is ± 1:3. Systems that operates at higher pressures may require the PRV installations to be designed in a series configuration.

For ease of maintenance and repair, the use of smaller diameter PRV's is preferred. However, should 500 mm diameter PRV's be required, suitable lifting equipment must be provided.

FCV shall be hydraulically operated globe valves. The inner valve assembly shall be top and bottom guided by means of bearing bushings. The inner valve assembly shall be the only moving part and shall be securely mounted on an AISI 316 Stainless Steel stem. Lower grades of Stainless Steel shall not be acceptable. The Stainless-Steel stem shall be provided with wrench flats for ease of assembly and maintenance. Wrench flats will be fully accessible when inner valve is assembled.

All pressure containing components shall be constructed of ASTM A536-65 / 45 / 12 ductile iron. Valves shall be provided with smooth frictionless motion and maximum low flow stability with actuation being

achieved by the use of Rolling Diaphragm technology. Rocky Drift WWTW (3 ML/day).

Plant equipment supply

Valves shall have a protective fusion bonded epoxy coating internally and externally to a minimum of 250 microns. The protective fusion bonded epoxy coating shall conform to the ANSI / AWWA C116 / A21.16 (current version) specification.
No machining of any external parts after final coating will be acceptable to ensure a continuous coating surface throughout the entire valve.

The valve cover shall have a separate stem cap giving access to the stem for alignment check, spring installation and ease of assembly. Valve bonnets shall be accurately located to bodies utilizing locating pins. Locating pins shall eliminate corrosion resulting from the use of uncoated ductile iron to ductile iron surfaces. Valves with lipped spigot covers shall not
be acceptable due to risk of rust and difficulty in assembly.

Valves shall have the AISI 316 Stainless Steel seat and shall incorporate a two-piece seat and bottom guide design. The valves shall form a drip-tight seal between the stationary stainless steel seat ring and the resilient disc, which has a rectangular cross-section and is retained by clamping on three- and one-half sides. The resilient disc shall be constructed of EPDM for normal service conditions.

All external fasteners shall be AISI 18-8 Stainless Steel with AISI 18-8 Stainless Steel washers. Mild steel studs or bolts will not be acceptable.

All repairs and maintenance shall be possible without removing the valve from the line. To facilitate easy removal and replacement of the inner valve assembly and to reduce unnecessary wear on the guide, the stem shall be vertical when the valve is mounted in a horizontal line.

Each valve shall be air tested prior to shipment. The standard test shall include leakage test, seat leakage test, and stroke test. The valves shall be covered by a minimum three years (3) warranty against defects in materials and workmanship. The stainless-steel seat shall be covered by a lifetime replacement warranty.

The auxiliary control system shall be fitted with a large filter assembly, to prevent fouling of the control system. This filter shall be fitted with a transparent drain cap, which allows maintenance personnel to inspect the strainer, without the need to shut of the system, or remove the strainer from service. The main valve body shall be fitted with a visual position indicator, to offer the maintenance personnel visual indication of the valve position, as well as opening and closing speed controls.

The strainer shall have an integral blowdown valve and discharge tube for facilitate the ease of maintenance.

Air Valves

All air valves shall be Vent-O-Mat type or similar approved.

1.1.7.4. Non-return / reflux / check valves NRV's / reflux valves / check valves may be swing check type with a PN 16 minimum pressure rating. The valves shall be suitable for either horizontal or vertical mounting with the angle of the door ensuring that closure starts at the point where forward flow declines.

The disk and hinge shall be fixed in the valve bonnet for easy access and maintenance. The body configuration shall be such that friction losses are minimized. The disc shall be fully encapsulated with rubber to prevent corrosion and ensures a drop tight shut-off, while the seat shall be hydraulically pressed into the body. The valve hinge shall be designed to adjust
itself accurately to the plane of the seating under load.

Arm-weight type NRV's can also be considered if on prior approval by the consulting engineer.

Flow / water meters

All 300 mm diameter and above flow meters are to be electromagnetic flow meters and shall be Class 16, to be supplied, delivered, installed and commissioned.

The flow meter shall be of the electromagnetic type, utilizing pulsed DC excitation and shall be microprocessor based. It must be capable of measuring flow rate and flow total in both directions, with two independent totalizers to give flow for network management purposes. There shall be separate isolated analogue (4 to 20 mA) and pulse outputs (volts free) for forward and reverse flow. These outputs shall be fully user configurable.

The meter shall offer lifetime stable zero so that routine zeroing is not required. The meter shall automatically indicate zero flow under empty pipe sensor conditions.

Condition monitoring of the sensor, transmitter and interconnection cable shall be available to provide verification of long-term satisfaction field system operation. This shall be traceable and shall conform to ISO 9000 series quality standards. The meter shall be designed and manufactured under the ISO 9000 series quality standards. The meter shall have lay lengths to current ISO standards for magnetic meters to facilitate interchangeableness of products.

The wetted materials shall be compatible with, and suitable for, the appropriate application. An internationally recognized
Pumps

Pumps manufactured by (Grundfos, Gorman Rupp, Flight) should be considered in all cases to suite pumping requirements deviations to this must be approved by the client/engineer.

All dry running pumps are to be Centrifugal self-priming pumps as per the billed specified item, complete with base plate, high efficiency motor and coupling. The pumps are to operate as 1 duty 1 standby have individual suction pipes with isolation valves installed as per civil drawings details.

Condition monitoring of the sensors, transmitter and interconnection cables shall be able to achieve the designated duty head and required flows.
All pumps shall account for the minimum NPSH requirement at invert level of its structure and to be able to cope with raw sewage contaminates.

All pipe work to conform SANS 1600/3

All pumps to be fitted with isolation valves, ball type non return valves, dismantling couplings and air release valves for ease of maintenance taking into cognizance continued operations on removal of pumps for maintenance purposes.

All pumps to have a Glycerin filled pressure gauge on the suction and delivery end of each pump.

All submersible pumps to be fitted with guide rails and galvanized chains for ease of removal during maintenance purposes. All pumps are to conform to billed items and to of

Electrical

2.1 CONTRACTOR DESIGN AND OBLIGATIONS

The Contractor shall be responsible for the workshop drawings and wiring diagrams required for the manufacturing and installation of motor control centres , buildings and instrumentation.

2.2 QUALITY OF MATERIALS

Only materials of first-class quality shall be used and all materials shall be subject to the approval of the employer's agent prior to installation. Departmental specifications for various materials to be used on this contract such as department public works and infrastructure standard electrical specification (section A, B and C) are not attached but form part of this specification and available on the department website and from the employer's agent on request.
Wherever applicable the material is to comply with the relevant South African Bureau of Standards, department of public works and infrastructure electrical specifications which are available or to IEC Specifications, where no SANS specifications exist.
Materials wherever possible, must be of South African manufacture.

2.3 TRAINING AND MAINTENANCE DURING DEFECT LIABILITY PERIOD

The Contractor shall inform the Engineer on the completion of the project and provide training to the person(s) responsible for the operation and maintenance of the project. The training shall be conducted for a period equivalent to 8 hours, starting with the basic information and getting into detail as time progresses. The training will be scattered into a minimum of 2 days.

Training shall not be conducted unless materials and planned procedure is approved by the Engineer and the client representative. The number of personnel to attend the training shall be determined by the Client and contractor to ensure they all have training material as may be required.

During the defect liability period, the Contractor shall be responsible for the complete maintenance of equipment and plant according to the suppliers/manufacturer's specifications. Maintenance of the installation shall mean the regular servicing, lubrication, repairing, cleaning and adjustment of the installation as recommended by the manufacturers as well as the free of charge replacement of any defective components during this period.

A suitably qualified and trained person shall routinely and regularly examine and test the installation once every 3 months and shall also perform all the necessary maintenance tasks to ensure smooth and faultless operation. A quarterly report shall be submitted to the Engineer.

The Contractor shall immediately, on the day of first call-out, attend to breakdown/emergency calls. In the event of non-performance by the Contractor in this respect, the employer shall be entitled to make such other arrangements as are necessary, the cost of which shall be for the Contractor's account or deductible from any outstanding retention monies.

A logbook shall be kept and all servicing and repairs shall be recorded in this logbook with meticulous care. The logbook shall at all times be put at the disposal of the Engineer. The Contractor shall issue the logbook with full record of all services and repairs to the employer after the defect liability period has expired.

2.4 OPERATION AND MAINTENANCE MANUALS

Three (3) sets of comprehensive operating instructions and maintenance procedures shall be provided on completion of the commissioning of the installation

One draft copy shall be submitted for scrutiny PRIOR To any commissioning.

2.5 FIRE EXTINGUISHERS

Portable fire extinguishers containing liquefiable gaseous halons for Class S, B, C and E fires shall be installed. Areas with a room floor area not exceeding 50m² shall be equipped with a 2.5kg unit and rooms bigger than 50m² shall be equipped with a 4kg unit and equivalent mass of smaller units. In structures where more than one room is incorporated, housing different hazardous points, each room shall be equipped with appropriate extinguishers, e.g. a generator room with a separate fuel store.

Portable extinguisher shall comply with SANS 0105. Fire extinguishers shall be installed near exits or along exit routes in conspicuous and unobstructed positions and marked with conspicuous signboards. The extinguisher must be so installed that the carrying handle is 1.25m above floor.

Extinguishers that are to be mounted outside and adjacent to the main entrance door shall be mounted with a suitable cupboard.

2.6 PLANNING AND PROGRAMING

The Contractor shall provide and maintain a detail construction program indicating duration of all manufacturing processes, transportation, delivery and installation dates.

There are no constraints on the execution of the work. However, any disruption of the normal working of the plant must be planned and co-ordinated in conjunction with the Engineer and Client

2.7 SEQUENCE OF WORK

The electrical works shall be coordinated with the mechanical and civil works to ensure smooth execution.

2.8 OTHER CONTRACTORS ON SITE

Should other contractors be required on site coordination between the concerned parties would be essential and this should not interfere with the works under this contract in any significant way.

2.9 ELECTRICAL SPECIFICATION

2.9.1 MOTOR CONTROL CENTRE (MCC)

The MCC is to be manufactured from 3CR12 with a minimum thickness of 1.5mm. The MCC is to be light orange with smooth white back plates, finished from baked enamel with dry fil thickness of at least 0.1mm. Immediately after cleaning all surfaces shall be covered by a rust inhibiting, tough unbroken metal-phosphate film and then thoroughly dried. The paint shall have an impact resistance of 5,65 J on cold-rolled steel plate and a scratch resistance of 2kg.

The MCC shall be IP 54 rated and shall be specifically sized for the equipment for which it is to house. The MCC shall be designed in such a way that adequate heat dissipation is accomplished in order to prevent any de-rating of equipment or premature tripping of circuit breakers or any other electrical devices.

Variable Speed Drive (VSD)

All electrical motors motor shall started using variable speed, only the submersible pump motor shall start using direct online starter. Each variable speed drive shall be rated at the rating of the motor and

shall digital keypad and display screen with keys such as run, stop/reset, forward or reverse, hand, auto, and menu etc. It shall be designed to fit inside the MCC and shall have a built-in active front end rectifiers to reduce harmonics. It shall be rated at minimum input voltage of 230V phase to neutral and 400V phase to phase and shall have a minimum overload tolerance of 120% of rated current for at least 1 minutes every 5 minutes and a minimum 160% of rated current for 3 seconds during every 25 seconds.

2.9.2 CONTROL PHILOSOPHY OF THE WATER TREATMENT MOTORS

Modes of operation

The equipment shall operate in three modes of operation ‘AUTO’, ‘MAN’ & ‘OFF’ and shall be available via a 3- position selector switch on the control starter panel door.

With the selector switch selected in ‘AUTO’ the control shall be as follows:

The equipment will automatically flip flop, starting and stopping according to the start and stop conditions as stated above.

All fault and alarm conditions will need to be reset manually from the pump station when selected in ‘AUTO’. With the selector switch selected in MAN’ the control shall be as follows:
In the manual selected position, the pumps shall be started manually by means of separate start and stop push buttons for each pump.

Manual operation is not to be the normal mode of operation and is only to be used for testing and maintenance purposes, therefore the operation shall be manned at all times during such operation with skilled and trained operators.

With the selector switch selected in ‘OFF’ the control shall be as follows:

No control shall be possible and any previously running equipment shall stop. Pump & Motor Protection
The following pump and motor protection shall be available in the operational modes indicated in the table below:

TYPE OF PROTECTION	AUTO	MAN	OFF
Short circuit & overcurrent protection	×	×	
Over & under voltage	×	×	
Phase sequence & imbalance	×	×	
Low & high level (float switch)	×	×	
Motor high temp	×	×	
Phase angle / Under load Protection	×	×	

Any fault condition that occurs must be indicated by an illuminated indication light and prevent any further operation of the pump until the reset push button has been pressed. Only once the fault has been cleared and the reset button pressed should the indication light go off and normal operation allowed commencing. All protection and float control circuits must be wired failsafe.

2.10 DE-COMMISSIONING OF THE EXISTING PANELS

The existing electrical equipment is to remain in service until the new MCC has been installed and commissioned for a trouble-free period of at least 1 week. Only once a trouble-free period of 1 week has been reported to the Engineer shall permission be granted to the contractor to proceed with the de-commissioning and upgrading of the existing. Should this not be a viable solution a new plan shall be established and presented to engineer for approval. The newly established plan shall ensure that the Hospital has enough water all times.

2.11 LIGHTNING PROTECTION

All equipment in the control MCC shall be adequately protected against lightning and lightning induced disturbances on the control and power cables. Suitable lightning suppressors, surge arrestors and circuit breakers shall be provided to suit the particular application.

2.12 GENERAL ELECTRICAL REQUIREMENTS

The Contractor shall refurbish the general electrical installation on site including all small power outlets and luminaries.

E.13 LOW VOLTAGE (L.V.) CABLES AND TRENCHES

Supply and install the following L.V. cables. The cables shall comply with the requirements of SANS 1507 as amended. The cables shall be of the PVC/PVC/SWA/PVC type.

2.14 IDENTIFICATION OF CABLES

Cables shall be identified at all terminations by means of punched metallic bands or marked with labels or tags. (Refer also to SANS 10142). The use of PVC tape with punched characters is not acceptable. The identification numbers of cables shall be shown on "as built" drawings of the Installation.

2.15 TESTING

Each cable shall be tested after installation in accordance SANS 1507 (up to 1 kV) and SANS 97 (up to 11 kV) as well as the requirements of the Local and Supply Authorities.

LV Cables shall be tested by means of a suitable megger at 1 kV and the insulation resistance shall be tabulated and certified.

The Contractor shall make all arrangements, pay all fees and provide all equipment for these tests. The cost of testing shall have been included in the tender price.

The Contractor shall notify the Department/Engineer timeously so that a representative of the Department may witness the tests.

On completion of the tests on any cable, the Contractor shall without delay, submit three copies of the certified Test Reports to the Department/Engineer.

2.16 NEW LUMINAIRES

Description/Specification	Typical Fitting
Surface mount 40W LED luminaire with 4000lm and dimensions of (LxWxH) 1270 x 86 x 90 mm shall consists of an injection-moulded, flame-retardant polycarbonate housing and prismatic diffuser. A powder coated white reflector and control gear tray upon which all electrical components shall be mounted and secured by means of multiple twist lock latches to secure the reflector to the housing. Silicon sponge seal shall be moulded into the housing to ensure an optimal seal between the housing and the prismatic diffuser. Two of the stainless-steel latches shall facilitate the hinging of the diffuser and ensure correct alignment when closing the diffuser. It shall be designed to operate LEDs of up to 65W.The luminaire shall come complete with constant current driver,1.7 to 2.3kg weight, mains tolerance of ± 10% at 230V voltage supply, line frequency of 50Hz, Class I electrical safety class, 10kV/10kA surge protection, power factor of ≥ 0.95, operating temperature of -30 to +35° C, enclosure tightness of IP 65 and mechanical withstand impact of IK07.	
Surface mount 13W LED luminaire with 2000lm and dimensions of 280mm diameter shall have base and trim ring manufactured from of high pressure die-cast marine grade, the trim ring casting shall be mounted onto the base casting by means of stainless steel M5 Allen head screws located outside the lamp compartment. The base and trim shall be finished with epoxy powder coating. An opal non-discolouring high impact acrylic injection molded diffuser shall be used and shall offer excellent vandal resistance, be highly translucent and shall not discolour even when subjected to the harshest UV environments. A silicon sponge gasket shall be fitted into a special groove in the diffuser to prevent damage to the gasket during installation and to achieve the certified ingress protection rating of IP65, It shall be designed to operate LEDs of up to 13W.The luminaire shall come complete with 300mm supply lead, constant current driver, mains tolerance of ± 10% at 230V voltage supply, line frequency of 50Hz, Class I electrical safety class, 10kV/10kA surge protection, power factor of ≥ 0.95, operating temperature of -20 to +35° C, and mechanical withstand impact of IK08.	

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Wall mount (flood mounting) 55W 24LED luminaire with 7012lm and dimensions of (LxWxH) 3396mm x 249mm x 63mm shall have body manufactured from marine grade aluminium, high-impact polycarbonate protector and painted finish, housing shall be corrosion-resistant high- pressure die-cast and shall provide access to photometric engine and electronic assembly in case of upgrading or replacing components. The luminaire shall have certified ingress protection rating of IP66, It shall be designed to operate LEDs of up to 55W.The luminaire shall come complete with constant current driver, mains tolerance of ± 10% at 230V voltage supply, line frequency of 50Hz, Class I electrical safety class, 10kV/10kA surge protection, power factor of ≥ 0.95, operating temperature of -20 to +60° C, and mechanical withstand impact of IK10.	

2.17 CONDUIT AND WIRING

Galvanised plain-end steel conduit shall be used for lighting and power installation, all conduit shall bechased into wall unless an agreement between the engineer and contractor has been reach to have it surface. All wiring shall be channelled through conduit throughout the installation and 2.5mm2 single core stranded conductor shall be used for lighting and 4mm2 shall be used for single phase socket-outlet points unless. Provisional quantities of conduit, wiring and small power outlets have been included in the bills of quantities. Instructions as to the final requirements will be issued during the construction stage. All items will be re- measurable.

E2.18 TELEMETRY

The Contractor will be responsible for the supply, installation and commissioning of a new telemetry system. The Telemetry units will be wall mounted on enclosures manufactured from 3CR12, with baked enamel finish. All Telemetry radios are to operate on the 433.05 - 434.79Mhz licence free bandwidth. All telemetry shall be 12 VDC operated with battery backup. A minimum standby time of 24 hours is required.

E2.18.1 TELEMETRY EQUIPMENT

System Overview

The telemetry system supplied will be used for remote monitoring and control to various designated sites.

The system shall not only allow for units that accept direct I/O (e.g. digital, analogue, pulses) but also gateway units that allow direct interfacing to common industrial protocols (e.g. Modbus, Modbus Plus, Ethernet/IP, Profibus, DF1) commonly employed by various PLC vendors as well as third party equipment manufacturers.

It shall therefore be possible to have a combination of both wireless I/O and wireless gateways in a single telemetry system that can scale as the system requirements dictates. The system aims for easy setup and maintenance (by the supplier as well as end-user if necessary). The software to configure and maintain the radios shall be made freely available with this system.

It is strongly advised that radio path testing is undertaken where uncertainty lies on the reliability of the radio signal strength. The radio telemetry system shall operate in the 430 – 450MHz range with a software- adjustable RF transmit power level of up to 5W.

Principle of Operation

Radio transmissions must occur when an input signal changes (change-of-state). That is, when a digital (e.g. switch contact) input turns off or on, or when the value of an analogue input changes by a pre-configured amount (delta-change), a radio transmission should occur. There should also be regular update transmissions (configurable) to check the value of the input signals and to insure the integrity of the communications signal. The communications status shall be made available as an alarm output. In the event of a communications failure, it shall be possible to reset digital and analogue outputs to zero.

Input signals should be transmitted in a data frame which shall include the address of the transmitting module (and repeaters if used), the address of the destination module, and a CRC error check. The error check will be used to ensure that there is no corruption of the data frame during transmission. The same radio module shall have digipeating (digital repeating) capabilities as well. It shall also be possible to have peer-to-peer communications between modules – this means that wireless units can transmit directly to any other wireless unit, and can also transmit to multiple wireless units. There are no master units and no slaves and it shall be possible for all input signals to be transmitted to multiple destinations.

Each module should have handshaking capabilities over the air so that if transmitting module is suppose to receive an acknowledgment from the receiving module, and the transmitting module does not receive this acknowledgment, it should have retry capabilities. It must be possible to flag a communications failure via a digital output on the unit.

General Specifications Power Supply:
The unit should incorporate an internal switched-mode power supply design that will accept an input voltage of 230V +-10% tolerance supply. The unit should also have a built-in battery charger to allow for an uninterrupted power supply and internally automatically switch to 12V battery backup in the event of a power failure. On return of main supply, the unit must switch back to mains operation, and charge the battery. It must also be possible to power the unit directly from a 12V battery at the battery terminals. The unit should have the ability to communicate its current state in real time to the RTU, giving the operator the ability to monitor and log voltages and currents as well as battery and AC state. The radios power circuit must have built-in intelligence and should be able to automatically alarm on loss of mains supply, loss of solar charging or low battery voltage and it should be possible to transmit these alarm signals to remote modules as digital output signals.

Inputs / Outputs Description:
See the technical specifications table below to a description of the I/O capabilities of the radio modules.

RS232 Port:

The serial port must be a 9 pin DB9 female and should provide a connection to a terminal or to a PC for configuration and testing. The port should not be used for radio data communications except in the case of wireless gateways where it could be used for interfacing to a host device such as a PLC.

RS485 Port:

All telemetry modules will have I/O expansion capability via the RS485 port in the event that outstations I/O count needs to be expanded. The units must be expandable with up to 31 remote I/O units on the RS485 bus and mounting distances of up to 1200m from the radio should be achievable. The expansion I/O should consist of several options that include Digital, Analogue and Pulse input / output variations.

Software Configuration:

The units should be easy to configure via standard Windows-based software. Programming the units can be done via a straight serial cable to the RS232 serial port. It must also be possible to extract the software configuration from the module.
The configuration software should be project-based and a single project file shall be used for the complete telemetry installation. There shall be password protection facilities for the project file to prevent unauthorized use. There software shall log and store data as required by the client for future use or reference.

Diagnostics and Testing:

The unit should provide diagnostic and test functions by connecting a PC terminal to the module. It should be possible to test both I/O and communication functions. The unit will include a radio strength measurement, which provides an indication of background noise as well as received radio strength. This feature shall allow radio paths to be tested without any additional specialized test equipment. In the case of wireless Gateways, it should be possible to read and write to the actual units data registers for testing and diagnostic purposes.

Summary of Minimal Technical Specifications for Radio Telemetry Equipment. Remote Terminal Unit

Item	Minimum Specification
Communication	Data Radios, Cell SMS, Cell GPRS, RS232/485 and Ethernet etc
Features	Real-time I/O device, Intelligent Data Logger, Remote time stamping of event and logged data, Configurable and programmable from the Picasso Configuration Toolbox, modular and easily expandable, EMI Protection, Programmable with PLC Languages, Industrial standard high speed processor, On-Board 1Meg-Word Flash and Gig-Word non volatile RAM, On-Board Real-time clock and watch-dog timer , On-Board LED's indicating the Digital Input and Digital Output Status , Communication Orchestrator, Build to ISO 9000 Standards, 24 I/O's on the main processor board, DIN,8 AIN,8DOT,connects to interface modules such as I/O lightning protection units, galvanic isolation units for AIN's and 10A Interposing relay modules.
Analog Inputs (AIN)	8 Inputs, 12 Bit Resolution, 0.1 % Accuracy, Single ended, Additional AIN on expansion modules,
Digital Inputs (DIN)	8 Inputs, with LED status display, Opto-Isolated, 5 kV isolation and Additional DIN on expansion modules to accommodate all I/Os
Digital Outputs (DOT)	8 Outputs with LED status display, Open Collector, 250mA sinking per channel and additional DOT on expansion modules
Other Specifications	Voltage: 9 to 17Volts DC,120mA power consumption,2 x RS232 ports (300 to 57600 bps) RJ45(EIA-561 Compatible)
Data Reporting	Data shall be capable of being reported to any SCADA on the communication network. It shall be capable of being configured to send text messages to mobile cell phone users to report alarms

Digital Input Surge Protector

Item	Minimum Specification
Features	Digital input lightning protection, No isolation available on the module.
Supply Voltage DC	Minimum 9V, maximum 15V and standard 12V
Physical Dimension	61mm x 42mm x 80mm (LxWxH)
Connection Sockets	14-Way Ribbon to the RTU or I/O Modules, 2 x 8 way termination connectors, 4 Way Power Supply 12V+, Ground.
Protection	10kA per channel and maximum input voltage 30Vdc
Channel (I/O)	Four channels

Power Supply

Item	Minimum Specification
DC supply	13.8V (tunable), max 4.3A (split between DC output and battery charge)
AC supply	Input: 90~264VAC, 47~63Hz
Battery supply	Battery charge: max 1.5A
Battery	Low Maintenance Battery 12Volt 18Ah
Rated Power	60W
Protection	Short circuit, overload and over-voltage protection, Battery low, battery polarity protection

Data Radio

Item	Minimum Specification
Transmission Power	2W
Working Frequency	433MHz, options 402-470MHz
Power Consumption	DC5V Power, receiving current <50mA, transmitting current <1.5A/2W (<1A/1W); Sleeping current ＜1mA.
Receiver Sensitivity	-112dBm
Working Temperature	-40℃~+85℃
Output/ Input Interface	RS 232, RS 485 and TTL
Power control	One sleeping model, awaken from hardware
Circuit Structure	Radio adopts chip integration, the conversion time for transceiver should be short less than 20ms, all indications consistency and better performance
High Anti-Interference and Low BER (Bit error Rate)	Based on the GFSK modulation mode, it shall adopts the efficient communication protocol. The actual bit error rate shall be 10-5～10-6 when channel bit error rate is 10-2.

Technical Competency

The supplier of the telemetry system must have experience with the radios being supplied and should either have undergone basic training or provide an authorized letter from the local agency indicating that they are able to offer sufficient technical support on the telemetry system.

Service and Maintenance

The type of telemetry system deployed should ensure that in the event of the end user not getting satisfactory service from the supplier, they are able to seek assistance and technical support from an alternate supplier. The radio configuration software and all future revisions of it should be freely available to the end-user.

Warranty

The radio telemetry modules used must ensure long-term reliable operation. A limited lifetime warranty from the manufacturer should be included as standard on all radio telemetry modules supplied.

E2.19 SCADA (SUPERVISORY CONTROL AND DATA ACQUISITION) SYSTEM

SCADA system shall provide supervisory control, monitoring and management of waste water system, by acquiring and analysing the data from these remote stations. It shall gather the real-time data from the stations, presents the data on various HMIs, records and logs the data on SCADA database management.

Radio telemetry shall gather data from other stations to the main station and the data shall be transferred from main station to the SCADA system via fibre, however the system shall be capable of gathering data from any other station during communication breakdown.
The system shall be so designed to allow addition of future stations which shall be added and form part of the entire system at later stage.

SCADA system shall store received data which shall also be used for trending, alarming, reporting and archiving, this system shall be capable of sending an alarm via sms to the relevant stakeholders in the event of unattended alarm.

The supply and installation of the system shall come complete with the software, ADSL, correctly sized computer to cater for current installation and wastewater stations which shall be added at a later stage and any other accessories which are required to supply a complete operational system.

The system shall have as a minimum, an operating system of 64-bit windows 8.1 Professional, i7 processor, 8 GB RAM and 40inch commercial type computer screen.

C3.5: MANAGEMENT

C3.5 MANAGEMENT

C3.5.1 MANAGEMENT OF THE WORKS

C3.5.1.1 Applicable SANS and SABS Standards

The SANS 1200 Civil Engineering Standardized Specifications listed in C3.4.1.1 are applicable.

C3.5.1.2 Particular/Generic Specifications

Not applicable.

C3.5.1.3 Methods and Procedures

(a) Maintenance of access and streets

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

No additional payment will be made for the construction of temporary access roads to the construction site, borrow areas or the spoil sites, except for payment made under payment item 15.01 in the Bill of Quantities.

Should the Contractor make use of existing roads or streets for haulage, he shall be held responsible to clear the road or street of any spillage caused by his activities within one (1) day after such spillage occurred. No additional payment will be made for the cleaning of the spillage.

(b) Blasting operation

All blasting shall be carried out by a competent, registered blaster. The blaster shall furnish to the Engineer copies of all the permits required to purchase, transport, use and dispose of unused blasting material. The Contractor shall inform the commander of the local SAPS at least 1 day prior to the date and time blasting is about to take place.

No blasting operations shall take place on weekends or holidays or weekdays after 17h00.

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

(c) Normal working hours

Normal working hours shall be from 07h00 until 17h00 on weekdays from Monday to Friday. It shall be from 07h00 until 13h00 on Saturdays.

Work on other days will only be allowed after written approval has been granted by the Engineer.

(d) Interference with municipal staff and operations

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

Any person ignoring this shall be removed permanently from site, all at the expense of the Contractor.

(e) Access for other contractors

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

The contractual responsibilities of the Contractor shall remain in full force in spite of the other Contractors having access to the site.

(f) Giving notice of work to be covered up

The Contractor shall give the Engineer at least 24 hours' notice prior to a request for examination of materials or work to be covered up. This request must be made in the request book on site.

Should such a request be made and upon inspection the Engineer found that the works or materials are not yet ready for inspection, the Contractor shall reimburse the Engineer within 30 days of invoice for all expenses incurred as a result.

(g) Sequence of the works

The Contractor shall execute the Works in accordance with the approved programme.

C3.5.1.4 Quality plans and control (Testing)

Refer to Section C3.4.2.5(b).

C3.5.1.5 Environmental Management Plan (EMP)

(a) Demarcation of the site

For the purpose of the EMP, the site shall be demarcated into two distinct areas, viz.;

(i) The construction camp comprising all buildings, hostels, offices, lay down yards, vehicle wash areas, fuel and material storage area, batching areas and other infrastructure that is required for the running of the job.

(ii) The working area in which construction activities are permitted to take place. No infrastructure, permanent lay down or storage areas shall be established in this working are unless specified in the project specification or prior approval is obtained from the Engineer.

(b) Construction camp

The Contractor shall provide the Engineer with a plan showing the positions of all buildings, yards, vehicle wash areas, batching areas and other infrastructure for approval by the Engineer at least ten (10) days prior to the commencement date.

(c) Fencing of site

If a temporary fence is required, the Contractor shall erect and maintain such a fence (demarcating the boundary of the working area, construction camp and access roads) to the satisfaction of the Engineer.

This fence shall be erected before the commencement of any other work on site. The fence shall be removed after completion of the project and the site reinstated to its original state.

(d) Workshops

All workshops shall be located inside the demarcated construction camp area as approved by the Engineer prior to establishment. The workshop shall have a smooth impermeable concrete floor sloped to one side where oil is trapped in an oil trap or sump to contain any spillages of substances such as oil.

Waste material shall be disposed of in accordance with the national, regional and local by-laws regulations and by-laws. The waste shall be regularly removed and disposed of at an approved site.

(e) Eating areas

The Contractor's employees shall eat in a designated eating area indicated on the drawing approved by the Engineer. The Contractor shall provide adequate shade and provide scavenger proof and waterproof refuse bins. Cooking will only take place in this area on well-maintained gas cookers with fire extinguishers present. Open fires other than the gas cookers shall not be allowed.

(f) Watchmen

The Contractor shall have a watchman present on site during non-working hours and on holidays to ensure the safety of plant and materials on site.

(g) Ablution facilities

The exact location of toilets shall be approved by the Engineer. The Contractor shall provide the toilets and maintain and service it on a daily basis. The toilets shall be kept clean. Regular inspections shall be conducted by the Engineer. Burial of waste on site is strictly forbidden. Leaking or broken toilets shall be removed and replaced immediately by the Contractor.

(h) Solid waste

"Solid waste" refers to construction debris, chemical waste, tins, cans, paper, wrappers, excess concrete, waste timber, etc.

The Contractor shall establish a waste control and removal system. He shall submit a method statement to the Engineer for approval prior to commencement.

Appropriate solid waste containers shall be provided for the storage of waste. The containers shall be water proof. The waste shall be removed on a regular basis to prevent the accumulation of waste on site and disposed of at an approved waste site.

(i) Wastewater

Water shall be used sparingly on site. Where possible, wastewater shall be recycled. A wastewater management plan shall be submitted to the Engineer for approval 10 days prior to the commencement date.

The management plan shall detail the expected extent of the contamination of each wastewater stream and how the Contractor plans to deal with it.

Wastewater shall be prevented from flowing into the Olifants River.

(j) Fuel storage area

Fuel shall be stored on site in a depot at a location as agreed with the Engineer. The Contractor shall ensure that liquid fuels are stored in tanks with lids. The tanks shall be placed on a sloped smooth concrete surface with an oil trap on the lower end to collect any spillage.

Fuel shall be kept under lock at all times.

(k) Concrete batching area

Cement and concrete is hazardous to the environment due to the high pH of the material and the chemicals it contains.

The Contractor shall furnish to the Engineer for approval a method statement for the mixing of concrete. Concrete shall not be mixed directly on the ground. Care must be taken to ensure that wastewater and contaminated material is collected and disposed of correctly.

(l) Equipment maintenance and storage

All equipment and vehicles shall be kept in good working order and serviced regularly. Leaking equipment shall be repaired immediately or removed from site. Where possible, maintenance and service shall take place only in the workshop. Permission must be obtained from the Engineer if the aforementioned cannot be adhered to.

The Contractor shall demarcate an area in which the equipment and vehicles may be stored. The location shall be approved by the Engineer.

(m) Materials handling, use and storage

The Contractor is responsible to ensure that all material suppliers are aware of the EMP's restrictions and conditions. The Contractor shall be held responsible should deliveries not comply with the EMP requirements.

The Contractor shall comply with all relevant national, regional and local legislation with regard to the transport, use and disposal of hazardous material.

The Contractor shall furnish to the Engineer a list of all hazardous materials to be used on site, together with the handling, storage and disposal procedures of the materials. This information shall be available to all personnel on site.

The location of the hazardous material store shall be within the demarcated construction camp area. The location shall be approved by the Engineer.

Where possible, the Contractor shall ensure that the refueling of vehicles takes place only at the fuel storage area in the construction camp. If this is not possible, the Contractor shall obtain permission from the Engineer to refuel at any other place. Contaminated material and wastewater at the refueling area shall be contained and disposed of correctly.

(n) Emergency procedures

The Contractor shall ensure that emergency procedures for the following situations are submitted for approval to the Engineer;

Fire – the Contractor shall inform the relevant authority immediately as soon as a fire starts. The Contractor shall ensure that his staff and subcontractors are fully aware of the procedures to be followed in the event of a fire.

Spillages – the Contractor shall ensure that his staff and subcontractors are fully aware of the procedures to be followed in the event of a spillage. The Engineer must be informed immediately about a spill. The Contractor shall ensure that the necessary materials and equipment is on site to deal with spills and leaks. The cleanup of spills and leaks shall be for the account of the Contractor.

(o) Care of surrounding areas

The Contractor shall ensure that no contamination of or damage to the surrounding areas or watercourses shall occur as a result of any of his activities during construction.

C3.5.1.6 Planning and programming

The programme to be furnished by the Contractor to the Engineer for approval shall be in the form of a Gantt chart. The critical path shall be indicated in red.

C3.5.1.7 Other Contractors on site

No other waste water treatment contractors will be on site during the implementation of the project.

C3.5.1.8 Recording of weather

The Contractor shall record the weather conditions on a daily basis in the site diary. Rainfall figures and strong wind which could delay the Works shall be noted and recorded.

C3.5.1.9 Format of communications

All communication regarding the Contract shall be channelled through the Engineer or his representative.

C3.5.1.10 Planning and programming

Management meeting shall be held monthly on site for the duration of the project on dates to be agreed upon.

C3.5.1.11 Daily records

Daily records of plant, personnel, materials, etc., shall be kept daily by the Contractor and noted in the site diary to be supplied by the Contractor before commencement date of the project.

C3.6: HEALTH AND SAFETY

C3.6 HEALTH AND SAFETY

C3.6.1 HEALTH AND SAFETY REQUIREMENTS AND PROCEDURES

Before starting work on site, the Contractor shall present to the Engineer his Health and Safety Plan which includes the COVID-19 plan for approval. He shall also appoint a health and Safety Officer in writing and give a copy of the letter of appointment to the Engineer.

The Health and Safety Specification is attached as Appendix B and must be referred to when compiling the Health and Safety Plan.

(a) Construction Regulations, 2003

The Contractor shall be required to comply with the Occupational Health and Safety Act, 1993: Construction Regulations, 2003 (the regulations) as promulgated in Government Gazette No 25207 and Regulation Gazette No 7721 of 18 July 2003 Non-compliance with these regulations, in any way whatsoever, will be adequate reason for suspending the Works.

The proposed type of work, materials to be used and potential hazards likely to be encountered on this Contract are detailed in the Project Specifications, Schedule of Quantity and Drawings, as well as in the Employers' Health and Safety Specifications (regulation 4(1)) of the Construction Regulations 2003.

The Contractor shall in terms of regulation 5(1) provide a comprehensive health and safety plan detailing his proposed compliance with the regulations, for approval by the Employer.

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

Payment items are included in the Schedule of Quantities to cover the Contractor's cost for compliance with the OHS Act and the abovementioned regulations.

(b) COVID-19 Occupational Health and Safety Measures in Workplaces COVID-19 (C19 OHS), 2020

The Contractor shall be required to comply with the COVID-19 Occupational Health and safety Measures in Workplaces act: COVID-19 (C19 OHS),2020 for as long as the declaration of a national disaster published in Government Gazette 43096 on 15 March 2020 remain in force. Non-compliance with these regulations, in any way whatsoever, will be adequate reason for suspending the Works or termination of contract.

C3.6.2 PROTECTION OF THE PUBLIC

The site is accessible to the general public. The Contractor shall ensure that all personnel entering the construction site is fully informed about the dangers, dos and don’ts on the site. The Contractor shall ensure that non-construction personnel are protected within the guidelines of the OH&S Regulations.

C3.6.3 BARRICADES AND LIGHTING

All excavations, into which a person may fall, shall be securely barricaded at all times in accordance with the requirements of the applicable OH&S Regulations.

C3.6.4 TRAFFIC CONTROL ON ROADS

The Safety Officer shall take full responsibility for the traffic control in and around the site. The personnel on site shall be fully informed and trained by the Safety Officer regarding the construction traffic and general traffic control.

C3.6.5 MEASURES AGAINST DISEASE AND EPIDEMICS

Necessary measures must be adopted and implement occupational health and safety measures to reduce and eliminate the escalations of infections in workplaces against disease, epidemics and pandemics on site as and when directed by the Department of Labour.

C3.6.6 AIDS AWARENESS

All construction personnel shall be given an Aids Awareness briefing session by the Safety Officer.

C3.6.7 COVID-19 AWARENESS

All construction personnel shall be given an COVID-19 Awareness briefing session by the Safety Officer.

PART C4 SITE INFORMATION

PART C4: SITE INFORMATION

GENERAL

This section describes the site at the time of tender to enable the tenderer to price his tender and to decide upon his method of working and programming and risks.

CONTENTS

SI 1 project Location

1.1 Site Location

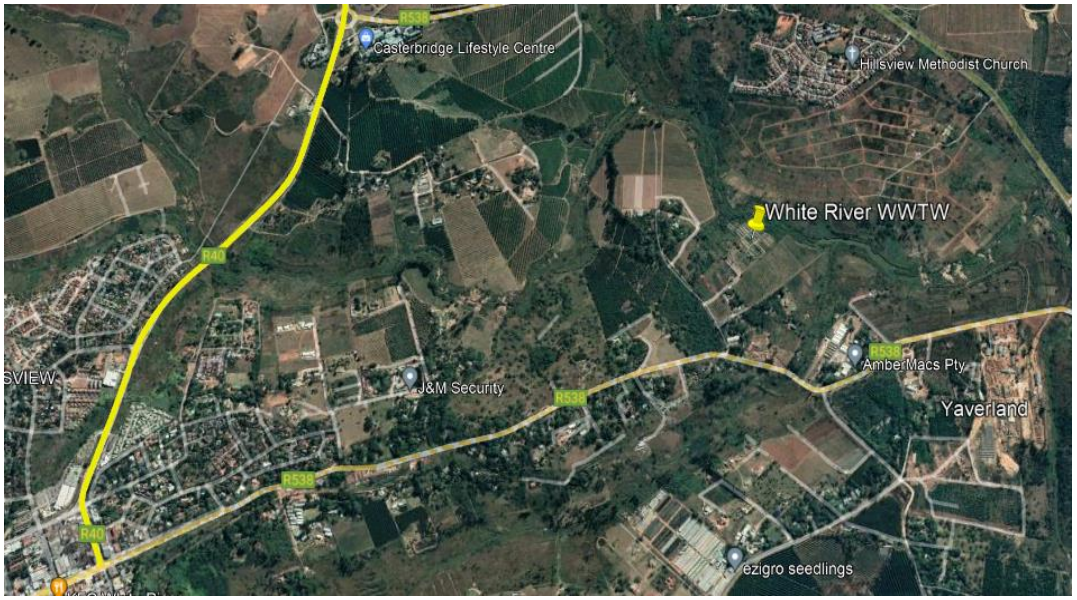

Figure 1: Project locality plan

The City of Mbombela intends to Upgrade the existing White River Sanitation Infrastructure in terms of the existing Waste Water Treat Works (WWTW) and four (4) Sewer pump stations that will service sewage generated by the White River area and existing townships in pursuance of sustainable basic service delivery. Upliftment to higher level of service. Attraction of new business and industry, mitigation against pollution of ground water and surface water and sustainable growth of White River

The White River WWTW is an Activated Sludge process. The process consists of the followings:

- Inlets Works
- Electrical Control Rooms
- Aerobic Tanks /Aeration Basin
- Clarifiers Tanks
- Disinfection

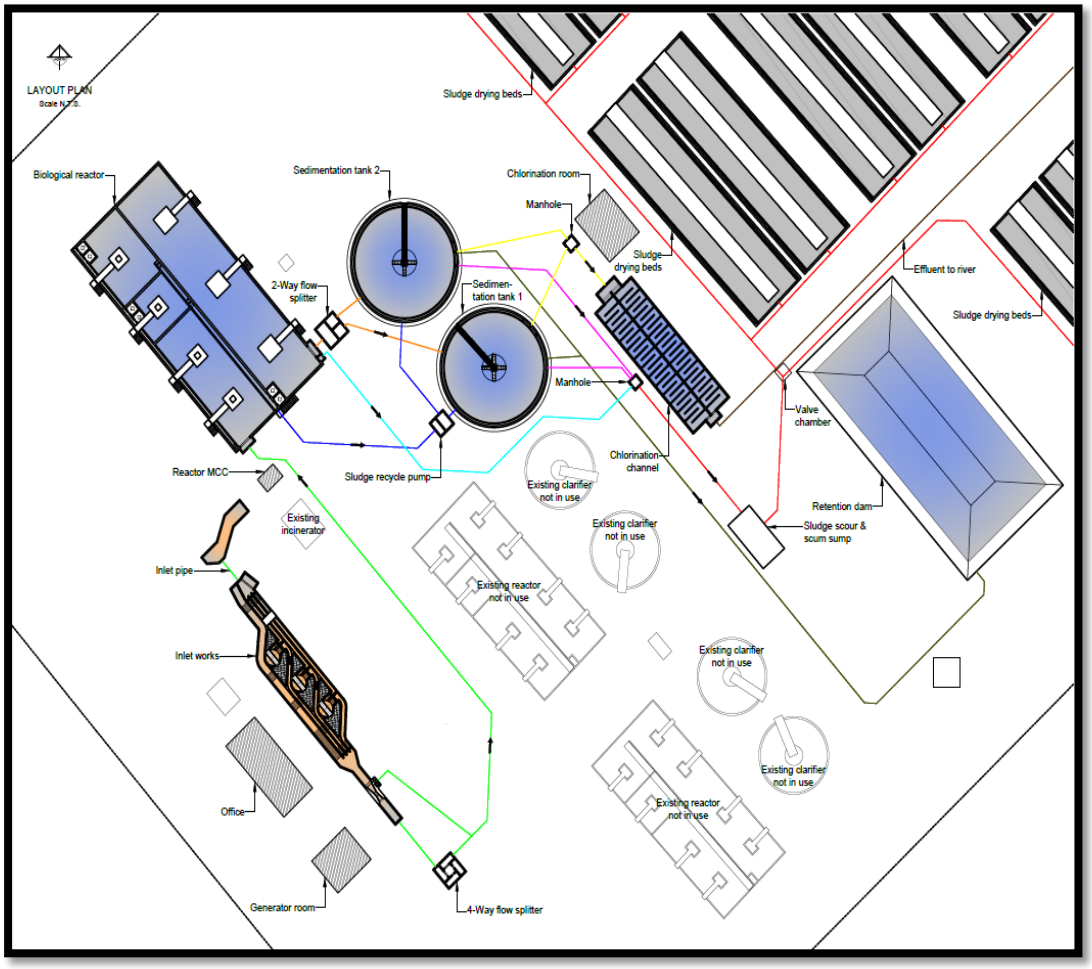

Figure 5.2: White River WWTW Plan

Inlet Works

The sewer treatment plant is fed from White River town through a 600mm diameter sewer pipe to the inlet screen. There is one screen installed, a mechanical type and there is two additional channels to install two more screens in future. The current mechanical screen is working overcapacity such that its purpose is not fully served to handle the plant. After the removal of large none biodegradable material the influent passes through the de-gritting channels.

C4.4 Finishing – off the Site

The site shall be finished-off in accordance with the specifications as well as to the requirements of all applicable environmental standards.

C4.5 Existing Services

Although every effort has been made to depict existing services (water mains, electric cables, telephone cables etc.), as accurately as possible on the contract drawings, insofar as they are known, variations do arise and the Contractor shall exercise extreme care when working in the area. Items have been allowed in the Schedule of Quantities for dealing with and protecting services.

The Contractor shall take whatever precautions are required to protect these services from damage during the period of the Contract.

C4.6 Proving of Underground Services

It is stressed that all services in a particular area must be proven before commencing work in that area.

Insofar as bulk earthworks are concerned, where services are indicated on the drawings or where from site observations can reasonably be expected that such services are likely to exist where excavations are to take place, the Contractor shall without instructions from the Engineer carefully excavate by hand to expose and prove their positions.

When a service is not located in its expected position the Contractor shall immediately report such circumstances to the Engineer who will decide what further searching or other necessary action is to be carried out and shall instruct the Contractor accordingly.

Should any service be damaged by the Contractor in carrying out the works, and should it be found that the procedure laid down in this clause has not been followed than all costs in connection with the repair of service will be to the Contractors account.

Proving of services shall be completed at least two weeks in advance of the actual programmed date for commencing work in the area. The position of these services located must be co-ordinated and levelled by the Contractor, and the information given in writing to the Engineer's representative.
The requirements of this clause do not relieve the Contractor of any obligations as detailed under the General Conditions of Contract or the Special Conditions of Contract.

ANNEXURE A: OCCUPATIONAL HEALTH AND SAFETY SPECIFICATIONS

OCCUPATIONAL HEALTH AND SAFETY SPECIFICATIONS

CONTENTS

PARTICULAR SPECIFICATIONS

SECTION OHS: OHSA 1993: HEALTH AND SAFETY SPECIFICATION

OHS 1 SCOPE

This specification covers the health and safety requirements to be met by the Contractor to ensure a continued safe and healthy environment for all workers, employees and subcontractors under his control and for all other persons entering the site of works.

This specification shall be read with the Occupational Health and Safety Act (Act No 85 and amendment Act No 181) 1993, and the corresponding Construction Regulations 2014, and all other safety codes and specifications referred to in the said Construction Regulations **and the COVID-19 Occupational Health and Safety Measures in Workplaces, COVID-19(C19 OHS), 2020**.

In terms of the OHSA Agreement in Section (C1.4) of the Contract document, the status of the Contractor as mandatory to the Employer (client) is that of an employer in his own right, responsible to comply with all provisions of OHSA 1993, the Construction Regulations 2014 and **COVID-19(C19 OHS), 2020**.

This safety specification and the Contractor's own Safety Plan, the Construction Regulations 2014 as well as **COVID-19(C19 OHS), 2020**, shall be displayed on site or made available for inspection by all workers, employees, inspectors and any other persons entering the site of works.

The following are possible risks associated with this project:

- Please insert the risks associated with the project here

Additional risks may arise from specific methods of construction selected by the Contractor which are not necessary covered in the above.

OHS 2 DEFINITIONS

For the purpose of this contract the following shall apply:

Employer" where used in the contract documents and in this specification, means the Employer as defined in the General Conditions of Contract and it shall have the exact same meaning as "**client**" as defined in the Construction Regulations 2014. "**Employer**" and "**client**" is therefore interchangeable and shall be read in the context of the relevant document.

(c) "**Contractor**" wherever used in the contract documents and in this specification, shall have the same meaning as "**Contractor**" as defined in the General Conditions of Contract.

In this specification the terms "**principal contractor**" and "**contractor**" are replaced with "**Contractor**" and "**subcontractor**" respectively.

For the purpose of this contract the **Contractor** will, in terms of OHSA 1993, be the mandatory, without derogating from his status as an employer in his own right.

(d) "**Engineer**" where used in this specification, means the Engineer as defined in the General Conditions of Contract. In terms of the Construction Regulations the Engineer may act as agent on behalf of the Employer (the client as defined in the Construction Regulations).

OHS 3 TENDERS

The Contractor shall submit the following with his tender:

(a) a documented Health and Safety Plan as stipulated in Regulation 7 of the Construction Regulations. The Safety Plan must be based on the Construction Regulations 2014 and **COVID-19(C19 OHS), 2020** and will be subject to approval by the Employer;

(b) a declaration to the effect that he has the competence and necessary resources to carry out the work safely in compliance with the Construction Regulations 2014;

(c) a declaration to the effect that he made provision in his tender for the cost of the health and safety measures envisaged in the Construction Regulations.

(d) Failure to submit the foregoing with his tender, will lead to the conclusion that the Contractor will not be able to carry out the work under the contract safely in accordance with the Construction Regulations.

OHS 4 NOTIFICATION OF COMMENCEMENT OF CONSTRUCTION WORK

After award of the contract, but before commencement of construction work, the Contractor shall, in terms of Regulation 3, notify the Provincial Director of the Department of Labour in writing if the following work is involved:

(a) the demolition of structures and dismantling of fixed plant of height of 3,0m or more;

(b) the use of explosives;

(c) construction work that will exceed 30 days or 300 person-days;

(e) excavation work deeper than 1,0m; or

(f) working at a height greater than 3,0m above ground or landings.

The notification must be done in the form of the pro forma included under Section T2 (Forms to be Completed by Tenderer) of the tender document.

A copy of the notification form must be kept on site, available for inspection by inspectors, Employer, Engineer, employees and persons on site.

OHS 5 RISK ASSESSMENT

Before commencement of any construction work during the construction period, the Contractor shall have a risk assessment performed and recorded in writing by a competent person. (Refer Regulation 9 of the Construction Regulations 2014).

The risk assessment shall identify and evaluate the risks and hazards that may be expected during the execution of the work under the contract, and it shall include a documented plan of safe work procedures to mitigate, reduce or control the risks and hazards identified.

The risk assessment shall be available on site for inspection by inspectors, Employer, Engineer, subcontractors, employees, trade unions and health and safety committee members, and must be monitored and reviewed periodically by the Contractor.

OHS 6 APPOINTMENT OF EMPLOYEES AND SUBCONTRACTORS

6.1 Health and Safety plan

The Contractor shall appoint his employees and any subcontractors to be employed on the contract, in writing, and he shall provide them with a copy of his documented Health and Safety Plan, or relevant sections thereof. The Contractor shall ensure that all subcontractors and employees are committed to the implementation of his Safety Plan.

6.2 Health and safety induction training

The Contractor shall ensure that all employees under his control, including subcontractors and their employees, undergo a health and safety induction training course by a competent person before commencement of construction work. No visitor or other person shall be allowed or permitted to enter the site of the works unless such person has undergone health and safety training pertaining to hazards prevalent on site.

The Contractor shall ensure that every employee on site shall at all times be in possession of proof of the health and safety induction training issued by a competent person prior to commencement of construction work.

OHS 7 APPOINTMENT OF SAFETY PERSONNEL

7.1 Construction Supervisor

The Contractor shall appoint a full-time **Construction Supervisor** with the duty of supervising the performance of the construction work.

He may also have to appoint one or more competent employees to assist the construction supervisor where justified by the scope and complexity of the works.

7.2 Construction safety officer

Taking into consideration the size of the project and the hazards or dangers that can be expected, the Contractor shall appoint in writing a full-time or part-time **Construction Safety Officer** if so decided by the client. The Safety Officer shall have the necessary competence and resources to perform his duties diligently.

Provision shall be made by the Contractor in his rates, to cover the cost of this dedicated construction safety officer appointed after award of the contract.

7.3 Health and safety representatives

In terms of **Section 17 and 18 of the Act (OHSA 1993)** the Contractor, being the employer in terms of the Act for the execution of the contract, shall appoint a **health and safety representative** whenever he has more than 20 employees in his employment on the site of the works. The health and safety representative must be selected from employees who are employed in a full-time capacity at a specific workplace.

The number of health and safety representatives for a workplace shall be at least one for every 100 employees.

The function of health and safety representative(s) will be to review the effectiveness of health and safety measures, to identify potential hazards and major incidents, to examine causes of incidents (in collaboration with his employer, the Contractor), to investigate complaints by employees relating to health and safety at work, to make representations to the employer (Contractor) or inspector on general matters affecting the health and safety of employees, to inspect the workplace, plant, machinery etc. on a regular base, to participate in consultations with inspectors and to attend meetings of the health and safety committee.

7.4 Health and safety committee

In terms of Sections **17 and 18 of the Act (OHSA 1993)** the Contractor (as employer), shall establish one or more **health and safety committee(s)** where there are two or more health and safety representatives at a workplace. The persons selected by the Contractor to serve on the committee shall be designated in writing.

The function of the health and safety committee shall be to hold meetings at regular intervals, but at least once every three months, to review the health and safety measures on the contract, to discuss incidents related to health and safety with the Contractor and the inspector, and to make recommendations regarding health and safety to the Contractor and to keep record of recommendations and reports made by the committee.

7.5 Competent persons

In accordance with the Construction Regulations the Contractor has to appoint in writing **competent persons** responsible for supervising construction work on each of the following work situations that may be expected on the site of the works.

(a) Risk assessment and induction training as described in Regulation 9 of the Construction Regulations;

(b) Fall protection as described in Regulation 10;

(c) Structures described in Regulation 11;

(d) Temporary works described in Regulation 12;

(e) Excavation described in Regulation 13;

(f) Demolition work described in Regulation 14;

(g) Tunneling as described in Regulation 15;

(h) Scaffolding as described in Regulation 16;

(i) Suspended platforms as described in Regulation 17;

(j) Rope Access Work as described in Regulation 18;

(k) Material hoists as described in Regulation 19;

(l) Bulk mixing plant as described in Regulation 20;

(m) Explosive actuated fastening device as described in Regulation 21;

(n) Cranes as described in Regulation 22;

(o) Construction vehicle and mobile as described in Regulation 23;

(p) Electrical installations and machinery of construction sites as described in Regulation 24;

(q) Use and temporary storage of flammable liquids on construction sites as described in Regulation 25;

(r) Water environments as described in Regulation 26;

(s) Housekeeping and general safeguarding on construction sites as described in Regulation 27;

(t) Stacking and storage on construction sites as described in Regulation 28;

(u) Fire precautions on construction sites as described in Regulation 29, and

(s) Construction employees' facilities as described in Regulation 30.

A competent person may be appointed for more than one part of the construction work with the understanding that the person must be suitably qualified and able to supervise at the same time the construction work on all the work situations for which he has been appointed.

The appointment of competent persons to supervise parts of the construction work does not relieve the Contractor from any of his responsibilities to comply with **all** requirements of the Construction Regulations.

OHS 8 RECORDS AND REGISTERS

In accordance with the Construction Regulations the Contractor is bound to keep records and registers related to health and safety on site for periodic inspection by inspectors, the Engineer, the Employer, trade union officials and subcontractors and employees. The following records and registers must be kept on site and shall be available for inspection at all times.

(a) A copy of the OHSA 1993 Construction Regulations 2014;

(b) A copy of this Health and Safety Specification;

(c) A copy of the Contractor's Health and Safety Plan (Regulation 7);

(d) A copy of the Notification of Construction Work (Regulation 4);

(e) A health and safety file in terms of Regulation 5(1)(b) with inputs by the Construction Safety Officer (Regulation 7(1));

(f) A copy of the risk assessment described in Regulation 9;

(g) A full protection plan and the corresponding records of evaluation and training of employees working from elevated positions as described in Regulation 10;

(h) Drawings pertaining to the design of structures (Regulation 11(1)(c)) and formwork and support work structures (Regulation 12) must be kept on site;

(i) Pronouncement of the safety of excavations must be recorded in a register to be kept on site (Regulation 13);

(j) A copy of the certificate of the system design for suspended platforms (Regulation 17(2)(b));

(k) A notice must be affixed around the base towers of material hoists to indicate the maximum mass load, which may be carried at any one time by material hoists (Regulation 19(5));

(l) Maintenance records of material hoists and inspection results must be kept in a record book to be kept on site (Regulation 19(8));

(m) A record of any repairs to or maintenance of a batch plant must be kept on site (Regulations 20(8));

(n) A warning notice must be displayed in a conspicuous manner when and wherever an explosive powered tool is used (Regulation 19(2));

(o) A register for recording of findings by the competent person appointed to inspect construction vehicles and mobile plant (Regulation 23(1)(k)).

OHS 9 CONTRACTORS RESPONSIBILITIES

For this contract the Contractor will be the mandatory of the Employer (Client), as defined in the Act (OHSA 1993), which means that the Contractor has the status of employer in his own right in respect of the contract. The Contractor is therefore responsible for all the duties and obligations of an employer as set out in the Act (OHSA 1993) and the Construction Regulations 2014.

Before commencement of work under the contract, the Contractor shall enter into an agreement with the Employer (Client) to confirm his status as mandatory (employer) for the contract under consideration.

The Contractor's duties and responsibilities are clearly set out in the Construction Regulations 2014 and are not repeated in detail but some important aspects are highlighted hereafter, without relieving the Contractor of any of his duties and responsibilities in terms of the Construction Regulations.

(a) Contractor's position in relation to the Employer (Client) (Regulation 5)

In accordance with Section 4 of the Regulations, the Contractor shall liaise closely with the Employer or the Engineer on behalf of the Employer, to ensure that all requirements of the Act and the Regulations are met and complied with.

(b) The Principal Contractor and Contractor (Regulation 7)

The Contractor is in terms of the definition in Regulation 1 the equivalent of Principle Contractor as defined in the Construction Regulations, and he shall comply with all the provisions of Regulation 7.

Any subcontractors employed by the Contractor must be appointed in writing, setting out the terms of the appointment in respect of health and safety. An independent subcontractor shall however provide and demonstrate to the Contractor a suitable, acceptable and sufficiently documented health and safety plan before commencement of the subcontract. In the absence of such a health and safety plan the subcontractor shall undertake in writing that he will comply with the Contractor's safety plan, the health and safety specifications of the Employer and the Construction Regulations 2014.

(c) Supervision of construction work (Regulation 8)

The Contractor shall appoint the safety and other personnel and employees as required in terms of Regulation 7 and as set out in OHS 7 above. Appointment of those personnel and employees does not relieve the Contractor from any of the obligations under Regulation 7.

(d) Risk assessment (Regulation 9)

The Contractor shall have the risk assessment made as set out in paragraph 7 above before commencement of the work and it must be available on site for inspection at all times. The Contractor shall consult with the health and safety committee or health and safety representative(s) etc. on a regular basis to ensure that all employees, including subcontractors under his control, are informed and trained by a competent person regarding health hazards and related work procedures.

No subcontractor, employee or visitor shall be allowed to enter the site of works without prior health and safety induction training, all as specified in Regulation 7.

(e) Fall protection (Regulation 10)

Fall protection, if applicable to this contract shall comply in all respects with Regulation 8 of the Construction Regulations.

(f) Structures (Regulation 11)

The Contractor will be liable for all claims arising from collapse or failure of structures if he failed to comply with all the specifications, project specifications and drawings related to the structures, unless it can be proved that such collapse or failure can be attributed to faulty design or insufficient design standards on which the specifications and the drawings are based.
In addition, the Contractor shall comply with all aspects of Regulation 11 of the Construction Regulations.

(g) Temporary works (Regulation 12)

The Contractor will be responsible for the adequate design of all formwork and support structures by a competent person.
All drawings pertaining to formwork shall be kept on site and all equipment and materials used in formwork, shall be carefully examined and checked for suitability by a competent person.

The provisions of Regulation 12 of the Construction Regulations shall be followed in every detail.

(h) Excavation work (Regulation 13)

It is essential that the Contractor shall follow the instructions and precautions in the Standard Specifications and Project Specifications as well as the provisions of the Construction Regulations to the letter as unsafe excavations can be a major hazard on any construction site. The Contractor shall therefore ensure that all excavation work is carried out under the supervision of a competent person, that inspections are carried out by a Professional Engineer or Technologist, and that all work is done in such a manner that no hazards are created by unsafe excavations and working conditions.

Supervision by a competent person will not relieve the Contractor from any of his duties and responsibilities under Regulation 13 of the Construction Regulations.

(i) Demolition work (Regulation 14)

Whenever demolition work is included in a contract, the Contractor shall comply with all the requirements of Regulation 14 of the Construction Regulations. The fact that a competent person has to be appointed by the Contractor does not relieve the Contractor from any of his responsibilities in respect of safety of demolition work.

(j) Tunneling (Regulation 15)

The Contractor shall comply with Regulation 15 wherever tunneling of any kind is involved.

(k) Scaffolding (Regulation 16)

The Contractor shall ensure that all the provisions of Regulation 16 of the Construction Regulations are complied with. [Note: Reference in the Regulations to “Section 44 of the Act” should read “Section 43 of the Act”].

(l) Suspended platforms (Regulation 17)

Wherever suspended platforms will be necessary on any contract, the Contractor shall ensure that copies of the system design issued by a Professional Engineer are submitted to the Engineer for inspection and approval. The Contractor shall appoint competent persons as supervisors and competent scaffold erectors, operators and inspectors and ensure that all work related to suspended platforms are done in accordance with Regulation 17 of the Construction Regulations.

(m) Rope Access Work (Regulation 18)

Where rope access work is required on the construction site, the Contractor shall comply with Regulation 18.

(n) Material Hoists (Regulation 19)

Wherever applicable, the Contractor shall comply with the provisions of Regulation 19 to the letter.

(o) Batch plants (Regulation 20)

Wherever applicable, the Contractor shall ensure that all lifting machines, lifting tackle, conveyors, etc. used in the operation of a batch plant shall comply with, and that all operators, supervisors and employees are strictly held to the provisions of Regulation
20. The Contractor shall ensure that the General Safety Regulations (2003), the Driven Machinery Regulations (Government Notice R295 of 26/2/1988) and the Electrical Installation Regulations (Government Notice R2271 of 11/10/1995) are adhered to by all involved.

In terms of the Regulations, records of repairs and maintenance shall be kept on site.

(p) Explosive powered tools (Regulation 21)

The Contractor shall ensure that, wherever explosive-powered tools are required to be used, all safety provisions of Regulation 21 are complied with.

It is especially important that warning notices are displayed and that the issue and return of cartridges and spent cartridges be recorded in a register to be kept on site.

(q) Cranes (Regulation 22)

Wherever the use of tower cranes becomes necessary, the provisions of Regulation 20 shall be complied with.

(r) Construction vehicles and mobile plant (Regulation 23)

The Contractor shall ensure that all construction vehicles and plant are in good working condition and safe for use, and that they are used in accordance with their design and intended use. The vehicles and plant shall only be operated by workers or operators who have received appropriate training, all in accordance with all the requirements of Regulation 23.

All vehicles and plant must be inspected on a daily basis, prior to use, by a competent person and the findings must be recorded in a register to be kept on site.

(s) Electrical installation and machinery on construction sites (Regulation 24)

The Contractor shall comply with the Electrical Installation Regulations (Government Notice R2920 of 23 October 1992) and the Electrical Machinery Regulations (Government Notice R1953 of 12 August 1993). Before commencement of construction, the Contractor shall take adequate steps to ascertain the presence of, and guard against dangers and hazards due to electrical cables and apparatus under, over or on the site.

All temporary electrical installations on the site shall be under the control of a competent person, without relieving the Contractor of his responsibility for the health and safety of all workers and persons on site in terms of Regulation 24.

(t) Use of temporary storage of flammable liquids on construction sites (Regulation 25)

The Contractor shall comply with the provisions of the General Safety Regulations (2003) and all the provisions of Regulation 25 of the Construction Regulations to ensure a safe and hazard-free environment to all workers and other persons on site.

(u) Water environments (Regulation 26)

Where construction work is done over or in close proximity to water, the provisions of Regulation 26 shall apply.

(v) Housekeeping on Construction sites (Regulation 27)

Housekeeping on all construction sites shall be in accordance with the provisions of the environment Regulations for workplaces (Government Notice R2281 of 16 October 1987) and all the provisions of Regulation 27 of the Construction Regulations.

(w) Stacking and storage on construction sites (Regulation 28)

The provisions for the stacking of articles contained in the General Safety Regulations (2003) as well as all the provisions Regulation 28 of the Construction Regulations shall apply.

(x) Fire precautions on construction sites (Regulation 29)

The provisions of the Environmental Regulations for Workplaces (Government Notice R2281 of 16 October 1987) shall apply.

In addition, the necessary precautions shall be taken to prevent the incidence of fires, to provide adequate and sufficient fire protection equipment, sirens, escape routes etc. all in accordance with Regulation 29 of the Construction Regulations.

(y) Construction employees' facilities (Regulation 30)

The Contractor shall comply with the construction site provisions as in the Facilities Regulations (2004), the provisions of Regulation 30 of the Construction Regulations and **the COVID-19 Occupational Health and Safety Measures in Workplaces COVID-19 (C19 OHS), 2020.**

(z) Non-compliance with the Construction Regulations 2014

The foregoing is a summary of parts of the Construction Regulations applicable to all construction projects.

The Contractor, as employer for the execution of the contract, shall ensure that all provisions of the Construction Regulations and **the COVID-19 Measures in Workplaces** applicable to the contract under consideration are complied with to the letter.

Should the Contractor fail to comply with the provisions of the Regulations 3 to 30 as listed in Regulation 33 **and COVID-19 (C19 OHS),2020,** he will be guilty of an offence and will be liable, upon conviction, to the fines or imprisonment as set out in Regulation 33.

***The Contractor is advised in his own interest to make a careful study of the Act, the Construction Regulations and the COVID-19 (C19 OHS),2020 as ignorance of the Act and the Regulations will not be accepted in any proceedings related to non-conformance to the Act and the Regulations*.**

OHS 10 MEASUREMENT AND PAYMENT

10.1 Principles

It is a condition of this contract that Contractors, who submit tenders for this contract, shall make provision in their tenders for the cost of all health and safety measures during the construction process. All associated activities and expenditure are deemed to be included in the Contractor's tendered rates and prices.

(a) Safety personnel

The Construction Supervisor, the Construction Safety Officer, Health and Safety Representatives, Health and Safety Committee and Competent Persons referred to in clauses 7.1 to 7.5 shall be members of the Contractor's personnel, and no additional payment will be made for the appointment of such safety personnel.

(b) Records and Registers

The keeping of health and safety-related records and registers as described in paragraph 8 is regarded as a normal duty of the Contractor for which no additional payment will be considered, and which is deemed to be included in the Contractor's tendered rates and prices.

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

THIS AGREEMENT is made between.....

(hereinafter called the EMPLOYER of the one part, herein represented by:

……
……
……
……

in his capacity as:

……..

AND:

(hereinafter called the CONTRACTOR) of the other part, herein represented by

……
……
……
……

in his capacity as:

…….. duly authorised to sign on behalf of the Contractor.

WHEREAS the CONTRACTOR is the Mandatory of the EMPLOYER in consequence of an agreement between the CONTRACTOR and the EMPLOYER in respect of

CONTRACT:.....

AND WHEREAS the EMPLOYER and the CONTRACTOR have agreed to enter into an agreement in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act No 85 of 1993, as amended by OHSA Amendment Act No 181/1993 (hereinafter referred to as the ACT);

NOW THEREFORE the parties agree as follows:

1. **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.**

2. The CONTRACTOR undertakes to fully comply with all relevant duties, obligations and prohibitions imposed in terms of the ACT and Regulations: Provided that should the EMPLOYER have prescribed 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.

3. The CONTRACTOR hereby accepts sole liability for such due compliance with the relevant duties, obligations, prohibitions, arrangements and procedures, if any, imposed by the ACT and Regulations, and the CONTRACTOR expressly absolves the EMPLOYER and the Employer's CONSULTING ENGINEERS from being obliged to comply with any of the aforesaid duties, obligations, prohibitions, arrangements and procedures in respect of the work included in the contract.

4. 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 his undertakings as more fully set out in paragraphs 1 and 2 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 take such steps it may deem necessary to remedy the default of the CONTRACTOR at the cost of the CONTRACTOR.

5. The CONTRACTOR shall be obliged to report forthwith to the EMPLOYER 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 agreement, and shall, on written demand, provide full details in writing of such investigation, complaint or criminal charge.

Thus signed at..... for and on behalf of the **CONTRACTOR**

on this the ……. day of ……..……..…… 20……

SIGNATURE:.....

NAME AND SURNAME: .....

CAPACITY: .....

WITNESSES: 1. .....

2. .....

Thus signed at ..... for and on behalf of the **EMPLOYER** on this

the …….. day of ……..…… 20……

SIGNATURE:.....

NAME AND SURNAME: .....

CAPACITY: .....

WITNESSES: 1. .....

2. .....

CONTRACTOR'S HEALTH AND SAFETY DECLARATION

In terms of Clause 4(4) of the OHSA 1993 Construction Regulations 2014 (referred to as "the Regulations" hereafter), a Contractor may only be appointed to perform construction work if the Employer is satisfied that the Contractor has the necessary competencies and resources to carry out the work safely in accordance with the Occupational Health and Safety Act No 85 of 1993 and the OHSA 1993 Construction Regulations 2014.

To that effect a person duly authorised by the tenderer must complete and sign the declaration hereafter in detail.

Declaration by Tenderer

1. I the undersigned hereby declare and confirm that I am fully conversant with the Occupational Health and Safety Act No 85 of 1993 (as amended by the Occupational Health and Safety Amendment Act No 181 of 1993), and the OHSA 1993 Construction Regulations 2014.

2. I hereby declare that my company has the competence and the necessary resources to safely carry out the construction work under this contract in compliance with the Construction Regulations and the Employer's Health and Safety Specifications.

3. I propose to achieve compliance with the Regulations by one of the following:

(a) From my own competent resources as detailed in 4(a) hereafter:..... ***Yes / No**

(b) From my own resources still to be appointed or trained until competency is achieved, as detailed in 4(b) hereafter:..... ***Yes / No**

(c) From outside sources by appointment of competent specialist subcontractors as detailed in 4(c) hereafter:..... ***Yes / No**

(***** = *delete whatever is not applicable*)

4. Details of resources I propose:

(Note: Competent resources shall include safety personnel such as a construction supervisor and construction safety officer as defined in Regulation 8, and competent persons as defined in Regulations 9-29, (all or individual regulations) as applicable to this contract)

(a) Details of the competent and qualified key persons from my company's own resources, who will form part of the contract team:

NAMES OF COMPETENT PERSONS	POSITIONS TO BE FILLED BY COMPETENT PERSONS

(b) Details of training of persons from my company's own resources (or to be hired) who still have to be trained to achieve the necessary competency:

(i) By whom will training be provided? .....

(ii) When will training be undertaken? .....

(iii) List the positions to be filled by persons to be trained or hired: .....

.....

.....

(c) Details of competent resources to be appointed as subcontractors if competent persons cannot be supplied from own company:

Name of proposed subcontractor: .....

Qualifications or details of competency of the subcontractor: .....

5. I hereby undertake, if my tender is accepted, to provide, before commencement of the works under the contract, a suitable and sufficiently documented Health and Safety Plan in accordance with Regulation 7(1) of the Construction Regulations, which plan shall be subject to approval by the Employer.

6. I confirm that copies of my company's approved Health and Safety Plan, the Employer's Safety Specifications as well as the OHSA 1993 Construction Regulations 2014 will be provided on site and will at all times be available for inspection by the Contractor's personnel, the Employer's personnel, the Engineer, visitors, and officials and inspectors of the Department of Labour.

7. I hereby confirm that adequate provision has been made in my tendered rates and prices in the schedule of quantities to cover the cost of all resources, actions, training and all health and safety measures envisaged in the OHSA 1993 Construction Regulations 2014, and that I will be liable for any penalties that may be applied by the Employer in terms of the said Regulations (Regulation 33) for failure on the Contractor's part to comply with the provisions of the Act and the Regulations.

8. I agree that my failure to complete and execute this declaration to the satisfaction of the Employer will mean that I am unable to comply with the requirements of the OHSA 1993 Construction Regulations 2014, and accept that my tender will be prejudiced and may be rejected at the discretion of the Employer.

SIGNATURE: ..... DATE: .....…….....

(of person authorised to sign on behalf of the Tenderer)

PRO FORMA NOTIFICATION FORM IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT 1993, CONSTRUCTION REGULATIONS 2014

[This form must be completed and forwarded, prior to commencement of work on site, by all Contractors that qualify in terms of Regulation 3 of the Construction Regulations 2014, to the office of the Department of Labour]

NOTIFICATION OF CONSTRUCTION WORK

1. (a) Name and postal address of principal contractor.

   (b) Name and tel. pf principal contractor's contact person:

   ---

2. Principal contactor's compensation registration number:

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3. (a) Name and postal address of client :

   (b) Name and tel. no of clients contact person or agent:

   ---

4 (a) Name and postal address of designer (s) for the project:

   (b) ---

5. Name and telephone number of principal contractor's sub- ordinate supervisor on site appointed in terms of Regulation 8 (1).

   ---

6. Name /s of principal contractor's sub- ordinate supervisor on sire appointed in terms of Regulation 8 (2)

   ---

7. Exact physical address of the construction site or site office:

   ---

8. Nature of the construction work:

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9. Expected commencement date:

---

10. Expected completion date:

---

11. Estimated maximum number of persons on the construction site.

Total:_____ Male:_____ Female_____

12. Planned number of contractors on the construction:

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13. Name (s) of contractors already selected.

Principal Contractor	Date
Client's Agent (where applicable)	Date
Client	Date

ANNEXURE B: DRAWINGS FOR TENDER PURPOSES