No. 17 Harrison Street
Marshalltown
P.O. Box 61542
Marshalltown 2107
Tel: (011) 688 1790
Enq: Lucky Hlatywayo
Email: Lucky.Hlatywayo@jwater.co.za

Supply Chain Management Unit (SCMU)

REQUEST FOR TENDER

NOTE: TENDER DOCUMENTS ARE AVAILABLE AND CAN BE DOWNLOADED FROM THE JOHANNESBURG WATER WEBSITE www.johannesburgwater.co.za AT NO COST BUT MUST COMPLY WITH SUBMISSION REQUIREMENTS.

HARD COPY TENDER DOCUMENTS ARE AVAILABLE AT A COST OF R350 PER SET.

IMPORTANT NOTICE

N.B. NO TENDER DOCUMENTS TRANSMITTED PER FAX WILL BE ADMISSIBLE

CIDB requirements	Tenderers should have a CIDB contractor grading designation of 8CE or higher.
Collection of Tenders	Documents may be collected during working hours from Supply Chain Management Unit, Johannesburg Water, 17 Harrison Street, Marshalltown. Johannesburg
Closing of tenders:	No tenders will be accepted after closing time of **10:30** on the closing date. Please ensure that tenders are submitted in sealed envelopes, clearly marked with the reference number JW13599 and addressed to the **SCMU**, **Johannesburg Water**. Tenders are to be deposited in the Tender Box situated at the entrance to No. 17 Harrison Street, Marshalltown, on or before the closing time and date, being **10:30 on 08 December 2021** Under no circumstances must documents be handed to an employee of Johannesburg Water or Handed in at the Supply Chain Management Unit. Tender documents via courier services must also be deposited in the Tender Box and not handed to an employee of Johannesburg Water. **NB: Tender documents which are not in sealed envelopes or which are not placed in the tender box will be rejected. Johannesburg Water will not accept responsibility for tender documents which are not deposited in the Tender Box.**
Point scoring system	The 90/10-point scoring system will be applicable to this tender, i.e. 90 points for Price and 10 points for Preferential procurement **(BBBEE)**.
Tender Briefing:	A Non- compulsory virtual briefing session will be held on the 12 November 2021 at 11h00 to 12h00. Click link to join the meeting Click here to join the meeting. All enquiries must be directed to Lucky.hlatywayo@jwater.co.za or 011 688 1790
Late tenders:	**Tender documents received after the closing time and date will be late and will not be accepted under any circumstances.**
Opening of Tenders:	There will be no tender public opening.
Selection Process:	The selection process will be subject to the Supply Chain Management Policy of Johannesburg Water. Johannesburg Water will not necessarily accept the lowest or any proposal and reserves the right to withdraw a tender without furnishing reasons or award in whole or in part and to more than one tenderer

JOHANNESBURG WATER SOC Ltd SUPPORTS BBBEE

CONTRACT NO: JW13599: NORTHERN WASTEWATER TREATMENT WORKS: UNIT 4 LIQUOR TREATMENT PLANT

	CLOSING DATE: 08 December 2021 at 10:30		
Name of tenderer:		CIDB CRS Number	
Contact person:		CIDB Grading	
Telephone No:		CSD Number	
Fax No:		SARS Tax Compliance Pin (Tenders)	
Cellular telephone no:		Email address:	

Tenderers are encouraged to submit one original hard copy plus a soft copy in a USB/CD. Tenderers who do not submit a soft copy will not be disqualified.

Johannesburg Water SOC Ltd

CONTRACT NO: JW13599

Northern Wastewater Treatment Works – Unit4 Liquor Treatment Plant

VOLUME 1

TENDER AND CONTRACT

Prepared by
PMU
PO Box 61542
Marshalltown
2107

Tel **+27 11 688 1400**
Fax **+27 11 688 1521**

V1.0
August 2018

CHECK-LIST FOR TENDER SUBMISSION

The Tenderer is to indicate in the check-boxes provided that they have completed the required section of the tender document. Completion of this check-list will assist the Tenderer in ensuring that they have attended to all the required items for submission with this tender. **Additionally, it is an absolute requirement that tenderers comply with National Treasury's CSD registration as well as SARS tax compliance requirements – refer T2.2.4 below**.

Ref	Description		Completed		For office use		
			Yes	No	Yes	No	Comments
Cover	Name of tenderer						
	Contact person						
	Telephone/Fax number						
	CIDB CRS Number						
T2.1	T2.2.2 Complete the Certificate of Authority						
	Submit Valid SARS Tax Compliance status Pin for Tenders						
	Confirm Proof of CSD Registration - submission of MA ---------- Number						
	Valid BBBEE certificate (SANAS/CIPC) or Sworn affidavit signed by the EME representative and attested by a Commissioner of oaths.						
	Consortium / JV agreement with all signatories and breakdown of each members contribution / role						
	Complete and sign JW 10 – Preference Points claim form						
T2.2.4	Complete and sign JW 14- Non- Collusion form						
T2.2.4	Complete and sign JW 14.1- Declaration of any potential Conflict of Interest						
T2.2.4	Complete and sign JW 14.2- past Supply Chain Management Practices Form						
	Complete and sign JW 14.3 (Declaration for Procurement above R10m)*						
	Confirmation that you have no municipal commitments overdue for more than 90 days**(for both the bidder/company and for the directors)						
	Confirmation that suitable arrangements are in place for arrear municipal obligations with your local municipality						
	Annual Financial statements for past 3 years (AFS) *						
T2.2.4	Complete and sign JW MBD 9- Certificate of Independent bid Determination						
	Complete and sign JW6.4 - Acknowledgement of JW Volume 3 OHS Specs						
C2.2	Complete the Schedule of Rates and the Summary. Sign the Summary						
C.1.1	Complete the Form of Offer. **Do not complete the Form of Acceptance**						
	Sign the Form of Offer with 2 witnesses. **Do not sign the Form of Acceptance**						
Qualifications	Is your tender subject to any qualifications. If Yes, reference to such qualification/s must be indicated below: ----------						

* for tenders with an estimated total value exceeding R10m (VAT included)
** for all tenders regardless of value
Signature: _____Date_____

CONTENTS:

* Only Volume 1 and Volume 2A must be returned.

Johannesburg Water (SOC) Ltd

CONTRACT JW13599

NORTHERN WASTEWATER TREATMENT WORKS

UNIT4 LIQUOR TREATMENT PLANT

VOLUME 1

TENDERING PROCEDURES

TABLE OF CONTENTS

T1.1 TENDER DATA

T1.1.1 Conditions of Tender

The conditions of tender are the Standard Conditions of Tender as contained in Annex C of the CIDB Standard for Uniformity in Construction Procurement (August 2019). (See www.cidb.org.za).

The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender.

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

T1.1.2 Tender Data

The clause numbers in the Tender Data refer to the corresponding clause numbers in the Conditions of Tender.

The additional Conditions of Tender are:

Clause number	**Tender Data**
C.1.1	The Employer is, Johannesburg Water (SOC) Limited
C.1.2	The tender documents issued by the Employer comprise: **Volume 1:** **Part 1: Tendering Procedures** T1.1 Tender Notice and Invitation to Tender T1.2 Tender Data **Part 2: Returnable Documents** T2.1 List of Returnable Documents T2.2 Returnable Schedules, including the Enterprise Declaration Affidavit which may be bound in a separate volume **Volume 1:** **Part 1: Agreement and Contract Data** C1.1 Form of Offer and Acceptance C1.2 Contract Data C1.3 Forms of Securities **Part 2: Pricing Data** C2.1 Pricing Instructions C2.2 Schedule of Rates **Volume 2A** **Part 3: Scope of Work** C3.1 Scope of Work C3.2 Particular Specifications **Part 4: Site Information** C4 Site Information **Volumes 2B:** Generic Specifications **Volume 3:** Occupational Health, Safety and Environmental Specification and Environmental Management Plan **Volume 4:** Tender Drawings

Clause number	Tender Data
C.1.4	The Employer's representative is: Contact Person: Mr Thapelo Teane Telephone: 011 688 6615 E-mail address: thapelo.teane@jwater.co.za
C.2.1	**Eligibility criteria and requirements** **CIDB registration and grading:** 1) Only tenderers who are registered with the **8CE** CIDB with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a **8CE** class of construction work, are eligible to submit tenders. 2) Joint ventures are eligible to submit tenders provided that: i) every member of the joint venture is registered with the CIDB; and ii) the combined contractor grading designation calculated in accordance with the CIDB Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for an **8CE** class of construction work.
C.2.7	Tenderers should forward their contact details to the contact person as stated in the tender notice and invitation to tender so that they will be sent any communication pertaining to this tender.
C.2.8	Replace the contents of the clause with the following: "Request clarification of the tender documents, if necessary, by notifying the Employer's Official indicated in the Tender Notice and Invitation to Tender in writing at least seven working days before the closing time stated in the foregoing notice and clause C.2.15."
C.2.9	Add the following to the clause: "Accept that the submission of a Tender shall be construed as an acknowledgement by the Tenderer that they are satisfied with the insurance cover, the Employer will affect under the contract."
C.2.10.5	Add the following to the clause: "If no offer is made for an item, a line must be drawn through the space in pen. All prices and details must be legible / readable to ensure the tender will be considered for adjudication."

Clause number	Tender Data
C.2.11	In instances where errors are made during the completion of the tender document, bidders are required to authenticate each and every alteration by the authorized signatory by inserting either his/her initial or signature next to the alteration Where alteration (s) are made in respect of the pricing component (i.e. errors made on the Bill of Quantity), the pricing schedule or the Form of Offer, such ***alteration (s) must be authenticated by the authorized signatory by inserting either his/her initial or signature next to the alteration.*** Corrections may not be made using correction fluid, correction tape or the like.
C.2.12	Replace Contents Alternative offers will not be permitted.
C.2.13.3	Each tender offer shall be submitted as an original. Tenderers are also requested to submit a soft copy in a USB or CD (Tenderers who do not submit a soft copy will not be disqualified)
C.2.13.5	The Employer's address for delivery of tender offers and identification details to be shown on the Tenderer's offer package are: **Location of tender box:** Ground Floor Entrance **Physical address:** Johannesburg Water (SOC) Ltd 17 Harrison Street Marshalltown 2107 **Identification details:** Tender reference number, Title of Tender and the closing date and time of the tender, *as well as the Tenderer's name, their Authorised Representative's name, postal address and telephonic contact numbers*.
C.2.13.6 & C.3.5	A two-envelope procedure will not be followed.
C.2.15.1	The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender.
C.2.16	The tender offer validity period is 90 days.
C.2.16.1	Add the following to the clause : "If the tender validity expires on a Saturday, Sunday or public holiday, the Tender Offer shall remain valid and open for acceptance until the closure of business on the following working day."
C.2.19	The Tenderer must provide access during working hours to his premises for inspections on request.
C.2.23	The Tenderer is required to submit with his tender: 1) Valid SARS Compliance status Pin for Tenders issued by the South African Revenue Services.

Clause number	Tender Data
	2) Proof of CSD registration i.e. MA xxxxxxxx number 3) a Certificate of Contractor Registration issued by the CIDB. 4) where the tendered amount inclusive of VAT exceeds R 10 million: i) audited annual financial statement for 3 years, or for the period since establishment if established during the last 3 years, if required by law to prepare annual financial statements for auditing; ii) if the bidder is not required by law to prepare financial statements, then the bidder is required to submit their unaudited financial statements prepared by an independent accounting professional. iii) a certificate certifying that the tenderer has no undisputed commitments for iv) municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days; v) particulars of any contracts awarded to the tenderer by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract; vi) a statement indicating whether any portion of the goods or services are expected to be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality or municipal entity is expected to be transferred out of the Republic. Where a tenderer satisfies CIDB contractor grading designation requirements through joint venture formation, such tenderers must submit the Certificates of Contractor Registration in respect of each partner.
C.2.24	Add the following new clause: **Canvassing and obtaining of additional information by tenderers** Accept that no Tenderer shall make any attempt either directly or indirectly to canvass any of the Employers officials or the Employer's agent in respect of his tender, after the opening of the tenders but prior to the Employer arriving at a decision thereon. No Tenderer shall make any attempt to obtain particulars of any relevant information, other than that disclosed at the opening of tenders." ."
C.2.25	Add the following new clause: **Prohibitions on awards to persons in service of the state** Accept that the Employer is prohibited to award a tender to a person - a) who is in the service of the state; or b) if that person is not a natural person, of which any director, manager, principal shareholder or stakeholder is a person in the service of the state; or c) a person who is an advisor or consultant contracted with the municipality or municipal entity. "In the service of the state" means to be - i) a member of:- • any municipal council; • any provincial legislature; or • the National Assembly or the National Council of Provinces; ii) a member of the board of directors of any municipal entity; iii) an official of any municipality or municipal entity; iv) an employee of any national or provincial department; v) provincial public entity or constitutional institution within the meaning of the Public

Clause number	Tender Data
	Finance Management Act, 1999 (Act No.1 of 1999); vi) a member of the accounting authority of any national or provincial public entity; or vii) an employee of Parliament or a provincial legislature." In order to give effect to the above, the questionnaire for the declaration of interests in the tender of persons in service of state in Section T2.1 must be completed.
C.2.26	Add the following new clause: **Awards to close family members of persons in the service of the state** "Accept that the notes to the Employer's annual financial statements must disclose particulars of any award of more than R 2 000 to a person who is a spouse, child or parent of a person in the service of the state (defined in clause C.2.25), or has been in the service of the state in the previous twelve months, including a) the name of that person; b) the capacity in which that person is in the service of the state; and c) the amount of the award. In order to give effect to the above, the questionnaire for the declaration of interests in the tender of persons in service of state in part T2 – Returnable Documents must be completed in full and signed."
C.2.27	Add the following new clause: **Tax Compliance** In the case of a Joint Venture/Consortium the tax Compliance status Pin must be submitted for each member of the Joint Venture/Consortium."
C.2.28	Add the following new clause: Tenderers will be afforded a period of three (3) days to complete the following returnable documents (, JW 10 (MBD 6.1), JW 14, JW 14.1, JW 14.2, JW 14.3, JW MBD 9) in instances where such forms are incomplete.
C.3.4.2	Tenders will not be opened in public due to *Covid 19 protocols and restrictions.*. *The above is subject to Covid 19 protocols and restrictions. Johannesburg Water will publish all received bids at JW website.*
C.3.11	Replace Contents with Returnable Schedule JW10 (MBD 6.1) for evaluation criteria
	Part A **Pre-qualification** **Description** | **Complied**

Clause number	Tender Data

1.	Has the tenderer met the local content threshold as stipulated in MBD 6.2 and annexure C **Note: Bidders who fails to meet the local content threshold as stipulated in MBD 6.2 will be disqualified immediately. Bidders who meet the local content threshold as stipulated in MBD 6.2 will be evaluated further.**	**Yes**	**No**

	Description	**Complied**	
2.	Has the Tenderer completed and signed the Special Condition Schedule JW6.1?	**Yes**	**No**

Tenderers who **FAIL** to complete and sign schedule JW6.1 will not be evaluated further.

Part B

Functionality

Description	**Complied**	
1. Contracts Manager - Qualifications and Experience Has minimum requirements been met for both	**Yes**	**No**
2. Site agent - Qualifications and Experience Has minimum requirements been met for both	**Yes**	**No**
3. OHS Officer - Qualifications and Experience Has minimum requirements been met for both	**Yes**	**No**
4. Tenderer's experience with respect to specific aspects of the project / comparable projects –Has minimum requirements been met.	**Yes**	**No**

The quality criteria in respect of each of criteria shall be as follows:

Quality criteria	**Description**	**Means of Verification (Documentary Evidence)**
3. Qualifications and Registration Status of the key staff in relation to the scope of work.	Contracts Manager	Certified Copies of Qualifications and Registration Documents
	Site Agent	
	Safety Officer	
4. Experience of the key staff	Contracts Manager	CVs outlining experience as

Clause number	Tender Data

in relation to the scope of work.		outlined below
	Site Agent	
	Safety Officer	
5. Tenderer's experience with respect to specific aspects of the project / comparable projects	Experience on at least any 2 projects of Civil waste or potable water treatment projects with the capacity of at least 10ml/d or digesters treating minimum 10000m³. **Alternatively:** 1 Civil in waste or potable water treatment project with a minimum of 20ml/d treatment capacity	Record of completed projects as per format given on section T2.1.6 accompanied with completion certificate / final approval certificate and supported with contactable references as per format given in T2.1.7
Possible score for quality **(M_s)**		

Experience of Key Personnel

CVs of all key personnel to be furnished or T2.1.9 can be completed. Qualifications and Experience of Key Construction Personnel.

Designation	Minimum Qualification	Registration	Minimum Experience
Contracts Manager	BSc or BEng or B.Tech Engineering (Civil or Mechanical or Electrical) plus professional registration	Pr Eng or /Pr Tech Eng or Pr PMP or Pr CPM	5 years' (All Projects) post minimum qualification.
Site Agent	National Diploma or BSc or BEng Engineering (Civil)	N/A	Experience on at least any 2 projects of Civil waste or potable water treatment projects with the capacity of at least 10ml/d or digesters treating minimum 10000m³. **OR** 1 Civil in waste or potable water treatment project with a minimum of 20ml/d treatment capacity

Clause number	Tender Data

Safety Officer	National Diploma (Safety Management)	N/A	2 Years' (All Projects) post minimum qualification
	OR		
	National Diploma (Environmental Health / Environmental Science / Environmental Management)	N/A	2 Years' (All Projects post minimum qualification)
	OR		
	SAMTRAC/SHEOMTRAC/SHEMTRAC/MESHTRAC/NEBOSH/ Safety Officers Course	N/A	4 Years' All Projects post minimum qualification)

Acronyms

SACPCMP: South African Council for the Project and Construction Management Professions

SAMTRAC: Safety Management Training Course

NEBOSH: National Examination Board in Occupational Safety and Health

SHEOMTRAC: Safety Health Environmental Occupational Management Training Course

SHEMTRAC: Safety Health Environmental Management Training Course

MESHTRAC: Management Environmental Safety Health Training Course

C.3.11.2 & C.3.11.3

The procedure for the evaluation of responsive tenders is Method 2 (Financial Offer and Preferences):

1. APPLICATION OF THE PREFERRENCE POINTS SCORING SYSTEM

<u>The following preference point systems are applicable to all bids:</u>

- 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).

(a) The value of this bid is estimated to exceed R50 000 000 (all applicable taxes included) and therefore the 90/10 preference point system shall be applicable.

(b) Preference points for this bid shall be awarded for:

(a) Price; and

(b) B-BBEE Status Level of Contributor.

(c) The maximum points for this bid are allocated as follows:

	POINTS

Clause number	Tender Data

PRICE	90
B-BBEE STATUS LEVEL OF CONTRIBUTOR	10
Total points for Price and B-BBEE must not exceed	**100**

(d) Failure on the part of a bidder to submit proof of BBBEE status level of contributor Certificate will be interpreted to mean that preference points for BBBEE status level of contribution are not claimed.

(e) The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

2. **ADJUDICATION USING A POINT SYSTEM**

(a) The bidder obtaining the highest number of total points will be awarded the contract.

(b) Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts;.

(c) Points scored must be rounded off to the nearest 2 decimal places.

(d) In the event that two or more bids have scored equal total points, the successful bid must be the one scoring the highest number of preference points for B-BBEE.

(e) However, when functionality is part of the evaluation process and two or more bids have scored equal points including equal preference points for B-BBEE, the successful bid must be the one scoring the highest score for functionality.

(f) Should two or more bids be equal in all respects, the award shall be decided by the drawing of lots.

3. POINTS AWARDED FOR PRICE

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**

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

Where

Ps = Points scored for comparative price of bid under consideration

Pt = Comparative price of bid under consideration

Pmin = Comparative price of lowest acceptable bid

Clause number	Tender Data
C.3.13.1	Add to the existing clause: Tender offers will only be accepted if: a) the tenderer submits a valid SARS tax Compliance status Pin for tenders issued by the South African Revenue Services or has made arrangements to meet outstanding tax obligations; b) Proof of CSD registration ie MA xxxxx number; c) the tenderer submits a letter of intent from an approved insurer undertaking to provide the Performance Guarantee to the format included in Part T2.2.22 of this procurement document d) the tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation; e) 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; f) 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; g) the tenderer has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the Employer or potentially compromise the tender process and persons in the employ of the state are permitted to submit tenders or participate in the contract; h) the tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer; i) 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; and j) the tenderer: i) has sufficiently substantiated his experience in this type work; ii) has the required and experienced key personnel; and iii) Owns the primary equipment to effectively and efficiently execute the work.
C.3.17	The number of paper copies of the signed contract to be provided by the Employer is one.
C.3.9	Add the following new clause Arithmetical errors 3.9.1 Correction of arithmetic errors shall be done after determining the *Highest Ranking bidder* based on the score obtained for price and scores obtained for preferential procurement. 3.9.2 JW undertakes to check the highest scoring bid for arithmetical errors and correcting them as follows: 3.9.2.1 Construction related tenders 3.9.2.1.1 JW shall check for arithmetic errors using the following sequence: 3.9.2.1.1.1 Check the amount in words against the amount in figures on the *Form of Offer*, 3.9.2.1.1.2 Check the *Form of Offer* against the *Summary Schedule Total*,

Clause number	Tender Data
	3.9.2.1.1.3 Check the *Section Sub-Totals* per section against the *Summary Total* for summation errors, 3.9.2.1.1.4 Check the *Section Sub-Totals* in the *Summary Schedule* against *Section Sub-Totals* in the *Bill of Quantities*. 3.9.2.1.1.5 Check the *Section Sub-Totals* against the Item Totals for summation errors. 3.9.2.1.1.6 Check the *Item Totals* against the product of the *Item Rate* and the Quantity Provided. 3.9.2.2 In respect of the Form of Offer, where there is a discrepancy between the amounts in figures and the amount in words, the amount in words shall govern. The amount in figure will be adjusted to correspond with the amount in words 3.9.2.3 If a bill of quantities or price schedule applies arithmetic errors will be treated as follows: 3.9.2.3.1 Where there is an error in the *Total* of the prices either as a result of other corrections required by this checking process or in the Tenderer's addition of prices, the Total of the prices shall govern and the tenderer will be asked to revise selected *Item Prices* (and their *Rates* if *Bills of Quantities* apply) to achieve the *Tendered Total* of the prices. 3.9.2.4 Where there is an error in the *Line Item Total* resulting from the product of the *Item Rate* and the *Quantity*, the *Line Item Total* shall govern and the *Item Rate* shall be corrected. 3.9.2.5 Where there is an obvious misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected. 3.9.2.6 Where there is an obviously gross misplacement of the decimal point in the *Line Item Total*, the *Line Item Total* as quoted shall govern, and the Item Rate shall be corrected taking into consideration any risks associated with implementing such corrections 3.9.2.7 Clarification session(s) shall be held with Tenderer where errors are highlighted and corrections made are explained. Tenderer is afforded an opportunity to give additional input, accept or reject corrections made. 3.9.2.7.1 In the event that Tenderer accepts corrections made. JW to proceed with evaluation. 3.9.2.7.2 In the event that Tender rejects the correction(s) made, JW should review the Tenderer‘s motivation and risks associated with proposed change. 3.9.2.8 Risk related to the Arithmetic Corrections shall be assessed. Where risks are identified, tenderers shall provide JW with any other material or information that has a bearing on the tender offer, the tenderer‘s commercial position (including joint venture agreements), quotations preferencing arrangements or samples of materials considered necessary by JW for the purpose of a full and fair risk assessment. 3.9.2.9 Should the tenderer not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the JW request, or fails to attend any meeting in which it has been formally invited to clarify any issue, the tender offer will be regarded as non-responsive.
	There are no additional conditions of tender.

--- END OF PART ---

Johannesburg Water (SOC) Ltd

VOLUME 1

RETURNABLE DOCUMENTS AND SCHEDULES

T2.1 LIST OF RETURNABLE DOCUMENTS

The tenderer must complete the following returnable documents:

T2.2 LIST OF RETURNABLE DOCUMENTS

T2.3 LIST OF RETURNABLE SCHEDULES

T2.4 LIST OF RETURNABLE SCHEDULES

NOTE: the Tenderer is required to complete each and every schedule listed above to the best of his ability as the evaluation of tenders and the eventual contract will be based on the information provided by the tenderer.

T2.1 LIST OF RETURNABLE DOCUMENTS

T2.1.1 Record of Addenda to Tender Documents

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

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

Attach additional pages if more space is required.

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

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

Tenderer .....

T2.1.2 Certificate of Authority

Indicate the status of the Tenderer by ticking the appropriate box hereunder. The Tenderer must complete the certificate set out below for the relevant category.

(I) COMPANY	(II) CLOSE COR-PORATION	(III) PARTNERSHIP	(IV) JOINT VENTURE	(V) SOLE PROPRI-ETOR

(I) Certificate for Company

I, ……, chairperson of the Board of Directors of ....., hereby confirm that by resolution of the Board (copy attached) taken on ....., Mr/Ms ....., acting in the capacity of ....., was authorized to sign all documents in connection with the tender for Contract No. JW13599 and any contract resulting from it on behalf of the company.

Chairman: .....

As Witnesses: 1.....

2.....

Date: .....

(II) Certificate for Close Corporation

We, the undersigned, being the key members in the business trading as .....

..... hereby authorize Mr/Ms …….... , acting in the capacity of

....., to sign all documents in connection with the tender and any contract resulting from it on our behalf.

NAME	ADDRESS	SIGNATURE	DATE

Note: This certificate is to be completed and signed by all of the key members upon whom rests the direction of the affairs of the Close Corporation as a whole.

(III) Certificate for Partnership

We, the undersigned, being the key partners in the business trading as,

……., hereby authorize Mr/Ms …… ,

acting in the capacity of …….. , to sign all documents in connection with the tender and any contract resulting from it on our behalf.

NAME	ADDRESS	SIGNATURE	DATE

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

(IV) Certificate for Joint Venture

This Returnable Schedule is to be completed by joint ventures.

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

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

Note: This certificate is to be completed and signed by all of the key partners upon whom rests the direction of the affairs of the Joint Venture as a whole.

(V) ***Certificate for Sole Proprietor***

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

Signature of Sole owner: .....

As Witnesses:

1.....

2. .....

Date: .....

T2.1.3 Compulsory Enterprise Questionnaire

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

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

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

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

Section 4: Particulars of sole proprietors and partners in partnerships

Name*	Identity number*	Personal income tax number*

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

Section 5: Particulars of companies and close corporations

Company registration number . . . . . .

Close corporation number . . . . . .

Proof of CSD registration i.e. MA xxxxxxxxx number. . . . . .

SARS Tax Compliance status Pin number . . . . . .

Section 6: Record in the service of the state

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

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

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

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

*insert separate page if necessary

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

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

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

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

*insert separate page if necessary

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

i) authorizes the Employer to verify the tax compliance status from the South African Revenue Services that my / our tax matters are in order;

ii) confirms that the neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;

iii) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption;

iv) confirms that I / we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest; and

iv) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signed ---------- Date ----------

Name ---------- Position ----------

Enterprise name ----------

T2.1.4 Preferential Procurement

Forms for Completion by the Tenderer included in this section are:

Form No.	Form Title	Description
JW6.1	Special Conditions	Sub-contracting and Skills Transfer
MBD6.2	Declaration certificate for local production and content for designated sectors	Form to be completed by the Tenderer
JW10	Empowerment and Preferential Procurement	Procedures and adjudication criteria for the information of the Tenderer
JW14	Non – collusion Form	Form to be completed by the Tenderer
JW 14.1	Declaration of any potential Conflict of Interest	Form to be completed by the Tenderer
JW14.2	Declaration of bidder's past supply chain management practices	Form to be completed by the Tenderer
JW14.3	Declaration for Procurement above R10 Million (VAT Included)	Form to be completed by the Tenderer
JW MBD9	Certificate of Independent Bid Determination	Form to be completed by the Tenderer

Note:

All information supplied must be current and valid. Proposed or imminent changes to a Tenderer's status may be mentioned but the declarations must reflect current circumstances.

SPECIAL CONDITIONS *JW 6.1 (b)*

Although the total value of this contract exceeds R30m, Johannesburg Water deems it **not** feasible to subcontract a minimum of 30% of the contract. However, the successful tenderer must subcontract a minimum of 13% of the value of this contract to an entity that is an EME or QSE that is 51% Black Owned or 51% Black Women Owned or 51% Black Youth Owned. The subcontractor/s chosen for this purpose must be registered on National Treasury's Central Supplier Database (CSD).

- An EME or QSE which is at least 51% black owned by black people;
- An EME of QSE which is at least 51% owned by black people who are youth;
- An EME of QSE which is at least 51% owned by black people who are women;
- More than one of the categories referred to above.

1. Subcontractors must be chosen from National Treasury's Central Supplier Database which can be accessed on National Treasury's website.
2. A subcontracting agreement between main contractor and the subcontractor shall be submitted to JW upon appointment and must include minimum information below.
   - Name of sub-contractor and BBBEE status
   - Area and location of project
   - Scope of work issued to the sub-contractor
   - Value of the work issued including P&G's (auditable)
   - Assistance provided to the sub-contractor e.g. acquisition of materials, machinery and tools
   - Skills transfer plan
3. The successful contractor must submit periodic SMME reports to the Project Manager as follows:
   - Name of sub-contractor and BBBEE status
   - Area and location of project
   - Scope of work issued to the sub-contractor
   - Value of the work issued (auditable)
   - Monthly payments made to the subcontractor (auditable)
   - Assistance provided to the sub-contractor e.g. acquisition of materials, machinery and tools
   - Performance of the sub-contractor
4. Upon completion of the project, the contractor is required to provide a final report to JW on skills acquired, description and value of work performed as well as their overall performance.

   (The above information will assist the sub-contractor to improve their CIDB grading)

Skills transfer

It is an absolute requirement that the successful tenderer empowers the appointed sub-contractor through the transfer of skills. In this regard a skills transfer plan must be submitted prior to commencement of the project.

I / we representing the tenderer hereunder agree to the above conditions in the event of being successful.

Failure to complete this form or disagree with subcontracting conditions will result in disqualification.

Name of tenderer: _____

Authorised signatory_____**Date**_____

MBD 6.2

DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS

This Municipal Bidding Document (MBD) must form part of all bids invited. It contains general information and serves as a declaration form for local content (local production and local content are used interchangeably).

Before completing this declaration, bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2017, the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 (Edition 1) and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)].

1. General Conditions

1.1. Preferential Procurement Regulations, 2017 (Regulation 8) make provision for the promotion of local production and content.

1.2. Regulation 8.(2) prescribes that in the case of designated sectors, organs of state must advertise such tenders with the specific bidding condition that only locally produced or manufactured goods, with a stipulated minimum threshold for local production and content will be considered.

1.3. Where necessary, for tenders referred to in paragraph 1.2 above, a two stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.

1.4. A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.

1.5. The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:

$$LC = [1 - x / y] * 100$$

Where
x is the imported content in Rand
y is the bid price in Rand excluding value added tax (VAT)

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) on the date of advertisement of the bid as indicated in paragraph 3.1 below.

The SABS approved technical specification number SATS 1286:2011 is accessible on http:/www.thedti.gov.za/industrial development/ip.jsp at no cost.

1.6. A bid may be disqualified if this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation;

2. The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid is/are as follows:

BOQ Item no	Description of Goods	Stipulated minimum threshold
	Steel Products and Components of Construction	
	Steel Value-add products	
2.12.6.22	Installation of Vehicular Access Gate	*100%*
2.12.6.23	Installation of Gate for Pedestrian Access	*100%*
	Access Ladders	
2.2.4.12	Ladders, Complete and Installed	*100%*
2.3.4.28	Ladders, Complete and Installed	*100%*
2.4.4.28	Ladders, Complete and Installed	*100%*
2.7.4.12	Ladders, Complete and Installed	*100%*
	Open Grid Floors	
2.2.4.14	a) Open grid floors - Chamber (Rectagrid 40 x 4.5 bearer bars)	*100%*
2.2.4.15	b) Open grid floors - Sump Cover (Rectagrid 40 x 4.5 bearer bars)	*100%*
2.3.4.31	1) Rectagrid RS80, 40 x 3	*100%*
2.3.4.32	2) Rectagrid RS40, 30 x 4.5 stair treads	*100%*
2.4.4.31	1) Rectagrid RS80, 40 x 4.5	*100%*
2.4.4.32	2) Rectagrid RS40, 30 x 4.5 stair treads	*100%*
2.5.4.23	1) Rectagrid RS80, 40 x 4.5	*100%*
2.5.4.24	2) Rectagrid RS40, 30 x 4.5 stair treads	*100%*
2.6.3.11	1) Rectagrid RS80, 40 x 4.5	*100%*
2.7.4.14	a) Open grid floors - Chamber	*100%*
2.7.4.15	b) Open grid floors - Sump Cover	*100%*
	Bolts	
2.2.4.11	Erection Bolts	*100%*
2.3.4.22	(1) M16 HILTI Concrete Anchors	*100%*
2.4.4.22	(1) M16 HILTI Concrete Anchors	*100%*
2.5.4.15	(1) M16 HILTI Concrete Anchors	*100%*
2.7.4.11	Erection Bolts	*100%*
3.2.1.5	3 kW Agitator - Mounting Plate Holding Down Bolts	*100%*
3.3.1.5	0.75 kW - Agitator Mounting Plate Holding Down Bolts (min 4 per Base Plate)	*100%*
	Handrails	
2.3.4.25	1) Horizontal	*100%*
2.3.4.26	2) Sloping (measured on slope)	*100%*

BOQ Item no	Description of Goods	Stipulated minimum threshold
2.4.4.25	1) Horizontal	*100%*
2.4.4.26	2) Sloping (measured on slope)	*100%*
2.5.4.18	1) Horizontal	*100%*
2.5.4.19	2) Sloping (measured on slope)	*100%*
	Plates and Sheets	
2.8.4.11	VASTRAP ® flooring, 6.0mm thick	*100%*
2.12.4.11	VASTRAP ® flooring, 6.0mm thick	*100%*
2.8.6.2	(1) 0.6mm Thick heavy industrial profile roof sheets in cut lengths complete with FBE colour traffic green E.07 fixed to 76x50 purlins at 1200mm c/c max. on pre-fabricated engineered timber trusses at 1200mm c/c max designed in accordance with SANS 10163	*100%*
2.8.6.4	(1) 0.8mm Thick standard sidewall flashing FK9 and counter flashing FK7 all with colour middle blue F.07	*100%*
2.8.6.5	(2) 0.8mm Thick standard ridge capping FK3 with finish in colour middle blue F.07	*100%*
2.8.6.6	(3) 125x100mm Ogee profile guttering in chromadek finish colour middle blue F.07 gutter secured to trough with 6mm verandah bolts at 203mm centres and to crown of sheets with gutter clips pop-rivetted at 800mm centres max.	*100%*
2.8.6.7	(4) 100x75mm Rectangular downpipes in chromadek finish colour middle blue F.07	*100%*
2.8.8.8	(1) Standard 1.2mm Mild Steel Transformer Door and Jamb combination type DV as per Duro Cat with full louvres (2mm steel plate riveted to inside face of louvres)	*100%*
2.8.8.9	(2) Standard 2032 x 813mm Meranti F/L Batten Door with Open Back	*100%*
2.12.6.14	(2) Standard 2032 x 813mm Meranti F/L Batten Door with Open Back	*100%*
2.8.8.11	(1) Standard SS31 Window Centre Pivot as per Duro pressing Cat, and complete with catch opener & type B2 burglar bars	*100%*
2.12.6.16	(1) Standard SS31 Window Centre Pivot as per Duro pressing Cat, and complete with catch opener & type B2 burglar bars	*100%*
3.1.1.1	150 m³ Lime Storage Silo (complete with fluidization equipment, Level Indicator, load cells, level switches, etc.).	*100%*
3.6.2	Design, Fabricate, Supply, Deliver and Store Ventilation System Ducting	*100%*
3.6.1.2	Scraper Bridge (complete with walkways)	*100%*
3.6.1.5	Scum Box (complete with valve)	*100%*
3.6.1.7	Baffle Plates	*100%*
4.1.1	Motor Control Centre (MCC) panel	*100%*
4.6.1	High Mast Lighting	*100%*
4.2.2.8	Heavy Duty Cable Ladder or racking	*100%*
	Primary Steel Products	
	Steel reinforcement bars with nominal size of 25mm	
2.2.3.20	Foundations	*100%*
2.2.3.21	Walls	*100%*
2.2.3.22	Plinths	*100%*
2.3.3.15	(1) Floor Slab Foundations	*100%*
2.3.3.16	(2) Walls	*100%*

BOQ Item no	Description of Goods	Stipulated minimum threshold
2.3.3.17	(3) Stairway and Platform Plinth	*100%*
2.4.3.21	(1) Floor Slab Foundations	*100%*
2.4.3.22	(2) Walls of Lime Reactor	*100%*
2.4.3.23	(3) Roof of Lime Reactor	*100%*
2.4.3.24	(4) Stairway and Platform Plinth	*100%*
2.5.3.18	(1) Floor Slab	*100%*
2.5.3.19	(2) Walls	*100%*
2.5.3.20	(3) Roof at Discharge Point	*100%*
2.5.3.21	(4) Stairway and Platform Plinth	*100%*
2.6.2.19	(1) Floor Slab	*100%*
2.6.2.20	(2) Walls of Lime Clarifier	*100%*
2.6.2.21	(3) Launder	*100%*
2.6.2.22	(4) Overflow Chamber	*100%*
2.6.2.23	(5) Sludge Extraction Sump	*100%*
2.7.3.20	Foundations	*100%*
2.7.3.21	Walls	*100%*
2.7.3.22	Plinths	*100%*
2.8.3.9	Strip Footing Foundations	*100%*
2.9.3.8	(1) Floor Slab Foundation	*100%*
2.12.3.12	Strip Footing Foundations	*100%*
2.12.3.13	Concrete Floor Slabs	*100%*
2.12.3.14	Roof Slab	*100%*
	Structural steel	
2.2.4.3	Rolled Angle - 60x60x6L	*100%*
2.2.4.7	Rolled Angle - 50x50x5L with 25x5 Thk. Flat lugs	*100%*
2.3.4.14	Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs	*100%*
2.3.4.15	Rolled Angle - 60x60x6L	*100%*
2.3.4.5	Parallel Flange Channel - 180x70PFC	*100%*
2.3.4.6	Base Plate - 220x220x12mm	*100%*
2.4.4.3	Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs	*100%*
2.4.4.4	Rolled Angle - 60x60x6L	*100%*
2.4.4.5	Parallel Flange Channel - 180x70PFC	*100%*
2.4.4.6	Base Plate - 220x220x12mm	*100%*
2.5.4.3	Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs	*100%*
2.5.4.4	Parallel Flange Channel - 180x70PFC	*100%*
2.6.3.3	Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs	*100%*
2.7.4.3	Rolled Angle - 60x60x6L	*100%*
2.7.4.4	Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs	*100%*
2.8.4.3	(1) Angle Frame (50x50x6mm L Iron, including R8 lugs and 6x6mm Square Bar)	*100%*

BOQ Item no	Description of Goods	Stipulated minimum threshold
2.12.4.3	(1) Angle Frame (50x50x6mm L Iron, including R8 lugs and 6x6mm Square Bar)	*100%*
2.12.3.15	High-Tensile Welded Mesh:	*100%*
	Transformers and Shunt Reactors:	
4.2.2.1	Transformers - 800kVA 11kV/6.6kV/400V	*90%*
	Air Insulated MV Switchgear	
4.2.2.5	Medium Voltage Switching Panel	*25%*
	Electrical Cable Products	
	Power Cables – Cables used for power transmission	
4.2.2.6	11kV 3core XLPE 185 mm2 (Cu/XLPE/SWA/PVC) cable	*90%*
4.2.2.7	11kV 3core XLPE 185 mm2 (Cu/XLPE/SWA/PVC) cable (internal cabling)	*90%*
4.3.9	4C x 120mm² Cu/PVC/SWA/PVC	*90%*
4.3.10	1C x 120mm² BCEW	*90%*
4.4.1.1	"Power cable" 4mm² x 4c PVC/SWA/PVC Red stripe Cable"	*90%*
4.4.2.1	"Power cable" 4mm² x 4c PVC/SWA/PVC Red stripe Cable"	*90%*
4.4.1.2	4mm² x 1c BCEW	*90%*
4.4.2.2	4mm² x 1c BCEW	*90%*
4.4.1.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"	*90%*
4.4.2.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"	*90%*
4.4.3.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"	*90%*
4.4.4.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"	*90%*
4.4.5.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"	*90%*
4.4.6.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"	*90%*
4.4.8.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"	*90%*
4.4.9.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"	*90%*
4.4.10.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"	*90%*
4.4.11.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"	*90%*
4.4.12.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"	*90%*
4.4.13.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"	*90%*
4.4.14.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"	*90%*
4.4.15.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"	*90%*
4.4.16.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"	*90%*
4.4.17.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"	*90%*
4.4.18.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"	*90%*
4.4.19.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"	*90%*
4.4.20.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"	*90%*
4.4.21.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"	*90%*
4.4.22.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"	*90%*
4.4.23.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"	*90%*
4.4.24.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"	*90%*

BOQ Item no	Description of Goods	Stipulated minimum threshold
4.4.3.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"	*90%*
4.4.4.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"	*90%*
4.4.5.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"	*90%*
4.4.6.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"	*90%*
4.4.8.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"	*90%*
4.4.9.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"	*90%*
4.4.10.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"	*90%*
4.4.11.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"	*90%*
4.4.12.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"	*90%*
4.4.14.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"	*90%*
4.4.15.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"	*90%*
4.4.16.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"	*90%*
4.4.17.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"	*90%*
4.4.18.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"	*90%*
4.4.19.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"	*90%*
4.4.20.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"	*90%*
4.4.21.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"	*90%*
4.4.22.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"	*90%*
4.4.23.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"	*90%*
4.4.24.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"	*90%*
4.4.3.2	2.5 mm² x 1c BCEW	*90%*
4.4.4.2	2.5 mm² x 1c BCEW	*90%*
4.4.5.2	2.5 mm² x 1c BCEW	*90%*
4.4.6.2	2.5 mm² x 1c BCEW	*90%*
4.4.8.2	2.5 mm² x 1c BCEW	*90%*
4.4.9.2	2.5 mm² x 1c BCEW	*90%*
4.4.10.2	2.5 mm² x 1c BCEW	*90%*
4.4.11.2	2.5 mm² x 1c BCEW	*90%*
4.4.12.2	2.5 mm² x 1c BCEW	*90%*
4.4.13.2	2.5 mm² x 1c BCEW	*90%*
4.4.14.2	2.5 mm² x 1c BCEW	*90%*
4.4.15.2	2.5 mm² x 1c BCEW	*90%*
4.4.16.2	2.5 mm² x 1c BCEW	*90%*
4.4.17.2	2.5 mm² x 1c BCEW	*90%*
4.4.18.2	2.5 mm² x 1c BCEW	*90%*
4.4.19.2	2.5 mm² x 1c BCEW	*90%*
4.4.20.2	2.5 mm² x 1c BCEW	*90%*
4.4.21.2	2.5 mm² x 1c BCEW	*90%*
4.4.22.2	2.5 mm² x 1c BCEW	*90%*
4.4.23.2	2.5 mm² x 1c BCEW	*90%*

BOQ Item no	Description of Goods	Stipulated minimum threshold
4.4.24.2	2.5 mm² x 1c BCEW	
4.6.2	4c x 10mm² PVC/SWA/PVC Red stripe cable	*90%*
	Telecom Cables – cables used for telecommunications	
5.3.1.1	3 core, 2.5 mm² (220 Vac)	*90%*
5.3.1.4	7 core, 1.5 mm²	*90%*
4.3.2.1	12 core Single Mode Fibre Cable	*90%*
4.3.2.4	7 core, 1.5 mm²	*90%*
5.3.3.1	1 pair, 1 mm²	*90%*
5.3.3.4	4 pair, 1 mm²	*90%*
5.3.3.8	24 pair, 1 mm²	*90%*
	Pump, Medium Voltage (MV) Motors and Associated Accessories	
	Pumps	
3.4.1.1	Centrifugal Pumps	*70%*
3.1.2.10	Lime Dosing Pumps (Complete with Motor, Gearbox, Couplings and Baseplate)	*70%*
	Valves Products and Actuators	
2.2.6.9	DN250 - Item 7 - Knife Gate Valve (Non-Rising Stem), PN10	*70%*
2.2.6.18	DN400 - Item 16 - Knife Gate Valve (Non-Rising Stem), PN10	*70%*
2.7.6.7	DN200 - Item 8 - Knife Gate Valve (Non-Rising Stem), PN10	*70%*
2.10.8.14	(1.7) Knife Gate Valve (Non-Rising Stem)	*70%*
2.10.19.7	DN125 - (6) Item 15 - Knife Gate Valve (Non-Rising Stem)	*70%*
3.1.1.3	Silo Discharge Isolating Valve (Knife gate)	*70%*
3.1.1.11	Lime Dosing Pipework and Valves	*70%*
3.5.1.1	DN300 Knife Gate Valves – Suction, PN10	*70%*
3.5.1.2	DN250 Knife Gate Valves - Discharge	*70%*
3.5.1.3	DN250 Non-Return Valves	*70%*
3.2.1.7	Penstock/Sluice gate for a 1200x800 opening with a rising spindle of L=4200mm	*70%*
3.3.1.7	Penstock/Sluice gate for a 350x400 opening with a rising spindle of L=4200mm	*70%*
	Plastic Conveyance Pipes	
	High density polyethylene (HDPE) pipes and fittings	
2.2.6.4	DN280-DN250 Item 2 - Concentric Reducer, L = 200mm	*100%*
2.2.6.5	DN250 Item 3 - Stub Flange with Backing Slip-On Flange (HDE steel), L = 100mm	*100%*
2.10.3.7	DN280 Item 3 - Stub Flange with Backing Slip-On Flange (HDE steel), L = 100mm	*100%*
2.7.6.22	DN315 Item 24 - Stub Flange with Backing Slip-On Flange (HDE steel), L = 100mm	*100%*
2.10.3.8	(3) DN315 Stub Flange with Backing Slip-On Flange (HDE steel), L = 100mm	*100%*
2.10.3.14	Item 5 - Stub Flange with Backing Slip-On Flange (HDE steel), L = 100mm	*100%*
2.10.3.2	(1) HDPE / DN280 / PN10 / SDR17 (RISING MAIN)	*100%*

BOQ Item no	Description of Goods	Stipulated minimum threshold
2.10.8.2	(1) HDPE / DN280 / PN10 / SDR17 (RISING MAIN)	*100%*
2.10.3.3	(2) HDPE / DN315 / PN10 / SDR 17 (SLUDGE DISCHARGE LINE)	*100%*
2.10.8.3	(2) HDPE / DN315 / PN10 / SDR 17 (SLUDGE DISCHARGE LINE)	*100%*
2.10.20.2	(1) Sludge Discharge Line (DN 315, HDPE, Length = 11 m, Min. Cover to Pipe Under Roadway 1 m)	*100%*
2.10.20.4	(1) Sludge Discharge Line (DN 315, HDPE, Length = 11 m, Min. Cover to Pipe Under Roadway 1 m)	*100%*
2.10.20.8	(1) Sludge Discharge Line (DN 315, HDPE, Length = 11 m, Min. Cover to Pipe Under Roadway 1 m)	*100%*
2.10.20.6	(3) Rising Main (DN 280, HDPE, Length = 11m, Min. Cover to Pipe Under Roadway 1 m)	*100%*
2.10.20.10	(3) Rising Main (DN 280, HDPE, Length = 11m, Min. Cover to Pipe Under Roadway 1 m)	*100%*
2.10.3.5	(1) Seamless 45 degree bend, HDPE / DN280 (Rising Main)	*100%*
2.10.8.8	(1.1) Seamless 45 degree bend, HDPE / DN280	
2.10.3.6	(2) Seamless 45 degree bend, HDPE / DN315 (Sludge Discharge)	*100%*
2.10.8.16	(2.1) Seamless 45 degree bend, HDPE / DN315	
2.10.8.9	(1.2) Seamless 90 degree bend, HDPE / DN280	*100%*
2.10.8.17	(2.2) Seamless 90 degree bend, HDPE / DN315	*100%*
2.10.8.19	Item 1 - Rodding Eyes on Sludge Discharge Line	*100%*
	Polyvinyl chloride PVC pipes and fittings	
2.8.7.3	(1.1) 110NB uPVC (Class 25) Ducts to be infilled with "Sika Boom Expanding Polyurethane Foam" or similar approved.	*100%*
2.12.6.3	(1.1) 110mm diam uPVC (Class 25) Ducts to be infilled with "Sika Boom Expanding Polyurethane Foam" or similar approved.	*100%*
2.10.8.4	(2) DN250 PVC (Class 6) Clarifier Overflow pipe	*100%*
2.10.8.27	Common overflow line from Lime Clarifiers to Open Culvert – PVCu / DN 250 / Class 6	*100%*
2.10.20.5	(2) Clarifier Overflow Pipeline (DN 250, PVCu, Length = 11m, Min. Cover to Pipe Under Roadway 1 m)	*100%*
2.10.20.9	(2) Clarifier Overflow Pipeline DN 250, PVCu, Length = 11m, Min. Cover to Pipe Under Roadway 1 m)	*100%*
2.10.8.5	(3) DN125 PVC (Class 6) Clarifier Overflow pipe	*100%*
2.10.8.26	Lime Clarifier 1, 2 and 3 to common overflow line – PVCu / DN 125 / Class 6	*100%*
2.10.14.3	Morning Glory Spillway to Lime Clarifier 1, 2 and 3 – PVCu / DN 125 / Class 6	*100%*
2.10.17.13	Lime Reactor to Morning Glory Spillway – PVCu / DN 200 / Class 6	*100%*
2.10.8.21	(3.1) DN250 45 degree Bend PVC, (Class 6)	*100%*
2.10.8.22	(3.2) DN250 90 degree Bend PVC, (Class 6)	*100%*
2.10.8.24	(3.4) Concentric Reducer 160x125 B	*100%*
2.10.8.25	(3.5) Concentric Reducer 250x160 L	*100%*
2.10.11.2	(1) DN200 PVC 45 degree bend	*100%*
2.10.11.3	(2) DN200 PVC 22.5 degree bend	*100%*
2.10.11.5	Item 1 - Rodding Eyes on Sludge Discharge Line	*100%*
2.10.11.6	(3) Lime Clarifier 1, 2 and 3 to Sludge Chamber - PVCu / DN 200 / Class 6	*100%*

BOQ Item no	Description of Goods	Stipulated minimum threshold
2.10.14.2	(2) DN160 PVC 22.5 degree bend	*100%*
2.10.17.2	(1) DN315 PVC 22.5 degree bend	*100%*
	Steel Conveyance Pipes	
	Steel Conveyance Pipes – Galvanized	
2.6.4.7	f) Item 6 - Steel spool piece, flanged one end DN700, L = 4.0m	*100%*
	Steel pipe fittings and specials – Lined and Coated	
2.2.6.4	Item 2 - Concentric Reducer, L = 200mm	*80%*
2.2.6.7	DN250 - Item 5 - Equal Tee to SANS 719, Flanged all Ends	*80%*
2.2.6.8	DN250 - Item 6 - Flanged Steel 90 Degree Elbow Long Radius - AN-SI (ASA) B16.9	*80%*
2.2.6.10	DN250 - Item 8- Flange Adaptor	*80%*
2.2.6.15	DN400 to DN250 Item 13 - Concentric Reducer to SANS 719, Flanged Both Ends, L = 280mm	*80%*
2.2.6.16	DN400 - Item 14 - Equal Tee to SANS 719, Flanged all Ends	*80%*
2.2.6.19	DN400 - Item 17 - Flange Adaptor	*80%*
2.2.6.21	Item 19 - Mechanical Viking Johnson Type Coupling to connect with existing DN400 PVC pipe	*80%*
2.3.6.3	Item 8 - Pipe Spool L = 622mm, Flanged One End, Plain Ended Oth-er with Concentric Reducer to SANS 719 (300 to 350mm), Puddle Flange at L = 622mm from flanged end	*80%*
2.3.6.4	Item 9 - Pipe Spool L = 615mm , Flanged One End, Plain Ended Other with Concentric Reducer to SANS 719 (200 to 125mm), Puddle Flange at L = 442mm from flanged end	*80%*
2.4.6.3	Item 9 - Pipe Spool L = 615mm , Flanged One End, Plain Ended Other with Concentric Reducer to SANS 719 (200 to 125mm), Puddle Flange at L = 442mm from flanged end	*80%*
2.4.6.4	Item 16 - Pipe Spool L = 807mm , Flanged One End, Plain Ended Other with Concentric Reducer to SANS 719 (200 to 125mm), Puddle Flange at L = 634mm from flanged end	*80%*
2.5.6.3	Item 1 - Concentric Reducer 250 to 160mm, with puddle flange and DN160 spool piece	*80%*
2.5.6.4	Item 2 - DN160 Long Radius Elbow, FBE, ANSI (ASA) B16.9	*80%*
2.5.6.5	Item 3 - Steel to uPVC SG Iron Flange Adaptor, DN160	*80%*
2.6.4.2	a) Item 1 - Steel to uPVC flange adapter (DN160)	*80%*
2.6.4.3	b) Item 2 - Flanged steel medium 7° radius bend (DN160)	*80%*
2.6.4.5	d) Item 4 - 90° steel bend long radius (DN160)	*80%*
2.6.4.6	e) Item 5 - Concentric reducer (DN160 to DN700)	*80%*
2.6.4.9	h) Item 8 - Viking Johnson type coupling (DN200)	*80%*
2.6.4.12	b) Item 10 - Flanged steel medium 7° radius bend (DN160)	*80%*
2.6.4.14	d) Item 12 - Steel to UPVC Flange Adaptor (DN200)	*80%*
2.7.6.3	Item 4 - Steel to uPVC SG Iron Flange Adaptor	*80%*
2.7.6.5	Item 6 - Equal Tee to SANS 719, Flanged all Ends	*80%*
2.7.6.6	Item 7 - Flanged Steel 90 Degree Elbow Long Radius - ANSI (ASA) B16.9, Spool piece 100mm long welded to plain end	*80%*
2.7.6.8	Item 9 - Flange Adaptor	*80%*
2.7.6.10	Item 11 - Pipe special, equal tee to SANS 719 plain ended two ends with spool pieces welded to each end	*80%*
2.7.6.11	Item 13 - Flanged Steel Both Ends 90 Degree Elbow Long Radius -	*80%*

BOQ Item no	Description of Goods	Stipulated minimum threshold
	ANSI (ASA) B16.9	
2.7.6.14	Item 16 - Standard 45 Degree Lateral, SANS 719, Flanged all Ends, Including Blank Flange Added to Lateral End	*80%*
2.7.6.21	Item 23 - Eccentric Reducer, DN350 to DN300, with puddle flange and spool piece L = 777 mm Flanged	*80%*
2.7.6.23	Item 26 - Equal Tee to SANS 719, Flanged, Spool piece 200 mm long welded to plain end	*80%*
2.10.3.11	Item 2 - DN300 ASME B16.9, Long Radius Elbow, Flanged Both Ends	*80%*
2.10.8.10	(1.3) Flanged Steel 90 Degree Elbow Long Radius - ANSI (ASA) B16.9	*80%*
2.10.8.13	(1.6) Flange Adaptor	*80%*
2.10.8.23	(3.3) D250 SG Iron Equal Tees	*80%*
2.10.17.3	(2) Item 17 - Flanged Steel 90 Degree Elbow Long Radius - ANSI (ASA) B16.9	*80%*
2.10.17.6	(5) Item 20 - Concentric Reducer, SANS 719, L = 180mm	*80%*
2.10.17.7	(6) Item 21 - Equal Tee to SANS 719, Flanged all ends	*80%*
2.10.17.8	(7) Item 22 - Flanged Steel 90 Degree Elbow Long Radius - ANSI (ASA) B16.9	*80%*
2.10.17.12	(11) Item 26 - Steel to uPVC SG Iron Flange Adaptor	*80%*
2.10.19.2	(1) Item 10 - Flanged Steel 45 Degree Elbow Long Radius - ANSI (ASA) B16.9	*80%*
2.10.19.6	(5) Item 14 - Flange Adaptor	*80%*
3.5.1.4	Suction Piping Manifold including supports	*80%*
3.5.1.5	Discharge Piping Manifold including supports	*80%*
3.5.2.1	DN300 - Blank Flange - Suction	*80%*
3.5.2.2	DN250 - Blank Flange - Suction	*80%*

3. Does any portion of the goods or services offered have any imported content?
(*Tick applicable box*)

YES		NO	

3.1 If yes, the rate(s) of exchange to be used in this bid to calculate the local content as prescribed in paragraph 1.5 of the general conditions must be the rate(s) published by SARB for the specific currency on the date of advertisement of the bid.

The relevant rates of exchange information are accessible on www.reservebank.co.za

Indicate the rate(s) of exchange against the appropriate currency in the table below (refer to Annex A of SATS 1286:2011):

Currency	**Rates of exchange**
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

NB: Bidders must submit proof of the SARB rate (s) of exchange used.

4. Where, after the award of a bid, challenges are experienced in meeting the stipulated minimum threshold for local content the dti must be informed accordingly in order for the dti to verify and in consultation with the Accounting Officer / Accounting Authority (AO/AA) provide directives in this regard.

LOCAL CONTENT DECLARATION
(REFER TO ANNEX B OF SATS 1286:2011)

LOCAL CONTENT DECLARATION BY CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (CLOSE CORPORATION, PARTNERSHIP OR INDIVIDUAL)

IN RESPECT OF BID NO. .....

ISSUED BY: (Procurement Authority / Name of Institution):
.....

NB

1 The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.

2 Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on http://www.thedti.gov.za/industrial development/ip.jsp. Bidders should first complete Declaration D. After completing Declaration D, bidders should complete Declaration E and then consolidate the information on Declaration C. **Declaration C should be submitted with the bid documentation at the closing date and time of the bid in order to substantiate the declaration made in paragraph (c) below.** Declarations D and E should be kept by the bidders for verification purposes for a period of at least 5 years. The successful bidder is required to continuously update Declarations C, D and E with the actual values for the duration of the contract.

I, the undersigned, ... (full names),
do hereby declare, in my capacity as ....
of .....(name of bidder entity), the following:

(a) The facts contained herein are within my own personal knowledge.

(b) I have satisfied myself that:

(i) the goods/services/works to be delivered in terms of the above-specified bid comply with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286:2011;

(c) The local content percentage (%) indicated below has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 3.1 above and the information contained in Declaration D and E which has been consolidated in Declaration C;

Bid price, excluding VAT (y)	R
Imported content (x), as calculated in terms of SATS 1286:2011	R
Stipulated minimum threshold for local content (paragraph 3 above)	
Local content %, as calculated in terms of SATS 1286:2011	

If the bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above. The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E.

(d) I accept that the Procurement Authority / Institution has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011.

(e) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Institution imposing any or all of the remedies as provided for in Regulation 14 of the Preferential Procurement Regulations, 2017 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

SIGNATURE: _____ **DATE:** _____

WITNESS No. 1 _____ **DATE:** _____

WITNESS No. 2 _____ **DATE:** _____

SATS 1286.2011

Annex C.1

Local Content Declaration - Summary Schedule

(C1) **Tender No.**
(C2) **Tender description:**
(C3) **Designated product(s)**
(C4) **Tender Authority:**
(C5) **Tendering Entity name:**
(C6) **Tender Exchange Rate:** USD EU GBP
(C7) **Specified local content %**

Note: VAT to be excluded from all calculations

			Calculation of local content						Tender summary			
Tender item no's	List of items		Tender price - each (excl VAT)	Exempted imported value	Tender value net of exempted imported content	Imported value	Local value	Local content % (per item)	Tender Qty	Total tender value	Total exempted imported content	Total Imported content
(C8)	(C9)		(C10)	(C11)	(C12)	(C13)	(C14)	(C15)	(C16)	(C17)	(C18)	(C19)
	Steel Products and Components of Construction											
	Steel Value-add products											
2.12.6.22	Installation of Vehicular Access Gate								1no			
2.12.6.23	Installation of Gate for Pedestrian Access								1no			
	Access Ladders											
2.2.4.12	Ladders, Complete and Installed								2no			
2.3.4.28	Ladders, Complete and Installed								1no			
2.4.4.28	Ladders, Complete and Installed								9no			
2.7.4.12	Ladders, Complete and Installed								3no			
	Open Grid Floors											
2.2.4.14	a) Open grid floors - Chamber (Rectagrid 40 x 4.5 bearer bars)								13.2m2			
2.2.4.15	b) Open grid floors - Sump Cover (Rectagrid 40 x 4.5 bearer bars)								0.09m2			
2.3.4.31	1) Rectagrid RS80, 40 x 3								11m2			
2.3.4.32	2) Rectagrid RS40, 30 x 4.5 stair treads								2.57m2			
2.4.4.31	1) Rectagrid RS80, 40 x 4.5								20.02m2			
2.4.4.32	2) Rectagrid RS40, 30 x 4.5 stair treads								5.15m2			
2.5.4.23	1) Rectagrid RS80, 40 x 4.5								2.88m2			
2.5.4.24	2) Rectagrid RS40, 30 x 4.5 stair treads								3.86m2			
2.6.3.11	1) Rectagrid RS80, 40 x 4.5								2.88m2			
2.7.4.14	a) Open grid floors - Chamber								19.6m2			
2.7.4.15	b) Open grid floors - Sump Cover								0.18m2			
	Bolts											
2.2.4.11	Erection Bolts								0.005ton			
2.3.4.22	(1) M16 HILTI Concrete Anchors								9no			
2.4.4.22	(1) M16 HILTI Concrete Anchors								18no			
2.5.4.15	(1) M16 HILTI Concrete Anchors								18no			
2.7.4.11	Erection Bolts								0.005ton			
3.2.1.5	3 kW Agitator - Mounting Plate Holding Down Bolts								4no			
3.3.1.5	0.75 kW - Agitator Mounting Plate Holding Down Bolts (min 4 per Base Plate)								9no			
	Handrails											
2.3.4.25	1) Horizontal								22.6m			
2.3.4.26	2) Sloping (measured on slope)								8.96m			
2.4.4.25	1) Horizontal								77.82m			
2.4.4.26	2) Sloping (measured on slope)								17.92m			
2.5.4.18	1) Horizontal								17.7m			
2.5.4.19	2) Sloping (measured on slope)								18m			
	Plates and Sheets											
2.8.4.11	VASTRAP ® flooring, 6.0mm thick								2.41m2			
2.12.4.11	VASTRAP ® flooring, 6.0mm thick								10.15m2			
2.8.6.2	(1) 0.6mm Thick heavy industrial profile roof sheets in cut lengths complete with FBE colour traffic green E.07 fixed to 76x50 purlins at 1200mm c/c max. on pre-fabricated engineered timber trusses at 1200mm c/c max designed in accordance with SANS 10163								48.5m2			
2.8.6.4	(1) 0.8mm Thick standard sidewall flashing FK9 and counter flashing FK7 all with colour middle blue F.07								11.55m			
2.8.6.5	(2) 0.8mm Thick standard ridge capping FK3 with finish in colour middle blue F.07								8.40m			
2.8.6.6	(3) 125x100mm Ogee profile guttering in chromadek finish colour middle blue F.07 gutter secured to trough with 6mm verandah bolts at 203mm centres and to crown of sheets with gutter clips pop-rivetted at 800mm centres max.								16.80m			
2.8.6.7	(4) 100x75mm Rectangular downpipes in chromadek finish colour middle blue F.07								6.14m			
2.8.8.8	(1) Standard 1.2mm Mild Steel Transformer Door and Jamb combination type DV as per Duro Cat with full louvres (2mm steel plate riveted to inside face of louvres)								1no			
2.8.8.9	(2) Standard 2032 x 813mm Meranti F/L Batten Door with Open Back								1no			
2.12.6.14	(2) Standard 2032 x 813mm Meranti F/L Batten Door with Open Back								3no			
2.8.8.11	(1) Standard SS31 Window Centre Pivot as per Duro pressing Cat, and complete with catch opener & type B2 burglar bars								2no			
2.12.6.16	(1) Standard SS31 Window Centre Pivot as per Duro pressing Cat, and complete with catch opener & type B2 burglar bars								3no			
3.1.1.1	150 m³ Lime Storage Silo (complete with fluidization equipment, Level Indicator, load cells, level switches, etc.).								1no			
3.6.2	Design, Fabricate, Supply, Deliver and Store Ventilation System Ducting								1no			
3.6.1.2	Scraper Bridge (complete with walkways)								3no			
3.6.1.5	Scum Box (complete with valve)								3no			
3.6.1.7	Baffle Plates								6no			
4.1.1	Motor Control Centre (MCC) panel								1no			
4.6.1	High Mast Lighting								2no			
4.2.2.8	Heavy Duty Cable Ladder or racking								sum			
	Primary Steel Products											
	Steel reinforcement bars with nominal size of 25mm											
2.2.3.20	Foundations								0.45ton			
2.2.3.21	Walls								0.93ton			
2.2.3.22	Plinths								0.02ton			
2.3.3.15	(1) Floor Slab Foundations								0.65ton			
2.3.3.16	(2) Walls								1.82ton			
2.3.3.17	(3) Stairway and Platform Plinth								0.06ton			
2.4.3.21	(1) Floor Slab Foundations								2.35ton			
2.4.3.22	(2) Walls of Lime Reactor								5.27ton			
2.4.3.23	(3) Roof of Lime Reactor								1.27ton			
2.4.3.24	(4) Stairway and Platform Plinth								0.06ton			
2.5.3.18	(1) Floor Slab								0.31ton			
2.5.3.19	(2) Walls								0.47ton			
2.5.3.20	(3) Roof at Discharge Point								0.04ton			
2.5.3.21	(4) Stairway and Platform Plinth								0.01ton			
2.6.2.19	(1) Floor Slab								21.6ton			
2.6.2.20	(2) Walls of Lime Clarifier								26.89ton			
2.6.2.21	(3) Launder								7.29ton			
2.6.2.22	(4) Overflow Chamber								0.46ton			
2.6.2.23	(5) Sludge Extraction Sump								8.31ton			
2.7.3.20	Foundations								0.74ton			
2.7.3.21	Walls								2.26ton			
2.7.3.22	Plinths								0.02ton			
2.8.3.9	Strip Footing Foundations								0.63ton			
2.9.3.8	(1) Floor Slab Foundation								4ton			
2.12.3.12	Strip Footing Foundations								0.89ton			
2.12.3.13	Concrete Floor Slabs								1.06ton			
2.12.3.14	Roof Slab								1.86ton			
	Structural steel											
2.2.4.3	Rolled Angle - 60x60x6L								0.07ton			
2.2.4.7	Rolled Angle - 50x50x5L with 25x5 Thk. Flat lugs								0.08ton			
2.3.4.14	Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs								0.11ton			
2.3.4.15	Rolled Angle - 60x60x6L								0.13ton			
2.3.4.5	Parallel Flange Channel - 180x70PFC								0.28ton			
2.3.4.6	Base Plate - 220x220x12mm								0.01ton			
2.4.4.3	Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs								0.29ton			
2.4.4.4	Rolled Angle - 60x60x6L								0.26ton			
2.4.4.5	Parallel Flange Channel - 180x70PFC								0.57ton			
2.4.4.6	Base Plate - 220x220x12mm								0.02ton			
2.5.4.3	Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs								0.05ton			
2.5.4.4	Parallel Flange Channel - 180x70PFC								0.38ton			
2.6.3.3	Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs								0.04ton			
2.7.4.3	Rolled Angle - 60x60x6L								0.09ton			
2.7.4.4	Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs								0.11ton			
2.8.4.3	(1) Angle Frame (50x50x6mm L Iron, including R8 lugs and 6x6mm Square Bar)								0.09ton			
2.12.4.3	(1) Angle Frame (50x50x6mm L Iron, including R8 lugs and 6x6mm Square Bar)								0.16ton			
2.12.3.15	High-Tensile Welded Mesh:								6m2			

Signature of tenderer from Annex B

Date:

(C20) Total tender value	
(C21) Total Exempt imported content	
(C22) Total Tender value net of exempt imported content	
(C23) Total Imported content	
(C24) Total local content	
(C25) Average local content % of tender	

SATS 1286.2011

Annex C.2

Local Content Declaration - Summary Schedule

(C1)	Tender No.
(C2)	Tender description:
(C3)	Designated product(s)
(C4)	Tender Authority:
(C5)	Tendering Entity name:
(C6)	Tender Exchange Rate: USD EU GBP
(C7)	Specified local content %

Note: VAT to be excluded from all calculations

Tender item no's	List of items	Calculation of local content: Tender price - each (excl VAT)	Exempted imported value	Tender value net of exempted imported content	Imported value	Local value	Local content % (per item)	Tender summary: Tender Qty	Total tender value	Total exempted imported content	Total Imported content
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)	(C16)	(C17)	(C18)	(C19)
	Transformers and Shunt Reactors:										
4.2.2.1	Transformers - 800kVA 11kV/6.6kV/400V							1no			
	Air Insulated MV Switchgear										
4.2.2.5	Medium Voltage Switching Panel							1no			
	Electrical Cable Products										
	Power Cables – Cables used for power transmission										
4.2.2.6	11kV 3core XLPE 185 mm2 (Cu/XLPE/SWA/PVC) cable							375m			
4.2.2.7	11kV 3core XLPE 185 mm2 (Cu/XLPE/SWA/PVC) cable (internal cabling)							20m			
4.3.9	4C x 120mm² Cu/PVC/SWA/PVC							270m			
4.3.10	1C x 120mm² BCEW							270m			
4.4.1.1	"Power cable" 4mm² x 4c PVC/SWA/PVC Red stripe Cable"							50m			
4.4.2.1	"Power cable" 4mm² x 4c PVC/SWA/PVC Red stripe Cable"							50m			
4.4.1.2	4mm² x 1c BCEW							50m			
4.4.2.2	4mm² x 1c BCEW							50m			
4.4.1.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"							50m			
4.4.2.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"							50m			
4.4.3.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"							110m			
4.4.4.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"							130m			
4.4.5.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"							160m			
4.4.6.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"							100m			
4.4.8.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"							100m			
4.4.9.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"							100m			
4.4.10.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"							100m			
4.4.11.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"							100m			
4.4.12.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"							100m			
4.4.13.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"							100m			
4.4.14.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"							100m			
4.4.15.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"							100m			
4.4.16.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"							100m			
4.4.17.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"							100m			
4.4.18.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"							100m			
4.4.19.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"							100m			
4.4.20.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"							100m			
4.4.21.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"							100m			
4.4.22.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"							100m			
4.4.23.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"							100m			
4.4.24.3	"Control Cable" 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable"							100m			
4.4.3.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"							110m			
4.4.4.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"							130m			
4.4.5.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"							160m			
4.4.6.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"							100m			
4.4.8.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"							100m			
4.4.9.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"							100m			
4.4.10.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"							100m			
4.4.11.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"							100m			
4.4.12.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"							100m			
4.4.14.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"							100m			
4.4.15.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"							100m			
4.4.16.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"							100m			
4.4.17.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"							100m			
4.4.18.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"							100m			
4.4.19.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"							100m			
4.4.20.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"							100m			
4.4.21.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"							100m			
4.4.22.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"							100m			
4.4.23.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"							100m			
4.4.24.1	"Power cable" 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable"							100m			
4.4.3.2	2.5 mm² x 1c BCEW							110m			
4.4.4.2	2.5 mm² x 1c BCEW							130m			
4.4.5.2	2.5 mm² x 1c BCEW							160m			
4.4.6.2	2.5 mm² x 1c BCEW							100m			
4.4.8.2	2.5 mm² x 1c BCEW							100m			
4.4.9.2	2.5 mm² x 1c BCEW							100m			
4.4.10.2	2.5 mm² x 1c BCEW							100m			
4.4.11.2	2.5 mm² x 1c BCEW							100m			
4.4.12.2	2.5 mm² x 1c BCEW							100m			
4.4.13.2	2.5 mm² x 1c BCEW							100m			
4.4.14.2	2.5 mm² x 1c BCEW							100m			
4.4.15.2	2.5 mm² x 1c BCEW							100m			
4.4.16.2	2.5 mm² x 1c BCEW							100m			
4.4.17.2	2.5 mm² x 1c BCEW							100m			
4.4.18.2	2.5 mm² x 1c BCEW							100m			
4.4.19.2	2.5 mm² x 1c BCEW							100m			
4.4.20.2	2.5 mm² x 1c BCEW							100m			
4.4.21.2	2.5 mm² x 1c BCEW							100m			
4.4.22.2	2.5 mm² x 1c BCEW							100m			
4.4.23.2	2.5 mm² x 1c BCEW							100m			
4.4.24.2	2.5 mm² x 1c BCEW							100m			
4.6.2	4c x 10mm² PVC/SWA/PVC Red stripe cable							260m			
	Telecom Cables – cables used for telecommunications										
5.3.1.1	3 core, 2.5 mm² (220 Vac)							100m			
5.3.1.4	7 core, 1.5 mm²							120m			
4.3.2.1	12 core Single Mode Fibre Cable							300m			
4.3.2.4	7 core, 1.5 mm²							120m			
5.3.3.1	1 pair, 1 mm²							250m			
5.3.3.4	4 pair, 1 mm²							85m			
5.3.3.8	24 pair, 1 mm²							300m			
	Pump, Medium Voltage (MV) Motors and Associated Accessories										
	Pumps										
3.4.1.1	Centrifugal Pumps							3no			
3.1.2.10	Lime Dosing Pumps (Complete with Motor, Gearbox, Couplings and Baseplate)							4no			
	Valves Products and Actuators										
2.2.6.9	DN250 - Item 7 - Knife Gate Valve (Non-Rising Stem), PN10							3no			
2.2.6.18	DN400 - Item 16 - Knife Gate Valve (Non-Rising Stem), PN10							1no			
2.7.6.7	DN200 - Item 8 - Knife Gate Valve (Non-Rising Stem), PN10							13no			
2.10.8.14	(1.7) Knife Gate Valve (Non-Rising Stem)							1no			
2.10.19.7	DN125 - (6) Item 15 - Knife Gate Valve (Non-Rising Stem)							6no			
3.1.1.3	Silo Discharge Isolating Valve (Knife gate)							1no			
3.1.1.11	Lime Dosing Pipework and Valves							10no			
3.5.1.1	DN300 Knife Gate Valves – Suction, PN10							3no			
3.5.1.2	DN250 Knife Gate Valves - Discharge							3no			
3.5.1.3	DN250 Non-Return Valves							3no			
3.2.1.7	Penstock/Sluice gate for a 1200x800 opening with a rising spindle of L=4200mm							3no			
3.3.1.7	Penstock/Sluice gate for a 350x400 opening with a rising spindle of L=4200mm							6no			

(C20) Total tender value

(C21) Total Exempt imported content

(C22) Total Tender value net of exempt imported content

(C23) Total Imported content

(C24) Total local content

(C25) Average local content % of tender

Signature of tenderer from Annex B

Date:

SATS 1286.2011

Annex C.3

Local Content Declaration - Summary Schedule

(C1) **Tender No.**
(C2) **Tender description:**
(C3) **Designated product(s)**
(C4) **Tender Authority:**
(C5) **Tendering Entity name:**
(C6) **Tender Exchange Rate:** USD EU GBP
(C7) **Specified local content %**

Note: VAT to be excluded from all calculations

		Calculation of local content						Tender summary			
Tender item no's	List of items	Tender price - each (excl VAT)	Exempted imported value	Tender value net of exempted imported content	Imported value	Local value	Local content % (per item)	Tender Qty	Total tender value	Total exempted imported content	Total Imported content
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)	(C16)	(C17)	(C18)	(C19)
	Plastic Conveyance Pipes										
	High density polyethylene (HDPE) pipes and fittings										
2.2.6.4	DN280-DN250 Item 2 - Concentric Reducer, L = 200mm							1no			
2.2.6.5	DN250 Item 3 - Stub Flange with Backing Slip-On Flange (HDE steel), L = 100mm							1no			
2.10.3.7	DN280 Item 3 - Stub Flange with Backing Slip-On Flange (HDE steel), L = 100mm							1no			
2.7.6.22	DN315 Item 24 - Stub Flange with Backing Slip-On Flange (HDE steel), L = 100mm							1no			
2.10.3.8	(3) DN315 Stub Flange with Backing Slip-On Flange (HDE steel), L = 100mm							1no			
2.10.3.14	Item 5 - Stub Flange with Backing Slip-On Flange (HDE steel), L = 100mm							1no			
2.10.3.2	(1) HDPE / DN280 / PN10 / SDR17 (RISING MAIN)							126.7m			
2.10.8.2	(1) HDPE / DN280 / PN10 / SDR17 (RISING MAIN)							163.25m			
2.10.3.3	(2) HDPE / DN315 / PN10 / SDR 17 (SLUDGE DISCHARGE LINE)							178.46m			
2.10.8.3	(2) HDPE / DN315 / PN10 / SDR 17 (SLUDGE DISCHARGE LINE)							107.35m			
2.10.20.2	(1) Sludge Discharge Line (DN 315, HDPE, Length = 11 m, Min. Cover to Pipe Under Roadway 1 m)							1no			
2.10.20.4	(1) Sludge Discharge Line (DN 315, HDPE, Length = 11 m, Min. Cover to Pipe Under Roadway 1 m)							1no			
2.10.20.8	(1) Sludge Discharge Line (DN 315, HDPE, Length = 11 m, Min. Cover to Pipe Under Roadway 1 m)							1no			
2.10.20.6	(3) Rising Main (DN 280, HDPE, Length = 11m, Min. Cover to Pipe Under Roadway 1 m)							1no			
2.10.20.10	(3) Rising Main (DN 280, HDPE, Length = 11m, Min. Cover to Pipe Under Roadway 1 m)							1no			
2.10.3.5	(1) Seamless 45 degree bend, HDPE / DN280 (Rising Main)							2no			
2.10.8.8	(1.1) Seamless 45 degree bend, HDPE / DN280							2no			
2.10.3.6	(2) Seamless 45 degree bend, HDPE / DN315 (Sludge Discharge)							2no			
2.10.8.16	(2.1) Seamless 45 degree bend, HDPE / DN315							3no			
2.10.8.9	(1.2) Seamless 90 degree bend, HDPE / DN280							2no			
2.10.8.17	(2.2) Seamless 90 degree bend, HDPE / DN315							2no			
2.10.8.19	Item 1 - Rodding Eyes on Sludge Discharge Line							2no			
	Polyvinyl chloride PVC pipes and fittings										
2.8.7.3	(1.1) 110NB uPVC (Class 25) Ducts to be infilled with "Sika Boom Expanding Polyurethane Foam" or similar approved.							2no			
2.12.6.3	(1.1) 110mm diam uPVC (Class 25) Ducts to be infilled with "Sika Boom Expanding Polyurethane Foam" or similar approved.							6no			
2.10.8.4	(2) DN250 PVC (Class 6) Clarifier Overflow pipe							80.25m			
2.10.8.27	Common overflow line from Lime Clarifiers to Open Culvert – PVCu / DN 250 / Class 6							186m			
2.10.20.5	(2) Clarifier Overflow Pipeline (DN 250, PVCu, Length = 11m, Min. Cover to Pipe Under Roadway 1 m)							1no			
2.10.20.9	(2) Clarifier Overflow Pipeline DN 250, PVCu, Length = 11m, Min. Cover to Pipe Under Roadway 1 m)							1no			
2.10.8.5	(3) DN125 PVC (Class 6) Clarifier Overflow pipe							45.83m			
2.10.8.26	Lime Clarifier 1, 2 and 3 to common overflow line – PVCu / DN 125 / Class 6							90m			
2.10.14.3	Morning Glory Spillway to Lime Clarifier 1, 2 and 3 – PVCu / DN 125 / Class 6							96m			
2.10.8.21	(3.1) DN250 45 degree Bend PVC, (Class 6)							5no			
2.10.8.22	(3.2) DN250 90 degree Bend PVC, (Class 6)							3no			
2.10.8.24	(3.4) Concentric Reducer 160x125 B							3no			
2.10.8.25	(3.5) Concentric Reducer 250x160 L							3no			
2.10.11.2	(1) DN200 PVC 45 degree bend							3no			
2.10.11.3	(2) DN200 PVC 22.5 degree bend							6no			
2.10.11.5	Item 1 - Rodding Eyes on Sludge Discharge Line							9no			
2.10.11.6	(3) Lime Clarifier 1, 2 and 3 to Sludge Chamber - PVCu / DN 200 / Class 6							210m			
2.10.17.13	Lime Reactor to Morning Glory Spillway – PVCu / DN 200 / Class 6							51m			
2.10.14.2	(2) DN160 PVC 22.5 degree bend							6no			
2.10.17.2	(1) DN315 PVC 22.5 degree bend							2no			
	Steel Conveyance Pipes										
	Steel Conveyance Pipes – Galvanized										
2.6.4.7	f) Item 6 - Steel spool piece, flanged one end DN700, L = 4.0m							4m			
	Steel pipe fittings and specials – Lined and Coated										
2.2.6.4	Item 2 - Concentric Reducer, L = 200mm							1no			
2.2.6.7	DN250 - Item 5 - Equal Tee to SANS 719, Flanged all Ends							2no			
2.2.6.8	DN250 - Item 6 - Flanged Steel 90 Degree Elbow Long Radius - ANSI (ASA) B16.9							2no			
2.2.6.10	DN250 - Item 8- Flange Adaptor							3no			
2.2.6.15	DN400 to DN250 Item 13 - Concentric Reducer to SANS 719, Flanged Both Ends, L = 280mm							1no			
2.2.6.16	DN400 - Item 14 - Equal Tee to SANS 719, Flanged all Ends							1no			
2.2.6.19	DN400 - Item 17 - Flange Adaptor							1no			
2.2.6.21	Item 19 - Mechanical Viking Johnson Type Coupling to connect with existing DN400 PVC pipe							2no			
2.3.6.3	Item 8 - Pipe Spool L = 622mm, Flanged One End, Plain Ended Other with Concentric Reducer to SANS 719 (300 to 350mm), Puddle Flange at L = 622mm from flanged end							1no			
2.3.6.4	Item 9 - Pipe Spool L = 615mm , Flanged One End, Plain Ended Other with Concentric Reducer to SANS 719 (200 to 125mm), Puddle Flange at L = 442mm from flanged end							3no			
2.4.6.3	Item 9 - Pipe Spool L = 615mm , Flanged One End, Plain Ended Other with Concentric Reducer to SANS 719 (200 to 125mm), Puddle Flange at L = 442mm from flanged end							3no			
2.4.6.4	Item 16 - Pipe Spool L = 807mm , Flanged One End, Plain Ended Other with Concentric Reducer to SANS 719 (200 to 125mm), Puddle Flange at L = 634mm from flanged end							3no			
2.5.6.3	Item 1 - Concentric Reducer 250 to 160mm, with puddle flange and DN160 spool piece							3no			
2.5.6.4	Item 2 - DN160 Long Radius Elbow, FBE, ANSI (ASA) B16.9							3no			
2.5.6.5	Item 3 - Steel to uPVC SG Iron Flange Adaptor, DN160							3no			
2.6.4.2	a) Item 1 - Steel to uPVC flange adapter (DN160)							3no			
2.6.4.3	b) Item 2 - Flanged steel medium 7° radius bend (DN160)							3no			
2.6.4.5	d) Item 4 - 90° steel bend long radius (DN160)							3no			
2.6.4.6	e) Item 5 - Concentric reducer (DN160 to DN700)							3no			
2.6.4.9	h) Item 8 - Viking Johnson type coupling (DN200)							3no			
2.6.4.12	b) Item 10 - Flanged steel medium 7° radius bend (DN160)							3no			
2.6.4.14	d) Item 12 - Steel to UPVC Flange Adaptor (DN200)							3no			
2.7.6.3	Item 4 - Steel to uPVC SG Iron Flange Adaptor							3no			
2.7.6.5	Item 6 - Equal Tee to SANS 719, Flanged all Ends							4no			
2.7.6.6	Item 7 - Flanged Steel 90 Degree Elbow Long Radius - ANSI (ASA) B16.9, Spool piece 100mm long welded to plain end							1no			
2.7.6.8	Item 9 - Flange Adaptor							10no			
2.7.6.10	Item 11 - Pipe special, equal tee to SANS 719 plain ended two ends with spool pieces welded to each end							1no			
2.7.6.11	Item 13 - Flanged Steel Both Ends 90 Degree Elbow Long Radius - ANSI (ASA) B16.9							1no			
2.7.6.14	Item 16 - Standard 45 Degree Lateral, SANS 719, Flanged all Ends, Including Blank Flange Added to Lateral End							4no			
2.7.6.21	Item 23 - Eccentric Reducer, DN350 to DN300, with puddle flange and spool piece L = 777 mm Flanged							1no			
2.7.6.23	Item 26 - Equal Tee to SANS 719, Flanged, Spool piece 200 mm long welded to plain end							2no			
2.10.3.11	Item 2 - DN300 ASME B16.9, Long Radius Elbow, Flanged Both Ends							4no			
2.10.8.10	(1.3) Flanged Steel 90 Degree Elbow Long Radius - ANSI (ASA) B16.9							2no			
2.10.8.13	(1.6) Flange Adaptor							1no			
2.10.8.23	(3.3) D250 SG Iron Equal Tees							3no			
2.10.17.3	(2) Item 17 - Flanged Steel 90 Degree Elbow Long Radius - ANSI (ASA) B16.9							3no			
2.10.17.6	(5) Item 20 - Concentric Reducer, SANS 719, L = 180mm							3no			
2.10.17.7	(6) Item 21 - Equal Tee to SANS 719, Flanged all ends							2no			
2.10.17.8	(7) Item 22 - Flanged Steel 90 Degree Elbow Long Radius - ANSI (ASA) B16.9							2no			
2.10.17.12	(11) Item 26 - Steel to uPVC SG Iron Flange Adaptor							1no			
2.10.19.2	(1) Item 10 - Flanged Steel 45 Degree Elbow Long Radius - ANSI (ASA) B16.9							4no			
2.10.19.6	(5) Item 14 - Flange Adaptor							6no			
3.5.1.4	Suction Piping Manifold including supports							1no			
3.5.1.5	Discharge Piping Manifold including supports							1no			
3.5.2.1	DN300 - Blank Flange - Suction							1no			
3.5.2.2	DN250 - Blank Flange - Suction							1no			

(C20) Total tender value
(C21) Total Exempt imported content
(C22) Total Tender value net of exempt imported content
(C23) Total Imported content
(C24) Total local content
(C25) Average local content % of tender

Signature of tenderer from Annex B

Date:

EXAMPLE SATS 1286.2011

Annex D

Imported Content Declaration - Supporting Schedule to Annex C

(D1)	Tender No.	
(D2)	Tender description:	
(D3)	Designated Products:	
(D4)	Tender Authority:	
(D5)	Tendering Entity name:	
(D6)	Tender Exchange Rate:	USD EU GBP

Note: VAT to be excluded from all calculations

A. Exempted imported content

Tender item no's	Description of imported content	Local supplier	Overseas Supplier	Calculation of imported content: Forign currency value as per Commercial Invoice	Tender Exchange Rate	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Summary: Tender Qty	Exempted imported value
(D7)	(D8)	(D9)	(D10)	(D11)	(D12)	(D13)	(D14)	(D15)	(D16)	(D17)	(D18)

(D19) Total exempt imported value

This total must correspond with Annex C - C 21

B. Imported directly by the Tenderer

Tender item no's	Description of imported content	Unit of measure	Overseas Supplier	Calculation of imported content: Forign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Summary: Tender Qty	Total imported value
(D20)	(D21)	(D22)	(D23)	(D24)	(D25)	(D26)	(D27)	(D28)	(D29)	(D30)	(D31)

(D32) Total imported value by tenderer

C. Imported by a 3rd party and supplied to the Tenderer

Description of imported content	Unit of measure	Local supplier	Overseas Supplier	Calculation of imported content: Forign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Summary: Quantity imported	Total imported value
(D33)	(D34)	(D35)	(D36)	(D37)	(D38)	(D39)	(D40)	(D41)	(D42)	(D43)	(D44)

(D45) Total imported value by 3rd party

D. Other foreign currency payments

Type of payment	Local supplier making the payment	Overseas beneficiary	Calculation of foreign currency payments: Foreign currency value paid	Tender Rate of Exchange	Summary of payments: Local value of payments
(D46)	(D47)	(D48)	(D49)	(D50)	(D51)

(D52) Total of foreign currency payments declared by tenderer and/or 3rd party

Signature of tenderer from Annex B

(D53) Total of imported content & foreign currency payments - (D32), (D45) & (D52) above

Date:

This total must correspond with Annex C - C 23

EXAMPLE **SATS 1286.2011**

Annex E

Local Content Declaration - Supporting Schedule to Annex C

(E1)	**Tender No.**	**Note:** VAT to be excluded from all calculations
(E2)	**Tender description:**	
(E3)	**Designated products:**	
(E4)	**Tender Authority:**	
(E5)	**Tendering Entity name:**	

	Local Products (Goods, Services and Works)	**Description of items purchased**	**Local suppliers**	**Value**
		(E6)	*(E7)*	*(E8)*
		***(E9)* Total local products (Goods, Services and Works)**		

(E10)	**Manpower costs**	(Tenderer's manpower cost)	
(E11)	**Factory overheads**	(Rental, depreciation & amortisation, utility costs, consumables etc.)	
(E12)	**Administration overheads and mark-up**	(Marketing, insurance, financing, interest etc.)	
		***(E13)* Total local content**	
		This total must correspond with Annex C - C24	

Signature of tenderer from Annex B

Date:

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS (January 2017) **JW 10 (MBD 6.1)**

1. GENERAL CONDITIONS

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

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

1.2 The value of this bid is estimated to exceed R50 000 000 (all applicable taxes included) and therefore the 90/10 preference point system shall be applicable.

1.3 Preference points for this bid shall be awarded for:

(a) Price; and

(b) B-BBEE Status Level of Contributor.

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

	POINTS
PRICE	90
B-BBEE STATUS LEVEL OF CONTRIBUTOR	10
Total points for Price and B-BBEE must not exceed	**100**

1.5 Failure on the part of a bidder to submit proof of BBBEE status level of contributor Certificate will be interpreted to mean that preference points for BBBEE status level of contribution are not claimed.

1.6 The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

2. ADJUDICATION USING A POINT SYSTEM

2.1 The bidder obtaining the highest number of total points will be awarded the contract.

2.2 Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts;.

2.3 Points scored must be rounded off to the nearest 2 decimal places.

2.4 In the event that two or more bids have scored equal total points, the successful bid must be the one scoring the highest number of preference points for B-BBEE.

2.5 However, when functionality is part of the evaluation process and two or more bids have scored equal points including equal preference points for B-BBEE, the successful bid must be the one scoring the highest score for functionality.

2.6 Should two or more bids be equal in all respects, the award shall be decided by the drawing of lots.

3. POINTS AWARDED FOR PRICE

3.1 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**

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

Where

Ps = Points scored for comparative price of bid under consideration

Pt = Comparative price of bid under consideration

Pmin = Comparative price of lowest acceptable bid

4. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTOR

4.1 In terms of Regulation 6 (2) and 7 (2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the B-BBEE status level of contributor in accordance with the table below:

BBBEE Status Level of Contributor	Number of Points (based on 80/20)	Number of Points (based on 90/10)
1	20	10
2	18	9
3	14	6
4	12	5
5	8	4
6	6	3
7	4	2
8	2	1
Non-compliant contributor	0	0

5. BID DECLARATION

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

B-BBEE STATUS LEVEL OF CONTRIBUTOR CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 5.1

5.2 B-BBEE Status Level of Contributor: = (maximum of 10 or 20 points)

(Points claimed in respect of paragraph 6.1 must be in accordance with the table reflected in paragraph 5.1 and must be substantiated by means of a B-BBEE certificate issued by a Verification Agency accredited by relevant proof of BBBEE status level of contributor.

6. DECLARATION WITH REGARD TO COMPANY/FIRM/ BIDDER

6.1 Name of company/firm/bidder:……..

6.2 VAT registration number:…….

6.3 Company registration number:…….

6.4 Valid Tax Compliance Status Pin for Tenders…….

6.5 Proof of CSD Registration - indicate MA ----------(Number)

6.6 Postal address
……

6.7 Physical address…….

6.8 Contact person ……telephone number…….

6.9 Facsimile number ……..Cell number…….

6.10 Email address……website address:…….

6.11 Was your company registered under another name previously? If yes, provide company registration details……..

……
……
……
.....

……
.....

6.12 TYPE OF COMPANY/ FIRM

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

[TICK APPLICABLE BOX]

***NB: In the case of the bidder being a Partnership / Joint Venture / Consortium, this form must be completed in respect of each member of the Joint Venture / Consortium or Partnership and included in the tender submission**

The Consortium, Partnership or Joint Venture must indicate each member's contribution to the project as well as the percentage of such contribution by completion and submission of the appropriate Consortium, Partnership or Joint Venture agreement with the tender.

Failure to comply with the above requirements will result in the elimination of the tender.

6.13 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

……

……

……

…….COMPANY CLASSIFICATION

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

[*TICK APPLICABLE BOX*]

7. SUB-CONTRACTING

7.1 Will any portion of the contract be sub-contracted? **YES**

7.1.1 If yes, indicate:

i) What percentage of the contract will be subcontracted (At least13%)?……

ii) The name of the sub-contractor

iii) Description of work to be sub-contracted

iv) The B-BBEE status level of the sub-contractor

8. OWNERSHIP STRUCTURE OF ENTERPRISE

List below all the proprietors/partners/shareholders/ members of your enterprise: Attach your own list if the space provided below is inadequate:

Initials & Surname	RSA ID number	Citizenship	Race (A/Ch/Co/I/W)[1]	Ownership Effective Date	Gender M/F	Disabled Yes/No	% Owned

[1] **A/Ch/Co/I/W**: means African, Chinese, Coloured, Indian or White

9. MUNICIPAL INFORMATION

Municipality where business is situated: …….

Is the property owned ? yes / no …….

*If yes, Stand / Erf Number ……and Registered municipal Account Number: ……..

**Is the property leased? Yes / No

Stand / Erf Number:……

Nota Bena

*Copy of latest up to date municipal account (not older than 90 days) or where the account is in arrears, confirmation of suitable arrangements have been made with the respective municipality must be submitted with the bid.

**Alternatively, if the premises are leased, then a copy of a valid lease agreement must be submitted.

a. Total number of years the company/firm has been in business:…….

b. I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBE status level of contributor indicated in paragraph 7 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

i) The information furnished is true and correct;

ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;

iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 6.2, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;

iv) If the B-BBEE status level of contributor has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have –

(a) disqualify the person from the bidding process;

(b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;

(c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;

(d) restrict the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and

(e) forward the matter for criminal prosecution.

WITNESSES (Name and signature) 1. …… 2. ……	Name of authorized signatory: _____ …… SIGNATURE(S) OF BIDDERS(S) DATE: ……..

Non-collusion Form ***JW 14***

I, the undersigned

_____

In my capacity as

_____
(insert Sole Owner, Partner, President, Secretary or other title)

of_____
(insert name of the Company).

acknowledges that on behalf of the abovementioned Company, I submit to Johannesburg Water [JW], a tender and that all statements of fact in such tender are both true and correct.

That such tender was not made in the interest of or on behalf of any undisclosed Person, Partnership, Company, Association, Organization or Corporation.

That such tender is genuine and not collusive or a sham.

That I have not directly or indirectly by agreement, communication or reference with anyone, attempted to induce action prejudicial to the interest of JW, or any other Bidder or anyone interested in the proposed contract.

That prior to the opening and reading of bids,

a. I did not, directly or indirectly, induce or solicit anyone else to submit a false or sham tender
b. I did not, directly or indirectly, collude, conspire, connive or agree with anyone else that the said bidder or anyone else would submit a false or sham tender, or that anyone should refrain from tendering or withdraw his tender
c. I did not, in any manner, directly or indirectly, seek by agreement, communication, or conference with anyone to raise or fix my tender price or anyone else, or to raise or fix any overhead, profit or cost element of his tendered price of that of anyone else.
d. I did not directly or indirectly, submit this tender price or any breakdown, thereof, or the contents thereof, or divulge information or data relative thereto, to any Corporation, Partnership, Company, Association, Organization, Tender Depository, or to any member or agent thereof, or to any individual group of individuals, except to the Parent Company holding a controlling interest (above 50%) in my business.

Dated at _____ on this ____ day of _____

_____
Signed on behalf of the tenderer

DECLARATION OF INTEREST ***JW 14.1***

1. No bid will be accepted from persons in the service of the state[1].

2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority.

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

3.1 Full Name of bidder or his or her representative:……..

3.2 Identity Number: ……

3.3 Position occupied in the Company (director, trustee, hareholder[2]):……..

3.4 Company Registration Number: ……

3.5 Tax Reference Number:……

3.6 VAT Registration Number: ……

3.7 The name of all directors / trustees / shareholders members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.

3.8 Are you presently in the service of the state? YES / NO
3.8.1 If yes, furnish particulars. ……

……..

[1]MSCM Regulations: "in the service of the state" means to be –
(a) a member of –
  (i) any municipal council;
  (ii) any provincial legislature; or
  (iii) the national Assembly or the national Council of provinces;

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

[2] Shareholder" means a person who owns shares in the company and is actively involved in the management of the company or business and exercises control over the company.

3.9 Have you been in the service of the state for the past twelve months? …**YES / NO**

3.9.1 If yes, furnish particulars……..

……

3.10 Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid? …… **YES / NO**

3.10.1 If yes, furnish particulars.

……
……

3.11 Are you, aware of any relationship (family, friend, other) between any other bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

3.11.1 If yes, furnish particulars

……
……

3.12 Are any of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state? **YES / NO**

3.12.1 If yes, furnish particulars.

……
……

3.13 Are any spouse, child or parent of the company's directors' trustees, managers, principle shareholders or stakeholders in service of the state? **YES / NO**

3.13.1 If yes, furnish particulars.

……
……

3.14 Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract. **YES / NO**

3.14.1 If yes, furnish particulars:

……..
……..

** The intention of this clause is deemed to be the declaration of relationships which may improperly influence or affect the outcome of this bid, in particular relationships with persons involved in the procurement processes in Johannesburg Water. Therefore, if the bidder or any of the persons mentioned in this clause or any company or business controlled by any of them have such a relationship, it should be declared.*

4. Full details of directors / trustees / members / shareholders.

Full Name	Identity Number	State Employee Number

…….. ……..
Signature **Date**

…… ……
Capacity **Name of Bidder**

DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES JW 14.2

1 The bid of any bidder may be disregarded if that bidder, 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; or
c. failed to perform on any previous contract.

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

Item	Question	Yes	No
4.1	Is the bidder or any of its directors listed on the National Treasury's database 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 National Treasury after the *audi alteram partem* rule was applied).	Yes □	No □
4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? **To access this Register, enter the National Treasury's site, www.treasury.gov.za, click on the icon "Register for Tender Defaulters" or submit your written request for a hard copy of the Register to facsimile number (012) 3265445.**	Yes □	No □
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court outside of 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	Was any contract between the bidder and any organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes □	No □
4.4.1	If so, furnish particulars:		

JW 14.2

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**
……	**……..**
Position	**Name of Bidder**

DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (VAT INCLUDED) JW 14.3

For all procurement expected to exceed R10 million (VAT included), bidders must complete the following questionnaire:

1 Are you by law required to prepare annual financial statements for auditing? **YES / NO**

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

……

……

2. If the bidder is not required by law to prepare annual financial statements for auditing, they shall be required to furnish their Annual Financial Statements -

i.for the past three years , or
ii. since their establishment if established during the past three years

Do you have any outstanding undisputed commitments for municipal services towards a municipality or any other service provider in respect of which payment is overdue for more than 30 days? **YES / NO**

2.1 If no, this serves to certify that the bidder has no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days.

2.2 If yes, provide particulars.

……

……

3 Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract? **YES / NO**

3.1 If yes, furnish particulars

……

……

4 Will any portion of goods or services be sourced from outside the Republic, and, if so, what portion and whether any 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

……..

……..

JW 14.3

CERTIFICATION

I, THE UNDERSIGNED (NAME)
……

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

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

FALSE.

…….. ……..
Signature Date

…… ……
Position Name of Bidder

CERTIFICATE OF INDEPENDENT BID DETERMINATION JW MBD 9

1. This Municipal Bidding Document (MBD) must form part of all bids[1] invited.

2. Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).[2] Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.

3. Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:

   a. takes all reasonable steps to prevent such abuse;

   b. rejects the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and

   c. cancels a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.

4. This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.

5 In order to give effect to the above, the attached Certificate of Bid Determination (MBD9) must be completed and submitted with the bid:

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

JW MBD 9

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

_____

(Bid Number and Description) in response to the invitation for the bid made by:

_____

(Name of Municipality / Municipal Entity) do hereby make the following statements that I certify to be true and complete in every respect:

I certify, on behalf of _____that:
(Name of Bidder)

1. I have read, and I understand the contents of this Certificate;

2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;

3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;

4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;

5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:

   (a) has been requested to submit a bid in response to this bid invitation;
   (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
   (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder

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

7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:

   (a) prices;
   (b) geographical area where product or service will be rendered (market allocation)
   (c) methods, factors or formulas used to calculate prices;
   (d) the intention or decision to submit or not to submit, a bid;
   (e) the submission of a bid which does not meet the specifications and conditions of the bid; or
   (f) bidding with the intention not to win the bid.

8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions

or delivery particulars of the products or services to which this bid invitation relates.

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

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

10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No. 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No. 12 of 2004 or any other applicable legislation.

…… …… ……
Signature Date

…… …… ……
Position Name of Bidder

T2.1.5 Proposed Qualifications

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

The Tenderer's attention is drawn to clause C.3.8 of the Standard Conditions of Tender referenced in the Tender Data regarding the employer's handling of material qualifications.

Page	Clause or item	Proposal

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

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

Tenderer .....

T2.1.6 Schedule of the Tenderer's Experience

A detailed description of the nature of works must be provided for all projects listed below must be supported by a Completion Certificate and reference letters (T2.1.7).

EMPLOYER: CONTACT PERSON AND TELEPHONE NUMBER	EMPLOYER'S AGENT OR REPRESENTATIVE: CONTACT PERSON AND TELEPHONE NUMBER	NATURE OF WORK	VALUE OF WORK (inclusive of VAT)	DATE COMPLETED OR EXPECTED TO BE COMPLETED

Each Tenderers project listed in T2.1.6 above must be supported by a completion certificate/final approval certificate and reference letters as per format T2.1.7. Tenderer's to note that work completed as a subcontractor will also require confirmation letter from the client as per schedule T2.1.7.

Signed ______________________ Date ______________________

Name ______________________ Position ______________________

Tenderer ______________________

T2.1.7 Contactable Reference Template

Note : Please see NB at bottom of page.

To Johannesburg Water (SOC) Ltd

I, the undersigned being duly authorized to do so, hereby furnish a reference to Johannesburg Water relative to tender JW……. for ……..

Name of tenderer: _____

Description of goods / service provided_____

Duration / time when the above was provided_____

Approximate value of the goods/ service provided_____

Was their performance satisfactory? Yes / No*

Were the quality / specifications complied with Yes / No*

If No, please furnish details……
……
……

Will you recommend this supplier to anyone without reservations: Yes / No

Rate this supplier out of a possible score of 5 with 5 being excellent and 1 being unacceptable. ☐

Name of authorised person:_____**Signature:**_____

Telephone: _____**e-mail**_____**date**_____

Completed on behalf (name of business)
_____

Official stamp

NB: This document must be completed in full by the referee and included in the tender submission. Alternatively, the client's letterhead may be used for this purpose provided it complies with all the above requirements.. A separate form must be completed for each reference as required in the evaluation criteria. Failure to adhere to this requirement will result in such tender being prejudiced.
Information provided will be verified and if found to be false or misrepresented, punitive measures will be instituted against the respective party including blacklisting and restriction from participating in any future government tender.

T2.1.7 Contactable Reference Template

Note : Please see NB at bottom of page.

To Johannesburg Water (SOC) Ltd

I, the undersigned being duly authorized to do so, hereby furnish a reference to Johannesburg Water relative to tender JW…… for ……

Name of tenderer:_____

Description of goods / service provided_____

Duration / time when the above was provided_____

Approximate value of the goods/ service provided_____

Was their performance satisfactory? Yes / No*

Were the quality / specifications complied with Yes / No*

If No, please furnish details……
……
……

Will you recommend this supplier to anyone without reservations: Yes / No

Rate this supplier out of a possible score of 4 with 4 being excellent and 1 being unacceptable. ☐

Name of authorised person:_____**Signature:**_____

Telephone: _____**e-mail**_____**date**_____

Completed on behalf (name of business)
_____

Official stamp

NB: This document must be completed in full by the referee and included in the tender submission. Alternatively, the client's letterhead may be used for this purpose provided it complies with all the above requirements. A separate form must be completed for each reference as required in the evaluation criteria. Failure to adhere to this requirement will result in such tender being prejudiced.
Information provided will be verified and if found to be false or misrepresented, punitive measures will be instituted against the respective party including blacklisting and restriction from participating in any future government tender.

T2.1.7 Contactable reference template

Note : Please see NB at bottom of page.

To Johannesburg Water (SOC) Ltd
I, the undersigned being duly authorized to do so, hereby furnish a reference to Johannesburg Water relative to tender JW…… for ……

Name of tenderer:_____

Description of goods / service provided_____

Duration / time when the above was provided_____

Approximate value of the goods/ service provided_____

Was their performance satisfactory? Yes / No*

Were the quality / specifications complied with Yes / No*

If No, please furnish details……
……
……
Will you recommend this supplier to anyone without reservations: Yes / No

Rate this supplier out of a possible score of 4 with 4 being excellent and 1 being unacceptable. ☐

Name of authorised person:_____**Signature:**_____

Telephone: _____**e-mail**_____**date**_____

Completed on behalf (name of business)
_____

Official stamp

NB: This document must be completed in full by the referee and included in the tender submission. Alternatively, the client's letterhead may be used for this purpose provided it complies with all the above requirements.. A separate form must be completed for each reference as required in the evaluation criteria. Failure to adhere to this requirement will result in such tender being prejudiced.
Information provided will be verified and if found to be false or misrepresented, punitive measures will be instituted against the respective party including blacklisting and restriction from participating in any future government tender.

T2.1.8 Schedule of Key Personnel

In terms of the Project Specification and the Conditions of Tender, unskilled workers may only be brought in from outside the local community if such personnel are not available locally.

The Tenderer shall list below the personnel which they intend to utilize on the Works, including key personnel which may have to be brought in from outside if not available locally.

CATEGORY OF EMPLOYEE	NUMBER OF PERSONS					
	KEY PERSONNEL, PART OF THE CONTRACTOR'S ORGANISATION		KEY PERSONNEL TO BE IMPORTED IF NOT AVAILABLE LOCALLY		UNSKILLED PERSONNEL TO BE RECRUITED FROM LOCAL COMMUNITY	
	HDI	NON-HDI	HDI	NON-HDI	HDI	NON-HDI
Site Agent, Contracts Manager						
Foremen, Quality Control and Safety Personnel						
Technicians, Surveyors, etc.						
Artisans and other Skilled workers						
Plant Operators						
Unskilled Workers						
Others: ……..... .....…… ……						

SIGNATURE:.....…… DATE: ….....

(of person authorized to sign on behalf of the Tenderer)

T2.1.9 Curriculum Vitae of Key Personnel

Provide separate forms for each position listed in Form: Key Personnel
Contracts Manager

Name:	**Date of birth:**
Profession:	**Nationality:**
Qualifications:	
Professional Registration Number:	
Name of Employer (firm):	
Current position:	**Years with firm:**
Employment Record:	
Experience Record Pertinent to Required service:	

Certification:

I, the undersigned, certify that, to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience.

....
Signature of person named in the schedule *Date*

Site Agent(s)

Name:	**Date of birth:**
Profession:	**Nationality:**
Qualifications:	
Professional Registration Number:	
Name of Employer (firm):	
Current position:	**Years with firm:**
Employment Record:	
Experience Record Pertinent to Required service:	

Certification:

I, the undersigned, certify that, to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience.

..... ……

Signature of person named in the schedule *Date*

Safety Officer

Name:	**Date of birth:**
Profession:	**Nationality:**
Qualifications:	
Professional Registration Number:	
Name of Employer (firm):	
Current position:	**Years with firm:**
Employment Record:	
Experience Record Pertinent to Required service:	

Certification:

I, the undersigned, certify that, to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience.

.....…… ……..

Signature of person named in the schedule *Date*

T2.2 LIST OF RETURNABLE DOCUMENTS

T2.2.1 Contractor's Certificate of Registration With CIDB

The Tenderer shall attach hereto the Contractor's Certificate of Registration with CIDB. Failure to submit the certificate with the tender document will lead to the conclusion that the Tenderer is not registered with the CIDB and therefore not eligible to tender.

Tenderers who have made application to CIDB for registration and are capable of being so registered prior to the evaluation of submissions must attach a notification from CIDB that their application is being considered.

T2.2.2 SARS Tax Compliance Status Pin and Proof of CSD registration

The Tenderer must attach hereto a copy SARS Tax Compliance Status Pin and Proof of CSD registration i.e. MA xxxxxxxxxx number.

T2.3 LIST OF RETURNABLE SCHEDULES

Document **Page**

3. Returnable Schedules that will be incorporated into the contract

T2.3.1 Imported Content Sheet: Forward Exchange Cover for Imported Goods

The Tenderer shall, in the attached schedule, for each item which a price is tendered, state the item number as it appears in the Schedule of Quantities, a brief description of the item, the country of origin, the value of the imported content of all goods comprising that item, the number of items for which he requires forward exchange cover, and the total amount for which forward exchange cover will be required.

Each Part of the Schedule of Quantities must be dealt with separately.

In the event of components being imported from more than one country, a separate entry shall be made for each country.

The Tenderer shall state the applicable rate(s) for the relevant country(ies) as at the date seven days prior to the closing date for the receipt of tenders.

Exchange rate(s) as at ..... (*insert date*)

Country	Exchange Rate

SIGNED ON BEHALF OF TENDERER : .....

NAME (in print) : .....

DATE : .....

Equipment Schedule

Item No. in SQ	Brief Description	Country of Origin	Value of Imported Content	No. of Items Quantity Scheduled	Amount (R)
Total Value of Imported Content for Section 1 carried to Item 1.1.5 in Schedule of Quantities					

T2.4 LIST OF RETURNABLE SCHEDULES

JW 6.4 Returnable Annexure A: Acknowledgement of SHE Specification & Annexures

DECLARATION BY CONTRACTOR

I, the undersigned, and representing the tenderer as indicated hereby acknowledge that I have obtained copies of the following listed documentation and confirm that I fully understand the contents thereof and confirm compliance thereto in the event of being successful:

- OHS Specification (Volume 2)
- Annexure 1: Baseline Risk Assessment
- Annexure 2: Medical Screening Policy
- Annexure 3: Contractor Competency Evaluation
- Annexure 4: Sign off form
- Annexure 5: Environmental Management Plan
- Annexure 6: Waste Management Plan

We furthermore commit to:

- Comply with all applicable SHE related legal and other requirements.
- Inform all staff of their role in managing environmental impacts and safety hazards on site.

Signed at …….. on this …….. Day of …….. 20……..

Name of tenderer	
Name of Authorized person	
Authorized Signature*	

**Signature must be as per form JW 3.3 as applicable*

NB: Failure to complete this form in full and have it signed as required will result in elimination

Johannesburg Water SOC Ltd

VOLUME 1

PART 1:

AGREEMENT AND CONTRACT DATA

TABLE OF CONTENTS

PAGE (S)

C1.1 FORM OF OFFER (AGREEMENT)

C1.1.1 FORM OF OFFER

THE TENDERER IS TO COMPLETE AND SIGN THE FORM OF OFFER

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

CONTRACT NO. JW13599
NORTHERN WASTEWATER TREATMENT WORKS:
UNIT4 LIQUOR TREATMENT PLANT

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

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

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

..... Rand (in words); R ..... (in figures),

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

Signature(s)

Name(s)

Capacity

For the Tenderer

(Name and address of organisation)

Name and signature of witness

Date

C1.1.2 FORM OF ACCEPTANCE

THE EMPLOYER IS TO COMPLETE AND SIGN THE FORM OF ACCEPTANCE

By signing this part of the Form of Offer and Acceptance, **the Employer** identified below accepts the Tenderer's Offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the Conditions of Contract identified in the Contract Data. Acceptance of the Tenderer's Offer shall form an agreement between the Employer and the Tenderer upon the terms and conditions contained in this Agreement and in the Contract that is the subject of this Agreement.
The terms of the contract are contained in

Part 1 Agreement and Contract Data, (which includes this Agreement)
Part 2 Pricing Data
Part 3 Scope of Work
Part 4 Site Information

and drawings and documents or parts thereof, which may be incorporated by reference into Parts 1 to 4 above.
Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules as well as any changes to the terms of the Offer agreed by the Tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Agreement. No amendments to or deviations from said documents are valid unless contained in this Schedule, which must be duly signed by the authorised representative(s) of both parties.

The Tenderer shall within **twenty (28) days** 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 Contact Data) to arrange the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data at, or just after, the date of 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 the Contractor) within **five days** after 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 binding contract between the parties,

FOR EMPLOYER OFFICIAL USE ONLY

Signature(s) _____ _____

Name(s) _____ _____

Capacity _____ _____

For the Employer ***Johannesburg Water SOC Ltd, 17 Harrison Street, Marshalltown, Johannesburg***
(Name and address of organisation)

Name and signature of witness _____ **Date** _____

C1.1.3 SCHEDULE OF DEVIATIONS

Notes:

1. The extent of deviations from the tender documents issued by the employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender;
2. A Tenderer's covering letter shall not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid become the subject of agreements reached during the process of offer and acceptance, the outcome of such agreement shall be recorded here;
3. Any other matter arising from the process of offer and acceptance either as a confirmation, clarification or change to the tender documents and which it is agreed by the Parties becomes an obligation of the contract shall also be recorded here; and
4. Any change or addition to the tender documents arising from the above arrangements and recorded here shall also be incorporated into the final draft of the Contract.

1 **Subject** _____

Details _____

2 **Subject** _____

Details _____

3 **Subject** _____

Details _____

4 **Subject** _____

Details _____

5 **Subject** _____

Details _____

6 **Subject** _____

Details _____

7 **Subject** _____

Details _____

8 **Subject** _____

Details _____

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

signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this Agreement.

For the Tenderer:
Signature(s)

	_____	_____
Name(s)	_____	_____
Capacity	_____	_____
	_____	
	(Name and address of organisation)	
Name and signature of witness	_____	**Date** _____

For the Employer:
Signature(s)

	_____	_____
Name(s)	_____	_____
Capacity	_____	_____
	Johannesburg Water SOC Ltd, 17 Harrison Street, Marshalltown, Johannesburg	
	(Name and address of organisation)	
Name and signature of witness	_____	**Date** _____

C1.2 CONTRACT DATA

C1.2.1 PART 1: DATA PROVIDED BY THE EMPLOYER

CONDITIONS OF CONTRACT

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

CONTRACT SPECIFIC DATA

The following contract specific data are applicable to this Contract:

GCC Clause	Information
Clause 1.1.1.5	*Add the following:* or the date of the Letter of Award issued by the Employer to the Contractor, whichever is the earlier. Should the Commencement Date be specified in the Letter of Award to the Contractor, then the Commencement Date shall the date specified in the Letter of Award.
Clause 1.1.1.13	The Defects Liability Period is fifty-two 52 weeks from the date of the Certificate of Completion.
Clause 1.1.1.14	The time for achieving Practical Completion is 18 months.
Clause 1.1.1.15	The name of the Employer is Johannesburg Water (SOC) Limited, the contact person is Mr. Thapelo Teane
Clause 1.2.1.2	The address of the Employer is: Physical: 17 Harrison Street, Marshalltown Postal: P.O. Box 61542, Marshalltown 2107 Tel: 011 688 6615 Fax: 011 688 1521 Email: thapelo.teane@jwater.co.za
Clause 1.1.1.16	The name of the Employer's Agent is Mr. Johan Prinsloo and who is Registered as a Pr. Eng. with the Engineering Council of South Africa
Clause 1.2.1.2	The address of the Employer's Agent is: Physical Address: 58 Emerald Parkway, Greenstone Hill, Johannesburg Postal Address: Private Bag X20, Gallo Manor, 2052 Tel : 011 239 5300 Fax : 011 239 5790 E-mail : johan.prinsloo@hatch.com ……
Clause 1.1.1.26	The Pricing Strategy is Re-measurement Contract
Clause 3.2.3	Specific Approval – The Employer's Agent is required to obtain the Employer's approval for the following: • Approval of Variation Orders • Approval to exceed the Contract Sum

GCC Clause	Information
Clause 5.1.1 and 5.8.1	The non-working days are Sundays The special non-working days are all Public Holidays in terms of the Public Holidays Act (as amended), and the annual "Builder's Break" as defined by SAFCEC on an annual basis.
Clause 5.3.1	The documentation required before commencement with Works execution are: • Health and Safety Plan (Clause 4.3) • Approval of the Environmental File • Initial programme (Clause 5.6) • Guarantee from Bank or Insurance Company (Clause 6.2) • Insurance of Construction Machinery Plant (Clause 8.6) • Insurance of Motor Vehicle Liability (Clause 8.6) • Commissioner of COID (Clause 8.6) • Signed Notification to the Department of Labour • Construction Permit where applicable
Clause 5.3.2	The time to submit the Contract documentation required before commencement of the Works is twenty-one (21) days.
Clause 5.4.2	The Works will be executed on an operational Wastewater Treatment Works. *Note any requirements regarding phased Access, Construction and Handover.*
Clause 5.13.1	The penalty for failing to complete the Works is the greater of: An amount equal to the daily Time Related P&G rate (as calculated from the Time Related P&G Section in the Bill of Quantities), **OR** R57 000 (Fifty Seven thousand Rand) per day, whichever is the greater. Refer to "C2.1 Pricing Data : Pricing Instructions – Preamble to the Bill of Quantities" for the calculation of the daily Time Related P&G rate.
Clause 5.16.3	The latent defect period is Five (5) years for Building Works and three (3) years for Electrical and Mechanical engineering works.
Clause 6.2.1	The security to be provided by the Contractor shall be in the form of a Performance Guarantee and will comply with the requirements of Clause 6.2.3. The value of the Performance Guarantee shall be ten (10) % of the Contract Sum (excl. VAT).
Clause 6.8.2	If the value of payment certificates is to be adjusted by a Contract Price Adjustment Factor, the value of the payment certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule, with the following values: The value of "x" is 0,10 The values of the coefficients are: a = 0,32 Labour b = 0,25 Contractor's equipment c = 0,33 Material d = 0,10 Fuel The province where in the Site is located is Gauteng. The base month is the month prior to the closing of the tender.

GCC Clause	Information
Clause 6.8.3	Price adjustments for variations in the costs of special materials are allowed.
Clause 6.10.1.5	The percentage advance on materials delivered to Site but not yet built into the Permanent Works is eighty percent (80%). The percentage advance on Plant not yet supplied to Site is eighty percent (80%). A Cession of Rights ceding ownership to the Client is required.
Clause 6.10.3	The percentage retention on the amounts due to the Contractor is 10%. The limit of retention money is 5% of the Contract Price
6.10.4	**Delivery, dissatisfaction with and payment of payment certificates** Delete Clause 6.10.4 and replace with the following: Payment shall be made upon: • The Contractor providing a payment certificate with all required supporting documents to the Employer's Agent on dates to be communicated to the Contractor upon award. • The payment certificate being submitted with an original tax invoice. • A statement being submitted on the last day of the month. Payment will be made within 30 days of receipt of the supplier's statement. Payment shall be subject to the Contractor submitting an Original Tax Invoice compliant with SARS requirements for Valid Tax Invoice to the Employer for the amount due. Any dissatisfaction in respect of such payment certificate shall be dealt with in terms of Clause 10.2.
6.10.6	A Retention Money Guarantee is not permitted.
Clause 8.4.1.1	Add to the end of Clause 8.4.1.1 the following text: "hereby indemnifies the Employer against any liability in respect of damage or physical loss of property of any person or injury or death of any person due to non-compliance with the Occupational Health and Safety Act (Act 85 of 1993), and"
Clause 8.6.1	Delete Clause 8.6.1 and replace it with the following: **8.6.1** Notwithstanding anything elsewhere contained in the Contract and without limiting the obligations, liabilities or responsibilities of the Contractor in any way whatsoever (including but not limited to any requirement for the provision by the Contractor of any other insurances) the Employer shall effect and maintain as appropriate in the joint names of the Employer and the Contractor and where relevant Sub-Contractors the following insurances which are subject to the terms, limits, exceptions and conditions of the Policy: **8.6.1.1 Contract Works Insurance** – which will provide cover against accidental and Physical loss of or damage to the Works, Temporary Works and Materials intended for incorporation in the Works from whatsoever cause arising other than causes set out in Clause 8.3.1 for which the Contractor is responsible for the Works in terms of Clause 8.2.1, and for a sum insured which shall, unless otherwise specified in the Contract, be the aggregate of: **8.6.1.1.1** the Contract Price, **8.6.1.1.2** a sum to cover the value (specified at the time of delivery to the Contractor) of materials supplied by the Employer for incorporation in the Works and not included in the Contract Price, and **8.6.1.1.3** a sum to cover professional fees, not included in the Contract Price, payable in respect of the repair or reinstatement of damage to the Works.

GCC Clause	Information
	8.6.1.2 Public Liability Insurance which will provide indemnity against legal liability in the event of accidental death of or injury to third parties and/or loss or damage to third party property arising directly from the execution of the Contract and occurring during the period of Insurance with a limit of indemnity of R 10 million in respect of all claims arising from any one occurrence or series of occurrences consequent on or attributable to one source or original cause. **8.6.1.3** Following the introduction of legislation affecting the articles of the **South African Special Risks Insurance Association (SASRIA)**, insurance cover for loss or damage to the Works caused by any event defined as a risk in terms of the insurance offered by SASRIA, will be provided under a certificate issued by SASRIA. **8.6.1.4** Full details of the Contract Works and Public Liability insurances effected by the Employer may be obtained from the Employer, and the Contractor/Subcontractors are deemed to be aware of the terms, exclusions and conditions of these insurances. **8.6.1.5** The Employer shall pay the premium in connection with the insurances effected by the Employer in 8.6.1.1, 8.1.6.2 and 8.6.1.3 above. **8.6.2** The Employer/Contractor/Subcontractors and/or any other party who obtains indemnity under the policies effected under 8.6.1.1, 8.6.1.2 and 8.6.1.3 above shall become liable for the deductibles (first amount payable) which are applicable in respect of each and every occurrence or series of occurrences attributable to one source or cause giving rise to loss or damage or indemnifiable liability. **8.6.3** In the event of an occurrence which is likely to give rise to a claim under the insurance effected by the Employer, the following procedure shall be adhered to: 8.6.3.1. In addition to any statutory requirements and/or other requirements contained in the Conditions of Contract, the Contractor shall immediately notify the Employer's Insurance Brokers, via the Employer's Agent, giving the circumstances, nature and an estimate of the loss or damage. 8.6.3.2. The Contractor shall, when required, complete a claims advice form, available from the Employer's Insurance Brokers, to whom the form shall be returned without delay, via the Employer's Agent. 8.6.3.3. The Contractor shall afford all access necessary to the representatives of the Insurers for the purpose of the assessment of any loss or damage. 8.6.3.4. Negotiations on the settlement of claims shall be conducted by the Contractor/Sub-Contractor with the Insurers through the Employer's Insurance Brokers, via the Employer's Agent. **8.6.4** Any amount which becomes payable to the Contractor or any of his Sub-Contractors as a result of claim under the Contract Works Insurance shall, if required by the Employer, be paid net of the deductible to the Employer who shall pay the Contractor from the proceeds of such payment upon rectification, repair or reinstatement of the loss or damage but this provision shall not in any way affect the Contractor's obligations, liabilities or responsibilities in terms of the Contract. **8.6.5** The Contractor shall insure all Constructional Machinery and Plant (including tools, offices and other temporary structures and content) and other items, other than those intended for incorporation into the works, owned, leased or hired and brought on to the Site against all risks of physical loss or damage for the period that such Plant shall be on the Site to the full value thereof. In respect of a Plant brought on to the Site by or on behalf of Sub-Contractors, the Contractor shall be deemed to have complied with the provisions of this Sub-Clause if it has ensured that such Sub-Contractors have similarly insured such Plant and Machinery. Such insurance shall be effected with an Insurer and in terms approved by the Employer (which approval shall not be unreasonably withheld) and the Contractor shall, when required, submit to the Employer's Insurance Brokers, via the Employer's Agent, the policy or policies of insurance and receipts for payment of the current premiums. **8.6.6** The Contractor and the Sub-contractors shall effect and maintain at their cost, insurance under the provision of the Compensation for Occupational Injuries and Diseases Act (COID), 1993 (Act No. 130 of 1993)

GCC Clause	Information
	8.6.7 The Contractor and the Sub-Contractors shall effect and maintain at their own cost, motor vehicle liability insurance with at least indemnification for "balance of third party" risks, including passenger liability with a limit of indemnity of not less than R2,5 million. **8.6.8** The Contractor and the Sub-Contractors shall effect and maintain at their own cost, any additional insurance which they deem necessary to cover damage or loss or injury not insured in terms of the insurance effected by the Employer. Such insurance shall be effected with an Insurer and in terms approved by the Employer (which approval shall not be unreasonably withheld) and the Contractor shall, when required, submit to the Employer's Insurance Brokers, via the Employer's Agent, the policy or policies of insurance and the receipts for payment of the current premiums. If the Contract entails manufacture and or assembly of the Works or part thereof on a site other than the Contract site, the Contractor must satisfy the Employer that all materials and equipment intended for incorporation into the Works are adequately insured during manufacture and assembly. If the Employer has an insurable interest in such works during manufacture or assembly, such interest shall be recorded by way of endorsement on the policies concerned. The Contractor shall furnish the appropriate insurance policies to the Employer within 14 days from the Commencement Date. **8.6.9** Submission of the Tender will be construed by the Employer as acceptance by the Contractor that he is satisfied with the insurance effected by the Employer, supplemented by any additional insurance which he shall specify in the manner provided for in the Bill of Quantities. **8.6.10** The Contractor shall give all notices and observe all conditions and requirements imposed by any and all relevant insurance policies which shall be read as being part of the General Conditions of Contract and which shall be binding on the Contractor. **8.6.11** In addition to any statutory obligations, or other requirements contained in the General Conditions of Contract, the Contractor shall report in writing to both the Employer's Agent and the Employer's Insurance Brokers every accident within 48 hours of its occurrence, whether such accident is in respect of damage to persons or property. The report shall contain full details of the accident. The Employer's Agent and/or the Employer's Insurers shall have the right to make any enquiries, either on the Site or elsewhere, as to the cause and results of any such accident and the Contractor shall give the Employer's Agent and/or the Employer's Insurers full access and facilities for carrying out such enquiries. **8.6.12** Negotiations on the settlement of claims under the insurance effected by the Employer shall be conducted by the Contractor/Sub-Contractor with the Insurers through the Employer's Insurance Brokers, via the Employer's Agent. **8.6.13** Any claims against the insurance effected by the Employer shall be subject to the Contractor being responsible for the payment of the amount stated in the Policy as being the Deductible (First Amount Payable) as defined in the Policy. **8.6.14** The Employer shall not be liable for any damages or compensation payable at law in respect or in consequence of any accident or injury to any workman or other person in the employ of the Contractor or any Sub-Contractor, save and except an accident or injury resulting from any act or omission of the Employer, its agents or servants and the Contractor shall be deemed to have indemnified and shall keep indemnified the Employer against all such damages and compensation (save and except as aforesaid) and against all claims, demands, proceedings, costs, charges and expenses whatsoever in respect thereof or in relation thereto. **8.6.15** The Contractor shall insure in the joint names of the Employer, the Contractor and all Sub-Contractors (whether nominated or otherwise) for an amount of R2million per occurrence against the liability stated in Sub-Clause 8.6.14 with an Insurer approved by the Employer (which approval shall not be unreasonably withheld) and shall continue such insurance during the whole of the time that any persons are employed by him on the Works, and shall submit to the Engineer such policy of insurance and the receipt of

GCC Clause	Information
	payment of the current premium on request. Provided always that in respect of any persons employed by any Sub-Contractor, the Contractor's obligation to insure as aforesaid under this Sub-Clause, shall be satisfied if the Sub-Contractor shall have insured against the liability in respect of such persons in such manner that the Employer is indemnified under the policy of insurance, but the Contractor shall require such Sub-Contractor to produce to the Employer's Agent such policy and the receipt for payment of the current premium. **8.6.16** If the Contractor fails to effect and keep in force the insurances referred to in this Clause or for any other insurance which he may be required to effect in terms of the Contract, then and in any such event, the Employer may effect and keep in force any such insurance and pay such premium or premiums as may be necessary for that purpose and from time to time deduct the amount so paid by the Employer as aforesaid, from any monies due or which may become due to the Contractor or recover the same as a debt due from the Contractor. **8.6.17** The Contractor shall ensure that all proposed and appointed sub-contractors are fully aware of the contents of Clause 8.6.1
Clause 8.6.1.1.2	The value of Plant and Materials supplied by the Employer to be included in the insurance sum is nil. (Employer's Agent to confirm based on project requirements.)
Clause 8.6.1.1.3	The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is ten (10)% of the Contract Sum.
Clause 10.5.3	The number of Adjudication Board Members to be appointed is one (1).
Clause 10.7.1	The determination of disputes shall be by arbitration

C1.2.1.1 Additions

The additional Conditions of Contract are:

C1.2.1.1.1 Penalties

In addition to GCC clause 5.13, during the Contract Period should the Contractor:

a) Fail to report

- The Employer shall levy a penalty on Contractor, should the latter fail to provide reporting as required in the specification highlighted in the Scope of Work in PS 3.2, PS 6.7 and PS 6.9, with regard to content and frequency, whilst as per the Pricing Data section no payment for work completed shall be processed.
- The penalty value shall be R15,000.00 per report per occasion; and
- If the Contractor fails to complete the latter more than three incidents and should the Employer or his duly authorised representative find that the Contractor is hindering his (the Employer's) deliverables to senior management, he shall reserve the right to:

i. perform the Works internally or through another Contractor; and
ii. deduct additional costs incurred by the Employer from monies owed to the Contractor or from the Contractor's Guarantee. Additional costs incurred by the Employer shall include all claims from Contract affected parties, claims such as but

not be limited to claims from customers, any costs associated with the loss of water, and all costs associated with the procurement of an alternative Contractor.

iii. terminate the Contract;

No liability in terms of this clause shall be attached to the Contractor if he can prove to the satisfaction of the Employer that the nature of the failure is due to fire, war, riot, strikes, act of God, lockout, accident or other unforeseen occurrences or circumstances beyond the Contractor's control, provided, however, that in all cases the Contractor has notified the Employer in writing within 24 hours of it first coming to his notice, that delivery shall be delayed or become impossible for the above-mentioned reasons.

b) Fail to pay any labour or SMME

- The Employer shall levy a penalty on Contractor, should the latter fail to provide payment to the any labourer or SMME as required in the specification highlighted in the Scope of Work and specified in the appointment agreements with the Contractor and the labourer or SMME.
- The penalty value shall be R 50,000.00 per report per occasion; and
- If the Contractor fails to complete the latter more than three incidents and should the Employer or his duly authorised representative find that the Contractor is hindering his (the Employer's) deliverables to senior management, he shall reserve the right to:

i) perform the Works internally or through another Contractor; and
ii) deduct additional costs incurred by the Employer from monies owed to the Contractor or from the Contractor's Guarantee. Additional costs incurred by the Employer shall include all claims from Contract affected parties, claims such as but not be limited to claims from customers, any costs associated with the loss of water, and all costs associated with the procurement of an alternative Contractor.
iii) terminate the Contract;

No liability in terms of this clause shall be attached to the Contractor if he can prove to the satisfaction of the Employer that the nature of the failure is due to fire, war, riot, strikes, act of God, lockout, accident or other unforeseen occurrences or circumstances beyond the Contractor's control, provided, however, that in all cases the Contractor has notified the Employer in writing within 24 hours of it first coming to his notice, that delivery shall be delayed or become impossible for the above-mentioned reasons

c) Penalties irreversible

If the Contractor fails to achieve the monetary value of the target set by the Employer for contract participation by local SMME Contractors in terms of for Procurement and Particular Specifications in Scope of Works clause PS3.2.3, the Contractor shall be liable to the Employer for a sum calculated in accordance with the Contract Data and the aforementioned Scope of Works as a penalty for such underachievement."

The penalty for failing to achieve the monetary value of the target set by the Employer for contract participation by Targeted Enterprises and local SMME Contractors in terms of Small Contractor Development of Particular Specifications in PS3: Scope of Works, is

50% of the monetary value by which the achieved monetary value falls short of the target monetary value.

d) Penalties irreversible

The Contractor shall note that all penalties once imposed shall be non-recoverable or reversible, even if the default is remedied.

C1.2.1.1.2 Source of instructions

The Contractor shall neither seek nor accept instructions from any authority external to the Employer's Agent in connection with the performance of his services under this Contract. The Contractor shall refrain from any action which may adversely affect the Employer and shall fulfill his commitments with fullest regard for the interest of the Employer. The Contractor may only take and comply with Employers Health and Safety representative or Environmental representative on matters regarding Health & Safety, as well as Environmental.

C1.2.1.1.3 Officials not to benefit

The Contractor warrants that no official of the Employer has been or shall be admitted by the Contractor to any direct or indirect benefit arising from this Contract or the award thereof. The Contractor agrees that breach of this provision is a breach of the Contract.

C1.2.1.1.4 Prevention of corruption

The Employer shall be entitled to cancel the Contract and to recover from the Contractor the amount of any loss resulting from such cancellation, if the Contractor has offered or given any person any gift or consideration of any kind as an inducement or reward for doing or intending to do any action in relation to the obtaining or the execution of the Contract or any other contract with the Employer or for showing or intending to show favor or disfavor to any person in relation to the Contract or any other contract with the Employer, if the like acts shall have been done by any persons employed by him or acting on his behalf whether with or without the knowledge of the Contractor in relation to this or any other Contract with the Employer.

C1.2.1.1.5 Confidential nature of documents

All maps, drawings, photographs, mosaics, plans, reports, recommendations, estimates, documents and all other data compiled by or received by the Contractor under the Contract shall be the property of the Employer, shall be treated as confidential and shall be delivered only to the Employer's Agent or his duly authorized representative on completion of the Works; their contents shall not be made known by the Contractor to any person other than the personnel of the Contractor performing services under this Contract without the prior written consent of the Employer.

C1.2.1.1.6 Returns of labour, SMME, plant, equipment and material

The Contractor shall provide a return in detail in the form and at such intervals as the Employer's Agent or his duly authorized representative may prescribe showing the supervisory staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such information respecting constructional plant, equipment and material as the Employer's Agent or his duly authorized representative may require.

C1.2.1.1.7 Materials and workmanship

All materials and workmanship shall be of the respective kinds described in the Contract and in accordance with the Employer's Agent's instructions and shall be subjected from time to time to such tests as the Employer's Agent may direct at the place of manufacture or fabrication, or on the Site or at all or any of such places. The Contractor shall provide such assistance, instruments, machines, labour and materials as are normally required for examining, measuring and testing any work and the quality, weight or quantity of any materials used and shall supply samples of materials before incorporation in the Works for testing as may be selected and required by the Employer's Agent. All testing equipment and instruments provided by the Contractor shall be used only by the Employer's Agent or by the Contractor in accordance with the instructions of the Employer's Agent.

a) No material not conforming with the Specifications in the Contract shall be used for the Works without prior written approval of the Employer and instruction of the Employer's Agent, provided always that if the use of such material results or may result in increasing the Contract Price, the procedure in GCC clause 6.3 (Variations) shall apply.

C1.2.1.1.8 Examination of the work before covering up

No work shall be covered up or put out of view without the approval of the Employer's Agent or his duly authorize representative and the Contractor shall afford full opportunity for the Employer's Agent or his duly authorize representative to examine and measure any work which is about to be covered up or put out of view and to examine foundations before permanent work is placed thereon. The Contractor shall give due notice to the Employer's Agent whenever any such work or foundations is or are ready or about to be ready for examination. The Employer's Agent or his duly authorized representative shall without unreasonable delay, unless he considers it unnecessary and advises the Contractor accordingly, attend for the purpose of examining and measuring such work or of examining such foundations.

C1.2.1.1.9 Employer's Agent's power to order removal of improper work and materials

The Employer's Agent or his duly authorized representative shall during the progress of the Works have power to order in writing from time to time, and the Contractor shall execute at his cost and expense, the following operations the:

a) removal from the Site within such time or times as may be specified in the order of any materials which in the opinion of the Employer's Agent are not in accordance with the Contract;
b) substitution of proper and suitable materials; and
c) removal and proper re-execution (notwithstanding any previous test thereof or interim payment therefore) of any work which in respect of materials or workmanship is not in the opinion of the Employer's Agent or his duly authorized representative in accordance with the Contract.

C1.2.1.1.10 Default of Contractor in carrying out Employer's Agent's or his duly authorized representative's Instructions

In case of default on the part of the Contractor in carrying out an instruction of the Employer's Agent or his duly authorized representative, the Employer shall be entitled to employ and pay other persons to carry out the same, and all expenses consequent thereon or incidental thereto shall be borne by the Contractor and shall be recoverable

from him by the Employer and may be deducted by the Employer from any monies due or which may become due to the Contractor.

C1.2.1.1.11 Date falling on public holiday or weekend

Where under the terms of the Contract any act is to be done or any period is to expire upon a certain day and that day or that period fall on a day of rest or recognized holiday or weekend, the Contract shall have effect as if the act were to be done or the period to expire upon the working day following such day.

C1.2.1.1.12 Ambiguities and inconsistencies

The Employer or the Contractor shall notify the other as soon as either becomes aware of an ambiguity or inconsistency in or between the documents, which are part of this Contract. Governed by the spirit and intention of the Contract, the Employer shall give a binding instruction resolving the ambiguity or inconsistency.

C1.2.1.1.13 False claims by the Contractor

a) Failure, by the Contractor, to demonstrate or present any feature declared during the procurement stage shall constitute grounds for Contract termination or the market related equivalent price discount, if no market related value is available, the Employer shall give a final ruling on the amount. This shall be at the discretion of the Employer based on the implication of such omission. Should the Contractor refuse to accept the Employer's price, the Contract shall be terminated.

b) Any false claims by the Contractor or his staff (with or without his knowledge), based on Works to be performed or completed per site stage shall constitute grounds for Contract termination and result in blacklisting on the Employer's database.

The Contractor shall note that any of the above shall constitute non-performance on the part of the Contractor, further resulting in him forfeiting his full Contract Guarantee.

C1.2.2 PART 2: DATA PROVIDED BY THE CONTRACTOR

GCC Clause	Information
Clause 1.1.1.9	The name of the Contractor is ……
Clause 1.2.1.2	The address of the Contractor is: Physical …… Postal …… Tel: …… Fax: …… Email: …… …… ……
Clause 6.5.1.2.3	The percentage allowance on the net cost of materials actually used in the completed work is ……(……..)% The percentage allowance on the gross remuneration of the workmen actually engaged is ……(……..)%
Clause 6.6.1.2.1	Provisional Sums and Subcontracting: The percentage allowance to cover overhead charges is ……..%
Clause 6.8.3	The variation in cost of special materials is; Type of Special Material …… Unit …… Rate or Price …… …… …… …… …… …… …… …… …… …… …… …… …… …… …… ……

C1.3 FORMS OF SECURITIES

FORMS FOR COMPLETION BY THE CONTRACTOR

THE FOLLOWING FORMS ARE TO BE COMPLETED BY THE CONTRACTOR AFTER THE TENDER HAS BEEN AWARDED TO THE SUCCESSFUL TENDERER

The forms will be completed by the Contractor who will be instructed to do so in the Form of Acceptance. The completed forms will become part of the Contract.

The Form of Guarantee is a pro forma document. An original document, from a financial institution, with the same text will be provided by the Contractor within the time stated in the Contract Data. Only a Bank or approved Insurance Company or Guarantee Corporation is acceptable as Guarantor.

FORM OF GUARANTEE **PRO-FORMA**

Contract No. JW13599

WHEREAS Johannesburg Water (SOC) Limited (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 No JW13599 – Northern Wastewater Treatment Works:

_____

Unit 4 – Liquor Treatment Plant

_____

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 fulfillment of such Contract by the Contractor;

AND WHEREAS _____
has/have at the request of the Contractor, agreed to such guarantee;

NOW THEREFORE WE, _____
Do hereby guarantee and bind ourselves jointly and severally as Guarantor and Co-principal Debtors to the Employer under renunciation of the benefits of division and excussion 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 authorised and/or contemplated by the terms of the said Contract, and/or to agree to any modifications, variations, alterations, directions or extensions of the Completion Date of the Works under the said Contract, and that its rights under this guarantee shall in no way be prejudiced nor our liability hereunder be affected by reason of any steps which the Employer may take under such Contract, or of any modification, variation, alteration 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 the 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.

4. This guarantee shall remain in 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 his intention to institute claims, and the particulars thereof, in which event this guarantee shall remain in full force and effect until all such claims have been paid or liquidated.

5. Our total liability hereunder shall not exceed the sum of _____

   _____ (R_____)

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.

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

_____

IN WITNESS WHEREOF this guarantee has been executed by us at _____

on this _____ day of _____ 20_____

As witnesses

1. _____

_____
Signature

2. _____

Duly authorised to sign on behalf of _____

Address _____

_____

BLASTING INDEMNITY
Contract No.

Given by _____

*Company Registration No. _____

Address _____

a *Company incorporated with limited liability according to the company laws of the Republic of South Africa, *Partnership, *Close Corporation, *Public Company (hereinafter called the Contractor), represented herein by _____ in his capacity as the Contractor's _____ duly authorised hereto by a resolution of the Contractor dated _____ a certified copy of which resolution is attached to this Indemnity.

WHEREAS the Contractor has entered into a Contract with the Johannesburg Water (SOC) Ltd (hereinafter called the Company) for,

_____

and the Company requires this Indemnity from the Contractor

NOW THEREFORE THIS DEED WITNESSETH that the Contractor does hereby indemnify and hold harmless the Company in respect of all loss or damage that may be incurred or sustained by the Company by reason of or in any way arising out of or caused by blasting operations that may be carried out by the Contractor in connection with the aforementioned Contract and also in respect of all claims that may be made against the Company in consequence of such blasting operations, by reason of or in any way arising out of any accidents or damage to persons, life or properly or any other cause whatsoever, and also in respect of all legal or other expenses that may be incurred by the Company in examining, resisting or settling any such claims; for the due performance of which the Contractor binds itself according to law.

THUS DONE AND SIGNED for and on behalf of the Contractor at _____ on the

_____ day of _____ 20____ in the presence of the subscribing witnesses.

AS WITNESSES

1. _____ _____
SIGNATURE

2. _____ _____
DESIGNATION OF SIGNATORY

*Delete which does not apply

HEALTH AND SAFETY CONTRACT BETWEEN EMPLOYER AND CONTRACTOR IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT NO 85 OF 1993

Written agreement between Johannesburg Water (SOC) Limited (hereinafter referred to as "the Employer) and _____ (hereinafter referred to as "the mandatory") as envisaged by Section 37(2) of the Occupational Health and Safety Act, No. 85, of 1993 as amended.

I _____ representing _____ (mandatory) do hereby acknowledge that _____ (mandatory) is an employer in its own right and shall be regarded as the employer for purposes of the contract work specified in the body of the principal agreement with duties as prescribed in the Occupational Health and Safety Act, No. 85 of 1993 as amended so as to ensure that all work will be performed or machinery and plant used in accordance with the provisions of the said Act. I furthermore agree to comply with the requirements of the Employer as contained in the Occupational Health and Safety Specification included with the principal agreement and to liaise with the employer should I, for whatever reason, be unable to perform in terms of this agreement.

Signed this _____ day of _____ at _____

Signature on behalf of mandatory _____

Signature on behalf of Employer _____

Compensation Fund Registration No. of mandatory _____

Good Standing Certificate: ☐ yes ☐ no (tick one box)

HEALTH AND SAFETY CONTRACT: GENERAL INFORMATION

1. The Occupational Health and Safety Act comprises Sections 1 to 50 and all un-repealed regulations promulgated in terms of the former Machinery and Occupational Safety Act No 6 of 1983 as amended, as well as other regulations which may be promulgated in terms of the OHS Act
2. 'Mandatary' is defined as including an agent, a contractor or a subcontractor for work, but without derogating from his status in his own right as an employer or user of plant and machinery
3. Section 37 of the Occupational Health and Safety Act potentially punishes employers (principals) for the unlawful acts or omissions of mandataries (contractors) save where a written agreement between the parties has been concluded containing arrangements and procedures to ensure compliance with the said Aid by the mandatary
4. All documents attached or referred to in the above agreement from an integral part of the agreement
5. To perform in terms of this agreement mandataries must be familiar with the relevant provisions of the Act
6. Mandataries who utilise the services of their own mandataries (subcontractors) are advised to conclude a similar written agreement
7. Be advised that this agreement places the onus on the mandatary to contact the employer in the event of inability to perform as per this agreement. The employer, however, reserves the right to unilaterally take any steps as may be necessary to enforce this agreement
8. The contractor shall be responsible for the full and proper implementation of the terms and provisions of the Act and its regulations in the area in which the work is to be undertaken by the contractor.
9. The contractor shall be responsible for the well-being, in relation to health and safety, of all persons coming upon or into such area in accordance with that legislation, including the implementation of any directives issued by management of Johannesburg Water in this respect.

10. The work to be done is _____

11. The area in which the work is to be conducted is _____

12. The contractor shall familiarise himself with such area and all risks existing thereon and undertakes to report to the representative of Johannesburg Water any hazard or risk to health and safety which arises during the contract work in the area concerned and over which the contractor may have no control. All necessary and appropriate safety / health equipment shall be issued by the contractor to all persons working on or coming into the area.

OCCUPATIONAL HEALTH AND SAFETY INDEMNITY UNDERTAKING

I, the undersigned _____

in my capacity as _____

of the firm _____

1.0 hereby undertake to ensure that I/my firm and/or employees and/or subcontractors and/or his employees -

1.1 comply strictly with the provisions of the Occupational Health and Safety Act of 1993 (as amended) and/or the regulations promulgated in terms thereof, with specific reference to section 37(2) of the said act, as well as any relevant legislation, in the course of the performance/execution of any service and/or work in, to or on any Johannesburg Water (SOC) Ltd buildings, construction sites and/or premises;

1.2 ensure that consultants and/or visitors comply with any instructions and measures relating to occupational health and safety, as prescribed by Johannesburg Water (SOC) Ltd; and

1.3 comply strictly with the statutorily prescribed work systems, operational equipment, machinery and occupational health and safety conditions;

2.0 and as an independent employer and contractor, hereby indemnify, in terms of the above undertakings, Johannesburg Water (SOC) Ltd -

2.1 in respect of any costs that I/my firm and/or employees and/or subcontractors and their employees may incur of necessity in compliance with the above undertakings; and

2.2 against any claims that may be instituted against Johannesburg Water (SOC) Ltd and/or any liability that Johannesburg Water (SOC) Ltd may incur, whether instituted and/or caused by me/my firm's employees, agents, consultants, subcontractors and/or their employees and visitors or Johannesburg Water (SOC) Ltd's clients or neighbors in respect of any incidents related to my/my firm's activities and as a result of which the occupational health and safety of the persons involved have been detrimentally affected; and

2.3 against similar claims that I, managers or directors of my firm may have against Johannesburg Water (SOC) Ltd and any damages for which I, managers or directors of my firm hold Johannesburg Water (SOC) Ltd liable.

3.0 My firm's compensation commissioner number is _____
and I confirm that my firm and its subcontractors' fees have been paid up and obligations in respect of the compensation commissioner have been complied with and further that I shall furnish proof thereof in writing on request.

4.0 I hereby confirm that I have the authority to sign this indemnity undertaking and that Johannesburg Water (SOC) Ltd is not obliged to confirm such confirmation.

Signed at _____ this _____ day

of _____ _____

_____ _____

Signature Capacity

As witnesses:

1 _____

2 _____

TRANSFER OF RIGHTS AND INDEMNITY
(To be completed during construction by successful Tenderer only)

Claim for materials on site, Payment Certificate No. …….. Date ……

Contract No: …….. For (contract title) ……...

I, the undersigned (name of signatory), …….. in my capacity as

…….. of (name of Contractor) ……..
Duly authorized hereto on behalf of the Contractor hereby transfer, cede and assign all the Contractor's rights, titles and interest in and to the materials and goods, for which evidence of bona fide ownership is attached hereto, unto and in favor of (name of Employer) ……..
Insofar as the Contractor retains actual control of the materials and goods, the right of ownership thereof passes to the Employer by constitutum possessorium.

I herewith indemnify the Employer against any claim to and in respect of said materials by reason of the Contractor's sequestration of liquidation or of any defect in the Contractor's title to the materials and agree that no payment for materials on site will be made by the Employer until such time as I have submitted documentary proof of bona fide ownership of the said materials and goods.

This transfer shall become effective upon conclusion of the Contractor receiving payment form Employer or from any other person on behalf of the materials and goods as Materials on Site, payment of retention money thereon excluded.

I further confirm that I am fully responsible for all materials and goods listed under this Transfer of Rights and that they have been insured adequately against all risks and will remain insured until they are built into or used in the permanent works and taken over by the Employer.

This certificate of Transfer of Rights applies only to the materials and goods as listed in the following table.

DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT	SUPPLIER
TOTAL VALUE OF MATERIALS AND GOODS					

Signed by: …… Date: ……
For and behalf of the Contractor

Witnessed by: …… Date: ……..

Note: this from, together with the documentary proof of ownership or proof of payment by the Contractor to the supplier, shall accompany the Contractor's claim for payment for materials on site in terms of Clause 6.10.1.5 of the General Conditions of Contract 2015 Latest Edition.

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Johannesburg Water (SOC) Ltd

VOLUME 1

CONTRACT

PART 2:

PRICING DATA

C2.1 PRICING DATA: PRICING INSTRUCTIONS

PREAMBLE TO THE BILL OF QUANTITIES

1. All items in the Bill of Quantities, except where otherwise specified in Clause 8 of a Standardised Specification or in the Project Specification, shall be measured and shall cover operations as recommended in the standard system of measurement of civil engineering quantities, published under the title “Civil Engineering Quantities”, by the South African Institution of Civil Engineering.

2. The basis and principles of measurement and payment are described in Clause 8 of each of the Standardised Specifications for Civil Engineering Construction. The applicable SANS 1200 Standardised Specifications are listed in the Scope of Work, Portion 1: Project Specification. Variations and amendments to the Standardised Specifications are contained in the Scope of Work, Portion 2: Variations and Additions to the Standardised Specifications.

3. Descriptions in the Bill of Quantities are abbreviated and comply generally with those in the Standardised Specifications. Clause 8 of each Standardised Specification, read together with the relevant clauses of the Scope of Work, set out what ancillary or associated activities are included in the rates for the operations specified. Should any requirements of the measurement and payment clause of the applicable Standardised Specification or the Scope of Work, conflict with the terms of the Bill of Quantities, the requirements of the Standardised Specification or Scope of Work, as applicable, shall prevail.

4. The clauses in a specification in which further information regarding the Bill item may be found are listed in the “Payment Refers” column in the Bill. The reference clauses indicated are not necessarily the only sources of information in respect of billed items. Further information and specifications may be found elsewhere in the Contract Documents. Standardised Specifications are identified by the letter or letters which follow SANS in the SANS 1200 series of specifications, eg. G for SANS 1200 G.

5. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.

6. The quantities set out in the Bill of Quantities are the estimated quantities of the Contract Works, but the Contractor will be required to undertake whatever quantities may be directed by the Employer’s Agent from time to time. The Contract Price for the completed contract shall be computed from the actual quantities of work done, valued at the relevant unit rates and prices.

7. The prices and rates to be inserted in the bill of Quantities are to be the full inclusive prices for the work described under the several items. Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead

charges and profit. Reasonable charges shall be inserted as these shall be used as a basis for assessment of payment for additional work that may have to be carried out.

8. A price or rate is to be entered against each item in the Bill of Quantities, whether the quantities are stated or not. An item against which no price is entered will be considered to be covered by the other prices or rates in the Bill.

9. Except where a rate only is required, the tendered price for each billed item is to be inserted in the "Amount" column. The total tendered price is to be inserted in the Summary of the Bill of Quantities.

10. Arithmetical errors in the Bill of Quantities will be corrected in accordance with Clause C3.9 of the Conditions of Tender.

11. The units of measurement described in the Bill of Quantities are metric units. Alternatives used in the Bill of Quantities are as follows:

mm	=	millimetre	h	=	hour
m	=	metre	kg	=	kilogram
km	=	kilometre	t	=	ton (1000kg)
m^2	=	square metre	No.	=	number
m^2 pass	=	square metre pass	sum	=	lump sum
ha	=	hectare	MN	=	meganewton
m^3	=	cubic metre	MN.m	=	meganewtom-metre
m^3km	=	cubic metre-kilometre	P C sum	=	Prime Cost sum
l	=	litre	Prov sum	=	Provisional sum
kl	=	kilolitre	%	=	per cent
MPa	=	megapascal	kW	=	kilowatt

12. The Tenderer shall price each item in the Bill of Quantities in **BLACK INK OR BY TYPING.**

C2.2 BILL OF QUANTITIES

CONTENTS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
A	SANS 1200 A	SECTION 1 : PRELIMINARY & GENERAL				
1.1	8.3	SCHEDULED FIXED-CHARGE AND VALUE RELATED ITEMS				
1.1.1	8.3.1	Contractual Requirements	Sum	1.00		
1.1.2	8.3.2	Establishment of Facilities on the Site				
1.1.3	PSA 8.3.2.1	Facilities for the Employer's Agent				
1.1.4	PSAB 3.2	a) Furnished offices (2 No.)	Sum	1.00		
1.1.5	PSAB 4.1	b) Telephone	Sum	1.00		
1.1.6	PSAB 3.1	c) Nameboard (1 No.)	Sum	1.00		
1.1.7		d) Covered Carports (3 No.)	Sum	1.00		
1.1.8	PSAB 5.5	e) Survey Assistant, Equipment and Materials	Sum	1.00		
1.1.9	PSAB 4.2	f) Internet Access	Sum	1.00		
1.1.10	8.3.2.2	Facilities for Contractor:				
1.1.11		a) Offices and storage sheds	Sum	1.00		
1.1.12		b) Workshops	Sum	1.00		
1.1.13		c) Laboratories	Sum	1.00		
1.1.14		d) Living Accommodation	Sum	1.00		
1.1.15		e) Ablution and latrine facilities	Sum	1.00		
1.1.16		f) Tools and equipment	Sum	1.00		
1.1.17		g) Water supplies, electric power and communications	Sum	1.00		
1.1.18		h) Dealing with water	Sum	1.00		
1.1.19		i) Access	Sum	1.00		
1.1.20		j) Plant (Construction Equipment)	Sum	1.00		
1.1.21	8.3.3	Other Fixed-charge Obligations				
1.1.22		a) Compliance with the Health & Safety Specification	Sum	1.00		
1.1.23		b) Compliance with the Environmental Management Plan	Sum	1.00		
1.1.24		c) Establish Survey Control	Sum	1.00		
1.1.25		d).....	Sum	1.00		
1.1.26		e).....	Sum	1.00		
1.1.27		f).....	Sum	1.00		
1.1.28	8.3.4	Removal of Site Establishment	Sum	1.00		
		TOTAL CARRIED FORWARD				

SECTION 1 : PRELIMINARY & GENERAL

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
1.2	**8.4**	**SCHEDULED TIME-RELATED ITEMS**				
1.2.1	8.4.1	Contractual Requirements	Sum	1.00		
1.2.2	8.4.2	Operation and maintenance of facilities on site for the duration of construction, except where otherwise stated				
1.2.3	PSA 8.3.2.1	Facilities for the Employer's Agent				
1.2.4	PSAB3.2	a) Furnished offices (2 No.)	Sum	1.00		
1.2.5	PSAB4.1	b) Telephone	Sum	1.00		
1.2.6	PSAB3.1	c) Nameboard (1 No.)	Sum	1.00		
1.2.7		d) Covered Carports (3 No.)	Sum	1.00		
1.2.8	PSAB5.5	e) Survey Assistant, Equipment and Materials	Sum	1.00		
1.2.9	PSAB4.2	f) Internet Access	Sum	1.00		
1.2.10	8.4.2.2	Facilities for Contractor:				
1.2.11		a) Offices and storage sheds	Sum	1.00		
1.2.12		b) Workshops	Sum	1.00		
1.2.13		c) Laboratories	Sum	1.00		
1.2.14		d) Living Accommodation	Sum	1.00		
1.2.15		e) Ablution and latrine facilities	Sum	1.00		
1.2.16		f) Tools and equipment	Sum	1.00		
1.2.17		g) Water supplies, electric power and communications	Sum	1.00		
1.2.18		h) Dealing with water	Sum	1.00		
1.2.19		i) Access	Sum	1.00		
1.2.20		j) Plant (Construction Equipment)	Sum	1.00		
1.2.21	8.4.3	Supervision for Duration of Construction	Sum	1.00		
1.2.22	8.4.4	Company and Head Office Overhead Costs for the Duration of the Contract	Sum	1.00		
1.2.23	8.4.5	Other Time-related Obligations				
1.2.24		a) Compliance with the Health and Safety Specification	Sum	1.00		
1.2.25		b) Compliance with the Environmental Management Plan	Sum	1.00		
1.2.26		c) Maintain Survey Control	Sum	1.00		
1.2.27		d) Subcontractor Management	Sum	1.00		
1.2.28		e).....				
1.2.29		f).....				
1.3	**8.5**	**SUMS STATED PROVISIONALLY BY THE EMPLOYER'S AGENT**				
1.3.1	PSA 3	Allow a provisional sum for materials control testing ordered by the Employer's Agent	P.Sum	1.00		R 100,000.00
1.3.2		Contractor's stated commission on the 1.3.1 provisional sum above	%		R 100,000.00	R -
1.3.3		Supply of hire specialist equipment for the detection of services	P.Sum	1.00		R 80,000.00
1.3.4		Contractor's stated commission on the 1.3.3 provisional sum above	%		R 80,000.00	R -
1.3.5		Unit 3 Clarifiers Scum Pipeline Diversion to Unit 3 WST's	P.Sum	1.00		R 250,000.00
1.3.6		Contractor's stated commission on the 1.3.5 provisional sum above	%		R 250,000.00	R -
1.3.7		Appointment of Project CLO for duration of Contract Period	P.Sum	1.00		R 240,000.00
1.3.8		Contractor's stated commission on the 1.3.7 provisional sum above	%		R 240,000.00	R -
1.4	**8.7**	**DAYWORKS (Provisional)**				
1.4.1	PSA 8.7	Labour:				
1.4.2		a) Foreman	hour	100.00		
1.4.3		b) Skilled	hour	150.00		
1.4.4		c) Semi-skilled	hour	150.00		
1.4.5		d) Unskilled	hour	200.00		
		TOTAL CARRIED FORWARD				

SECTION 1 : PRELIMINARY & GENERAL

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
1.4.6		e) Surveyor with transport, instruments and labour	hour	50.00		
1.4.7	PSA 4	Plant:				
1.4.8		a) Front loader (CAT 930 [75 kW] or similar)	hour	50.00		
1.4.9		b) Tip truck:	hour	50.00		
1.4.10		1) 10m³	hour	50.00		
1.4.11		2) 6m³	hour	50.00		
1.4.12		c) Backactor:				
1.4.13		1) 100 kW, 23 ton	hour	50.00		
1.4.14		2) TLB	hour	50.00		
1.4.15		d) Compactors:				
1.4.16		1) Vibrating roller (Bomag 60 or similar)	hour	50.00		
1.4.17		2) Plate compactor	hour	50.00		
1.4.18		3) Rammer	hour	50.00		
1.4.19		e) Pneumatic Roller	hour	50.00		
1.4.20		f) Generator and Breaker	hour	50.00		
1.4.21		g) Other (Tenderer to specify).....	hour	75.00		
1.4.22		Materials:				
1.4.23		a) Supplied by the Contractor under Dayworks	P.Sum	1.00		R 300,000.00
1.4.24		b) Contractor's stated commission on the 1.4.23 provisional sum above	%		R 300,000.00	R -
1.5	**8.8**	**TEMPORARY WORKS**				
1.5.1	8.8.1	Main Access Road to Works	Sum	1.00		
1.5.2	8.8.2	Dealing with Traffic	Sum	1.00		
1.5.3	8.8.4	Existing Services				
		c) Excavation by hand to expose existing services in all types of materials	m³	50.00		
1.6		**OTHER FIXED CHARGES**				
1.6.1	PSA 8.9	As-Built Survey	Sum	1.00		
1.7	**SANS 1200 AB**	**FACILITIES FOR EMPLOYER'S AGENT**				
1.7.1	PSAB 8.2.5	Provision of telecommunication services	P.Sum	1.00	R 40,000.00	R 40,000.00
1.7.2	PSAB 8.2.6	Protective clothing and testing equipment	P.Sum	1.00	R 10,000.00	R 10,000.00
1.7.3	PSAB 8.2.7	Photographic record of work	P.Sum	1.00	R 100,000.00	R 100,000.00
1.7.4	PSAB 8.2.8	Stationery for the Employer's Agent's staff	P.Sum	1.00	R 12,000.00	R 12,000.00
1.7.5	PSAB 8.2.9	Computer equipment for the Employer's Agent's staff	P.Sum	1.00	R 100,000.00	R 100,000.00
1.7.6	PSAB 8.2.10	Contractor's stated commission on the item 1.7.1 to 1.7.5 provisional sum above	%			
1.8		**DEFECTS LIABILITY PERIOD**				
1.8.1		Servicing and Maintenance of equipment during Defects Liability Period	Months	12.00		
1.9		**EQUIPMENT DOCUMENTATION**				
1.9.1		Operations and Maintenance Manuals (All desciplines) *The cost shall include for the preparation, submission and acceptance by the Employer's Agent and shall be broken down as follows:* *• 50% on submission of the Draft O & M Manuals* *• 25% on acceptance by the Employer's Agent of the Final O & M Manuals* *• 25% after the successful commissioning of the works and training of the Employers Personnel*	Sum	1.00		
1.9.2		*Operator Training of all Supplied Equipment on Permant Wiorks*	sum	1.00		
1.9.3		As-Built or Record Drawings (All desciplines) *The cost shall include for the preparation, submission and acceptance by the Employer's Agent and shall only be due once the works have been successfully tested and commissioned*	Sum	1.00		
		TOTAL SECTION 1 CARRIED FORWARD TO SUMMARY				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SECTION 2.1 **SITE WIDE CIVIL WORKS** **REFER TO DRAWING: "SITE LAYOUT" JW NUMBER: "JW13599-CE-001"**				
2.1.1	**SANS 1200C**	**SITE CLEARANCE**				
2.1.1.1	8.2.1	Clear and Grub	ha	1.28		
2.1.1.2	8.2.2	Remove and grub large trees and tree stumps of girth				
2.1.1.3		a) over 1 m and up to and including 2 m	No.	4		
2.1.1.4	8.2.8	Demolish and remove structures/buildings and dismantle steelwork, etc.				
2.1.1.5		1) Portions of broken concrete palisade fence	m	20.0		
2.1.1.6		2) Miscellaneous concrete debri smaller than 1m³ in volume	No.	5		
2.1.1.7	PSC 8.2.9	Transport materials and debris:				
2.1.1.8		Rates tendered shall include for all haul to a registered municipal dump including any dumping charges levied.				
2.1.1.9		1) Demolished building and structures (see clause payment clause 8.2.8)	m³.km	84.0		
2.1.1.10	PSC 8.2.11	Supply, install, maintain and remove temporary fencing				
		1) 1,8m high Bonnox" security fencing with timber poles or similar approved"	m	326.5		
2.1.1.11	PSC 8.2.12	Supply, install, maintain and remove temporary security gates	No.	2		
2.1.2	**PWB**	**BUILDING WORK**				
2.1.2.1	PWB 13.7	Fencing				
2.1.2.1.1	PWB13.7.1	Concrete Palisade Fencing	m	326.47		
2.1.2.2	PWB 13.8	Miscellaneous Work				
2.1.2.2.1	PWB 13.8.6	Installation of Vehicular Access Gate	No.	2		
2.1.2.2.2	PWB 13.8.7	Installation of Gate for Pedestrian Access	No.	2		
		TOTAL CARRIED FORWARD TO SECTION 2.2				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD FROM SECTION 2.1				
		SECTION 2.2 **TIE-IN CHAMBER** **REFER TO DRAWING: "TIE-IN CHAMBER" JW NUMBER: "JW13599-CE-010"**				
2.2.1	**SANS 1200D**	**EARTHWORKS**				
2.2.1.1	8.3.1	**Site Preparation**				
2.2.1.2	8.3.1.1	Clear and strip site	m²	16.8		
2.2.1.3	8.3.1.2	Remove topsoil to nominal depth 150mm, stockpile and maintain	m²	16.8		
2.2.1.4	8.3.3	Restricted Excavation				
2.2.1.5		a) Excavate in all materials and use for embankment or backfill or dispose, as ordered	m³	46.5		
2.2.1.6		b) Extra-over for:				
2.2.1.7		1) Intermediate excavation	m³	4.7		
2.2.1.8		2) Hard Rock excavation	m³	4.7		
2.2.1.9	8.3.8	Existing Services				
2.2.1.10	8.3.8.1	Location				
2.2.1.11		c) Excavate by hand in soft material to expose existing services: 3xDN110 PVC Pipe, 1xDN200 PVC Pipe, 1XDN250 PVC Pipe, 1xDN400 PVC Pipe	m³	46.5		
2.2.1.12	8.3.8.2	Dealing with services that are at risk because of the construction of earthworks				
2.2.1.13		c) Temporary protection of existing services: 3xDN110 PVC Pipe, 1xDN200 PVC Pipe, 1XDN250 PVC Pipe, 1xDN400 PVC Pipe	Sum	1		
2.2.1.14	8.3.9	Extra-over for Backfill Material against Structures	m³	20.2		
2.2.1.15	8.3.10	Topsoiling	m²	42.2		
2.2.1.16	8.3.11	Grassing	m²	42.2		
2.2.2	**SANS 1200DM**	**EARTHWORKS (ROADS, SUBGRADE)**				
2.2.2.1	8.3.3	Treatment of Roadbed				
2.2.2.2		(a) Roadbed preparation and Compaction				
2.2.2.3		2) minimum of 95% of modified AASHTO maximum density	m^3	5.6		
2.2.2.4	8.3.5	Selected layer compacted to 95% of modified AASHTO maximum density				
2.2.2.5		(a) Two layers of G7 150 mm deep	m^3	5.6		
2.2.3	**SANS 1200G**	**CONCRETE STRUCTURAL**				
2.2.3.1	8.2	SCHEDULED FORMWORK ITEMS				
2.2.3.2	8.2.1	Rough				
2.2.3.3		Vertical Surfaces				
2.2.3.4		Foundation Slab	m²	5.8		
2.2.3.5	8.2.2	Smooth				
2.2.3.6		Vertical Surfaces				
2.2.3.7		Chamber Walls	m²	77.4		
2.2.3.8		Plinths	m²	5.6		
2.2.3.9	8.2.5	Narrow Widths (up to 100mm wide)				
2.2.3.10		Sump	m	1.2		
2.2.3.11	8.2.6	Box Out Holes/Form Voids				
2.2.3.12		a) Small, circular, of diameter up to and including 0.35m				
2.2.3.13		1) Up to and including 0,5m deep	No.	11		
2.2.3.14		c) Large, circular, of diameter over 0.35m up to and including 0.7m				
2.2.3.15		1) Up to and including 0,5m deep	No.	2		
2.2.3.16	8.3	SCHEDULED REINFORCEMENT ITEMS				
2.2.3.17	8.3.1	Steel Bars				
2.2.3.18		High-tensile steel				
2.2.3.19		Nominal size 25mm to:				
		TOTAL CARRIED FORWARD				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
2.2.3.20		Foundations	t	0.45		
2.2.3.21		Walls	t	0.93		
2.2.3.22		Plinths	t	0.02		
2.2.3.23	8.4	SCHEDULED CONCRETE ITEMS				
2.2.3.24	8.4.2	Blinding Layer				
2.2.3.25		(1) 15 Mpa no-fines concrete 50 mm thick	m³	1.0		
2.2.3.26	8.4.3	Strength Grade Concrete				
2.2.3.27		(1) 30Mpa/19mm concrete				
2.2.3.28		(1.1) Floor Slab	m³	5.6		
2.2.3.29		(1.2) Walls	m³	11.6		
2.2.3.30		(1.3) Plinths	m³	0.2		
2.2.3.31	8.4.4	Unformed Surface Finishes				
2.2.3.32		(1) Wood-floated finish to				
2.2.3.33		(1.1) Floor Slab	m²	13.2		
2.2.3.34		(1.2) Top of Plinths	m²	0.3		
2.2.3.35		(2) Steel-floated finish to				
2.2.3.36		(2.1) Top of Walls	m²	1.8		
2.2.4	**SANS 1200H**	**STRUCTURAL STEELWORK**				
2.2.4.1	8.3.1	Supply and Fabrication				
2.2.4.2	8.3.1.1	Preparation of shop detail drawings				
2.2.4.3		Rolled Angle - 60x60x6L	t	0.07		
2.2.4.4		Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs	t	0.08		
2.2.4.5	8.3.1.2	Supply and fabrication of steelwork				
2.2.4.6		Rolled Angle - 60x60x6L	t	0.07		
2.2.4.7		Rolled Angle - 50x50x5L with 25x5 Thk. Flat lugs	t	0.08		
2.2.4.8	8.3.2	Delivery to Site				
2.2.4.9	8.3.2.1	Normal Delivery	t	0.14		
2.2.4.10	8.3.3	Erection on Site	t	0.14		
2.2.4.11	8.3.4	Erection Bolts	t	0.005		
2.2.4.12	8.3.8	Ladders, Complete and Installed	No.	2		
2.2.4.13	8.3.9	Flooring, Complete and Installed with Frames				
2.2.4.14		a) Open grid floors - Chamber (Rectagrid 40 x 4.5 bearer bars)	m²	13.2		
2.2.4.15		b) Open grid floors - Sump Cover (Rectagrid 40 x 4.5 bearer bars)	m²	0.09		
2.2.5	**SANS 1200HC**	**CORROSION PROTECTION OF STRUCTURAL STEELWORK**				
2.2.5.1	8.2.3	Surface Preparation and Coating Application				
2.2.5.2		a) in the shop	t	0.23		
2.2.5.3		b) on Site	t	0.02		
2.2.6	**SANS 1200L**	**MEDIUM PRESSURE PIPELINES**				
2.2.6.1	PSL 8.2.16	Wrapping of Steel Pipes at Concrete Interfaces	m²	3.3		
2.2.6.2	PSL 8.2.17	Tying into existing Pipelines	No.	1		
2.2.6.3	PSL 8.2.20	Supply, weld, lay, bed and test specials and valves in Chambers				
2.2.6.4		Item 2 - Concentric Reducer, L = 200mm	No.	1		
2.2.6.5		Item 3 - Stub Flange with Backing Slip-On Flange (HDE steel), L = 100mm	No.	1		
2.2.6.6		Item 4 - Pipe Spool, Flanged Both Ends with Puddle Flange, L = 840mm	No.	1		
2.2.6.7		Item 5 - Equal Tee to SANS 719, Flanged all Ends	No.	2		
2.2.6.8		Item 6 - Flanged Steel 90 Degree Elbow Long Radius - ANSI (ASA) B16.9	No.	2		
2.2.6.9		Item 7 - Knife Gate Valve (Non-Rising Stem)	No.	3		
2.2.6.10		Item 8- Flange Adaptor	No.	3		
2.2.6.11		Item 9 - Pipe Spool, Flanged One End, Plain Ended Other, L = 269mm	No.	1		
		TOTAL CARRIED FORWARD				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
2.2.6.12		Item 10 - Electromagnetic Flow Meter	No.	1		
2.2.6.13		Item 11 - Pipe Spool, Flanged One End, Plain Ended Other, L = 1019mm	No.	1		
2.2.6.14		Item 12 - Pipe Spool, Flanged One End, Plain Ended Other, L = 1588mm	No.	1		
2.2.6.15		Item 13 - Concentric Reducer to SANS 719, Flanged Both Ends, L = 280mm	No.	1		
2.2.6.16		Item 14 - Equal Tee to SANS 719, Flanged all Ends	No.	1		
2.2.6.17		Item 15 - Pipe Spool, Flanged Both Ends, with Puddle Flange, L = 1296mm	No.	1		
2.2.6.18		Item 16 - Knife Gate Valve (Non-Rising Stem)	No.	1		
2.2.6.19		Item 17 - Flange Adaptor	No.	1		
2.2.6.20		Item 18 - Pipe Spool, Flanged One End, Plain Ended Other with Puddle Flange, L = 920mm	No.	1		
2.2.6.21		Item 19 - Mechanical Viking Johnson Type Coupling to connect with existing DN400 PVC pipe	No.	2		
2.2.7	**PWB**	**BUILDING WORK**				
2.2.7.1		Sand Cement Screed to Fall, Average 75 mm Thick	m²	13.2		
2.2.7.2		"SikaSwell S-2" applied to circumference of existing pipes				
2.2.7.3		3xDN110 uPVC pipes	m	1.04		
2.2.7.4		1xDN200 uPVC pipes	m	0.63		
2.2.7.5		1xDN250 uPVC pipes	m	0.79		
2.2.8	**M21**	**MECHANICAL PRESSURE PIPEWORK**				
2.2.8.1		Wrapping of Buried Flanges in accordance with "Particular Specification M21: Mechanical Pressure Pipework"				
2.2.8.2		Item 19 - Mechanical Viking Johnson Type Coupling to connect with existing DN400 PVC pipe	No.	2		
2.2.8.3		Item 3 - Stub Flange with Backing Slip-On Flange (HDE steel), L = 100mm	No.	1		
		TOTAL CARRIED FORWARD TO SECTION 2.3				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD FROM SECTION 2.2				
		SECTION 2.3 **SPLITTER BOX** **REFER TO DRAWING: "SPLITTER BOX" JW NUMBER: "JW13599-CE-008 & 009"**				
2.3.1	**SANS 1200D**	**EARTHWORKS**				
2.3.1.1	8.3.1	**Site Preparation**				
2.3.1.2	8.3.1.1	Clear and strip site	m²	41.2		
2.3.1.3	8.3.1.2	Remove topsoil to nominal depth 150mm, stockpile and maintain	m²	41.2		
2.3.1.4	8.3.2	Buik Excavation				
2.3.1.5		a) Excavate in all materials and use for embankment or backfill or dispose, as ordered	m³	17.0		
2.3.1.6		b) Extra-over for:				
2.3.1.7		1) Intermediate excavation	m³	1.7		
2.3.1.8		2) Hard Rock excavation	m³	1.7		
2.3.1.9	8.3.9	Extra-over for Backfill Material against Structures	m³	6.6		
2.3.2	**SANS 1200DM**	**EARTHWORKS (ROADS, SUBGRADE)**				
2.3.2.1	8.3.3	Treatment of Roadbed				
2.3.2.2		(a) Roadbed preparation and Compaction				
2.3.2.3		2) minimum of 95% of modified AASHTO maximum density	m^3	8.1		
2.3.2.4	8.3.5	Selected layer compacted to 95% of modified AASHTO maximum density				
2.3.2.5		(a) Two layers of G7 150 mm deep	m^3	8.1		
2.3.3	**SANS 1200G**	**CONCRETE STRUCTURAL**				
2.3.3.1	8.2	SCHEDULED FORMWORK ITEMS				
2.3.3.2	8.2.1	Rough				
2.3.3.3		(1) Vertical to Floor Slab Foundations	m²	7.9		
2.3.3.4		(2) Vertical to Stairway and Platform Plinth	m²	4.1		
2.3.3.5	8.2.2	Smooth				
2.3.3.6		(1) Vertical to Walls	m²	163.5		
2.3.3.7	8.2.5	Narrow Widths (up to 300mm wide)				
2.3.3.8		(1) Weirs Splitter Box	m	1.2		
2.3.3.9		(3) Inlet Pipes	m	3.0		
2.3.3.10		(4) Outlet Pipes	m	6.6		
2.3.3.11	8.3	SCHEDULED REINFORCEMENT ITEMS				
2.3.3.12	8.3.1	Steel Bars				
2.3.3.13		High-tensile steel				
2.3.3.14		Nominal size 25mm to:				
2.3.3.15		(1) Floor Slab Foundations	t	0.65		
2.3.3.16		(2) Walls	t	1.82		
2.3.3.17		(3) Stairway and Platform Plinth	t	0.06		
2.3.3.18	8.4	SCHEDULED CONCRETE ITEMS				
2.3.3.19	8.4.2	Blinding Layer				
2.3.3.20		(1) 15 Mpa no-fines concrete 50 mm thick	m³	1.35		
2.3.3.21	8.4.3	Strength Grade Concrete				
2.3.3.22		(1) 35Mpa/19mm water retaining concrete				
2.3.3.23		(1.1) Floor Slab Foundation	m³	8.12		
2.3.3.24		(1.2) Walls	m³	22.7		
2.3.3.25		(2) 30Mpa/19mm concrete				
2.3.3.26		(2.1) Stairway and Platform Plinth	m³	0.7		
2.3.3.27	8.4.4	Unformed Surface Finishes				
		TOTAL CARRIED FORWARD				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
2.3.3.28		(1) Wood-floated finish to				
2.3.3.29		(1.1) Floor Slab Foundation	m²	27.1		
2.3.3.30		(1.2) Stairway and Platform Plinth	m²	4.6		
2.3.3.31		(2) Steel-floated finish to				
2.3.3.32		(2.1) Top of Walls	m²	8.9		
2.3.3.33	8.5	JOINTS				
2.3.3.34		1) Wall / Foundation Base Slab Interface Joint				
2.3.3.35		a) ABE Type B 150 Plain Web Durajoint Rubber Dumbell Waterstop	m	29.8		
2.3.3.36		b) Sikadur-Combiflex System 200 wide x 2mm thick	m	23.8		
2.3.3.37		2) Wall Construction Joint				
2.3.3.38		a) ABE Type C Centre Bulb Durajoint Rubber Dumbell Waterstop	m	29.8		
2.3.3.39		b) 20x10 Multiseal 1148 Polysulphide Sealant or approved equivalent.	m	23.8		
2.3.3.40	8.7	GROUTING				
2.3.3.41		a) Under bases (or beds)	l	0.80		
2.3.3.42		b) Puddle Flange Locations	l	310		
2.3.4	**SANS 1200H**	**STRUCTURAL STEELWORK**				
2.3.4.1	8.3.1	Supply and Fabrication				
2.3.4.2	8.3.1.1	Preparation of shop detail drawings				
2.3.4.3		Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs	t	0.11		
2.3.4.4		Rolled Angle - 60x60x6L	t	0.13		
2.3.4.5		Parallel Flange Channel - 180x70PFC	t	0.28		
2.3.4.6		Base Plate - 220x220x12mm	t	0.01		
2.3.4.7	8.3.1.2	Supply and fabrication of steelwork				
2.3.4.8		Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs	t	0.11		
2.3.4.9		Rolled Angle - 60x60x6L	t	0.13		
2.3.4.10		Parallel Flange Channel - 180x70PFC	t	0.28		
2.3.4.11		Base Plate - 220x220x12mm	t	0.01		
2.3.4.12	8.3.2	Delivery to Site				
2.3.4.13	8.3.2.1	Normal Delivery				
2.3.4.14		Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs	t	0.11		
2.3.4.15		Rolled Angle - 60x60x6L	t	0.13		
2.3.4.16		Parallel Flange Channel - 180x70PFC	t	0.28		
2.3.4.17		Base Plate - 220x220x12mm	t	0.01		
2.3.4.18	8.3.3	Erection on Site				
2.3.4.19		(1) Stairway	No.	1		
2.3.4.20		(2) Platform	No.	1		
2.3.4.21	8.3.6	Holding-down (HD) Bolts				
2.3.4.22		(1) M16 HILTI Concrete Anchors	No.	9		
2.3.4.23	8.3.7	Handrails				
2.3.4.24		b) Handrail assembly complete				
2.3.4.25		1) Horizontal	m	22.60		
2.3.4.26		2) Sloping (measured on slope)	m	8.96		
2.3.4.27		3) Shaped Ends	No.	24		
2.3.4.28	8.3.8	Ladders, Complete and Installed	No.	1		
2.3.4.29	8.3.9	Flooring, Complete and Installed with Frames				
2.3.4.30		a) Open grid floors				
2.3.4.31		1) Rectagrid RS80, 40 x 3	m²	11.00		
2.3.4.32		2) Rectagrid RS40, 30 x 4.5 stair treads	m²	2.57		
2.3.5	**SANS 1200HC**	**CORROSION PROTECTION OF STRUCTURAL STEELWORK**				
2.3.5.1	8.2.3	Surface Preparation and Coating Application				
		TOTAL CARRIED FORWARD				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
2.3.5.2		a) in the shop	t	0.53		
2.3.5.3		b) on Site	t	0.05		
2.3.6	**SANS 1200L**	**MEDIUM PRESSURE PIPELINES**				
2.3.6.1	PSL 8.2.16	Wrapping of Steel Pipes at Concrete Interfaces	m²	0.70		
2.3.6.2	PSL 8.2.20	Supply, weld, lay, bed and test specials and valves				
2.3.6.3		Item 8 - Pipe Spool L = 622mm, Flanged One End, Plain Ended Other with Concentric Reducer to SANS 719 (300 to 350mm), Puddle Flange at L = 622mm from flanged end	No.	1		
2.3.6.4		Item 9 - Pipe Spool L = 615mm , Flanged One End, Plain Ended Other with Concentric Reducer to SANS 719 (200 to 125mm), Puddle Flange at L = 442mm from flanged end	No.	3		
2.3.7	**PWA**	**WATERTIGHTNESS TESTING OF TANKS**				
2.3.7.1	PWA2.1	Testing of Watertightness of Structure	Sum	1		
		TOTAL CARRIED FORWARD TO SECTION 2.4				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD FROM SECTION 2.3				
		SECTION 2.4 LIME REACTOR REFER TO DRAWING: "LIME REACTOR" JW NUMBER: "JW13599-CE-008 & 009"				
2.4.1	SANS 1200D	EARTHWORKS				
2.4.1.1	8.3.1	Site Preparation				
2.4.1.2	8.3.1.1	Clear and strip site	m²	141.6		
2.4.1.3	8.3.1.2	Remove topsoil to nominal depth 150mm, stockpile and maintain	m²	141.6		
2.4.1.4	8.3.2	Buik Excavation				
2.4.1.5		a) Excavate in all materials and use for embankment or backfill or dispose, as ordered	m³	118.1		
2.4.1.6		b) Extra-over for:				
2.4.1.7		1) Intermediate excavation	m³	11.8		
2.4.1.8		2) Hard Rock excavation	m³	11.8		
2.4.1.9	8.3.9	Extra-over for Backfill Material against Structures	m³	19.8		
2.4.2	SANS 1200DM	EARTHWORKS (ROADS, SUBGRADE)				
2.4.2.1	8.3.3	Treatment of Roadbed				
2.4.2.2		(a) Roadbed preparation and Compaction				
2.4.2.3		2) minimum of 95% of modified AASHTO maximum density	m^3	29.4		
2.4.2.4	8.3.5	Selected layer compacted to 95% of modified AASHTO maximum density				
2.4.2.5		(a) Two layers of G7 150 mm deep	m^3	29.4		
2.4.3	SANS 1200G	CONCRETE STRUCTURAL				
2.4.3.1	8.2	SCHEDULED FORMWORK ITEMS				
2.4.3.2	8.2.1	Rough				
2.4.3.3		(1) Vertical to Floor Slab Foundations	m²	11.9		
2.4.3.4		(2) Vertical to Stairway and Platform Plinth	m²	4.1		
2.4.3.5	8.2.2	Smooth				
2.4.3.6		(1) Vertical to Walls	m²	410.6		
2.4.3.7		(2) Vertical to Openings in Roof Slab	m²	13.1		
2.4.3.8		(3) Horizontal to Soffit of Roof Slab	m²	42.8		
2.4.3.9	8.2.5	Narrow Widths (up to 300mm wide)				
2.4.3.10		(1) Weirs within Lime Reactor	m	4.5		
2.4.3.11		(2) Orifices within Lime Reactor	m	3.6		
2.4.3.12		(3) Inlet Pipes	m	10.2		
2.4.3.13		(4) Outlet Pipes	m	10.2		
2.4.3.14	8.2.6	Box Out Holes / Form Voids				
2.4.3.15		Large, circular, of diameter over 0,35 m up to and including 0.7 m				
2.4.3.16		(1) Up to and including 0,5m deep	No.	9.0		
2.4.3.17	8.3	SCHEDULED REINFORCEMENT ITEMS				
2.4.3.18	8.3.1	Steel Bars				
2.4.3.19		High-tensile steel				
2.4.3.20		Nominal size 25mm to:				
2.4.3.21		(1) Floor Slab Foundations	t	2.35		
2.4.3.22		(2) Walls of Lime Reactor	t	5.27		
2.4.3.23		(3) Roof of Lime Reactor	t	1.27		
2.4.3.24		(4) Stairway and Platform Plinth	t	0.06		
2.4.3.25	8.4	SCHEDULED CONCRETE ITEMS				
2.4.3.26	8.4.2	Blinding Layer				
2.4.3.27		(1) 15 Mpa no-fines concrete 50 mm thick	m³	5.0		
2.4.3.28	8.4.3	Strength Grade Concrete				
		TOTAL CARRIED FORWARD				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
2.4.3.29		(1) 35Mpa/19mm water retaining concrete				
2.4.3.30		(1.1) Floor Slab Foundation	m³	29.4		
2.4.3.31		(1.2) Walls of Lime Reactor	m³	65.9		
2.4.3.32		(1.3) Roof of Lime Reactor	m³	12.7		
2.4.3.33		(2) 30Mpa/19mm concrete				
2.4.3.34		(2.1) Stairway and Platform Plinth	m³	0.7		
2.4.3.35	8.4.4	Unformed Surface Finishes				
2.4.3.36		(1) Wood-floated finish to				
2.4.3.37		(1.1) Floor Slab Foundation	m²	98.0		
2.4.3.38		(1.2) Stairway and Platform Plinth	m²	4.6		
2.4.3.39		(2) Steel-floated finish to				
2.4.3.40		(2.1) Roof of Lime Reactor	m²	63.6		
2.4.3.41	8.5	JOINTS				
2.4.3.42		1) Wall / Foundation Base Slab Interface Joint				
2.4.3.43		a) ABE Type B 150 Plain Web Durajoint Rubber Dumbell Waterstop	m	54.0		
2.4.3.44		b) Sikadur-Combiflex System 200 wide x 2mm thick	m	37.2		
2.4.3.45		2) Wall Construction Joint				
2.4.3.46		a) ABE Type C Centre Bulb Durajoint Rubber Dumbell Waterstop	m	54.0		
2.4.3.47		b) 20x10 Multiseal 1148 Polysulphide Sealant or approved equivalent.	m	37.2		
2.4.3.48	8.7	GROUTING				
2.4.3.49		a) Under bases (or beds)	l	1.60		
2.4.3.50		b) Puddle Flange Locations	l	452		
2.4.4	**SANS 1200H**	**STRUCTURAL STEELWORK**				
2.4.4.1	8.3.1	Supply and Fabrication				
2.4.4.2	8.3.1.1	Preparation of shop detail drawings				
2.4.4.3		Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs	t	0.29		
2.4.4.4		Rolled Angle - 60x60x6L	t	0.26		
2.4.4.5		Parallel Flange Channel - 180x70PFC	t	0.57		
2.4.4.6		Base Plate - 220x220x12mm	t	0.02		
2.4.4.7	8.3.1.2	Supply and fabrication of steelwork				
2.4.4.8		Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs	t	0.29		
2.4.4.9		Rolled Angle - 60x60x6L	t	0.26		
2.4.4.10		Parallel Flange Channel - 180x70PFC	t	0.57		
2.4.4.11		Base Plate - 220x220x12mm	t	0.02		
2.4.4.12	8.3.2	Delivery to Site				
2.4.4.13	8.3.2.1	Normal Delivery				
2.4.4.14		Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs	t	0.29		
2.4.4.15		Rolled Angle - 60x60x6L	t	0.26		
2.4.4.16		Parallel Flange Channel - 180x70PFC	t	0.57		
2.4.4.17		Base Plate - 220x220x12mm	t	0.02		
2.4.4.18	8.3.3	Erection on Site				
2.4.4.19		(1) Stairway	No.	2		
2.4.4.20		(2) Platform	No.	2		
2.4.4.21	8.3.6	Holding-down (HD) Bolts				
2.4.4.22		(1) M16 HILTI Concrete Anchors	No.	18		
2.4.4.23	8.3.7	Handrails				
2.4.4.24		b) Handrail assembly complete				
2.4.4.25		1) Horizontal	m	77.82		
2.4.4.26		2) Sloping (measured on slope)	m	17.92		
2.4.4.27		3) Shaped Ends	No.	92		
2.4.4.28	8.3.8	Ladders, Complete and Installed	No.	9.00		
2.4.4.29	8.3.9	Flooring, Complete and Installed with Frames				
		TOTAL CARRIED FORWARD				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
2.4.4.30		a) Open grid floors				
2.4.4.31		1) Rectagrid RS80, 40 x 4.5	m²	20.02		
2.4.4.32		2) Rectagrid RS40, 30 x 4.5 stair treads	m²	5.15		
2.4.5	**SANS 1200HC**	**CORROSION PROTECTION OF STRUCTURAL STEELWORK**				
2.4.5.1	8.2.3	Surface Preparation and Coating Application				
2.4.5.2		a) in the shop	t	1.14		
2.4.5.3		b) on Site	t	0.11		
2.4.6	**SANS 1200L**	**MEDIUM PRESSURE PIPELINES**				
2.4.6.1	PSL 8.2.16	Wrapping of Steel Pipes at Concrete Interfaces	m²	0.79		
2.4.6.2	PSL 8.2.20	Supply, weld, lay, bed and test specials and valves				
2.4.6.3		Item 9 - Pipe Spool L = 615mm , Flanged One End, Plain Ended Other with Concentric Reducer to SANS 719 (200 to 125mm), Puddle Flange at L = 442mm from flanged end	No.	3		
2.4.6.4		Item 16 - Pipe Spool L = 807mm , Flanged One End, Plain Ended Other with Concentric Reducer to SANS 719 (200 to 125mm), Puddle Flange at L = 634mm from flanged end	No.	3		
2.4.7	**PWA**	**WATERTIGHTNESS TESTING OF TANKS**				
2.4.7.1	PWA2.1	Testing of Watertightness of Structure	Sum	1		
		TOTAL CARRIED FORWARD TO SECTION 2.5				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD FROM SECTION 2.4				
		SECTION 2.5 MORNING GLORY SPILLWAY REFER TO DRAWING: "MORNING GLORY SPILLWAY" JW NUMBER: "JW13599-CE-007"				
2.5.1	SANS 1200D	EARTHWORKS				
2.5.1.1	8.3.1	Site Preparation				
2.5.1.2	8.3.1.1	Clear and strip site	m²	30.2		
2.5.1.3	8.3.1.2	Remove topsoil to nominal depth 150mm, stockpile and maintain	m²	30.2		
2.5.1.4	8.3.2	Buik Excavation				
2.5.1.5		a) Excavate in all materials and use for embankment or backfill or dispose, as ordered	m³	29.9		
2.5.1.6		b) Extra-over for:				
2.5.1.7		1) Intermediate excavation	m³	3.0		
2.5.1.8		2) Hard Rock excavation	m³	3.0		
2.5.1.9	8.3.9	Extra-over for Backfill Material against Structures	m³	4.0		
2.5.2	SANS 1200DM	EARTHWORKS (ROADS, SUBGRADE)				
2.5.2.1	8.3.3	Treatment of Roadbed				
2.5.2.2		(a) Roadbed preparation and Compaction				
2.5.2.3		2) minimum of 95% of modified AASHTO maximum density	m^3	23.6		
2.5.2.4	8.3.5	Selected layer compacted to 95% of modified AASHTO maximum density				
2.5.2.5		(a) Two layers of G7 150 mm deep	m^3	23.6		
2.5.3	SANS 1200G	CONCRETE STRUCTURAL				
2.5.3.1	8.2	SCHEDULED FORMWORK ITEMS				
2.5.3.2	8.2.1	Rough				
2.5.3.3		(1) Sloping to Floor Slab Foundations	m²	29.2		
2.5.3.4		(2) Vertical Slabs at Outlet	m²	0.6		
2.5.3.5	8.2.2	Smooth				
2.5.3.6		(1) Vertical to Walls	m²	148.3		
2.5.3.7		(2) Vertical to Roof Slab at Outlet	m²	0.1		
2.5.3.8		(3) Horizontal to Soffit of Roof Slab	m²	1.5		
2.5.3.9	8.2.5	Narrow Widths (up to 200mm wide)				
2.5.3.10		(1) Internal Wall Slots	m	31.0		
2.5.3.11	8.2.6	Box Out Holes / Form Voids				
2.5.3.12		Small, circular, of diameter up to and including 0,35 m				
2.5.3.13		(1) Up to and including 0,5m deep	No.	7		
2.5.3.14	8.3	SCHEDULED REINFORCEMENT ITEMS				
2.5.3.15	8.3.1	Steel Bars				
2.5.3.16		High-tensile steel				
2.5.3.17		Nominal size 25mm to:				
2.5.3.18		(1) Floor Slab	t	0.31		
2.5.3.19		(2) Walls	t	0.47		
2.5.3.20		(3) Roof at Discharge Point	t	0.04		
2.5.3.21		(4) Stairway and Platform Plinth	t	0.01		
2.5.3.22	8.4	SCHEDULED CONCRETE ITEMS				
2.5.3.23	8.4.2	Blinding Layer				
2.5.3.24		(1) 15 Mpa no-fines concrete 50 mm thick	m³	1.0		
2.5.3.25	8.4.3	Strength Grade Concrete				
2.5.3.26		(1) 35Mpa/19mm water retaining concrete				
2.5.3.27		(1.1) Floor Slab	m³	3.9		
2.5.3.28		(1.2) Walls	m³	5.8		
		TOTAL CARRIED FORWARD				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
2.5.3.29		(1.3) Roof Outlets	m³	0.5		
2.5.3.30		(2) 30Mpa/19mm concrete				
2.5.3.31		(2.1) Stairway and Platform Plinth	m³	0.1		
2.5.3.32	8.4.4	Unformed Surface Finishes				
2.5.3.33		(1) Wood-floated finish to				
2.5.3.34		(1.1) Floor Slab	m²	78.5		
2.5.3.35		(1.2) Stairway and Platform Plinth	m²	0.7		
2.5.3.36		(2) Steel-floated finish to				
2.5.3.37		(2.1) Roof of Outlet Points	m²	4.8		
2.5.3.38		(2.2) Top of Walls	m²	14.8		
2.5.3.39	8.5	JOINTS				
2.5.3.40		1) Wall / Foundation Base Slab Interface Joint				
2.5.3.41		a) ABE Type B 150 Plain Web Durajoint Rubber Dumbell Waterstop	m	31.4		
2.5.3.42		b) Sikadur-Combiflex System 200 wide x 2mm thick	m	31.4		
2.5.3.43	8.7	GROUTING				
2.5.3.44		a) Under bases (or beds)	l	3.00		
2.5.3.45		b) Puddle Flange Locations	l	110		
2.5.4	**SANS 1200H**	**STRUCTURAL STEELWORK**				
2.5.4.1	8.3.1	Supply and Fabrication				
2.5.4.2	8.3.1.1	Preparation of shop detail drawings				
2.5.4.3		Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs	t	0.05		
2.5.4.4		Parallel Flange Channel - 180x70PFC	t	0.38		
2.5.4.5	8.3.1.2	Supply and fabrication of steelwork				
2.5.4.6		Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs	t	0.05		
2.5.4.7		Parallel Flange Channel - 180x70PFC	t	0.38		
2.5.4.8	8.3.2	Delivery to Site				
2.5.4.9	8.3.2.1	Normal Delivery				
2.5.4.10		Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs	t	0.05		
2.5.4.11		Parallel Flange Channel - 180x70PFC	t	0.38		
2.5.4.12	8.3.3	Erection on Site				
2.5.4.13		(1) Stairway	No.	3		
2.5.4.14	8.3.6	Holding-down (HD) Bolts				
2.5.4.15		(1) M16 HILTI Concrete Anchors	No.	18		
2.5.4.16	8.3.7	Handrails				
2.5.4.17		b) Handrail assembly complete				
2.5.4.18		1) Horizontal	m	17.70		
2.5.4.19		2) Sloping (measured on slope)	m	18.00		
2.5.4.20		3) Shaped Ends	No.	15		
2.5.4.21	8.3.9	Flooring, Complete and Installed with Frames				
2.5.4.22		a) Open grid floors				
2.5.4.23		1) Rectagrid RS80, 40 x 4.5	m²	2.88		
2.5.4.24		2) Rectagrid RS40, 30 x 4.5 stair treads	m²	3.86		
2.5.5	**SANS 1200HC**	**CORROSION PROTECTION OF STRUCTURAL STEELWORK**				
2.5.5.1	8.2.3	Surface Preparation and Coating Application				
2.5.5.2		a) in the shop	t	0.43		
2.5.5.3		b) on Site	t	0.04		
2.5.6	**SANS 1200L**	**MEDIUM PRESSURE PIPELINES**				
2.5.6.1	PSL 8.2.16	Wrapping of Steel Pipes at Concrete Interfaces	m²	0.38		
2.5.6.2	PSL 8.2.20	Supply, weld, lay, bed and test specials and valves				
2.5.6.3		Item 1 - Concentric Reducer 250 to 160mm, with puddle flange and DN160 spool piece	No.	3		
		TOTAL CARRIED FORWARD				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
2.5.6.4		Item 2 - DN160 Long Radius Elbow, FBE, ANSI (ASA) B16.9	No.	3		
2.5.6.5		Item 3 - Steel to uPVC SG Iron Flange Adaptor, DN160	No.	3		
2.5.7	**PWB**	**BUILDING WORK**				
2.5.7		Sand Cement Screed to Fall, Average 75 mm Thick	m²	23.1		
2.5.8	**M21**	**MECHANICAL PRESSURE PIPEWORK**				
2.5.8.1	M21.27	Wrapping of Buried Flanges in accordance with "Particular Specification M21: Mechanical Pressure Pipework"				
2.5.8.2		Item 2 -Steel to uPVC SG Iron Flange Adaptor	No.	3		
		TOTAL CARRIED FORWARD TO SECTION 2.6				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD FROM SECTION 2.5				
		SECTION 2.6				
	Est	LIME CLARIFIERS				
		REFER TO DRAWING: "LIME CLARIFIERS 1, 2 AND 3" JW NUMBER: "JW13599-CE-004 & 005"				
2.6.1	SANS 1200D	EARTHWORKS				
2.6.1.1	8.3.1	Site Preparation				
2.6.1.2	8.3.1.1	Clear and strip site	m²	3402		
2.6.1.3	8.3.1.2	Remove topsoil to nominal depth 150mm, stockpile and maintain	m²	3402		
2.6.1.4		Buik Excavation				
2.6.1.5		a) Excavate in all materials and use for embankment or backfill or dispose, as ordered	m³	18210		
		i) Embankments	m³	6882		
2.6.1.6		b) Extra-over for:				
2.6.1.7		1) Intermediate excavation	m³	2040		
2.6.1.8		2) Hard Rock excavation	m³	8158		
2.6.1.9	PSD 8.3.2	Extra-over for spoiling material in an approved municipal dump:				
2.6.1.10		b) Long overhaul				
2.6.1.11		1) Soft Material	m³	100		
2.6.1.12		2) Intermediate Material	m³	2040		
2.6.1.13		3) Hard Material	m³	8158		
2.6.1.14						
2.6.1.15	8.3.9	Extra-over for Backfill Material against Structures	m³	1030		
2.6.2	SANS 1200G	CONCRETE STRUCTURAL				
2.6.2.1	8.2	SCHEDULED FORMWORK ITEMS				
2.6.2.2	8.2.1	Rough				
2.6.2.3		(1) Sloped to Floor Slab	m²	1801.8		
2.6.2.4		(2) Vertical to Sump	m²	29.0		
2.6.2.5	8.2.2	Smooth				
2.6.2.6		(1) Vertical to Walls	m²	2677.2		
2.6.2.7		(2) Vertical to internal circular column	m²	70.0		
2.6.2.8		(3) Vertical to Launder	m²	250.3		
2.6.2.9		(4) Horizontal to soffit of Launder	m²	205.1		
2.6.2.10		(5) Vertical to Overflow Chamber	m²	41.9		
2.6.2.11		(6) Vertical to Sludge Extraction Sump	m²	67.9		
2.6.2.12	8.2.6	Box Out Holes / Form Voids				
2.6.2.13		Large, circular, of diameter over 0,35 m up to and including 0.7 m				
2.6.2.14		(1) Up to and including 0,5m deep	No.			
2.6.2.15	8.3	SCHEDULED REINFORCEMENT ITEMS				
2.6.2.16	8.3.1	Steel Bars				
2.6.2.17		High-tensile steel				
2.6.2.18		Nominal size 25mm to:				
2.6.2.19		(1) Floor Slab	t	21.60		
2.6.2.20		(2) Walls of Lime Clarifier	t	26.89		
2.6.2.21		(3) Launder	t	7.29		
2.6.2.22		(4) Overflow Chamber	t	0.46		
2.6.2.23		(5) Sludge Extraction Sump	t	8.31		
2.6.2.24	8.4	SCHEDULED CONCRETE ITEMS				
2.6.2.25	8.4.2	Blinding Layer				
2.6.2.26		(1) 15 Mpa no-fines concrete 50 mm thick	m³	5.0		
2.6.2.27	8.4.3	Strength Grade Concrete				
2.6.2.28		(1) 35Mpa/19mm water retaining concrete				
2.6.2.29		(1.1) Floor Slab Foundation	m³	270.0		
2.6.2.30		(1.2) Walls of Lime Reactor	m³	336.1		
		TOTAL CARRIED FORWARD				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
2.6.2.31		(1.3) Launder	m³	91.2		
2.6.2.32		(1.4) Overflow Chamber	m³	5.7		
2.6.2.33		(1.5) Sludge Extraction Sump	m³	103.9		
2.6.2.34		(2) 100mm No-Fines Concrete	m³	180.0		
2.6.2.35		(3) Mass Concrete (15 Mpa/38mm)	m³	59.0		
2.6.2.36		(4) 10mm Mortar	m³	18.0		
2.6.2.37	8.4.4	Unformed Surface Finishes				
2.6.2.38		(1) Power-floated finish to				
2.6.2.39		(1.1) Floor Slab Foundation	m²	600.6		
2.6.2.40		(2) Wood-Floated Finish				
2.6.2.41		(2.1) Outer Edge Foundation	m²	81.4		
2.6.2.42		(2.2) Top of Wall	m²	66.6		
2.6.2.43		(2.3) Launder	m²	205.1		
2.6.2.44		(2.4) Overflow Chamber	m²	4.8		
2.6.2.45		(2.5) Sludge Extraction Sump	m²	10.4		
2.6.2.46	8.5	JOINTS				
2.6.2.47		1) Wall / Foundation Base Slab Interface Joint				
2.6.2.48		a) ABE Type B 150 Plain Web Durajoint Rubber Dumbell Waterstop	m	266.2		
2.6.2.49		b) Sikadur-Combiflex System 200 wide x 2mm thick	m	268.6		
2.6.2.50		2) Wall Construction Joint				
2.6.2.51		a) ABE Type C Centre Bulb Durajoint Rubber Dumbell Waterstop	m	266.2		
2.6.2.52		b) 20x10 Multiseal 1148 Polysulphide Sealant or approved equivalent.	m	268.6		
2.6.2.53		3) Foundation Construction Joint				
2.6.2.54		a) ABE Durajoint PVC External Rearguard Water stop 200 wide, with 20x10 multiseal 1148 polysulphide sealant or approved equivalent	m	519.8		
2.6.3	**SANS 1200H**	**STRUCTURAL STEELWORK**				
2.6.3.1	8.3.1	Supply and Fabrication				
2.6.3.2	8.3.1.1	Preparation of shop detail drawings				
2.6.3.3		Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs	t	0.04		
2.6.3.4	8.3.1.2	Supply and fabrication of steelwork				
2.6.3.5		Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs	t	0.04		
2.6.3.6	8.3.2	Delivery to Site				
2.6.3.7	8.3.2.1	Normal Delivery	t	0.04		
2.6.3.8	8.3.3	Erection on Site	t	0.04		
2.6.3.9	8.3.9	Flooring, Complete and Installed with Frames				
2.6.3.10		a) Open grid floors				
2.6.3.11		1) Rectagrid RS80, 40 x 4.5	m²	2.88		
2.6.4	**SANS 1200L**	**MEDIUM PRESSURE PIPELINES**				
2.6.4.1	PSL 8.2.20	Supply, weld, lay, bed and test specials and valves				
2.6.4.2		a) Item 1 - Steel to uPVC flange adapter (DN160)	No.	3		
2.6.4.3		b) Item 2 - Flanged steel medium 7° radius bend (DN160)	No.	3		
2.6.4.4		c) Item 3 - Steel spool piece flanged both ends DN160 (L = 16.8m)	No.	3		
2.6.4.5		d) Item 4 - 90° steel bend long radius (DN160)	No.	3		
2.6.4.6		e) Item 5 - Concentric reducer (DN160 to DN700)	No.	3		
2.6.4.7		f) Item 6 - Steel spool piece, flanged one end DN700, L = 4.0m	No.	3		
2.6.4.8		g) Item 7 - Steel spool piece flanged both ends DN200 (L = 16.8m)	No.	3		
2.6.4.9		h) Item 8 - Viking Johnson type coupling (DN200)	No.	3		
		TOTAL CARRIED FORWARD				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
2.6.4.10	PSL 8.2.20	Supply, weld, lay, bed and test specials and valves				
2.6.4.11		a) Item 9 - Flanged steel pipe with puddle flange (L = 1m) (DN200)	No.	3		
2.6.4.12		b) Item 10 - Flanged steel medium 7° radius bend (DN160)	No.	3		
2.6.4.13		c) Item 11 - Steel spool piece flanged both ends DN200 (L = 16.8m)	No.	3		
2.6.4.14		d) Item 12 - Steel to UPVC Flange Adaptor (DN200)	No.	3		
2.6.5	**PWA**	**WATERTIGHTNESS TESTING OF TANKS**				
2.6.5.1	PWA2.1	Testing of Watertightness of Structure	Sum	3		
		TOTAL CARRIED FORWARD TO SECTION 2.7				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD FROM SECTION 2.6				
		SECTION 2.7 SLUDGE DISCHARGE CHAMBER REFER TO DRAWING: "SLUDGE DISCHARGE CHAMBER" JW NUMBER: "JW13599-CE-012"				
2.7.1	SANS 1200D	EARTHWORKS				
2.7.1.1	8.3.1	Site Preparation				
2.7.1.2	8.3.1.1	Clear and strip site	m²	220.3		
2.7.1.3	8.3.1.2	Remove topsoil to nominal depth 150mm, stockpile and maintain	m²	220.3		
2.7.1.4	8.3.3	Restrcted Excavation				
2.7.1.5		a) Excavate in all materials and use for embankment or backfill or dispose, as ordered	m³	343.5		
2.7.1.6		b) Extra-over for:				
2.7.1.7		1) Intermediate excavation	m³	34.4		
2.7.1.8		2) Hard Rock excavation	m³	34.4		
2.7.1.9	8.3.9	Extra-over for Backfill Material against Structures	m³	53.3		
2.7.2	SANS 1200DM	EARTHWORKS (ROADS, SUBGRADE)				
2.7.2.1	8.3.3	Treatment of Roadbed				
2.7.2.2		(a) Roadbed preparation and Compaction				
2.7.2.3		2) minimum of 95% of modified AASHTO maximum density	m^3	9.2		
2.7.2.4	8.3.5	Selected layer compacted to 95% of modified AASHTO maximum density				
2.7.2.5		(a) Two layers of G7 150 mm deep	m^3	9.2		
2.7.3	SANS 1200G	CONCRETE STRUCTURAL				
2.7.3.1	8.2	SCHEDULED FORMWORK ITEMS				
2.7.3.2	8.2.1	Rough				
2.7.3.3		Vertical Surfaces				
2.7.3.4		Foundation Slab	m²	6.8		
2.7.3.5	8.2.2	Smooth				
2.7.3.6		Vertical Surfaces				
2.7.3.7		Chamber Walls	m²	185.8		
2.7.3.8		Plinths	m²	4.05		
2.7.3.9	8.2.5	Narrow Widths (up to 100mm wide)				
2.7.3.10		Sump	m	2.4		
2.7.3.11	8.2.6	Box Out Holes/Form Voids				
2.7.3.12		a) Small, circular, of diameter up to and including 0.35m				
2.7.3.13		1) Up to and including 0,5m deep	No.	7		
2.7.3.14		c) Large, circular, of diameter over 0.35m up to and including 0.7m				
2.7.3.15		1) Up to and including 0,5m deep	No.	1		
2.7.3.16	8.3	SCHEDULED REINFORCEMENT ITEMS				
2.7.3.17	8.3.1	Steel Bars				
2.7.3.18		High-tensile steel				
2.7.3.19		Nominal size 25mm to:				
2.7.3.20		Foundations	t	0.74		
2.7.3.21		Walls	t	2.26		
2.7.3.22		Plinths	t	0.02		
2.7.3.23	8.4	SCHEDULED CONCRETE ITEMS				
2.7.3.24	8.4.2	Blinding Layer				
2.7.3.25		(1) 15 Mpa no-fines concrete 50 mm thick	m³	1.5		
2.7.3.26	8.4.3	Strength Grade Concrete				
2.7.3.27		(1) 30Mpa/19mm concrete				
2.7.3.28		(1.1) Floor Slab	m³	9.2		
2.7.3.29		(1.2) Walls	m³	28.2		
2.7.3.30		(1.3) Plinths	m³	0.3		
2.7.3.31	8.4.4	Unformed Surface Finishes				
2.7.3.32		(1) Wood-floated finish to				
2.7.3.33		(1.1) Floor Slab	m²	30.8		
		TOTAL CARRIED FORWARD				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
2.7.3.34		(1.2) Top of Plinths	m²	0.6		
2.7.3.35		(2) Steel-floated finish to				
2.7.3.36		(2.1) Top of Walls	m²	7.1		
2.7.4	**SANS 1200H**	**STRUCTURAL STEELWORK**				
2.7.4.1	8.3.1	Supply and Fabrication				
2.7.4.2	8.3.1.1	Preparation of shop detail drawings				
2.7.4.3		Rolled Angle - 60x60x6L	t	0.09		
2.7.4.4		Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs	t	0.11		
2.7.4.5	8.3.1.2	Supply and fabrication of steelwork				
2.7.4.6		Rolled Angle - 60x60x6L	t	0.09		
2.7.4.7		Rolled Angle - 50x50x6L with 25x5 Thk. Flat lugs	t	0.11		
2.7.4.8	8.3.2	Delivery to Site				
2.7.4.9	8.3.2.1	Normal Delivery	t	0.20		
2.7.4.10	8.3.3	Erection on Site	t	0.20		
2.7.4.11	8.3.4	Erection Bolts	t	0.005		
2.7.4.12	8.3.8	Ladders, Complete and Installed	No.	3		
2.7.4.13	8.3.9	Flooring, Complete and Installed with Frames				
2.7.4.14		a) Open grid floors - Chamber	m²	19.6		
2.7.4.15		b) Open grid floors - Sump Cover	m²	0.18		
2.7.5	**SANS 1200HC**	**CORROSION PROTECTION OF STRUCTURAL STEELWORK**				
2.7.5.1	8.2.3	Surface Preparation and Coating Application				
2.7.5.2		a) in the shop	t	0.20		
		b) on Site	t	0.02		
2.7.6	**SANS 1200L**	**MEDIUM PRESSURE PIPELINES**				
2.7.6.1	PSL 8.2.16	Wrapping of Steel Pipes at Concrete Interfaces	m²			
2.7.6.2	PSL 8.2.20	Supply, weld, lay, bed and test specials and valves in Chambers				
2.7.6.3		Item 4 - Steel to uPVC SG Iron Flange Adaptor	No.	3		
2.7.6.4		Item 5 - Pipe Spool, Flanged both Ends, L = 1283 mm, Puddle Flange at 466mm from end.	No.	3		
2.7.6.5		Item 6 - Equal Tee to SANS 719, Flanged all Ends	No.	4		
2.7.6.6		Item 7 - Flanged Steel 90 Degree Elbow Long Radius - ANSI (ASA) B16.9, Spool piece 100mm long welded to plain end	No.	1		
2.7.6.7		Item 8 - Knife Gate Valve (Non-Rising Stem)	No.	13		
2.7.6.8		Item 9 - Flange Adaptor	No.	10		
2.7.6.9		Item 10 - Pipe Spool, Flanged both Ends, L = 150 mm	No.	3		
2.7.6.10		Item 11 - Pipe special, equal tee to SANS 719 plain ended two ends with spool pieces welded to each end	No.	1		
2.7.6.11		Item 13 - Flanged Steel Both Ends 90 Degree Elbow Long Radius - ANSI (ASA) B16.9	No.	1		
2.7.6.12		Item 14 - Pipe Spool, Flanged One End, Plain Ended Other, L = 315 mm	No.	3		
2.7.6.13		Item 15 - Pipe Spool, Flanged Both Ends, L = 300 mm	No.	6		
2.7.6.14		Item 16 - Standard 45 Degree Lateral, SANS 719, Flanged all Ends, Including Blank Flange Added to Lateral End	No.	4		
2.7.6.15		Item 17 - Pipe Spool, Flanged Both Ends, L = 844 mm	No.	3		
2.7.6.16		Item 18 - Electromagnetic Flow Meter	No.	3		
2.7.6.17		Item 19 - Pipe Spool, Flanged One End, Plain Ended Other, L = 288 mm	No.	3		
2.7.6.18		Item 20 - Pipe Spool, Flanged One End, Plain Ended Other, L = 616 mm, Puddle Flange 150 mm from plain end	No.	3		
2.7.6.19		Item 21 - Pipe Spool, Flanged both Ends, L = 992 mm	No.	1		
2.7.6.20		Item 22 - Pipe Spool, Flanged One End, Plain Ended Other, L = 1493 mm	No.	1		
2.7.6.21		Item 23 - Eccentric Reducer, DN350 to DN300, with puddle flange and spool piece L = 777 mm Flanged	No.	1		
		TOTAL CARRIED FORWARD				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
2.7.6.22		Item 24 - Stub Flange with Backing Slip-On Flange (HDE steel), L = 100mm	No.	1		
2.7.6.23		Item 26 - Equal Tee to SANS 719, Flanged, Spool piece 200 mm long welded to plain end	No.	2		
2.7.7	**PWB**	**BUILDING WORK**				
2.7.7.1		Sand Cement Screed to Fall, Average 75 mm Thick	m²	19.6		
2.7.8	**M21**	**MECHANICAL PRESSURE PIPEWORK**				
2.7.8.1	M21.27	Wrapping of Buried Flanges in accordance with "Particular Specification M21: Mechanical Pressure Pipework"				
2.7.8.2		Item 4 -Steel to uPVC SG Iron Flange Adaptor	No.	3		
		Item 24 - Stub Flange with Backing Slip-On Flange (HDE steel), L = 100mm	No.	1		
		TOTAL CARRIED FORWARD TO SECTION 2.8				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD FROM SECTION 2.7				
		SECTION 2.8 MCC ROOM REFER TO DRAWING: "MCC ROOM" JW NUMBER: "JW13599-CE-006"				
2.8.1	SANS 1200D	EARTHWORKS				
2.8.1.1	8.3.1	Site Preparation				
2.8.1.2	8.3.1.1	Clear and strip site	m²	45.57		
2.8.1.3	8.3.1.2	Remove topsoil to nominal depth 150mm, stockpile and maintain	m²	45.57		
2.8.1.4	8.3.3	Restrcted Excavation				
2.8.1.5		a) Excavate in all materials and use for embankment or backfill or dispose, as ordered	m³	66.14		
2.8.1.6		b) Extra-over for:				
2.8.1.7		1) Intermediate excavation	m³	6.61		
2.8.1.8		2) Hard Rock excavation	m³	6.61		
2.8.1.9	8.3.9	Extra-over for Backfill Material against Structures	m³	12.73		
2.8.2	SANS 1200DM	EARTHWORKS (ROADS, SUBGRADE)				
2.8.2.1	8.3.3	Treatment of Roadbed				
2.8.2.2		(a) Roadbed preparation and Compaction				
2.8.2.3		2) minimum of 95% of modified AASHTO maximum density	m³	13.67		
2.8.2.4	8.3.5	Selected layer compacted to 95% of modified AASHTO maximum density				
2.8.2.5		(a) Two layers of G7 150 mm deep	m³	13.67		
2.8.3	SANS 1200G	CONCRETE STRUCTURAL				
2.8.3.1	8.2	SCHEDULED FORMWORK ITEMS				
2.8.3.2	8.2.1	Rough				
2.8.3.3		(1) Vertical to Strip Footing Foundations	m²	28.69		
2.8.3.4		(2) Vertical to cable trench floor slab	m²	3.79		
2.8.3.5	8.3	SCHEDULED REINFORCEMENT ITEMS				
2.8.3.6	8.3.1	Steel Bars				
2.8.3.7		High-tensile steel				
2.8.3.8		Nominal size 25mm to:				
2.8.3.9		Strip Footing Foundations	t	0.63		
2.8.3.10	8.3.2	High-Tensile Welded Mesh:				
2.8.3.11		(1) Floor Slab - Mesh Ref. 193	m²	59.91		
2.8.3.12	8.4	SCHEDULED CONCRETE ITEMS				
2.8.3.13	8.4.2	Blinding Layer				
2.8.3.14		(1) 15 Mpa no-fines concrete 50 mm thick	m³	2.28		
2.8.3.15	8.4.3	Strength Grade Concrete				
2.8.3.16		(1) 30Mpa/19mm concrete				
2.8.3.17		(1.1) Floor Slab	m³	5.99		
2.8.3.18		(1.2) Strip Footing Foundations	m³	7.89		
2.8.3.19		(1.3) Cable trench floor slab	m³	1.87		
2.8.3.20		(1.4) Ramp to FGL	m³	0.23		
2.8.3.21	8.4.4	Unformed Surface Finishes				
2.8.3.22		(1) Wood-floated finish to				
2.8.3.23		(1.1) Strip Footing Foundations	m²	14.34		
2.8.3.24		(1.2) Cable trench floor	m²	9.34		
2.8.3.25		(1.3) Ramp to FGL	m²	4.64		
2.8.3.26		(2) Steel-floated finish to				
2.8.3.27		(2.1) Floor Slab	m²	29.96		
2.8.3.28	8.5	JOINTS				
2.8.3.29		10mm Softboard with 10x10mm Polyurethane Sealant	m	25.20		
		TOTAL CARRIED FORWARD				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
2.8.4	**SANS 1200H**	**STRUCTURAL STEELWORK**				
2.8.4.1	8.3.1	Supply and Fabrication				
2.8.4.2	8.3.1.1	Preparation of shop detail drawings				
2.8.4.3		(1) Angle Frame (50x50x6mm L Iron, including R8 lugs and 6x6mm Square Bar)	t	0.09		
2.8.4.4	8.3.1.2	Supply and fabrication of steelwork				
2.8.4.5		(1) Angle Frame (50x50x6mm L Iron, including R8 lugs and 6x6mm Square Bar)	t	0.09		
2.8.4.6	8.3.2	Delivery to Site				
2.8.4.7	8.3.2.1	Normal Delivery				
2.8.4.8		(1) Angle Frame (50x50x6mm L Iron, including R8 lugs and 6x6mm)	t	0.09		
2.8.4.9	8.3.9	Flooring, Complete and Installed with Frames				
2.8.4.10		(b) Floorplate Floors				
2.8.4.11		VASTRAP ® flooring, 6.0mm thick	m²	2.41		
2.8.5	**SANS 1200HC**	**CORROSION PROTECTION OF STRUCTURAL STEELWORK**				
2.8.5.1	8.2.3	Surface Preparation and Coating Application				
2.8.5.2		a) in the shop	t	0.09		
2.8.5.3		b) on Site	t	0.01		
2.8.6	**SANS 1200 HB**	**CLADDING AND SHEETING**				
2.8.6.1	8.2.2	Supply and Install Cladding and Sheeting:				
2.8.6.2		(1) 0.6mm Thick heavy industrial profile roof sheets in cut lengths complete with FBE colour traffic green E.07 fixed to 76x50 purlins at 1200mm c/c max. on pre-fabricated engineered timber trusses at 1200mm c/c max designed in accordance with SANS 10163	m²	48.50		
2.8.6.3	8.2.3	Supply and Install Ancillaries:				
2.8.6.4		(1) 0.8mm Thick standard sidewall flashing FK9 and counter flashing FK7 all with colour middle blue F.07	m	11.55		
2.8.6.5		(2) 0.8mm Thick standard ridge capping FK3 with finish in colour middle blue F.07	m	8.40		
2.8.6.6		(3) 125x100mm Ogee profile guttering in chromadek finish colour middle blue F.07 gutter secured to trough with 6mm verandah bolts at 203mm centres and to crown of sheets with gutter clips pop-rivetted at 800mm centres max.	m	16.80		
2.8.6.7		(4) 100x75mm Rectangular downpipes in chromadek finish colour middle blue F.07	m	6.14		
2.8.7	**SANS 1200 LC**	**CABLE DUCTS**				
2.8.7.1	8.2.5	Supply, Lay, Bed, and Prove Ducts (Including Draw Wires)				
2.8.7.2		(1) Electrical cable ducts				
2.8.7.3		(1.1) 110mm diam uPVC (Class 25) Ducts to be infilled with "Sika Boom Expanding Polyurethane Foam" or similar approved.	No.	2.00		
2.8.8	**PWB**	**BUILDING SPECIFICATION**				
2.8.8.1	PWB 13.1	Brickwork				
2.8.8.2	PWB 13.1.1	230mm Thick				
2.8.8.3		(1) Facebrick Stretcher Bond	m²	89.22		
2.8.8.4	PWB 13.4	Timber Roof Truss				
2.8.8.5	PWB 13.4.1	Design, supply and erect timber roof trusses	Sum	1.00		
2.8.8.6	PWB 13.5	Iron Mongery				
		TOTAL CARRIED FORWARD				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
2.8.8.7	13.5.1	Steel Doors and Frames				
2.8.8.8		(1) Standard 1.2mm Mild Steel Transformer Door and Jamb combination type DV as per Duro Cat with full louvres (2mm steel plate riveted to inside face of louvres)	No.			
2.8.8.9		(2) Standard 2032 x 813mm Meranti F/L Batten Door with Open Back	No.			
2.8.8.10	13.5.2	Steel window frames				
2.8.8.11		(1) Standard SS31 Window Centre Pivot as per Duro pressing Cat, and complete with catch opener & type B2 burglar bars	No.			
2.8.8.12	13.8	Miscellaneous Work				
2.8.8.13	13.8.5	(1) 290 x 290mm Standard PVC safety signs to comply with SANS 1186	No.			
2.8.9	**PQC**	**CARPENTERY, JOINERY AND IRONMONGERY**				
2.8.9.1	PQC 10.7	Ceilings				
2.8.9.2		(1) 6.4mm Gypsum Ceiling Boards fixed to 38mm branderings 400 centres cross nailed trusses with metal H joiners prepared for painting with1 u/coat with 2cts super PVA	m²			
2.8.9.3	PQC 10.8	Ceiling Brandering				
2.8.9.4		(1) 6.4mm Gypsum Ceiling Boards fixed to 38mm branderings 400 centres cross nailed trusses with metal H joiners prepared for painting with1 u/coat with 2cts super PVA	m²			
		TOTAL CARRIED FORWARD TO SECTION 2.9				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD FROM SECTION 2.8				
		SECTION 2.9 SLAB - LIME SILO AND ANCILLARY EQUIPMENT REFER TO DRAWING: "SITE LAYOUT" JW NUMBER: "JW13599-CE-001"				
2.9.1	SANS 1200D	EARTHWORKS				
2.9.1.1	8.3.1	Site Preparation				
2.9.1.2	8.3.1.1	Clear and strip site	m²	134.6		
2.9.1.3	8.3.1.2	Remove topsoil to nominal depth 150mm, stockpile and maintain	m²	134.6		
2.9.1.4	8.3.2	Buik Excavation				
2.9.1.5		a) Excavate in all materials and use for embankment or backfill or dispose, as ordered	m³	55.3		
2.9.1.6		b) Extra-over for:				
2.9.1.7		1) Intermediate excavation	m³	5.5		
2.9.1.8		2) Hard Rock excavation	m³	5.5		
2.9.1.9	8.3.9	Extra-over for Backfill Material against Structures	m³	10.0		
2.9.2	SANS 1200DM	EARTHWORKS (ROADS, SUBGRADE)				
2.9.2.1	8.3.3	Treatment of Roadbed				
2.9.2.2		(a) Roadbed preparation and Compaction				
2.9.2.3		2) minimum of 95% of modified AASHTO maximum density	m^3	30.0		
2.9.2.4	8.3.5	Selected layer compacted to 95% of modified AASHTO maximum density				
2.9.2.5		(a) Two layers of G7 150 mm deep	m^3	30.0		
2.9.3	SANS 1200G	CONCRETE STRUCTURAL				
2.9.3.1	8.2	SCHEDULED FORMWORK ITEMS				
2.9.3.2	8.2.1	Rough				
2.9.3.3		(1) Vertical to Floor Slab Foundations	m²	20.0		
2.9.3.4	8.3	SCHEDULED REINFORCEMENT ITEMS				
2.9.3.5	8.3.1	Steel Bars				
2.9.3.6		High-tensile steel				
2.9.3.7		Nominal size 25mm to:				
2.9.3.8		(1) Floor Slab Foundation	t	4.00		
2.9.3.9	8.4	SCHEDULED CONCRETE ITEMS				
2.9.3.10	8.4.2	Blinding Layer				
2.9.3.11		(1) 15 Mpa no-fines concrete 50 mm thick	m³	5.00		
2.9.3.12	8.4.3	Strength Grade Concrete				
2.9.3.13		(1) 30Mpa/19mm concrete				
2.9.3.14		(1) Floor Slab Foundation	m³	50.0		
2.9.3.15	8.4.4	Unformed Surface Finishes				
2.9.3.16		(1) Wood-floated finish to				
2.9.3.17		(1.1) Floor Slab Foundation	m²	100.0		
		TOTAL CARRIED FORWARD TO SECTION 2.10				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD FROM SECTION 2.9				
		SECTION 2.10 **PIPELINES** **REFER TO DRAWING: "SITE LAYOUT" JW NUMBER: "JW13599-CE-002"** **PIPELINE LENGTH 1 - RISING MAIN AND SLUDGE LINE TO OPEN CULVERT**				
2.10.1	**SANS 1200 DB**	**EARTHWORKS (PIPE TRENCHES)**				
2.10.1.1	8.3.1	Site Clearance and removal of topsoil				
2.10.1.2		(a) Clear vegetation and trees of girth up to 1m				
2.10.1.3		1) Pipelines	m	195.65		
2.10.1.4		(c) Remove topsoil to depth of 100mm				
2.10.1.5		1) Pipelines	m^2	229.92		
2.10.1.6	8.3.2	Excavation				
2.10.1.7		a) Excavate in all materials for trench, backfill, compact, test and dispose of surplus/unsuitable material for the following depths:	m^3	354.37		
2.10.1.8		b) Extra-over items for:				
2.10.1.9		(1) Intermediate excavation	m^3	35.44		
2.10.1.10		(2) Hard rock excavation	m^3	35.44		
2.10.1.11		c) Extra-over for				
2.10.1.12		Excavate and dispose of unsuitable material from trench bottom	m^3	17.72		
2.10.2	**SANS 1200 LB**	**1200 LB - PROVISION OF BEDDING**				
2.10.2.1		Pipe bedding in accordance with SABS 1200 Drawing N° LB-1 rigid pipes with Class 'B' bedding:				
2.10.2.2	8.2	SCHEDULED ITEMS				
2.10.2.3	8.2.1	Provision of Bedding from Trench Excavation				
2.10.2.4		(a) Selected granular material	m^3	59.60		
2.10.2.5		(b) Selected fill material	m^3	95.65		
2.10.2.6	8.2.2	Supply only of Bedding by Importation				
2.10.2.7	8.2.2.3	From commercial sources				
2.10.2.8		(a) Selected granular material	m^3	6.63		
2.10.2.9		(b) Selected fill material	m^3	10.62		
2.10.3	**SANS 1200 L**	**MEDIUM PRESSURE PIPELINES**				
2.10.3.1	8.2.1	Supply, lay, joint, bed complete with valves and specials				
2.10.3.2		(1) HDPE / DN280 / PN10 / SDR17 (RISING MAIN)	m	163.25		
2.10.3.3		(2) HDPE / DN315 / PN10 / SDR 17 (SLUDGE DISCHARGE LINE)	m	178.46		
2.10.3.4	8.2.2	Extra-over 8.2.1 for the Supplying, Laying, and Bedding of Specials Complete with Coupling s				
2.10.3.5		(1) Seamless 45 degree bend, HDPE / DN280 (Rising Main)	No.	2.00		
2.10.3.6		(2) Seamless 45 degree bend, HDPE / DN315 (Sludge Discharge)	No.	2.00		
2.10.3.7		(3) DN280 Stub Flange with Backing Slip-On Flange (HDE steel), L = 100mm	No.	1.00		
2.10.3.8		(3) DN315 Stub Flange with Backing Slip-On Flange (HDE steel), L = 100mm	No.	1.00		
2.10.3.9		Sludge Discharge Pipework Details:				
2.10.3.10		Item 1 - DN300 Spool Piece, Flanged One End, L = 150mm, Mild Steel	No.	1.00		
2.10.3.11		Item 2 - DN300 ASME B16.9, Long Radius Elbow, Flanged Both Ends	No.	4.00		
2.10.3.12		Item 3 - Spool Piece, Flanged Both Ends, L = 2903mm , Mild Steel	No.	1.00		
		TOTAL CARRIED FORWARD				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
2.10.3.13		Item 4 - Spool Piece, Flanged Both Ends, L = 3074mm , Mild Steel	No.	1.00		
2.10.3.14		Item 5 - Stub Flange with Backing Slip-On Flange (HDE steel), L = 100mm	No.	1.00		
2.10.3.15		Rodding Eyes (as per detail on dwg: JW13004R-STD-004)				
2.10.3.16		Item 1 - Rodding Eyes on Sludge Discharge Line	No.	8.00		
2.10.4	**M21**	**MECHANICAL PRESSURE PIPEOWRK**				
2.10.4.1	M21.27	Wrapping of Buried Flanges in accordance with "Particular Specification M21: Mechanical Pressure Pipework"				
2.10.4.2		Item 5 - Stub Flange with Backing Slip-On Flange (HDE steel), L = 100mm	No.	1.00		
		PIPELINE LENGTH 2 - RISING MAIN AND SLUDGE LINE STEEL PIPES OVER OPEN CULVERT				
2.10.5	**SANS 1200 L**	**MEDIUM PRESSURE PIPELINES**				
2.10.5.1	8.2.1	Supply, lay, joint, bed complete with valves and specials				
2.10.5.2		Item 1 - DN280 / Mild Steel pipe / Flanged Both Ends / L = 5m	m	5.00		
2.10.5.3		Item 2 - DN300 / Mild Steel pipe / Flanged Both Ends / L = 5m	m	5.00		
		PIPELINE LENGTH 3 - RISING MAIN, SLUDGE LINE AND OVERFLOW TO SITE STRUCTURES				
2.10.6	**SANS 1200 DB**	**EARTHWORKS (PIPE TRENCHES)**				
2.10.6.1	8.3.1	Site Clearance and removal of topsoil				
2.10.6.2		(a) Clear vegetation and trees of girth up to 1m				
2.10.6.3		1) Pipelines	m	214.30		
2.10.6.4		(c) Remove topsoil to depth of 100mm				
2.10.6.5		1) Pipelines	m^2	200.00		
2.10.6.6	8.3.2	Excavation				
2.10.6.7		a) Excavate in all materials for trench, backfill, compact, test and dispose of surplus/unsuitable material for the following depths:	m^3	452.55		
2.10.6.8		b) Extra-over items for:				
2.10.6.9		(1) Intermediate excavation	m^3	45.26		
2.10.6.10		(2) Hard rock excavation	m^3	45.26		
2.10.6.11		c) Extra-over for				
2.10.6.12		Excavate and dispose of unsuitable material from trench bottom	m^3	22.63		
2.10.7	**SANS 1200 LB**	**1200 LB - PROVISION OF BEDDING**				
2.10.7.1		Pipe bedding in accordance with SABS 1200 Drawing N° LB-1 rigid pipes with Class 'B' bedding:				
2.10.7.2	8.2	SCHEDULED ITEMS				
2.10.7.3	8.2.1	Provision of Bedding from Trench Excavation				
2.10.7.4		(a) Selected granular material	m^3	75.59		
2.10.7.5		(b) Selected fill material	m^3	121.03		
2.10.7.6	8.2.2	Supply only of Bedding by Importation				
2.10.7.7	8.2.2.3	From commercial sources				
2.10.7.8		(a) Selected granular material	m^3	8.38		
2.10.7.9		(b) Selected fill material	m^3	13.44		
2.10.8	**SANS 1200 L**	**MEDIUM PRESSURE PIPELINES**				
2.10.8.1	8.2.1	Supply, lay, joint, bed complete with valves and specials				
2.10.8.2		(1) HDPE / DN280 / PN10 / SDR17 (RISING MAIN)	m	126.70		
2.10.8.3		(2) HDPE / DN315 / PN10 / SDR 17 (SLUDGE DISCHARGE LINE)	m	107.35		
		TOTAL CARRIED FORWARD				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
2.10.8.4		(2) DN250 PVC (CLARIFIER OVERFLOW)	m	80.25		
2.10.8.5		(3) DN125 PVC (CLARIFIER OVERFLOW)	m	45.83		
2.10.8.6	8.2.2	Extra-over 8.2.1 for the Supplying, Laying, and Bedding of Specials Complete with Coupling				
2.10.8.7		(1) RISING MAIN				
2.10.8.8		(1.1) Seamless 45 degree bend, HDPE / DN280	No.	2.00		
2.10.8.9		(1.2) Seamless 90 degree bend, HDPE / DN280	No.	2.00		
2.10.8.10		(1.3) Flanged Steel 90 Degree Elbow Long Radius - ANSI (ASA) B16.9	No.	2.00		
2.10.8.11		(1.4) Pipe Spool, Flanged Both Ends, L = 862mm	No.	1.00		
2.10.8.12		(1.5) Pipe Spool, Flanged One End, Plain Ended Other, L = 443mm	No.	1.00		
2.10.8.13		(1.6) Flange Adaptor	No.	1.00		
2.10.8.14		(1.7) Knife Gate Valve (Non-Rising Stem)	No.	1.00		
2.10.8.15		(2) SLUDGE DISCHARGE LINE				
2.10.8.16		(2.1) Seamless 45 degree bend, HDPE / DN315	No.	3.00		
2.10.8.17		(2.2) Seamless 90 degree bend, HDPE / DN315	No.	2.00		
2.10.8.18		(2.3) Rodding Eyes (as per detail on dwg: JW13599-STD-004)				
2.10.8.19		Item 1 - Rodding Eyes on Sludge Discharge Line	No.	5.00		
2.10.8.20		(3) CLARIFIER OVERFLOW				
2.10.8.21		(3.1) DN250 45 degree Bend PVC	No.	5.00		
2.10.8.22		(3.2) DN250 90 degree Bend PVC	No.	3.00		
2.10.8.23		(3.3) D250 SG Iron Equal Tees	No.	3.00		
2.10.8.24		(3.4) Concentric Reducer 160x125 B	No.	3.00		
2.10.8.25		(3.5) Concentric Reducer 250x160 L	No.	3.00		
	SANS 1200L	Supply, lay, joint, bed complete with valves and specials				
2.10.8.26	8.2.1	Lime Clarifier 1, 2 and 3 to common overflow line – PVCu / DN 125 / Class 6	m	90.00		
2.10.8.27	8.2.1	Common overflow line from Lime Clarifiers to Open Culvert – PVCu / DN 250 / Class 6	m	186.00		
		PIPELINE LENGTH 4 - CLARIFIER SLUDGE TO SLUDGE CHAMBER				
2.10.9	**SANS 1200 DB**	**EARTHWORKS (PIPE TRENCHES)**				
2.10.9.1	8.3.2	Excavation				
2.10.9.2		a) Excavate in all materials for trench, backfill, compact, test and dispose of surplus/unsuitable material for the following depths:	m^3	174.64		
2.10.9.3		b) Extra-over items for:				
2.10.9.4		(1) Intermediate excavation	m^3	17.46		
2.10.9.5		(2) Hard rock excavation	m^3	17.46		
2.10.9.6		c) Extra-over for				
2.10.9.7		Excavate and dispose of unsuitable material from trench bottom	m^3	8.73		
2.10.10	**SANS 1200 LB**	**1200 LB - PROVISION OF BEDDING**				
2.10.10.1		Pipe bedding in accordance with SABS 1200 Drawing N° LB-1 rigid pipes with Class 'B' bedding:				
2.10.10.2	8.2	SCHEDULED ITEMS				
2.10.10.3	8.2.1	Provision of Bedding from Trench Excavation				
2.10.10.4		(a) Selected granular material	m^3	27.67		
2.10.10.5		(b) Selected fill material	m^3	45.57		
2.10.10.6	8.2.2	Supply only of Bedding by Importation				
2.10.10.7	8.2.2.3	From commercial sources				
2.10.10.8		(a) Selected granular material	m^3	3.07		
2.10.10.9		(b) Selected fill material	m^3	5.06		
		TOTAL CARRIED FORWARD				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
2.10.11	SANS 1200 L	**MEDIUM PRESSURE PIPELINES**				
2.10.11.1	8.2.1	Supply, lay, joint, bed complete with valves and specials				
2.10.11.2		(1) DN200 PVC 45 degree bend	No.	3.00		
2.10.11.3		(2) DN200 PVC 22.5 degree bend	No.	6.00		
2.10.11.4		(2.3) Rodding Eyes (as per detail on dwg: JW13599-STD-003)				
2.10.11.5		Item 1 - Rodding Eyes on Sludge Discharge Line	No.	9.00		
2.10.11.6		(3) Lime Clarifier 1, 2 and 3 to Sludge Chamber - PVCu / DN 200 / Class 6	m	210.00		
		PIPELINE LENGTH 5 - MORNING GLORY SPILLWAY TO CLARIFERS				
2.10.12	SANS 1200 DB	**EARTHWORKS (PIPE TRENCHES)**				
2.10.12.1	8.3.2	Excavation				
2.10.12.2		a) Excavate in all materials for trench, backfill, compact, test and dispose of surplus/unsuitable material for the following depths:	m^3	49.08		
2.10.12.3		b) Extra-over items for:				
2.10.12.4		(1) Intermediate excavation	m^3	4.91		
2.10.12.5		(2) Hard rock excavation	m^3	4.91		
2.10.12.6		c) Extra-over for				
2.10.12.7		Excavate and dispose of unsuitable material from trench bottom	m^3	2.45		
2.10.13	SANS 1200 LB	**1200 LB - PROVISION OF BEDDING**				
2.10.13.1		Pipe bedding in accordance with SABS 1200 Drawing N° LB-1 rigid pipes with Class 'B' bedding:				
2.10.13.2	8.2	SCHEDULED ITEMS				
2.10.13.3	8.2.1	Provision of Bedding from Trench Excavation				
2.10.13.4		(a) Selected granular material	m^3	7.42		
2.10.13.5		(b) Selected fill material	m^3	12.62		
2.10.13.6	8.2.2	Supply only of Bedding by Importation				
2.10.13.7	8.2.2.3	From commercial sources				
2.10.13.8		(a) Selected granular material	m^3	0.82		
2.10.13.9		(b) Selected fill material	m^3	1.41		
2.10.14	SANS 1200 L	**MEDIUM PRESSURE PIPELINES**				
2.10.14.1	8.2.1	Supply, lay, joint, bed complete with valves and specials				
2.10.14.2		(2) DN160 PVC 22.5 degree bend	No.	6.00		
2.10.14.3		Morning Glory Spillway to Lime Clarifier 1, 2 and 3 – PVCu / DN 125 / Class 6	m	96.00		
		PIPELINE LENGTH 6 - LIME REACTOR TO MORNING GLORY SPILLWAY				
2.10.15	SANS 1200 DB	**EARTHWORKS (PIPE TRENCHES)**				
2.10.15.1	8.3.2	Excavation				
2.10.15.2		a) Excavate in all materials for trench, backfill, compact, test and dispose of surplus/unsuitable material for the following depths:	m^3	58.98		
2.10.15.3		b) Extra-over items for:				
2.10.15.4		(1) Intermediate excavation	m^3	5.90		
2.10.15.5		(2) Hard rock excavation	m^3	5.90		
2.10.15.6		c) Extra-over for				
2.10.15.7		Excavate and dispose of unsuitable material from trench bottom	m^3	2.95		
		TOTAL CARRIED FORWARD				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
2.10.16	**SANS 1200 LB**	**1200 LB - PROVISION OF BEDDING**				
2.10.16.1		Pipe bedding in accordance with SABS 1200 Drawing N° LB-1 rigid pipes with Class 'B' bedding:				
2.10.16.2	8.2	SCHEDULED ITEMS				
2.10.16.3	8.2.1	Provision of Bedding from Trench Excavation				
2.10.16.4		(a) Selected granular material	m^3	12.87		
2.10.16.5		(b) Selected fill material	m^3	20.15		
2.10.16.6	8.2.2	Supply only of Bedding by Importation				
2.10.16.7	8.2.2.3	From commercial sources				
2.10.16.8		(a) Selected granular material	m^3	1.43		
2.10.16.9		(b) Selected fill material	m^3	2.24		
2.10.17	**SANS 1200 L**	**MEDIUM PRESSURE PIPELINES**				
2.10.17.1	8.2.1	Supply, lay, joint, bed complete with valves and specials				
2.10.17.2		(1) DN315 PVC 22.5 degree bend	No.	2.00		
2.10.17.3		(2) Item 17 - Flanged Steel 90 Degree Elbow Long Radius - ANSI (ASA) B16.9	No.	3.00		
2.10.17.4		(3) Item 18 - Pipe Spool, Flanged One End, Plain Ended Other, L = 1230mm	No.	3.00		
2.10.17.5		(4) Item 19 - Pipe Spool, Flanged Both Ends, L = 798mm	No.	3.00		
2.10.17.6		(5) Item 20 - Concentric Reducer, SANS 719, L = 180mm	No.	3.00		
2.10.17.7		(6) Item 21 - Equal Tee to SANS 719, Flanged all ends	No.	2.00		
2.10.17.8		(7) Item 22 - Flanged Steel 90 Degree Elbow Long Radius - ANSI (ASA) B16.9	No.	2.00		
2.10.17.9		(8) Item 23 - Pipe Spool, Flanged Both Ends, L = 2484mm	No.	1.00		
2.10.17.10		(9) Item 24 - Pipe Spool, Flanged Both Ends, L = 2575mm	No.	1.00		
2.10.17.11		(10) Item 25 - Pipe Spool, Flanged Both Ends, L = 943mm	No.	1.00		
2.10.17.12		(11) Item 26 - Steel to uPVC SG Iron Flange Adaptor	No.	1.00		
2.10.17.13		Lime Reactor to Morning Glory Spillway – PVCu / DN 200 / Class 6	m	51.00		
2.10.18	**M21**	**MECHANICAL PRESSURE PIPEOWRK**				
2.10.18.1	M21.27	Wrapping of Buried Flanges in accordance with "Particular Specification M21: Mechanical Pressure Pipework"				
2.10.18.2		(5) Item 20 - Concentric Reducer, SANS 719, L = 180mm	No.	3.00		
2.10.18.3		(6) Item 21 - Equal Tee to SANS 719, Flanged all ends	No.	2.00		
2.10.18.4		(7) Item 22 - Flanged Steel 90 Degree Elbow Long Radius - ANSI (ASA) B16.9	No.	2.00		
2.10.18.5		(8) Item 23 - Pipe Spool, Flanged Both Ends, L = 2484mm	No.	1.00		
2.10.18.6		(9) Item 24 - Pipe Spool, Flanged Both Ends, L = 2575mm	No.	1.00		
2.10.18.7		(10) Item 25 - Pipe Spool, Flanged Both Ends, L = 943mm	No.	1.00		
2.10.18.8		(11) Item 26 - Steel to uPVC SG Iron Flange Adaptor	No.	1.00		
2.10.19		**PIPELINE LENGTH 7 - SPLITTER BOX TO LIME REACTOR**				
2.10.19.1	8.2.1	Supply, lay, joint, bed complete with valves and specials				
2.10.19.2		(1) Item 10 - Flanged Steel 45 Degree Elbow Long Radius - ANSI (ASA) B16.9	No.	4.00		
2.10.19.3		(2) Item 11 - Pipe Spool, Flanged Both Ends, L = 828mm	No.	2.00		
2.10.19.4		(3) Item 12 - Pipe Spool, Flanged One End, Plain Ended Other, L = 1722mm	No.	2.00		
2.10.19.5		(4) Item 13 - Pipe Spool, Flanged One End, Plain Ended Other, L = 1285mm	No.	2.00		
2.10.19.6		(5) Item 14 - Flange Adaptor	No.	6.00		
2.10.19.7		(6) Item 15 - Knife Gate Valve (Non-Rising Stem)	No.	6.00		
		TOTAL CARRIED FORWARD				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
2.10.20		**HORIZONTAL DIRECTIONAL DRILLING**				
2.10.20.1		Road 1				
2.10.20.2		(1) Sludge Discharge Line (DN 315, HDPE, Length = 11 m, Min. Cover to Pipe Under Roadway 1 m)	Sum	1.00		
2.10.20.3		Road 2				
2.10.20.4		(1) Sludge Discharge Line (DN 315, HDPE, Length = 11 m, Min. Cover to Pipe Under Roadway 1 m)	Sum	1.00		
2.10.20.5		(2) Clarifier Overflow Pipeline (DN 250, PVCu, Length = 11m, Min. Cover to Pipe Under Roadway 1 m)	Sum	1.00		
2.10.20.6		(3) Rising Main (DN 280, HDPE, Length = 11m, Min. Cover to Pipe Under Roadway 1 m)	Sum	1.00		
2.10.20.7		Road 3				
2.10.20.8		(1) Sludge Discharge Line (DN 315, HDPE, Length = 11 m, Min. Cover to Pipe Under Roadway 1 m)	Sum	1.00		
2.10.20.9		(2) Clarifier Overflow Pipeline DN 250, PVCu, Length = 11m, Min. Cover to Pipe Under Roadway 1 m)	Sum	1.00		
2.10.20.10		(3) Rising Main (DN 280, HDPE, Length = 11m, Min. Cover to Pipe Under Roadway 1 m)	Sum	1.00		
2.10.21		**POTABLE AND MAKE-UP WATER PIPELINES**				
2.10.21.1		Potable Water line for general site wide use	P. Sum	1.00		R 250,000.00
2.10.21.2		Lime Agitator Tanks Make-up Water Line	P. Sum	1.00		R 250,000.00
2.10.22	8.5	**SUMS STATED PROVISIONALLY BY THE EMPLOYER'S AGENT**				
2.10.22.1		Contractor's stated commission on Sub Contracted items Section 2.10.21 above	%		R 500,000.00	R -
		TOTAL CARRIED FORWARD TO SECTION 2.11				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD FROM SECTION 2.10				
		SECTION 2.11 ROADWORKS REFER TO DRAWING: "GENERAL ARRANGMENTS - ACCESS ROADS" JW NUMBER: "JW13599-CE-011"				
2.11.1	SANS 1200 C	SITE CLEARANCE				
2.11.1.1	8.2.1	Clear and grub site				
2.11.1.2		a) Within the road reserve	m²	2675.00		
2.11.2	SANS 1200DM	SECTION 2: EARTHWORKS (ROADS, SUBGRADE)				
2.11.2.1	8.3.2	**Preparation of Site**				
2.11.2.2		a) Preparation and stripping of topsoil to a maximum of 150mm for the boxing out and remove from site to spoil.	m³	400.00		
2.11.2.3	8.3.3	**Treatment of road-bed**				
2.11.2.4		a) Roadbed preparation and compaction to:				
2.11.2.5		1) 93% of Mod AASHTO	m³	400.00		
2.11.2.6	8.3.4	**Cut to fill, borrow to fill**				
2.11.2.7		a) Compact to 93% of Mod.AASHTO max. density	m³	300.00		
2.11.2.8	8.3.5	Selected layer:				
2.11.2.9		a) Selected layer (G7 or better quality material) from imported material, compacted to 90% Mod. AASHTO.	m³	400.00		
2.11.2.10		c) Import to fill subgrade (G7 or better quality material) and compacted to 95% Mod. AASHTO	m³	400.00		
2.11.2.11	8.3.6	**Extra over items 8.3.4 :**				
2.11.2.12		a) Intermediate excavation	m³	150.00		
2.11.2.13		b) Hard excavation	m³	0.00		
2.11.2.14		c) Rock excavation (Prov)	m³	0.00		
2.11.2.15	8.3.7	**Cut to spoil or stockpile :**				
2.11.2.16		1) Cut to spoil at a site located by the contractor	m³	0.00		
2.11.2.17		2) Cut to stockpile on site (suitable material to be used as fill on other roads)	m³	0.00		
2.11.2.18	PSDM 8.3.17	Pioneer Layer				
2.11.2.19		a) Supply rock fill from commercial source for fill as directed by	m³	0.00		
2.11.3	SANS 1200G	SECTION 3: CONCRETE PAVING				
2.11.3.1	8.3.2	High Tensile welded Mesh (on Irregular Shape Panels)	m²	15.00		
2.11.3.2	8.4.4	200mm Joint Concrete Paving Slabs (Cast Insitu) 25Mpa/19mm, broom finish	m²	1450.00		
2.11.4	SANS 1200ME	SECTION 4: SUBBASE				
2.11.4.1	8.3.3	Construct the subbase course/Gravel wearing course with material from commercial sources:				
2.11.4.2		a) 150 mm selected G4 material stabilised to C4 quality material compacted to 98% Mod AASHTO density	m³	300.00		
2.11.4.3		b) 200 mm selected G5 material (Gravel wearing course - max. 37.5mm)compacted to 98% Mod AASHTO density	m³	110.00		
2.11.4.4	8.3.5	Process subbase material by the following processes, as relevant, and use in the subbase:				
2.11.4.5		d) Stabilization	m³	300.00		
2.11.4.6	8.3.8	Stabilising agent:				
2.11.4.7		b) Portland Cement	t	30.00		
		TOTAL CARRIED FORWARD				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
2.11.5	**SANS 1200 MJ**	**SECTION 5: SEGMENTED PAVING**				
2.11.5.1	8.2.1	Provision of Edge Restraints (Type Figure 10)				
2.11.5.2		i) straight or curved exceeding 20m radius.	m	250.00		
2.11.5.3	8.2.2	Construction of Paving Complete:				
2.11.5.4		(b) Footways, using 60mm block paving. chamfered edge paver.	m²	4430.00		
2.11.5.5	8.2.3	Cut units to fit edge restraint				
2.11.5.6		(b) Footways - 60mm	m	25.00		
2.11.5.7	8.2.5	Trials Section (5 x 5m complete) (Provisional)	m²	25.00		
2.11.6	**SANS 1200 MK**	**SECTION 7: KERBING AND CHANNELLING**				
2.11.6.1	8.2.2	Concrete Kerbing				
2.11.6.2		a) Fig 7 kerb and cast insitu 25MPa offset, as shown on drawings laid on straight and curves less than 20m radius along islands	m	370.00		
2.11.6.3	8.2.4	Depressed kerbs				
2.11.6.4		i) Extra over items 8.2.2 for depressing kerb.	m	-		
2.11.7	**SANS 1200 MM**	**SECTION 8: ANCILLARY ROADWORKS**				
2.11.7.1	8.3	**Road Signs**				
2.11.7.2	8.3.1	Sign faces with galvanised background. Symbols, characters, and borders in engineering grade retro-reflective material with signboard constructed from:				
2.11.7.3		a) Aluminium sheet (2,0mm thick) of area:				
2.11.7.4		Over and Up to				
2.11.7.5		- 2 m²	m²	5.00		
2.11.7.6	8.3.3	Sign Supports				
2.11.7.7		b) Steel tubing (60mm nominal diameter galvanised tubing to SABS 657, with nominal wall thickness of 2,0mm)	m	20.00		
2.11.7.8	8.3.4	Excavation and Backfilling and Concreting (steel tubing only) for Sign Supports.	m³	5.00		
2.11.7.9	8.3.6	Supply and erect complete:				
2.11.7.10		Statutory road traffic signs complete:				
2.11.7.11		a) RTM2 (Yield)	No	1.00		
2.11.7.12	8.4	**Road Markings**				
2.11.7.13	8.4.1	Non-reflectorized paint applied at nominal rate of 0,42 litre/m² (or Proprietary brand road marking material)				
2.11.7.14		a) White lines 100 mm	m	170.00		
2.11.7.15		b) Yellow lines 100 mm	m	340.00		
2.11.7.16		c) White characters and symbols	m²	20.00		
2.11.7.17		d) Yellow characters and symbols	m²	40.00		
2.11.7.18		f) Special marking "YIELD"	m²	5.00		
		TOTAL CARRIED FORWARD TO SECTION 2.12				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD FROM SECTION 2.11				
		SECTION 2.12				
		MCC ROOM				
		REFER TO DRAWING: "LIQUOR TREATMENT PLANT / VILLAGE Substation" JW NUMBER: "JW13599-CE-013 & 14				
2.12.1	**SANS 1200D**	**EARTHWORKS**				
2.12.1.1	8.3.1	**Site Preparation**				
2.12.1.2	8.3.1.1	Clear and strip site	m²	66.37		
2.12.1.3	8.3.1.2	Remove topsoil to nominal depth 150mm, stockpile and maintain	m²	66.37		
2.12.1.4	8.3.3	Restricted Excavation				
2.12.1.5		a) Excavate in all materials and use for embankment or backfill or dispose, as ordered	m³	66.05		
2.12.1.6		b) Extra-over for:				
2.12.1.7		1) Intermediate excavation	m³	6.61		
2.12.1.8		2) Hard Rock excavation	m³	6.61		
2.12.1.9	8.3.9	Extra-over for Backfill Material against Structures	m³	85.41		
2.12.2	**SANS 1200DM**	**EARTHWORKS (ROADS, SUBGRADE)**				
2.12.2.1	8.3.3	Treatment of Roadbed				
2.12.2.2		(a) Roadbed preparation and Compaction				
2.12.2.3		2) minimum of 95% of modified AASHTO maximum density	m^3	19.82		
2.12.2.4	8.3.5	Selected layer compacted to 95% of modified AASHTO maximum density				
2.12.2.5		(a) Two layers of G7 150 mm deep	m^3	19.82		
2.12.3	**SANS 1200G**	Concrete Structural				
2.12.3.1	8.2	Scheduled Formwork Items				
2.12.3.2	8.2.1	Rough				
2.12.3.3		(1) Vertical to Strip Footing Foundations	m²	41.80		
2.12.3.4		(2) Vertical to cable trench floor slab	m²	5.08		
2.12.3.5	8.2.5	Special Smooth, Repaired and Rubbed Vertical to				
2.12.3.6		(1) Vertical to Roof Slab Edge	m²	8.40		
2.12.3.7		(2) Horizontal to Roof slab	m²	77.48		
2.12.3.8	8.3	Scheduled Replacement Items				
2.12.3.9	8.3.1	Steel Bars				
2.12.3.10		High-tensile steel				
2.12.3.11		Nominal size 25mm to:				
2.12.3.12		Strip Footing Foundations	t	0.89		
2.12.3.13		Concrete Floor Slabs	t	1.06		
2.12.3.14		Roof Slab	t	1.86		
2.12.3.15	8.3.2	High-Tensile Welded Mesh:				
2.12.3.16		(1) Floor Slab - Mesh Ref. 193				
2.12.3.17		Slab to entrances	m²	6.00		
2.12.3.18						
2.12.3.19	8.4	Scheduled Concrete Items				
2.12.3.20	8.4.2	Blinding Layer				
2.12.3.21		(1) 15 Mpa no-fines concrete 50 mm thick	m³	3.32		
2.12.3.22	8.4.3	Strength Grade Concrete				
2.12.3.23		(1) 30Mpa/19mm concrete				
2.12.3.24		(1.1) Floor Slab	m³	13.27		
2.12.3.25		(1.2) Strip Footing Foundations	m³	11.11		
2.12.3.26		(1.3) Cable Trench Floor Slab	m³	3.20		
2.12.3.27		(1.4) Ramps to doorways	m³	0.60		
2.12.3.28		(1.5) Roof Slab	m³	23.24		
2.12.3.29		(1.6) Apron slabs	m³	2.69		
		TOTAL CARRIED FORWARD				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
2.12.3.30	8.4.4	Unformed Surface Finishes				
2.12.3.31		(1) Wood-floated finish to				
2.12.3.32		(1.1) Strip Footing Foundations	m²	37.04		
2.12.3.33		(1.2) Cable trench floor	m²	15.99		
2.12.3.34		(1.3) Ramp to FGL	m²	6.00		
2.12.3.35		(1.4) Roof Slab	m²	77.48		
2.12.3.36		(1.5) Apron slabs	m²	35.84		
2.12.3.37		(2) Steel-floated finish to				
2.12.3.38		(2.1) Floor Slab	m²	66.37		
2.12.3.39	8.5	JOINTS				
2.12.3.40		10mm Softboard with 10x10mm Polyurethane Sealant	m	48.00		
2.12.3.41		Grooved Joint with Polyurethane Sealant	m	5.00		
2.12.4	**SANS 1200H**	Structural Steelwork				
2.12.4.1	8.3.1	Supply and Fabrication				
2.12.4.2	8.3.1.1	Preparation of shop detail drawings				
2.12.4.3		(1) Angle Frame (50x50x6mm L Iron, including R8 lugs and 6x6mm Square Bar)	t	0.16		
2.12.4.4	8.3.1.2	Supply and fabrication of steelwork				
2.12.4.5		(1) Angle Frame (50x50x6mm L Iron, including R8 lugs and 6x6mm Square Bar)	t	0.16		
2.12.4.6	8.3.2	Delivery to Site				
2.12.4.7	8.3.2.1	Normal Delivery				
2.12.4.8		(1) Angle Frame (50x50x6mm L Iron, including R8 lugs and 6x6mm)	t	0.16		
2.12.4.9	8.3.9	Flooring, Complete and Installed with Frames				
2.12.4.10		(b) Floorplate Floors				
2.12.4.11		VASTRAP ® flooring, 6.0mm thick	m²	10.15		
2.12.5	**SANS 1200HC**	Corrosion Protection of Structural Steelwork				
2.12.5.1	8.2.5	Surface Preparation and Coating Application				
2.12.5.2		a) in the shop	t	0.16		
2.12.5.3		b) on Site	t	0.02		
2.12.6	**SANS 1200 LC**	Cable Ducts				
2.12.6.1	8.2.5	Supply, Lay, Bed, and Prove Ducts (Including Draw Wires)				
2.12.6.2		(1) Electrical cable ducts				
2.12.6.3		(1.1) 110mm diam uPVC (Class 25) Ducts to be infilled with "Sika Boom Expanding Polyurethane Foam" or similar approved.	No.	6.00		
2.12.6.4						
2.12.6.5						
2.12.6.6	PWB	Building Specification				
2.12.6.7	PWB 13.1	Brickwork				
2.12.6.8	PWB 13.1.1	230mm Thick				
2.12.6.9		(1) Facebrick Stretcher Bond	m²	162.05		
2.12.6.10						
2.12.6.11	PWB 13.5	Iron Mongery				
2.12.6.12	13.5.1	Steel Doors and Frames				
2.12.6.13		(1) Standard 1.2mm Mild Steel Transformer Door and Jamb combination type DV as per Duro Cat with full louvres (2mm steel plate riveted to inside face of louvres)	No.	3.00		
2.12.6.14		(2) Standard 2032 x 813mm Meranti F/L Batten Door with Open Back	No.	0.00		
		TOTAL CARRIED FORWARD				

SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
2.12.6.15	13.5.2	Steel window frames				
2.12.6.16		(1) Standard SS31 Window Centre Pivot as per Duro pressing Cat, and complete with catch opener & type B2 burglar bars	No.	3.00		
2.12.6.17						
2.12.6.18	PWB 13.7	Fencing				
2.12.6.19	PWB13.7.1	Concrete Palisade Fencing	m	70.00		
2.12.6.20						
2.12.6.21	PWB 13.8	Miscellaneous Work				
2.12.6.22	PWB 13.8.5	Installation of Vehicular Access Gate	No.	1.00		
2.12.6.23	PWB 13.8.6	Installation of Gate for Pedestrian Access	No.	1.00		
2.12.6.24	PWB 13.8.7	290 x 290mm Standard PVC safety signs to comply with SANS 1186	No.	4.00		
		TOTAL SECTION 2 CARRIED FORWARD TO SUMMARY				

SCHEDULE 3: MECHANICAL ENGINEERING WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3		SECTION 3: MECHANICAL ENGINEERING REQUIREMENTS				
3.1		LIME DOSING PLANT				
3.1.1	M22.11.1	**Fabricate, Supply, Deliver and Store (if required)**				
3.1.1.1		150 m³ Lime Storage Silo (complete with fluidization equipment, Level Indicator, load cells, level switches, etc.).	No.	1		
3.1.1.2		Silo Dust Extraction Filter	No.	1		
3.1.1.3		Silo Discharge Isolating Valve (Knife gate)	No.	1		
3.1.1.4		Rotary Vane Feeder	No.	1		
3.1.1.5		Screw Feeder	No.	2		
3.1.1.6		Lime Mixing Tank	No.	2		
3.1.1.7		Lime Mixing Tank Agitator (Complete with Motor, Gearbox, Couplings and Mounting)	No.	2		
3.1.1.8		90 m³ Milk of Lime Storage Tank	No.	2		
3.1.1.9		Milk of Lime Storage Tank Agitator (Complete with Motor, Gearbox, Couplings and Mounting)	No.	2		
3.1.1.10		Lime Dosing Pumps (Complete with Motor, Gearbox, Couplings and Baseplate)	No.	2		
3.1.1.11		Lime Dosing Pipework and Valves	Sum			
3.1.1.12		Pneumatic System Pipework	Sum			
3.1.2	M22.11.1	**Handle and Install**				
3.1.2.1		150 m³ Lime Storage Silo (complete with fluidization equipment, Level Indicator, load cells, level switches, etc.).	No.	1		
3.1.2.2		Silo Dust Extraction Filter	No.	1		
3.1.2.3		Silo Discharge Isolating Valve (Knife gate)	No.	1		
3.1.2.4		Rotary Vane Feeder	No.	1		
3.1.2.5		Screw Feeder	No.	2		
3.1.2.6		Lime Mixing Tank	No.	2		
3.1.2.7		Lime Mixing Tank Agitator (Complete with Motor, Gearbox, Couplings and Mounting)	No.	2		
3.1.2.8		90 m³ Milk of Lime Storage Tank	No.	2		
3.1.2.9		Milk of Lime Storage Tank Agitator (Complete with Motor, Gearbox, Couplings and Mounting)	No.	2		
3.1.2.10		Lime Dosing Pumps (Complete with Motor, Gearbox, Couplings and Baseplate)	No.	2		
3.1.2.11		Lime Dosing Pipework and Valves	No.	2		
3.1.2.12		Pneumatic System Pipework	No.	1		
3.1.2.13		Lime Dosing Pipework and Valves	Sum			
3.1.2.14		Pneumatic System Pipework	Sum			
3.1.3.	M22.11.2	**Test and Commission**				
3.1.3.1		Dry Commissioning of Complete Lime Plant Installation	Sum			
3.1.3.2		Wet Commissioning of Complete Lime Plant Installation	Sum			
		TOTAL CARRIED FORWARD				

SCHEDULE 3: MECHANICAL ENGINEERING WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
		SPLITTER BOX				
3.2		**AGITATOR**				
3.2.1	**M05.12**	**Fabricate, Supply, Deliver and Store (if required)**				
3.2.1.1		3kW - Agitator Motor	No.	1		
3.2.1.2		3kW - Agitator Gear Reducer	No.	1		
3.2.1.3		3 kW Agitator Shaft Couplings	No.	1		
3.2.1.4		3 kW Agitator - Supports / Mounting Plate	No.	1		
3.2.1.5		3 kW Agitator - Mounting Plate Holding Down Bolts	No.	4		
3.2.1.6		3 kW Agitator -Impeller	No.	1		
3.2.1.7		Penstock/Sluice gate for a 1200x800 opening with a rising spindle of L=4200mm	No.	3		
3.2.2	**M05.12**	**Handle and Install**				
3.2.2.1		Complete Agitator Assembly Installation	No.	1		
3.2.2.2		Complete Penstock/Sluice gate assembly	No.	3		
3.2.3.	**M05.12**	**Test and Commission**				
3.2.3.1		Dry Commissioning of Agitator Installation	No.	1		
3.2.3.2		Wet Commissioning of Agitator Installation	No.	1		
3.2.3.3		Complete Penstock/Sluice gate assembly	No.	3		
		LIME REACTOR				
3.3		**AGITATOR**				
3.3.1	**M05.12**	**Fabricate, Supply, Deliver and Store (if required)**				
3.3.1.1		0.75 kW - Agitator Motor	No.	9		
3.3.1.2		0.75 kW - Agitator Gear Reducer	No.	9		
3.3.1.3		0.75 kW - Agitator Shaft Couplings	No.	9		
3.3.1.4		0.75 kW - Agitator Supports / Mounting Plate	No.	9		
3.3.1.5		0.75 kW - Agitator Mounting Plate Holding Down Bolts (min 4 per Base Plate)	No.	9		
3.3.1.6		0.75 kW - Agitator Impeller	No.	9		
3.3.1.7		Penstock/Sluice gate for a 350x400 opening with a rising spindle of L=4200mm	No.	6		
3.3.2	**M05.12**	**Handle and Install**				
3.3.2.1		Complete Agitator Assembly Installation	No.	9		
3.3.2.2		Complete Penstock/Sluice gate assembly	No.	6		
3.3.3.	**M05.12**	**Test and Commission**				
3.3.3.1		Dry Commissioning of Agitator Installation	No.	9		
3.3.3.2		Complete Penstock/Sluice gate assembly	No.	6		
		TOTAL CARRIED FORWARD				

SCHEDULE 3: MECHANICAL ENGINEERING WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
		BELT PRESS LIQUORS PUMP STATION (Refer to drawing dwg JW13599-ME-011)				
3.4		**BELT PRESS LIQUOR PUMPS**				
3.4.1		**Removal of Pumps for Replacement**				
3.4.1.1		Centrifugal Pumps	No.	3		
3.4.1.2		Pump Motors	No.	3		
3.4.1.3		Pump Base Plates	No.	3		
3.4.2.	**M18.28**	**Fabricate, Supply, Deliver and Store (if required)**				
3.4.2.1		Centrifugal Pumps	No.	3		
3.4.2.2		Pump Motors	No.	3		
3.4.2.3		Couplings	No.	3		
3.4.2.4		Pump Base Plates	No.	3		
3.4.3.	**M18.28**	**Handle and Install**				
3.4.3.1		Centrifugal Pumps	No.	3		
3.4.3.2		Pump Motors	No.	3		
3.4.3.3		Couplings	No.	3		
3.4.3.4		Pump Base Plates	No.	3		
3.4.4	**M18.28**	**Test and Commission**				
3.4.4.1		Dry Commissioning of Centrifugal Pumps	No.	3		
3.4.4.2		Wet Commissioning of Centrifugal Pumps	No.	3		
3.5		**VALVES, PIPEWORK & FITTINGS**				
3.5.1	**M20.21**	**Fabricate, Supply, Deliver and Store (if required)**				
3.5.1.1		DN300 Knife Gate Valves - Suction	No.	3		
3.5.1.2		DN250 Knife Gate Valves - Discharge	No.	3		
3.5.1.3		DN250 Non-Return Valves	No.	3		
3.5.1.4		Suction Piping Manifold including supports	Sum			
3.5.1.5		Discharge Piping Manifold including supports	Sum			
3.5.2	**M20.21**	**Fabricate, Supply, Deliver and Store (if required)**				
3.5.2.1		Blank Flange - Suction	No.	1		Rate Only
3.5.2.2		Blank Flange - Discharge	No.	1		Rate Only
3.5.3	**M20.21**	**Handle and Install**				
3.5.3.1		Suction Pipework	Sum			
3.5.3.2		Discharge Pipework	Sum			
3.5.3.3		Suction Valves - Isolating Knife Gate Valves	No.	3		
3.5.3.4		Discharge Valves - Isolating Knife Gate Valves	No.	3		
3.5.3.5		Non-Return Valves	No.	3		
3.5.3.6		Blank Flange - Suction	No.	1		Rate Only
3.5.3.7		Blank Flange - Discharge	No.	1		Rate Only
3.5.4		**Test and Commission**				
3.5.4.1		Dry Commissioning of Complete Valve, Pipework and Fitting Installation	Sum			
3.5.4.2		Wet Commissioning of Complete Valve, Pipework and Fitting Installation	Sum			
3.6		**VENTILATION SYSTEM**				
3.6.1		Removal of existing Ventilation System	No.	1		
3.6.2		Design, Fabricate, Supply, Deliver and Store Ventilation System	No.	1		
3.6.3		Handle and Install Ventilation System	No.	1		
3.6.4		Test and Commission Ventilation System	No.	1		
		TOTAL CARRIED FORWARD				

SCHEDULE 3: MECHANICAL ENGINEERING WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
3.6		**LIME CLARIFIERS BRIDGES**				
3.6.1	**M13.18**	**Fabricate, Supply, Deliver and Store (if required)**				
3.6.1.1		Central Bearing	No.	3		
3.6.1.2		Scraper Bridge (complete with walkways)	No.	3		
3.6.1.3		Scraper Blades (with rubber squeegees)	Sum			
3.6.1.4		Surface Skimmer Arm	No.	3		
3.6.1.5		Scum Box (complete with valve)	No.	3		
3.6.1.6		Weir Plates	No.	3		
3.6.1.7		Baffle Plates	No.	3		
3.6.1.8		Central Bearing	No.	3		
3.6.1.9		Gear Reducer	No.	3		
3.6.1.10		2.2 kW Drive motor	No.	3		
3.6.2	**M13.18**	**Handle and Install**				
3.6.2.1		Central Bearing	No.	3		
3.6.2.2		Scraper Bridge (complete with walkways)	No.	3		
3.6.2.3		Scraper Blades (with rubber squeegees)	Sum			
3.6.2.4		Surface Skimmer Arm	No.	3		
3.6.2.5		Scum Box (complete with valve)	No.	3		
3.6.2.6		Weir Plates	No.	3		
3.6.2.7		Baffle Plates	No.	3		
3.6.2.8		Central Bearing	No.	3		
3.6.2.9		Gear Reducer	No.	3		
3.6.2.10		2.2 kW Drive motor	No.	3		
3.70	**8.5**	**SUMS STATED PROVISIONALLY BY THE EMPLOYER'S AGENT**				
3.7.1		Provisional Sum for refurbish of two(2) Unit 4 's WST and reinstated of the under flow to initial design with decommissioning of the existing Lime.	P.Sum	1		R 1,000,000.00
3.7.2		Contractor's stated commission on Item 3.7.1 Provisional Sum above	%		R 1,000,000.00	R -
		TOTAL SECTION 3 CARRIED FORWARD TO SUMMARY				

SCHEDULE 4: ELECTRICAL ENGINEERING WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
4		SECTION 4: ELECTRICAL ENGINEERING REQUIREMENTS				
4.1		MOTOR CONTROL CENTRE (MCC)				
4.1.1	E04.13	**Supply, Install, Test and Commission Motor Control Centre.** This will include the Manufacturing of the Motor Control Centre according to the Motor Control Centre specification, Single line diagram and typical schematic's. Inspection of the Motor Control Centre on agreed hold points Inspections (**HPI**), full functional Factory Acceptance Test (**FAT**) delivery to site, installation of Motor Control Centre and Site Acceptance Test (**SAT**).	Sum	1.00		
4.1.2	E04.13	**Motor Control Centre (MCC) building.** **Small power and lighting installation** Equip new MCC Building with sufficient lighting and Switch Socket Outlets to satisfy the buildings electrical needs. This will include the feed for the supply of the Distribution Board. This installation will be done according to SANS10142-1.				
4.1.2.1		Distribution Board 400v	No.	1.00		
4.1.2.2		220V Switch Socket Outlets	No.	2.00		
4.1.2.3		1200mm Fluorescent fitting	No.	5.00		
4.1.2.4		2x18w CFL Food lights	No.	2.00		
4.1.2.5		2 way single lever light switch.	No.	2.00		
4.1.2.6		Day Night switch for outside lights	No.	1.00		
4.1.2.7		Emergency Exit lights including battery backup (1h)	No.	2.00		
4.1.2.8		Door limit switch series with light switch	No.	2.00		
4.1.2.9		Fire detection unit	No.	1.00		
4.1.2.10		Feeder to High mast lights 400v 3pH	No.	1.00		
4.1.2.11		400V 63A Welding Socket Outlet with protective steel drip cover	No.	1.00		
		TOTAL CARRIED FORWARD				

SCHEDULE 4: ELECTRICAL ENGINEERING WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
4.1.3		**Commissioning / COC**				
		The Certificate of Compliance will be issued in two sections. First section will form part of the cold commissioning. The second section will form part of the Hot commissioning of the works.	Sum	1.00		
4.2		**SUPPLY , INSTALL, TEST AND COMMISSION OF NEW LIQUOR TREATMENT PLANT SUBSTATION**				
4.2.1		11kV Switchboard	ea.	1.00		
4.2.2		11kV Battery Trip Unit Switchboard	ea.	1.00		
4.2.2.1		Transformers - 800kVA 11kV/6.6kV/400V	ea.	1.00		
4.2.2.2		400V Switchboard, MCC	ea.	1.00		
4.2.2.3		Substation Instrumentation DB	ea.	1.00		
4.2.2.4		Lighting and Small Power	sum	1.00		
4.2.2.5		Medium Voltage Switching Panel	sum	1.00		
4.2.2.6		11kV 3core XLPE 185 mm2 (Cu/XLPE/SWA/PVC) cable	m	375.00		
4.2.2.7		11kV 3core XLPE 185 mm2 (Cu/XLPE/SWA/PVC) cable (internal cabling)	m	20.00		
4.2.2.8		Heavy Duty Cable Ladder Installation	sum	1.00		
4.2.3		**Earthing for Liquor Treatment Plant/Village Substation**				
4.2.3.1		Earthing installation (labour and material)	ea.	1.00		
4.2.3.2		Testing and verification of earthing resistance	ea.	1.00		
4.3	E06.17	**SUPPLY, INSTALL AND TEST OF FEEDER CABLES**				
4.3.1		Setting out, demarcating and barraged the selected Cable route.	m	270.00		
4.3.2		Remove Existing paving, in such a manner to be reinstated, on selected cable route.	m	80.00		
4.3.3		Hand excavation on existing cable route. (Shovels only)	m	80.00		
4.3.4		Excavation on New cable route according to the Typical trenching drawing. (Picks, Shovels or mechanical digger where underground survey posed no under ground services)	m	80.00		
4.3.5		Bedding Material.	m^3	15.00		
4.3.6		Blanketing Material	m^3	15.00		
4.3.7		Cable indication warning Tape	m	270.00		
4.3.8		Backfilling and compacting.	m^3	15.00		
4.3.9		4C x 120mm² Cu/PVC/SWA/PVC	m	270.00		
4.3.10		1C x 120mm² BCEW	m	270.00		
4.3.11		11kV 3core XLPE 185 mm2 (Cu/XLPE/SWA/PVC) cable terminations	No.	2.00		
4.3.12		Cable fed from feed to markers (s/s punched)	No.	2.00		
4.3.13		Cable route indication markers (Concrete type casted indicator)	No.	5.00		
		Cable Joint	No.	2.00		
		Cable Racking				
4.3.14		150mm 75Powerspan Ladder	ea.	9.00		
4.3.15		150mm 75Powerspan 90° Bend	ea.	2.00		
4.3.16		Sunder steel work S/S	lot	1.00		
		Conduit and Accessories				
		Supply and Install Steel conduit to be surface mounted on wall including bend, jointing, short lengths, couplings, etc., complete with draw wires.				
4.3.17		20mm Ø	m	100.00		
4.3.18		25mm Ø	m	100.00		
		TOTAL CARRIED FORWARD				

SCHEDULE 4: ELECTRICAL ENGINEERING WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
4.4	E05.9	**SUPPLY, INSTALL, TEST AND COMMISSION MOTOR DRIVE CABLES**				
	E06.17					
4.4.1		Lime Dosing Pump No. 01				
4.4.1.1		Power cable 4mm² x 4c PVC/SWA/PVC Red stripe Cable	m	50.00		
4.4.1.2		4mm² x 1c BCEW	m	50.00		
4.4.1.3		**Control Cable** 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable	m	50.00		
4.4.2		Lime Dosing Pump No. 02				
4.4.2.1		Power cable 4mm² x 4c PVC/SWA/PVC Red stripe Cable	m	50.00		
4.4.2.2		4mm² x 1c BCEW	m	50.00		
4.4.2.3		**Control Cable** 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable	m	50.00		
4.4.3		Lime Clarifier No. 01				
4.4.3.1		Power cable 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable	m	110.00		
4.4.3.2		2.5 mm² x 1c BCEW	m	110.00		
4.4.3.3		**Control Cable** 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable	m	110.00		
4.4.4		Lime Clarifier No. 02				
4.4.4.1		Power cable 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable	m	130.00		
4.4.4.2		2.5 mm² x 1c BCEW	m	130.00		
4.4.4.3		**Control Cable** 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable	m	130.00		
4.4.5		Lime Clarifier No. 03				
4.4.5.1		Power cable 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable	m	160.00		
4.4.5.2		2.5 mm² x 1c BCEW	m	160.00		
4.4.5.3		**Control Cable** 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable	m	160.00		
4.4.6		Dosing screw conveyor No. 01				
4.4.6.1		Power cable 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable	m	100.00		
4.4.6.2		2.5 mm² x 1c BCEW	m	100.00		
4.4.6.3		**Control Cable** 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable	m	100.00		
		TOTAL CARRIED FORWARD				

SCHEDULE 4: ELECTRICAL ENGINEERING WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
4.4.8		**Dosing screw conveyor No. 02**				
4.4.8.1		**Power cable** 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable	m	100.00		
4.4.8.2		2.5 mm² x 1c BCEW	m	100.00		
4.4.8.3		**Control Cable** 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable	m	100.00		
4.4.9		**Lime Make-up Tank Agitator No. 01**				
4.4.9.1		**Power cable** 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable	m	100.00		
4.4.9.2		2.5 mm² x 1c BCEW	m	100.00		
4.4.9.3		**Control Cable** 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable	m	100.00		
4.4.10		**Lime Make-up Tank Agitator No. 02**				
4.4.10.1		**Power cable** 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable	m	100.00		
4.4.10.2		2.5 mm² x 1c BCEW	m	100.00		
4.4.10.3		**Control Cable** 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable	m	100.00		
4.4.11		**Wet Scrubber**				
4.4.11.1		**Power cable** 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable	m	100.00		
4.4.11.2		2.5 mm² x 1c BCEW	m	100.00		
4.4.11.3		**Control Cable** 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable	m	100.00		
4.4.12		**Blow Through Rotary**				
4.4.12.1		**Power cable** 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable	m	100.00		
4.4.12.2		2.5 mm² x 1c BCEW	m	100.00		
4.4.12.3		**Control Cable** 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable	m	100.00		
4.4.13		**Vibration Bin Discharge**				
4.4.13.1		**Power cable**	m	100.00		
4.4.13.2		2.5 mm² x 1c BCEW	m	100.00		
4.4.13.3		**Control Cable** 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable	m	100.00		
4.4.14		**Reverse Jet Filter**				
4.4.14.1		**Power cable** 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable	m	100.00		
4.4.14.2		2.5 mm² x 1c BCEW	m	100.00		
4.4.14.3		**Control Cable** 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable	m	100.00		
		TOTAL CARRIED FORWARD				

SCHEDULE 4: ELECTRICAL ENGINEERING WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
4.4.15		**Lime Mixer No. 01**				
4.4.15.1		**Power cable** 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable	m	100.00		
4.4.15.2		2.5 mm² x 1c BCEW	m	100.00		
4.4.15.3		**Control Cable** 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable	m	100.00		
4.4.16		**Lime Mixer No. 02**				
4.4.16.1		**Power cable** 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable	m	100.00		
4.4.16.2		2.5 mm² x 1c BCEW	m	100.00		
4.4.16.3		**Control Cable** 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable	m	100.00		
4.4.17		**Lime Mixer No. 03**				
4.4.17.1		**Power cable** 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable	m	100.00		
4.4.17.2		2.5 mm² x 1c BCEW	m	100.00		
4.4.17.3		**Control Cable** 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable	m	100.00		
4.4.18		**Lime Mixer No. 04**				
4.4.18.1		**Power cable** 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable	m	100.00		
4.4.18.2		2.5 mm² x 1c BCEW	m	100.00		
4.4.18.3		**Control Cable** 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable	m	100.00		
4.4.19		**Lime Mixer No. 05**				
4.4.19.1		**Power cable** 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable	m	100.00		
4.4.19.2		2.5 mm² x 1c BCEW	m	100.00		
4.4.19.3		**Control Cable** 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable	m	100.00		
4.4.20		**Lime Mixer No. 06**				
4.4.20.1		**Power cable** 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable	m	100.00		
4.4.20.2		2.5 mm² x 1c BCEW	m	100.00		
4.4.20.3		**Control Cable** 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable	m	100.00		
4.4.21		**Lime Mixer No. 07**				
4.4.21.1		**Power cable** 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable	m	100.00		
4.4.21.2		2.5 mm² x 1c BCEW	m	100.00		
4.4.21.3		**Control Cable** 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable	m	100.00		
4.4.22		**Lime Mixer No. 08**				
4.4.22.1		**Power cable** 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable	m	100.00		
4.4.22.2		2.5 mm² x 1c BCEW	m	100.00		
4.4.22.3		**Control Cable** 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable	m	100.00		
		TOTAL CARRIED FORWARD				

SCHEDULE 4: ELECTRICAL ENGINEERING WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
4.4.23		**Lime Mixer No. 09**				
4.4.23.1		**Power cable** 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable	m	100.00		
4.4.23.2		2.5 mm² x 1c BCEW	m	100.00		
4.4.23.3		**Control Cable** 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable	m	100.00		
4.4.24		**Lime Mixer No. 10**				
4.4.24.1		**Power cable** 2.5 mm² x 4c PVC/SWA/PVC Red stripe Cable	m	100.00		
4.4.24.2		2.5 mm² x 1c BCEW	m	100.00		
4.4.24.3		**Control Cable** 2.5mm² x 7c PVC/SWA/PVC Red Stripe Cable	m	100.00		
4.4.25		**LV Cable Terminations** Cable Terminations (Material and labour) for the cables below				
4.4.25.1		10 mm² x 4c PVC/SWA/PVC	ea	25.00		
4.4.25.2		2.5mm² x 3c PVC/SWA/PVC	ea	25.00		
4.4.25.3		2.5 mm² x 1c BCEW	ea	25.00		
4.4.26		**Local Control stations** Supply and install local control stations	ea	25.00		
4.5		**Refurbish 4E9MCC06 DAF Underflow Pump station Sub 6 Access and Refurbish existing Motor Control Centre.** Existing Motor Control Centre to be accessed for reusability of main structure including Bus Bar chamber, Bus Bar Droppers and cable glanding section. This will also include the Cable, Cable racking, control stations and supports. All Incomer's, feeders and drives will be refurbished, commissioned and COC's will be issued for each installation.				
4.5.1		Incomer	ea.	1.00		
4.5.2		Welding Switch Socket Outlet/Small power and Lighting.	ea.	1.00		
4.5.3		Vent Fan	ea.	1.00		
4.5.4		Pump W/L 1	ea.	1.00		
4.5.5		Pump W/L 2	ea.	1.00		
4.5.6		Pump W/L 3	ea.	1.00		
4.5.7		Spare space	ea.	1.00		
4.5.8		Sump Pump	ea.	1.00		
4.6		**AREA LIGHTING** (Including design, suitable base, anchoring of the structure, installation and testing.)				
4.6.1		High Mast Lighting	ea.	2.00		
4.6.2		4c x 10mm² PVC/SWA/PVC Red stripe cable	m	260.00		
4.6.3		High Mast Earthing installation (labour and material)	ea.	2.00		
4.6.4		High Mast Testing and verification of earthing resistance	ea.	2.00		
4.7	**8.5**	**SUMS STATED PROVISIONALLY BY THE EMPLOYER'S AGENT**				
4.7.1		Provisional Sum for replacement of transformer to accommodate new plant installation requirements and electrical requirements for automation of Unit 3 waste line and Unit 4 WST waste line.	P.Sum	1.00		R 1,000,000.00
4.7.2		Contractor's stated commission on Item 4.7.1 Provisional Sum above	%		R 1,000,000.00	R -
4.8		**Bonding, Earthing and Lightning Protection**				
4.8.1		Lightning protection and earthing of complete installation	Sum	1.00		
4.8.2		Bonding of complete installation using **Kwena Conductor**	Sum	1.00		
		TOTAL SECTION 4 CARRIED FORWARD TO SUMMARY				

SCHEDULE 5: INSTRUMENTATION AND CONTROL ENGINEERING WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
5		SECTION 5: INSTRUMENTATION AND CONTROL ENGINEERING REQUIREMENTS				
5.1		Supply, Install, Test and Commissioning Instruments				
	100-001	100-SU-001 Belt Press Liquor Sump				
5.1.1	100-001.1	100-LIT-001 Ultrasonic Level transmitter				
5.1.1.1		Supply Instrument with sensor	ea.	1.00		
5.1.1.2		Supply backplane and canopy (3CR12 epoxy coated)	ea.	1.00		
5.1.1.3		Deliver and Store	ea.	1.00		
5.1.1.4		Install new transmitter and sensor	Sum	1.00		
5.1.1.5		Terminate power supply cable	Sum	1.00		
5.1.1.6		Terminate sensor cable	Sum	1.00		
5.1.1.7		Terminate analog signal cable	Sum	1.00		
5.1.1.8		Terminate binary signal cable	Sum	1.00		
5.1.1.9		Labelling of Instrument	Sum	1.00		
5.1.1.10		Labelling of the cables as per existing	Sum	1.00		
5.1.1.11		Re-instate power to new instrument and do loop checks to PLC	ea.	1.00		
5.1.2	100-001.2	100-LSL/LSH -001 Pear ball Level switch				
5.1.2.1		Supply Instrument	ea.	6.00		
5.1.2.2		Supply switch bracket assembly	ea.	3.00		
5.1.2.3		Deliver and Store	ea.	9.00		
5.1.2.4		Isolate power to old switch at MCC	ea.	6.00		
5.1.2.5		Remove old switch and bracket assembly (2 x switch / bracket)	Sum	3.00		
5.1.2.6		Install new switch and bracket assembly (2 x switch / bracket)	Sum	3.00		
5.1.2.7		Terminate power supply cable	Sum	6.00		
5.1.2.8		Labelling of the cables as per existing	Sum	6.00		
5.1.2.9		Re-instate power to new switch and do loop check to MCC	ea.	3.00		
	100-002	Belt Press Liquor Pump - Station				
5.1.3	100-002.1	FIT 100-FIT-004 Ultrasonic Flow transmitter				
5.1.3.1		Supply Instrument with sensor	ea.	1.00		
5.1.3.2		Supply backplane and canopy (3CR12 epoxy coated)	ea.	1.00		
5.1.3.3		Deliver and Store	ea.	1.00		
5.1.3.4		Install new transmitter and sensor	Sum	1.00		
5.1.3.5		Terminate power supply cable	Sum	1.00		
5.1.3.6		Terminate sensor cable	Sum	1.00		
5.1.3.7		Terminate analog signal cable	Sum	1.00		
5.1.3.8		Terminate binary signal cable	Sum	1.00		
5.1.3.9		Labelling of Instrument	Sum	1.00		
5.1.3.10		Labelling of the cables as per existing	Sum	1.00		
5.1.3.11		Re-instate power to new instrument and do loop checks to PLC	Sum	1.00		
		TOTAL CARRIED FORWARD				

SCHEDULE 5: INSTRUMENTATION AND CONTROL ENGINEERING WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
	100-002	**Belt Press Liquor Pump - Station**				
5.1.4	**100-002.1**	**100-PI-001A / 100-PI-001B / 100-PI-002A / 100-PI-002B**				
5.1.4.1		Supply Instrument with Isolation Manifold and all Fittings	ea.	4.00		
5.1.4.2		Deliver and Store	ea.	4.00		
5.1.4.3		Install new Pressure Indicators and Manifolds	Sum	4.00		
5.1.4.4		Install new Pressure Indicators and Manifolds	Sum	4.00		
5.1.4.5		Labelling of Instrument	Sum	4.00		
	100-003	**Belt Press Liquor Pump - Station Discharge Line**				
5.1.5	**100-003.1**	**100-FIT-004 Ultrasonic Flow transmitter**				
5.1.5.1		Supply Instrument with sensor	ea.	1.00		
5.1.5.2		Supply backplane and canopy (3CR12 epoxy coated)	ea.	1.00		
5.1.5.3		Deliver and Store	ea.	1.00		
5.1.5.4		Isolate power to old instrument	ea.	1.00		
5.1.5.5		Remove old transmitter and sensor	Sum	1.00		
5.1.5.6		Install new transmitter and sensor	Sum	1.00		
5.1.5.7		Terminate power supply cable	Sum	1.00		
5.1.5.8		Terminate sensor cable	Sum	1.00		
5.1.5.9		Terminate analog signal cable	Sum	1.00		
5.1.5.10		Terminate binary signal cable	Sum	1.00		
5.1.5.11		Labelling of Instrument	ea.	1.00		
5.1.5.12		Labelling of the cables as per existing	Sum	1.00		
5.1.5.13		Re-instate power to new instrument and do loop checks to PLC	Sum	1.00		
5.1.6	**100-003.2**	**100-LSL/LSH -002 Pear ball Level switch**				
5.1.6.1		Supply Instrument	ea.	6.00		
5.1.6.2		Supply switch bracket assembly	ea.	3.00		
5.1.6.3		Deliver and Store	ea.	9.00		
5.1.6.4		Isolate power to old switch at MCC	ea.	6.00		
5.1.6.5		Remove old switch and bracket assembly (2 x switch / bracket)	Sum	3.00		
5.1.6.6		Install new switch and bracket assembly (2 x switch / bracket)	Sum	3.00		
5.1.6.7		Terminate power supply cable	Sum	6.00		
5.1.6.8		Labelling of the cables as per existing	Sum	6.00		
5.1.6.9		Re-instate power to new switch and do loop check to MCC	ea.	3.00		
5.1.7	**100-004**	**Milk of Lime Package**				
5.1.7.1	**100-004.1**	Vendor Supplied Package by others	ea.	1.00		
5.1.7.2		Supply and Install Network Switch for Ethernet	ea.	1.00		
		Install UTP Cat 6 Cable from Vendor supplied package PLC to main plant SCADA	ea.	1.00		
		TOTAL CARRIED FORWARD				

SCHEDULE 5: INSTRUMENTATION AND CONTROL ENGINEERING WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
	100-005	**Lime Reactor Splitter Box**				
5.1.7	**100-005.1**	**100-LIT-002 Ultrasonic Level transmitter**				
5.1.7.1		Supply Instrument with sensor	ea.	1.00		
5.1.7.2		Supply backplane and canopy (3CR12 epoxy coated)	ea.	1.00		
5.1.7.3		Deliver and Store	ea.	1.00		
5.1.7.4		Install new transmitter and sensor	Sum	1.00		
5.1.7.5		Terminate power supply cable	Sum	1.00		
5.1.7.6		Terminate sensor cable	Sum	1.00		
5.1.7.7		Terminate analog signal cable	Sum	1.00		
5.1.7.8		Terminate binary signal cable	Sum	1.00		
5.1.7.9		Labelling of Instrument	Sum	1.00		
5.1.7.10		Labelling of the cables as per existing	Sum	1.00		
5.1.7.11		Re-instate power to new instrument and do loop checks to PLC	ea.	1.00		
5.1.8	**100-006**	**Lime Reactors 001A/B/C & 002A/B/C & 003A/B/C**				
5.1.8.1		No Instrumentation on this section	ea.	9.00		
	100-007	**Lime Clarifiers - 100-CL-001 / 002 / 003**				
5.1.9	**100-007.1**	**100-FIT-001 / 002 / 003 Ultrasonic Flow transmitter**				
5.1.9.1		Supply Instrument with sensor	ea.	3.00		
5.1.9.2		Supply backplane and canopy (3CR12 epoxy coated)	ea.	3.00		
5.1.9.3		Deliver and Store	ea.	3.00		
5.1.9.4		Isolate power to old instrument	ea.	3.00		
5.1.9.5		Remove old transmitter and sensor	Sum	3.00		
5.1.9.6		Install new transmitter and sensor	Sum	3.00		
5.1.9.7		Terminate power supply cable	Sum	3.00		
5.1.9.8		Terminate sensor cable	Sum	3.00		
5.1.9.9		Terminate analog signal cable	Sum	3.00		
5.1.9.10		Terminate binary signal cable	Sum	3.00		
5.1.9.11		Labelling of Instrument	ea.	3.00		
5.1.9.12		Labelling of the cables as per existing	Sum	3.00		
5.1.9.13		Re-instate power to new instrument and do loop checks to PLC	Sum	3.00		
5.2.0	**100-007.1**	**100-ZS-001 / 002 / 003 Rake Position Indicators**				
5.2.0.1		Supply Instrument with sensor	ea.	3.00		
5.2.0.2		Deliver and Store	ea.	3.00		
5.2.0.3		Install new Proximity Switch	Sum	3.00		
5.2.0.4		Terminate power supply cable	Sum	3.00		
5.2.0.5		Terminate sensor cable	Sum	3.00		
5.2.0.6		Terminate analog signal cable	Sum	3.00		
5.2.0.7		Terminate binary signal cable	Sum	3.00		
5.2.0.8		Labelling of Instrument	ea.	3.00		
5.2.0.9		Labelling of the cables as per existing	Sum	3.00		
5.2.0.10		Re-instate power to new instrument and do loop checks to PLC	Sum	3.00		
5.2.1	**100-007.1**	**100-ZS-001 / 002 / 003 Rake Position Indicators**				
5.2.1.1		Supply Instrument with sensor	ea.	3.00		
5.2.1.2		Deliver and Store	ea.	3.00		
5.2.1.3		Install new Proximity Switch	Sum	3.00		
5.2.1.4		Terminate power supply cable	Sum	3.00		
5.2.1.5		Terminate sensor cable	Sum	3.00		
5.2.1.6		Terminate analog signal cable	Sum	3.00		
5.2.1.7		Terminate binary signal cable	Sum	3.00		
5.2.1.8		Labelling of Instrument	ea.	3.00		
5.2.1.9		Labelling of the cables as per existing	Sum	3.00		
5.2.1.10		Re-instate power to new instrument and do loop checks to PLC	Sum	3.00		
		TOTAL CARRIED FORWARD				

SCHEDULE 5: INSTRUMENTATION AND CONTROL ENGINEERING WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
5.2.2		**New PLC**				
5.2.2.1		PLC Rack				
5.2.2.2		PLC Power Supply	ea.	1.00		
5.2.2.3		PLC I/O modules - Digital Input 16 Channel	ea.	2.00		
5.2.2.4		PLC I/O modules - Digital Output 16 Channel	ea.	2.00		
5.2.2.5		PLC I/O modules - Analog Input 8 Channel	ea.	2.00		
5.2.2.6		PLC I/O modules - Analog Output 4 Channel	ea.	2.00		
5.2.2.7		Supply :	ea.	1.00		
5.2.2.8		Install :	ea.	1.00		
5.2.2.9		**New PLC - Panel**	Sum	1.00		
5.2.2.10		Design - build & supply a PLC cabinet to house the PLC and Panel View Touch screen With Power Supply and Earthing	Sum	1.00		
5.2.2.11		The Panel dimensions will be 3000mm wide 800mm deep & 2000mm height with 100mm plinth	Sum	1.00		
5.2.2.12		Mount PLC Panel	Sum	1.00		
5.2.2.13		Ensure sufficient terminals for all the field devices to be terminated to.	Sum	1.00		
5.2.2.14		Install Panel View and deploy SCADA Application	Sum	1.00		
5.2.2.15		Terminate all the Field Multi core cables to the PLC panel	Sum	1.00		
5.2.2.16		Supply IJB Instrument Junction Boxes complete with terminals	ea.	2.00		
5.2.2.17		Install IJB Instrument Junction Boxes and terminate all the field cables	Sum	1.00		
5.2.2.18		Install Multicore Cables and terminate inside the Junction Box	Sum	1.00		
5.3		**Instrument Cables**				
5.3.1	Volume 6	**Multicore Dekoron CU/PVC/ALUMINIUM MYLAR/PVC/SWA/PVC cable**				
5.3.1.1		3 core, 2.5 mm² (220 Vac)				
5.3.1.2		Supply :	m	100.00		
5.3.1.3		Install :	m	100.00		
5.3.1.4		7 core, 1.5 mm²				
5.3.1.5		Supply :	m	120.00		
5.3.1.6		Install :	m	120.00		
5.3.2	Volume 6	**SWA - 12 Core Single Mode Fibre optic cable**				
4.3.2.1		12 Core Single Mode Fibre Cable	m	300.00		
4.3.2.2		Supply :	m	300.00		
4.3.2.3		Install :	m	100.00		
4.3.2.4		7 core, 1.5 mm²				
4.3.2.5		Supply :	m	120.00		
4.3.2.6		Install :	m	120.00		
5.3.3	Volume 6	**Individually and overall screened Dekoron CU/PVC/ALUMINIUM MYLAR/PVC/SWA/PVC cable**				
5.3.3.1		1 pair, 1 mm²	m	250.00		
5.3.3.2		Supply :	m	250.00		
5.3.3.3		Install :	m	250.00		
5.3.3.4		4 pair, 1 mm²	m	85.00		
5.3.3.5		Supply :	m	85.00		
5.3.3.6		Install :	m	85.00		
5.3.3.7		**Individually and overall screened Dekoron CU/PVC/ALUMINIUM MYLAR/PVC/SWA/PVC cable**				
5.3.3.8		24 pair, 1 mm²	m	300.00		
5.3.3.9		Supply :	m	300.00		
5.3.3.10		Install :	m	300.00		
		TOTAL CARRIED FORWARD				

SCHEDULE 5: INSTRUMENTATION AND CONTROL ENGINEERING WORKS

ITEM No.	PAYM. REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
5.4	Volume 6	**Instrument cable rack ladder type Balancing Tanks**				
5.4.1		**150 mm Ladder**				
5.4.2		Supply	m	200.00		
5.4.3		Install - Scaffolding required	m	200.00		
5.4.4		Re-instate existing Instrument Cables	m	200.00		
5.4.5		Scaffolding required				
5.4.2		**200 mm Ladder**				
5.4.2.1		Supply	m	200.00		
5.4.2.2		Install - Scaffolding required	m	200.00		
5.4.2.3		Re-instate existing Instrument Cables	m	200.00		
5.4.2.4		Scaffolding required				
5.4.3		**300 mm Ladder**				
5.4.3.1		Supply	m	80.00		
5.4.3.2		Install	m	80.00		
5.4.3.3		Re-instate existing Instrument Cables	m	80.00		
5.4.3.4		Scaffolding required				
5.5	**8.5**	**SUMS STATED PROVISIONALLY BY THE EMPLOYER'S AGENT**				
5.5.1		Provisional sum for automation of Unit 3 waste line and Unit 4 WST waste line.	P.Sum	1.00		R 500,000.00
5.5.2		Contractor's stated commission on the 5.5.1 provisional sum above	%		R 500,000.00	R -
5.5.3		Provisional sum for Installation of Cameras and security related ancillaries to be Incorporated into the Existing CCTV System access control at Northern Wastewater Treatment Works	P.Sum	1.00		R 500,000.00
5.5.4		Contractor's stated commission on the 5.5.3 provisional sum above	%		R 500,000.00	R -
		TOTAL SECTION 5 CARRIED FORWARD TO SUMMARY				

SUMMARY OF SCHEDULE OF QUANTITIES		
DESCRIPTION		**AMOUNT**
SCHEDULE 1: PRELIMINARY & GENERAL		**R**
SCHEDULE 2: CIVIL ENGINEERING AND BUILDINGS WORKS		**R**
SCHEDULE 3: MECHANICAL ENGINEERING WORKS		**R**
SCHEDULE 4: ELECTRICAL ENGINEERING WORKS		**R**
SCHEDULE 5: CONTROL AND INSTRUMENTATION ENGINEERING WORKS		**R**
SUB TOTAL 1		**R**
	The Employer will estimate a percentage of above Sub-total 1 for **CONTRACT PRICE ADJUSTMENT** on all sums as provided for in Clause 6.8 of the General Conditions of Contract.	
ADD:	15% of above sub-total (1) for **VALUE ADDED TAX (VAT)**	**R**
TOTAL CARRIED TO FORM OF OFFER		**R**