THE MVULA TRUST
DFFE PROJECT - WATER & SANITATION PROGRAMME
LEHLAKE PRIMARY SCHOOL

	DESCRIPTION	UNIT	QUANTITY	RATE	
	SECTION 1 **BILL NO 1** **PRELIMINARIES NOTES** **BUILDING AGREEMENT AND PRELIMINARIES** The JBCC Series 2000 Principal Building Agreement (March 2005 edition) prepared by the Joint Building Contract Committee shall be the applicable building agreement, amended as hereinafter described. The JBCC Series 2000 Preliminaries (March 2005) published by the Joint Building Contracts Committee for use with the JBCC Series 2000 Principal Building Agreement (Edition 4.1 - March 2005) shall be deemed to be incorporated in these bills of quantities, amended as hereinafter described The contractor is deemed to have referred to the abovementioned documents for the full intent and meaning of each clause The clauses in the abovementioned documents are hereinafter referred to by clause number and heading only Where any item is not relevant to this specific contract such item is marked N/A, signifying "not applicable". Where standard clauses or alternatives are not entirely applicable to this agreement such amendments, modifications, corrections or supplements as will apply are given under each relevant clause heading and such amendments, modifications, corrections or supplements shall take precedence notwithstanding anything to the contrary contained in the abovementioned documents **PREAMBLES FOR TRADES** The General Preambles for Trades (2017 edition) as published by The Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said Model Preambles will be entertained Where Architect's or Engineer's specifications or drawings (where issued) are in conflict with the above Preambles, etc., the Architect's or Engineer's specification and drawings, as the case may be, are to take preference Where the drawings and Architect's or Engineer's specifications are in conflict, the Contractor is to obtain written clarification from the Principal Agent prior to the closing of tenders The Contractor's prices for all items throughout these bills of quantities must take account of and include for all of the obligations, requirements and specifications given in the said Model Preambles and in any supplementary preambles Note that the text of the Standard System of Measuring Building Work (seventh edition) has been utilized in the measurement of all items in these bills of quantities **PRICING OF PRELIMINARIES** The amount of the Preliminaries to be included in each monthly payment certificate shall be assessed as an amount prorated to the value of the work duly executed in the same ratio as the preliminaries bears to the total of prices excluding any contingency sum, the amount for the Preliminaries and any amount in respect of contract price adjustment provided for in the contract.Where the initial contract period is extended, the monthly charge shall be calculated on the basis as set out above but taking into account the revised period for completing the works.				
TOTAL CARRIED FORWARD					

BROUGHT FORWARD					
	The amount or items of the Preliminaries shall be adjusted to take account of the theoretical financial effect which changes in time or value (or both) have on this section. Such adjustments shall be based on adjustments in the following categories as recorded in the Bills of Quantities: a) an amount which is not to be varied, namely Fixed (F) b) an amount which is to be varied in proportion to the contract value, namely Value Related (V); and c) an amount which is to be varied in proportion to the contract period as compared to the initial construction period excluding revisions to the construction period for which no adjustment to the contractor is not entitled to in terms of the contract, namely Time Related (T). Where no provision is made in the Bills of Quantities to indicate which of the three categories apply or where no selection is made, the adjustments shall be based on the following breakdown: a) 10 percent is Fixed; b) 15 percent is Value Related c) 75 percent is Time Related.				
TOTAL CARRIED FORWARD					

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	SECTION A - PRINCIPAL BUILDING AGREEMENT				
	Definitions				
1	Clause 1.0 - Definitions and interpretation Clause 1.1 is amended as follows: Replace the following definitions in DEFINITIONS AND INTERPRETATIONS with the following wording: COMMENCEMENT DATE – means the date that is 5 working days after site hand over. CONSTRUCTION GUARANTEE – means a guarantee at call obtained by the contractor from an institution approved by the employer in terms of the employer's construction guarantee form as selected in the schedule. CONSTRUCTION PERIOD – means the period commencing on the commencement date and ending on the date of practical completion. INTEREST – the interest rates applicable on this contract, whether specifically indicated in the relevant clauses or not, will be in terms of the legislation of the Republic of South Africa, and in particular: (a) in respect of interest owed by the employer, the interest rate as determined by the Minister of Justice and Constitutional Development from time to time, in terms of section 1(2) of the Prescribed Rate of Interest Act, 1975 (Act No. 55 of 1975), will apply; and (b) in respect of interest owed to the employer, the interest rate as determined by the Minister of Finance, from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No. 1 of 1999), will apply SECURITY – means the form of security provided by the employer or contractor, as stated in the schedule, from which the contractor or employer may recover expenses or loss. Clause 1.6 is amended as follows: Any notice given may be delivered by hand, sent by prepaid registered post or telefax. Notice shall be presumed to have been duly given when: Delete sub-clause 1.6.4 F:..... V:..... T:.....	Item	1		
	Objective and preparations				
2	Clause 2.0 - Offer acceptance and performance obligations F:..... V:..... T:.....	Item	1		
3	Clause 3.0 - A construction guarantee in terms of 14.0, where so elected in his/her tender. The contractor shall supply and keep a copy of the JBCC Series 2000 Principal Building Agreement and Preliminaries applicable to this contract on the site, to which the employer, principal agent and agents shall have access at all times. Replace the second reference to "principal agent" with the word employer:..... V:..... T:.....	Item	1		
4	Clause 4.0 - Design responsibility, Clause 4.3 to be removed .F:..... V:..... T:.....	Item	1		
5	Clause 5.0 - Employer's agents under clause 41- Include reference to 32.6.3; 34.3 and 34.4 in terms of which the employer has retained its authority and has not given a mandate to the principal agent and in terms of which the employer shall sign all documents. F:..... V:..... T:.....	Item	1		
6	Clause 6.0 - Contractor's site representative F:..... V:..... T:	Item	1		
7	Clause 7.0 - Compliance with laws and regulations F: ..... V:..... T:.....	Item	1		
TOTAL CARRIED FORWARD					

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8	Clause 8.0 - Works risk F:..... V:..... T:.....	Item	1		
9	Clause 9.0 - Indemnities .F:..... V:..... T:.....	Item	1		
	Clause 10.0 - General insurances Clause 10.5, Damage to the works a)Without in any way limiting the contractor's obligations in terms of the contract, the contractor shall bear the full risk of damage to and/or destruction of the works by whatever cause during construction of the works and hereby indemnifies and holds harmless the employer against any such damage. The contractor shall take such precautions and security measures and other steps for the protection and security of the works as the contractor may deem necessary b)The contractor shall at all times proceed immediately to remove or dispose of any debris arising from damage to or destruction of the works and to rebuild, restore, replace and/or repair the works c)The employer shall carry the risk of damage to or destruction of the works and materials paid for by the employer that is the result of the excepted risks as set out in 10.6 d)Where the employer bears the risk in terms of this contract, the contractor shall, if requested to do so, reinstate any damage or destroyed portions of the works and the costs of such reinstatement shall be measured and valued in terms of 32.0 hereof				
	Clause10.6,Injury to Persons or loss of or damage to Properties a)The contractor shall be liable for and hereby indemnifies the employer against any liability, loss, claim or proceeding whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever arising out of or in the course of or caused by the execution of the works unless due to any act or neglect of any person for whose actions the employer is legally liable b)The contractor shall be liable for and hereby indemnifies the employer against any liability, loss, claim or proceeding consequent upon loss of or damage to any moveable, or immovable or personal property or property contiguous to the site, whether belonging to or under the control of the employer or any other body or person, arising out of or in the course of or by reason of the execution of the works unless due to any act or neglect of any person for whose actions the employer is legally liable c)The contractor shall upon receiving a contract instruction from the principal agent cause the same to be made good in a perfect and workmanlike manner at his own cost and in default thereof the employer shall be entitled to cause it to be made good and to recover the cost thereof from the contractor or to deduct the same from amounts due to the contractor. d)The contractor shall be responsible for the protection and safety of such portions of the premises placed under his control by the employer for the purpose of executing the works until the issue of the certificate of practical completion. e)Where the execution of the works involves the risk of removal of or interference with support to adjoining properties including land or structures or any structures to be altered or added to, the contractor, shall and will remain adequately insured or insured against the death of or injury to persons or damage to such property consequent on such removal or interference with the support until such portion of the works has been completed f)The contractor shall at all times proceed immediately at his own cost to remove or dispose of any debris and to rebuild, restore, replace and/or repair such property and to execute the works				
10	Clause 10.7, HIGH RISK INSURANCE In the event of the project being executed in a geological area classified as a "High Risk Area", that is an area which is subject to highly unstable subsurface conditions that might result in catastrophic ground movement evident by sinkhole or do line formation the following will apply: 10.7.1 Damage to the works, The contractor shall, from the commencement date of the works until the date of the certificate of practical completion, bear the full risk of and hereby indemnifies and holds harmless the employer against any damage to and/or destruction of the works consequent upon a catastrophic ground movement as mentioned above. The contractor shall take such precautions and security measures and other steps for the protection of the works as he may deem necessary When so instructed to do so by the principal agent, the contractor shall proceed immediately to remove and/or dispose of any debris arising from damage to or destruction of the works and to rebuild, restore, replace and/or repair the works, at the contractor's own costs	Item	1		
TOTAL CARRIED FORWARD					

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	10.7.2 Injury to persons or loss of or damage to property The contractor shall be liable for and hereby indemnifies and holds harmless the employer against				
11	Clause 11.0 - Special insurances F:..... V:..... T:.....	Item	1		
12	Clause 12.0 - Effecting insurances F:..... V:.....T:.....	Item	1		
13	Clause 13.0 - No Clause F:..... V:..... T:.....	Item	1		
14	Clause 14.0 - SECURITY 14.1-The security to be submitted by the contractor to the employer will be as a payment reduction of up to ten per cent (10%) of the value certified in the payment certificate (excluding VAT) 14.1.1-The payment reduction of the value certified in a payment certificate shall be mutatis mutandi in terms of 31.8(A) 14.1.2-The employer shall be entitled to recover expense and loss from the payment reduction in terms of 33.0 provided that the employer complies with the provisions of 33.4- in which event the employer's entitlement shall take precedence over his obligations to refund the payment reduction security or portions thereof to the contractor 14.2- Where security as a payment reduction of ten per cent (10%) of the value certified in the payment certificate (excluding VAT) has been selected: 14.2.1-The payment reduction of the value certified in a payment certificate shall be mutatis mutandi in terms of 31.8(B) 14.2.2 -The employer shall be entitled to recover expense and loss from the payment reduction in terms of 33.0 provided that the employer complies with the provisions of 33.4 in which event the employer's entitlement shall take precedence over his obligations to refund the payment reduction or portions thereof to the contractor F:..... V:..... T:.....	Item	1		
	Execution				
15	Clause 15.0 - Preparation for and execution of the works ,Clause 15.1.1 delete clause.15.1.4-An acceptable health and safety plan, required in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), within fourteen (14) calendar days of commencement date.15.2.1-Under 41: "Give the contractor possession of the site within ten (10) working days of the contractor complying with the terms of 15.1.2 and 15.1.4 F:..... V:..... T:.....	Item	1		
16	Clause 16.0 - Site and access Clause 16.7 - Known services Clause 16.8 - Protection of trees F:..... V:..... T:.....	Item	1		
TOTAL CARRIED FORWARD					

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17	Clause 17.0 - Contract instructions F:..... V:..... T:.....	Item	1		
18	Clause 18.0 - Setting out of the works':..... V:.....T:.....	Item	1		
19	Clause 19.0 - Assignment F:..... V:..... T:	Item	1		
20	Clause 20.0 - Nominated subcontractors Clause 20 is amended as follows: Delete clause 20.1.3F:..... V:..... T:.....	Item	1		
21	Clause 21.0 - Selected subcontractors F:..... V:..... T:.....	Item	1		
22	Clause 22.0 - Employer's direct contractors F:..... V:..... T:.....	Item	1		
23	Clause 23.0 - Contractor's domestic subcontractors F:..... V:..... T:.....	Item	1		
	Completion				
24	Clause 24.0 - Practical completion F:..... V:..... T:.....	Item	1		
25	Clause 25.0 - Works completion F:..... V:..... T:.....	Item	1		
26	Clause 26.0 - Final completion F:..... V:..... T:.....	Item	1		
27	Clause 27.0 - Latent defects liability period F:..... V:..... T:.....	Item	1		
28	Clause 28.0 - Sectional completion F:..... V:..... T:.....	Item	1		
29	Clause 29.0 - Revision of date for practical completion F:..... V:..... T:.....	item	1		
30	Clause 30.0 - Penalty for late or non-completion F:..... V:..... T:.....	Item	1		
	Payment				
31	Clause 31.0 - Interim payment to contractor, 31.8(A)-Where a security is selected in terms of 14.1; the value of the works in terms of 31.4.1 and of the materials and goods in terms of 31.4.2 shall be certified in full. The value certified shall be subject to the following percentage adjustments: 31.8(A).1-Ninety-five per cent (95%) of such value in interim payment certificates issued up to the date of practical completion 31.8. (A).2-Ninety-seven per cent (97.5%) of such value in interim payment certificates issued on the date of practical completion and up to but excluding the date of final completion 31.8(A).3-Ninety-nine per cent (99%) of such value in interim payment certificates issued on the date of final completion and up to but excluding the final payment certificate in terms of 34.6 31.8(A).4-One hundred per cent (100%) of such value in the final payment certificate in terms of 34.6 except where the amount certified is in favour of the employer. In such an event the payment reduction shall remain at the adjustment level applicable to the final payment certificate. 31.12 Delete the following: "Payment shall be subject to the employer giving the contractor a tax invoice for the amount due." F:..... V:..... T:.....	Item	1		
TOTAL CARRIED FORWARD					

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32	Clause 32.0 - Adjustment to the contract value .The following is to be added to clause 32.5.1 , 32.5.4 , 32.5.7 "……due to no fault of the contractor" Delete sub-clause 32.12F:..... V:..... T:.....	Item	1		
33	Clause 33.0 - Recovery of expense and loss. Add the following clause: 33.2.9 -the contractor's failure or neglect to commence with the works on the dates prescribed in the contract 33.2.10 -the contractor's failure or neglect to proceed with the works in terms of the contract 33.2.11 -the contractor's failure or neglect for any reason to complete the works in accordance with the contract 33.2.12 -the contractor's refusal or neglect to comply strictly with any of the conditions of contract or any contract instructions and/or orders in writing given in terms of the contract 33.2.13-the contractor's estate being sequestrated; liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa F:..... V:..... T:.....	Item	1		
34	Clause 34.0 - Final account and final payment Sub-clause 34.13 is amended as follows: Replace "seven (7) calendar days" with "twenty one (21) calendar days" and delete the words "subject to the employer giving the contractor a tax invoice for the amount due" F:..... V:..... T:.....	Item	1		
35	Clause 35.0 - Payment to other parties F:..... V:..... T:.....	Item	1		
	Termination				
36	Clause 36.0 - Termination by employer - contractor's default Clause 36 is amended as follows: Replace reference to 36.3 at end of sentence with "No clause", and replace "principal agent" with "employer". 36.7-Add the following: "Notwithstanding any clause to the contrary, on cancellation of 37.5 this agreement either by the employer or the and contractor; or for any reason and whatsoever, the contractor shall on written instruction, discontinue with the (38.7) works on a date stated and withdraw himself from the site. The contractor shall not be entitled to refuse to withdraw from the works on the grounds of any lien or right of retention or on the grounds of any other right whatsoever" F:..... V:..... T:.....	Item	1		
37	Clause 37.0 - Termination by employer - loss and damage Sub-clause 37.3.5 is amended as follows: Replace ninety (90) with one hundred and twenty (120) F:..... V:..... T:.....	Item	1		
38	Clause 38.0 - Termination by contractor - employer's default F:..... V:..... T:.....	Item	1		
39	Clause 39.0 - Termination - cessation of the works Sub-clause 37.3.5 is amended as follows: Add the following words at the end thereof: "within one hundred and twenty (120) working days of completion of such a report:..... V:..... T:.....	Item	1		
	Dispute				
40	Clause 40.0 - Settlement of disputes, 40.2.2 under clause 41 – Replace "one (1) year" with "three (3) years".40.6 -under clause 41 – Remove reference to no clause 40.7.1 -Change "(10)" to "(15)",Add the following to the end thereof: Whether or not mediation resolves the dispute, the parties shall bear their own costs concerning the mediation and equally share the costs of the mediator and related costs. F:..... V:..... T:.....	Item	1		
	State Provisions				
41	Clause 41.0 - State substitutions	Item	1		
TOTAL CARRIED FORWARD					

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	Contract Data - Employer to Contractor Given hereunder are all variables referred to in the Principal Building Agreement and which are set out in "Contract Data EC", prepared and published by the Joint Building Contracts committee: Edition 4.1. Code 2101 - EC, March 2005. **1.0 Contracting and Other Parties** 1.1 Employer: The Mvula Trust Postal address: 25 Rhodesdrift Street, Rhodesdrift Office Park ROP 6, Ext.30. Code 0699 Tel: (015) 291 2405 Fax: E-mail: mikateko@themvulatrust.org.za Physical Address: 25 Rhodesdrift Street, Rhodesdrift Office Park ROP 6, Ext.30. Limpopo South Africa 1.2 Principal Agent: Naidu Consulting (Pty) Ltd. Postal address: No 19 Frikkie De Beer Street, Atterbury Office Park, Garston AH, Pretoria Code 3635 Tel: (031) 265 6007 Fax: (031) 265 6011 E-mail: hilna.viljoen@naiduconsulting.com **2.0 Contract and Site Information** 2.1 The Law applicable to this agreement shall be that of: Republic of South Africa 2.2 Works Identification Water & Sanitation Programme at Lehlake Primary School Remedial Works to Existing toilet blocks, new water storage tanks, new septic tank, electrical and associated works 2.3 Site Description Lehlake Primary School 2.4 Possession of the site to be given on TBA 2.5 Period of the commencement of the works after the contractor takes possession of the site TBA 2.6 Completion of the works in sections is required NO As part of the Scope of Works the Tenderer are to note that they will be working inside an operational institute for education and consideration must be taken at all times regarding influence or interference from students and operational staff. Sections as follows: As per attached programme 2.7 Waivers of the contractors lien or right of continuing possession is required YES 2.8 Defined restrictions to the site area. Where "yes" the specific requirements are described below: The contractor is to hoard of the site in such a manner as to not allow patients/staff access YES Due to the facility being fully operational strict restrictions in terms of hoarding, setting out etc. will be provided to the contractor by the Principal Agent 2.9 Geotechnical investigation of the site has been undertaken. Where "yes" the results are included in the contract documents.				
TOTAL CARRIED FORWARD					

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	2.10 Existing premises will be occupied. Where "yes" the specific requirements are described. YES School will be fully operational during construction. therefore the Health and Safety of the staff & students are of utmost importance 2.11 Provision of temporary services is required. Where "yes" the specific requirements are detailed elsewhere in the contract documents (Refer to section B: Preliminaries) 2.12 Protection of existing trees or shrubs is required. Where "yes" the specific requirements are described below: NO **3.0 Insurance and Securities** 3.1 Contract works insurance to be effected by: 3.2 Supplementary / Special insurance to be effected by: Employer For the sum of: N/A With a deductible of: an amount to be payable by the employer 3.3 Public Liability Insurance to be effected by: Contractor For the sum of: R 10 000 000.00 With a deductible of: an amount to be payable by the contractor 3.4 Support insurance to be effected by: Contractor For the sum of: N/A 3.5 Special Insurance to be effected by: **4.0 Practical Completion Date and Penalties** 4.1 For the works as a whole The date of practical completion and the penalty per calendar day Date: Penalty amount is 11 cents per R100,00 of the final value per calendar day to a maximum of 10% of the contract award value **5.0 Documents and General** 5.1 Construction document copies to be supplied to the contractor free of charge 5.2 The price document may be used as specification of materials and goods and work methods No 5.3 The contractor shall provide a schedule of rates Yes 5.4 Changes made to the JBCC standard documents (Refer to clause 6.0 below) Yes 5.5 On acceptance of the tender, the priced document is to be submitted with the stated working days Priced Bills of Quantities to be submitted at the Tender Closing 5.6 Work to be undertaken by direct contractors as detailed below: NO 5.7 On achievement of practical completion the contractor is to hand over manuals, certificates etc. related to the works as listed below: 1. Electrical Installation 2. Roof Structures 3. Electrical COC 4. Plumbing COC 5. Glazing Certificates 6. Fire Inspection & Certification 7. Others as requested by the Principal Agent 5.8 Interim payment certificate to be issued by: 30th of each month	N/A			
TOTAL CARRIED FORWARD					

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	6.0 Details of changes made to the Standard JBCC Document Details of changes are shared within the tender document. **7.0 Declaration by the Principal Agent** I the principal agent named in the above, declare that the information provided above is complete and accurate at the time of calling for tenders. Where necessary should any of the above information need to be varied, tenders will be forthwith thereof in writing. Principal Agent:..... Date:..... Note: To be formally signed as part of contract documents. **SECTION B - JBCC PRELIMINARIES** **Definitions and interpretation**				
42	Clause 1.0 - Definitions and interpretation. F:..... V:..... T:.....	Item	1		
	Documents				
43	Clause 2.1 - Checking of documents F:..... V:..... T:.....	Item	1		
44	Clause 2.2 - Provisional Bills of Quantities F:..... V:..... T:.....	Item	1		
45	Clause 2.3 - Availability of construction documentation F:..... V:..... T:.....	Item	1		
46	Clause 2.4 - Interest of agents. F:..... V:..... T:.....	item	1		
47	Clause 2.5 - Priced Documents. F:..... V:..... T:.....	item	1		
48	Clause 2.6 - Tender submission. F:..... V:..... T:.....	item	1		
	The Site				
49	Clause 3.1 - Defined works area F:..... V:..... T:.....	Item	1		
50	Clause 3.2 - Geotechnical investigation F:..... V:..... T:.....	Item	1		
51	Clause 3.3 - Inspection of the site F:..... V:..... T:.....	Item	1		
52	Clause 3.4 - Existing premises occupied F:..... V:..... T:.....	Item	1		
53	Clause 3.5 - Previous work-dimensional accuracy F:..... V:..... T:.....	Item	1		
54	Clause 3.6 - defects F:..... V:..... T:.....	Item	1		
55	Clause 3.7 - Services-known F:..... V:..... T:.....	Item	1		
TOTAL CARRIED FORWARD					

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56	Clause 3. 8- Services-unknown F:..... V:..... T:.....	Item	1		
57	Clause 3. 9- Protection of trees F:..... V:..... T:.....	Item	1		
58	Clause 3. 10- Articles of value F:..... V:..... T:.....	Item	1		
59	Clause 3. 11- Inspection of adjoining properties F:..... V:..... T:.....	Item	1		
	Management of contract				
60	Clause 4.1 - Management of works. F:..... V:..... T:.....	Item	1		
61	Clause 4.2 - Programme of works F:..... V:..... T:.....	Item	1		
62	Clause 4.3 - Progress meetings. F:..... V:..... T:.....	Item	1		
63	Clause 4.4 - Compliance with manufacturer's instructions F:..... V:..... T:.....	Item	1		
64	Clause 4.5 - Labour and plant records F:..... V:..... T:.....	Item	1		
	Samples, shop drawings and manufacturer's instructions				
65	Clause 5.1 - Samples of material F:..... V:..... T:.....	Item	1		
66	Clause 5.2 - Workmanship samples F:..... V:..... T:.....	Item	1		
67	Clause 5.3 - Shop drawings F:..... V:..... T:.....	Item	1		
68	Clause 5.4 - Compliance with manufacturers' instructions F:..... V:..... T:.....	Item	1		
	Temporary works and plant				
69	Clause 6.1 - Deposits and fees F:..... V: ..... T:.....	Item	1		
70	Clause 6.2 - Enclosure of works F:..... V: ..... T:.....	Item	1		
71	Clause 6.3 - Advertising F:..... V:..... T:.....	Item	1		
72	Clause 6.4 - Plant, equipment, sheds and offices F:..... V:..... T:.....	Item	1		
73	Clause 6.5 - Main noticeboard F:..... V:..... T:.....	Item	1		
74	Clause 6.6 - Subcontractors' noticeboard F:..... V:..... T:.....	Item	1		
TOTAL CARRIED FORWARD					

BROUGHT FORWARD					
	Temporary services				
75	Clause 7.1 - Location F:..... V:..... T:.....	Item	1		
76	Clause 7.2 - Water F:..... V:..... T:.....	Item	1		
77	Clause 7.3 - Electricity F:..... V:..... T:.....	Item	1		
78	Clause 7.4 - Telecommunication facilities F:..... V:..... T:.....	Item	1		
79	Clause 7.5 - Ablution facilities F:..... V:..... T:.....	Item	1		
	Prime cost amounts				
80	Clause 8.1 - Responsibility for prime cost amounts F:..... V:..... T:.....	Item	1		
	Attendance on n/s subcontractors				
81	Clause 9.1 - General attendance F:..... V:..... T:.....	Item	1		
82	Clause 9.2 - Special attendance F:..... V:..... T:.....	Item	1		
83	Clause 9.3 - Commissioning-fuel, water and electricity F:..... V:..... T:.....	Item	1		
	Financial aspects				
84	Clause 10.1 - Statutory taxes, duties and levies F:..... V:..... T:.....	Item	1		
85	Clause 10.2 - Payments of preliminaries F:..... V:..... T:.....	Item	1		
86	Clause 10.3 - Adjustment of preliminaries F:..... V:..... T:.....	Item	1		
87	Clause 10.4 - Payment certificate cash flow F:..... V:..... T:.....	Item	1		
	General				
88	Clause 11.1 - Payment certificate cash flow F:..... V:..... T:.....	Item	1		
89	Clause 11.2 - Protection/isolation of existing/sectionally occupied works F:..... V:..... T:.....	Item	1		
90	Clause 11.3 - Security of the works F:..... V:..... T:.....	Item	1		
91	Clause 11.4 - Notice before covering F:..... V:..... T:.....	Item	1		
92	Clause 11.5 - Disturbance F:..... V:..... T:.....	Item	1		
93	Clause 11.6 - Enviromental disturbance F:..... V:..... T:.....	Item	1		
94	Clause 11.7 - Works cleaning and clearing F:..... V:..... T:.....	Item	1		
TOTAL CARRIED FORWARD					

BROUGHT FORWARD					
95	Clause 11.8 - Vermin F:..... V:..... T:.....	Item	1		
96	Clause 11.9 - Overhand work F:..... V:..... T:.....	Item	1		
97	Clause 11.10 - Instruction manuals and guarantees F:..... V:..... T:.....	Item	1		
98	Clause 11.11 - As built information F:..... V:..... T:.....	Item	1		
99	Clause 11.12 - Tenant installations F:..... V:..... T:.....	Item	1		
	SECTION C - SPECIFIC PRELIMINARIES Users shall avoid inserting in Section C items which may be construed as amending, modifying, correcting or supplementing the provisions of the JBCC Principal Building Agreement. Such amendments, modifications, corrections or supplements should be kept to the absolute minimum and should be inserted in Section A under the recited clause headings of the JBCC Principal Building Agreement in this Bill No. 1 Selected examples of typical clauses are provided to indicate ways of describing such clauses. Users must delete, adapt or add to these examples to suit their particular circumstances				
100	Site instructions: Instructions issued on site are to be recorded in triplicate in a site instruction book which is to be maintained on site by the contractor. F:..... V:..... T:.....	Item	1		
101	Warranties for material and workmanship Where warranties for materials and/or workmanship are called for, the contractor shall obtain a written warranty, addressed to the employer, from the firm supplying the materials and/or doing the work and shall deliver same to the principal agent on the certified completion of the contract. The warranty shall state that workmanship, materials and installation are warranted for a specified period from the date of final completion and that any defects that may arise during the specified period shall be made good at the expense of the firm supplying the materials and/or doing the work, upon written notice to do so. The warranty will not be enforced if the work is damaged by defects in the construction of the building in which case the responsibility for replacement shall rest entirely with the contractor. F:.....V:.....T:.....	Item	1		
102	Co-operation of contractor for cost management It is specifically agreed that the contractor accepts the obligation of assisting the principal agent in implementing proper cost management. The contractor will be advised by the principal agent of all cost management procedures which will be implemented to ensure that the final building cost does not exceed the budget. The principal agent undertakes to make available to the contractor all budgetary allowances and cost assessments/reports to enable the proper procedure to be implemented and the contractor shall attend all cost plan review and cost management meetings. The contractor undertakes to extend these procedures, as necessary, to all subcontractors. F:.....V:.....T:.....	Item	1		
103	Proprietary Branded Products The contractor shall take delivery of, handle, store, use apply and/or fix all proprietary branded products in strict accordance with the manufacturer's instruction after consultation with the manufacturers authorized representative. F:..... V:..... T:.....	Item	1		
TOTAL CARRIED FORWARD					

BROUGHT FORWARD					
104	Overtime Should overtime be required to be worked for any reason whatsoever, the costs of such overtime are to be borne by the contractor unless the principal agent has specifically authorized in writing, prior to the execution thereof, that costs for such overtime are to be borne by the employer. F:..... V:..... T:.....	Item	1		
105	As Built Drawings The position of construction breaks and the extent of individual concrete pours are to be recorded by the contractor on the structural engineers drawings and are to be submitted to the principal agent and the structural engineer for their records. F:..... V:..... T:.....	Item	1		
106	Labour Record At the end of each week the contractor shall provide the principal agent with a written record, in schedule form, reflecting the number and description of tradesman and labourers employed by him and all subcontractors on the works each day. F:..... V:..... T:.....	Item	1		
107	Plant Record At the end of each week the contractor shall provide the principal agent with the written record, in schedule form, reflecting the number, type and capacity of all plant, excluding hand tools, currently used on the works. F:..... V:..... T:.....	Item	1		
108	Special Works / Direct Contracts The Employer shall have the right to employ other contractors (hereafter referred to as "direct contractors") to execute any special or other work whether contained in this contract or not, concurrently with the work being executed under this contract. The contractor shall not be entitled to any percentage, profit or discount on value of any work executed by direct contractors but shall nevertheless allow these direct contractors and the Employers employees to have access to the works, allocate reasonable space for storage of their materials, tools and equipment, and co-ordinate the work of such direct contractors as necessary, all to the satisfaction of the principal agent. The contractor shall allow the direct contractors to use free of charge the ablutions, scaffolding, hoisting water and power supply, etc. on site and not hinder or prevent the execution of their work. F:..... V:..... T:.....	Item	1		
109	Guarantees and Maintenance Manuals The contractor shall obtain and hand over to the principal agent on practical completion, all relevant guarantees, any operating and maintenance instruction manuals, data or instructions required by the principal agent or provided by manufacturers, suppliers or sub-contractors. The contractor shall ensure that all warranties and guarantees received are fully ceded to the Employer on final completion, failing which the release of the Construction Guarantee or Retention amount will be withheld until this is satisfactorily compiled with. Where warranties for materials and/or workmanship are called for, the contractor shall obtain a written warranty, addressed to the employer, from the firm supplying the materials and/or doing the work and shall deliver same to the principal agent on the certified completion of the contract. The warranty shall state that the workmanship, materials and installation are warranted for a specified period shall from date of final completion and that any defects that may arise during the specified period shall be made good at the expense of the firm supplying the materials and/or doing the work, upon written notice to do so. The warranty will not be enforced if the work is damaged by defects in construction of the building in which case the responsibility of replacement shall rest entirely with the contractor. F:..... V:..... T:.....	Item	1		
110	Media Releases All rights of publication of articles in the media, together with any advertising relating to, or in any way connected with this project shall vest in the principal agent. The contractor, together with his subcontractor (whether nominated, selected or domestic) shall not, without the written consent of the principal agent, cause any statement or advertisement to be printed, screened or aired by the media. F:..... V:..... T:.....	Item	1		
TOTAL CARRIED FORWARD					

BROUGHT FORWARD					
111	Costs of Tender / Quotations / Claims, etc. Any costs incurred for the preparation of tenders or quotations, claims, etc. to the satisfaction of principal agent shall be borne by the contractor. F:..... V:..... T:.....	Item	1		
112	Co-Operation of Contractor for Cost Management It is specifically agreed that the contractor accepts the obligation of assisting the principal agent in implementing proper cost management. The contractor will be advised by the principal agent of all cost management procedures which will be implemented to ensure that the final building cost does not exceed the budget . The principal agent undertakes to make available to the contractor all budgetary allowances and costs assessments/reports to enable the proper procedure to be implemented and the contractor shall attend all cost plan review and cost management meetings. The contractor undertakes to extend these procedures, as necessary, to all subcontractors. F:..... V:..... T:.....	Item	1		
113	Tender Sum to be Fully Inclusive(The tenderer is to take note that this contract is a fixed price contract and no provision for escalation is allowed).The Tender Sum is deemed to be the fully inclusive price for the finished work described and is deemed to include inter alia for:- The supply of all materials- Labour of every description including additional costs incurred in working overtime, weekends, public holidays, etc. to meet the stipulated programme dates.- All making, transport, conveying, cartage, carriage and delivery, etc.- Taking delivery, unloading, storing, unpacking, hoisting or lowering, settings, fixing and building into positions, cutting and waste, templates, patterns and models.- Provision and maintenance of all plant, equipment, machines, trucks and other vehicles, tackle, tools, staging, sheds, stores and temporary works necessary for the due and proper performance of the contract works, establishment charges and all fuel, operating costs and depreciation to plant, equipment, etc. - All applicable import taxes and duties - Overheads and profits-All obligations arising out of the Bills of Quantities and all costs and charges deemed necessary for complying with the terms and conditions of contract herein. All charges required by the contractor in connection with Preliminaries, site establishment and the like. F:..... V:..... T:.....	Item	1		
114	Overloading The Tenderer shall prior to submitting their tender determine from the structural engineer any constraints and limitations in respect of works to be executed over slabs, etc. which have load limitations. The contractor shall take all necessary steps to ensure that no damage occurs due to overloading of any portion of the works. The contractor shall submit details of his proposed loading, storage, plant erection etc. to the principal agent for their approval prior to proceeding with such loading, storing, erecting or executing work and shall comply with and pay for the engineers requirements in connection with the provision of temporary support work etc. Any damage caused by the works by overloading shall be made good by the contractor at his sole expense. Notwithstanding any approval given by the principal agent, the contractor shall entirely be responsible for damage to the works caused by overloading which damage shall be made good by the contractor at his sole expense. F:..... V:..... T:.....	Item	1		
TOTAL CARRIED FORWARD					

BROUGHT FORWARD					
115	Removal and Making Good of Temporary Works, etc. on Completion The contractor shall remove all temporary works, roads, services and the like used for this contract and shall make good to the entire satisfaction of the principal agent any damage resulting there from. F:..... V:..... T:.....	Item	1		
116	Location of Temporary Building and Temporary Services The Contractor shall provide all necessary temporary works, including temporary roads, tracks, crossings, Hard standing and services, etc. required for his own and subcontractor use during the construction and maintenance period. There is no guarantee given that or implied site conditions will be such that the contractor will be able to erect such temporary works, offices, stores and temporary accommodation within the site boundaries and it shall be the contractors responsibility to adopt whatever measures he deems necessary in this regard and obtain all necessary permission and pay all costs in connection therewith. F:..... V:..... T:.....	Item	1		
117	Model Preliminaries for Trades and Standard Systems of Measurements Tenderers are referred to the General Preambles for Trades (2017 edition) at published by the Association of South African Quantity Surveyors for the full descriptions and specifications of items included in these bills of quantities. Descriptions in the bills of quantities generally appear brief form and the Model Preambles and supplementary preambles shall be deemed to apply fully to and augment the descriptions of the relevant items. Tenderers must study the Model Preamble before pricing these bills of quantities and all prices shall be deemed to include for the provisions of the Model Preambles for Trades. F:..... V:..... T:.....	Item	1		
118	Standard Workmanship and Materials In the absence of detailed specifications for any item or items, the National Building Regulations, the latest applicable South African National Standards Specification, or where such does not exist, then the latest applicable British Standard Specification shall apply. F:..... V:..... T:.....	Item	1		
119	Commodities To Be New All commodities, goods, articles or materials to be used in the Works are to be new except where re-use of existing is specified and are to be handed, stored used and/or fixed with care to ensure that they are in perfect condition when incorporated in the works and thereafter properly protected so as to ensure that they are likewise in perfect condition when handed over at completion of the works. F:..... V:..... T:.....	Item	1		
120	Mode of Procedures Notwithstanding anything to the contrary herein, the principal agent shall at all times reserves the right to direct the order in which the various parts of the contract are to be executed. The contractor shall give priority to any individual section or portion of the works that, in the opinion of the principal agent, requires to be expedited. Should it appear, in the principal agent's opinion, that work in any area is not being executed in accordance with the requirements of the contract programme, the contractor shall provide additional manpower and resources and shall work additional overtime and do everything else required to bring the work back to programme to the satisfaction of the principal agent and to the contractors cost. F:..... V:..... T:.....	Item	1		
121	Unauthorized Persons/Workmen on Premises The contractor shall at all times strictly exclude all unauthorized persons from the Works and the site and shall set up notice boards to that effect. No workmen or labourers (except security guards) are allowed under any circumstances to sleep or deposit any kit on the premises. The contractor must provide any necessary independent shelter or shed required for any labour or watchmen on site to the approval of the principal agent. F:..... V:..... T:.....	Item	1		
TOTAL CARRIED FORWARD					

BROUGHT FORWARD					
122	Method Statement The tenderer shall produce, where required to do so by the principal agent, a Method Statement outlining the methods of construction and labour and plant resources that he proposes to use in the execution of the works. Any approval given or observation made by the principal agent shall not relieve the contractor of his sole responsibility to adopt the methods of construction and to provide the labour and plant resources necessary for the due proper and timeous execution of the works. F:..... V:..... T:.....	Item	1		
123	Encroachment During the course of the Building operations, the contractor shall be held entirely responsible for any encroachment onto any adjoining properties, buildings, etc. or servitudes and the cost of any remedial measures as required by the principal agent shall be borne by the contractor. F:..... V:..... T:.....	Item	1		
124	Occupational Health & Safety: The contractor is referred to and shall comply with Department of Public Works, Roads & Transport Health and Safety Specification which is incorporated in these Bills Of Quantities and contains all the requirements of the employer in this regard. It is a requirement of this contract that the contractor shall provide a safe and healthy working environment and to	Item	1		
125	Site Security Measures The following security measures are to be complied with and enforced by the Contractor: No unauthorized persons/workmen are to be allowed on site and notice boards in English shall be displayed at the site entrance to this effect. All personnel that are utilized on the project by the contractor and its sub-contractors, are at all times whilst on site, be clothed with clothing that clearly identifies each staff member together with an identification document which includes, but not limited to the following: 1. A photograph of the personnel concerned; 2. The Identification numbers of the personnel concerned; and, 3. The Name of company concerned. In addition, to that stated above, the contractor shall adhere to the premises security rules and regulations. No personnel will be permitted to work on the project until this condition is adhered to. F:..... V:..... T:.....	Item	1		
126	Community Liaison Officer: The contractor is to allow for the appointment of a Community Liaison Officer (CLO) to act as facilitator between the local community and the contractor for the full duration of the contract (A rate of R10,000.00 per month is to be allowed) F:..... V:..... T:..... **SUMMARY OF CATEGORIES** Category : Fixed ..... Category : Value .....Category : Time	Item	1		
127	Preliminaries	Item	1		
CARRIED FORWARD TO SUMMARY					

	SECTION 2 **BILL NO. 1** **ALTERATIONS (PROVISIONAL)** **PREAMBLES** The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be included in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles **SUPPLEMENTARY PREAMBLES** View site Before submitting his tender the contractor shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained General The contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the principal agent Water supply pipes and other piping that may be encountered and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings, to the satisfaction of the principal agent Old materials from the alterations, except where described as to be re-used or handed over, as well as all rubbish, etc. must be regularly carted from the site and not be allowed to accumulate on or around the site None of the old materials are to be used for new work, except where specifically described as being set aside for re-use Prices for taking out of doors, windows, etc. shall include for removal of all beads, architraves, ironmongery, etc. Prices for taking out and removing doors and frames shall include for removing door stops, cabin hooks, etc. and making good floor and wall finishes to match existing Making good of finishes shall include making good of the brick and concrete surfaces onto which the new finishes are applied, where necessary				
TOTAL CARRIED FORWARD					

BROUGHT FORWARD					
	All materials, debris, and waste resulting from demolition, removal, or alteration works shall be the responsibility of the contractor and must be promptly removed from the site. Disposal shall be carried out at a licensed waste disposal facility or approved municipal dumpsite, in compliance with all relevant environmental and municipal regulations. Proof of legal disposal, such as weighbridge tickets or receipts from the disposal facility, must be submitted to the principal agent or client upon request. The contractor shall allow for all associated costs (transportation, tipping fees, handling, etc.) in their tendered rates. No material shall be stockpiled or dumped on-site unless expressly approved in writing by the principal agent. The contractor will be required to take all dimensions affecting the existing buildings on the site and he will be held solely responsible for the accuracy of all such dimensions where used in the manufacture of new items (doors, windows, fittings, etc.) Note that the text of the Standard System of Measuring Building Work (seventh edition) has been utilized in the measurement of all items in these bills of quantities **DEMOLISH AND REMOVE** Demolish & remove existing				
1	Existing Storage tank stand approximate size 2 x 2m x 2500mm high comprising 100mm concrete surface bed over brickwork in foundations, including carting off site	No	1		
2	Septic tank (approximately 75m² in area), which may be constructed from plastic, concrete, or brick, including carting off site	m3	150		
3	Excavate and removal of existing 22 pit toilets (amalooloo or similar), including backfilling with selected fill from site and compacted to 95% MODAASSHTO Density	No	22		
	REMOVAL OF EXISTING WORK Contractor to take out and remove piping, sanitary fittings, etc., including disconnecting piping from fittings and make good floor and wall finishes				
4	Wash hand basin, including short lengths of piping, etc.	No	12		
5	WC Pan with cistern, including short lengths of piping, etc.	No	24		
6	Urinal, including short lengths of piping, etc.	No	12		
	Taking out and removing Ironmongery				
7	Toilet roll holder from wall	No	24		
	Taking out and removing doors, windows, etc. (making good finishes elsewhere)				
8	Timber single door and metal frame not exceeding 2.5m2	No	28		
TOTAL CARRIED FORWARD					

BROUGHT FORWARD					
	Desludging Debris and rubble covering the access to the pit latrine must be cleared and disposed of at a registered landfill site. The pit latrine is to be accessed by the removable cover or removal of the access concrete slab. The solids that cannot be pumped out must be dug out by mechanical means. When the contents of the pit or tank are to be pumped out and the sludge is too firm or dry it must be jetted with a high pressure hose and agitate the mixture of sludge and water with the end of the suction hose before pumping begins. After pumping out the contents of the pit, the tanker must be driven to a legally authorized safe-disposal site, such as an off-site sewage treatment works, where the contents can be emptied. Dry pits or pits containing large quantities of solid materials including stones, sticks, plastic bags, debris, etc. must be cleaned by individuals with hand held mechanical machinery with the appropriate protective gear in terms of the OHS Act as well as certified to work in confined spaces. Contractors are to ensure that the vacuum tankers are suitable to maneuver close to latrines without compromising the integrity of the pit latrine				
9	Desludging of existing septic tank, approximately 6Kl in volume	No	4		
10	Desludging existing pit latrine, approximately 2Kl in volume for all toilets	No	22		
	Structural Cracks Allow for the stitching of structural cracks in walls using approved methods and materials, including cutting, cleaning, installation of steel reinforcement (e.g., crack stitching bars), anchoring with epoxy or equivalent, and making good all finishes				
11	Stitching on structural cracks to walls	m	10		
	NEW TEMPORARY TOILETS				
12	Provide, deliver, install, and maintain twenty-four (24) freestanding chemical toilets for learner use, hired for a continuous period of three (3) calendar months. The scope includes weekly emptying, cleaning, disinfection, replenishment of consumables (toilet paper and sanitizer), routine maintenance to ensure hygiene and functionality, and final removal with site clean-up. All services must comply with relevant health and safety regulations and be to the satisfaction of the principal agent. Should the contract period be exceeded without a duly approved Extension of Time (EOT), all associated costs for the continued provision and servicing of the toilets will be borne by the contractor.	Month	3		
CARRIED FORWARD TO SECTION					

	BILL NO. 2				
	CARPENTRY AND JOINERY				
	PREAMBLES				
	The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be included in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles				
	SUPPLEMENTARY PREAMBLES				
	Contractor to confirm door size on site prior to purchasing as any adjustment required to be made to the doors should be made by the manufacturer and not carried out on site				
	Note that the text of the Standard System of Measuring Building Work (seventh edition) has been utilized in the measurement of all items in these bills of quantities				
	DOORS ETC				
	44mm thick solid timber door suitable for vanish finish and hung to steel or aluminum frames, measured separately				
1	Semi-solid panel door with hardwood concealed edge strip fitted with lock block to one edge clearly marked and masonite faced both sides suitable for painting Size 813 x 1800mm high	No	22		
	Wrought Meranti				
2	44mm Framed ledged braced door with 44 x 146mm top rail and stiles, 22 x 108mm braces, 22 x 146mm lock rail, 22 x 222mm bottom rail, 22 x 70mm tongue in groove and v-jointed boarding Size 813 x 2 032mm high	No	6		
CARRIED FORWARD TO SECTION					

	BILL NO. 3 **METALWORK** **PREAMBLES** The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be included in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles **SUPPLEMENTARY PREAMBLES** The Contractor is to check and verify on site that the item specified in the BOQ matches existing prior to placing orders. Additional costs will not be borne by the client for items that do not match existing and are not approved by the Principal Agent Note that the text of the Standard System of Measuring Building Work (seventh edition) has been utilized in the measurement of all items in these bills of quantities **GALVANIZED PRESSED STEEL DOOR FRAMES** 1,6mm galvanized mild steel standard pressed jamb lining with double rebates to suit one brick wall:				
1	Frame for door 813 x 2032mm high	No	28		
CARRIED FORWARD TO SECTION					

	BILL NO. 4				
	IRONMONGERY				
	PREAMBLES				
	The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be included in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles Note that the text of the Standard System of Measuring Building Work (seventh edition) has been utilized in the measurement of all items in these bills of quantities				
	SUPPLEMENTARY PREAMBLES				
	Keys/Locks				
	Each lock is to be distinctly numbered with consecutive numbers and each key is to be stamped with the corresponding number to the lock that it controls. All locks are to have two keys				
	Trade Names				
	Where trade names are specified other ironmongery approved by the Principal Agent may be used				
	Fixing				
	Fixing of ironmongery is deemed to be fixed to timber unless otherwise described				
	Hinges, Bolts, Etc.				
	Manufactured by "Dormakaba" or similar approved				
1	102 x 75 x3mm Two Ball Bearing Butt Hinge, with stainless steel finish (Code: DBB-SS-009)	No	56		
	Locksets, Etc.				
	Manufactured by "Union" or similar approved				
2	3 Lever Lockset (Code: CZ6822452CH)	No	6		
3	WC Indicator Bolt (Code: UNION-SS8023SS)	No	22		
	Handles				
	Manufactured by "Union" or similar approved				
4	D-Handle straight diameter 19mm - Back to back (Code: DPH301C-BT)	Pairs	22		
	Sundries				
	Manufactured by "Dormakaba" or similar approved				
5	Dorma "DDS-SS-017" steel door stop	No	28		
	Bathroom Fittings				
	Manufactured by "Gen" or similar approved				
6	Toilet Roll Holder Lock White 3 tier TR3A WATR-1004	No	24		
CARRIED FORWARD TO SECTION					

	BILL NO. 5 **PLUMBING AND DRAINAGE (PROVISIONAL)** **PREAMBLES** The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be included in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles Note that the text of the Standard System of Measuring Building Work (seventh edition) has been utilized in the measurement of all items in these bills of quantities **SUPPLEMENTARY PREAMBLES** **Stainless steel basins, sinks, wash troughs, urinals, etc.** Stainless steel for economy basins, domestic sinks and worktops shall be Type 430 (17/0) Stainless steel for urinals, basins, quality sinks, wash troughs, institutional equipment, etc. shall be Type 304 (18/8) Stainless steel for laboratory sinks, photographic equipment, etc. shall be Type 316 (18/8) Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable **Sealing of edges** Outer edges of sinks, basins, baths, urinals, etc. are to be sealed against adjacent surfaces with approved silicone **PVC-U pipes and fittings** Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings Soil, waste and vent pipes and fittings shall be solvent weld jointed or sealed with butyl rubber rings **PVC-U pressure pipes and fittings** Pipes of 50mm diameter and smaller shall be plain ended with solvent welded PVC-U loose sockets and fittings Pipes of 63mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be PVC-U and all other fittings shall be cast iron, all with similar push-in type joints **High density polyethylene (HDPE) pipes and fittings** Pipes shall be type IV and of the class specified with compression fittings **Polypropylene pipes** Polypropylene pipes 54mm diameter and smaller shall be seamless copper coloured Class 16 pipes jointed with heat welded thermoplastic or where so described compression fittings Pipes shall be firmly fixed to walls, etc. with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions				
TOTAL CARRIED FORWARD					

BROUGHT FORWARD					
	Reducing fittings Where fittings have reducing ends or branches they are described as "reducing" and only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained **Fixing of pipes** Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls, etc., casting in, building in or suspending not exceeding 1m below suspension level **Disinfection of water pipework** Water pipework is to be disinfected at completion **Laying, backfilling, bedding, etc. of pipes** Pipes shall be laid and bedded in accordance with manufacturers' instructions and trenches shall be carefully backfilled Where no manufacturers' instructions exist, pipes shall be laid in accordance with the relevant section of SANS 2001 **General** Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc. shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 93% Mod AASHTO density and disposal of surplus material on site Descriptions of service pipes and flexible connecting pipes shall be deemed to include connections to taps, cisterns, etc. and to steel pipes (adaptors for connections to PEX pipes, etc. are given separately) Descriptions of WC pans, slop hoppers, etc. shall be deemed to include for joints to soil pipes (pan connectors are separately measured) **As-built drawings** Where required, the contractor shall prepare an updated set of as-built drawings. At completion of the contract the contractor shall hand these drawings to the principal agent for reproducing onto the originals for handing over to the employer (provision for allowance of as-built drawings elsewhere) **Soil Drainage** uPVC flexible drainage pipes				
1	110mm Pipes laid in and including trenches not exceeding 1m deep	m	30		
2	110mm Ditto, but exceeding 1m and not exceeding 2m dee	m	30		
	Extra over uPVC flexible drainage pipes for fittings				
3	110mm Bend	No	32		
4	110mm Junction	No	8		
5	110mm Rodding eye	No	8		
6	110mm Inspection eye	No	8		
	uPVC gulleys				
7	110mm Gully not exceeding 500mm deep	No	6		
	Testing				
8	Testing soil drainage system	sum	1		
TOTAL CARRIED FORWARD					

BROUGHT FORWARD					
	Sanitary Fittings				
	Supply, fix, clean, wash and leave in a satisfactory condition the following items of sanitaryware:				
	Manufactured by "Atlas Plastics" or similar approved				
9	Atlas Plastic 507 AP Bowl Urinal c/w Galv Bracket White complete with spreader and waste union, flush valve, etc.	No	12		
10	(SA PAT 2015/06505) WC suite comprising pan with double flap heavy duty plastic seat and matching 9 litre cistern	No	24		
	Vaal				
11	Franke WB001 520mm Code 2520004 or other approved grade 304 (18/10) wash hand basin size 520 x 432mm with tiling key all round and 40mm waste outlet and bolt to wall on a pair of square stainless steel gallows brackets and seal at junction with wall with clear silicone sealant	No	12		
	Waste Unions, Etc.				
	Marley				
12	32 x 50mm Deep seal "P" or "S" trap	No	12		
	Taps, Valves, Etc.				
	Brass				
13	22mm Stopcock	No	12		
	Sanitary Plumbing				
	uPVC pipes				
14	50mm Pipes	m	51		
	Extra over uPVC pipes for fittings				
15	50mm Bend	No	22		
16	50mm Junction	No	22		
17	50mm Access bend	No	8		
	Water Supplies				
	PEX pipes				
18	15mm Pipes	m	10		
19	15mm Pipes fixed to the walls	m	51		
	Extra over fittings for PEX pipes				
20	15mm Fittings	No	72		
	Class 16 HDPE type IV pipes				
21	50mm Pipes laid in and including trenches not exceeding 1m deep	m	401		
22	25mm Pipes laid in and including trenches not exceeding 1m deep	m	20		
	Extra over Class 12 HDPE type IV pipes for fittings				
23	50mm Fittings	No	16		
TOTAL CARRIED FORWARD					

BROUGHT FORWARD					
24	50mm Reducer	No	4		
25	50mm Bend	No	2		
26	25mm Fittings	No	2		
27	25mm Reducer	No	4		
28	25mm Bend	No	8		
	Galvanized medium normalized mild steel piping				
29	25mm Standpipes	m	5		
	Extra over galvanized piping for galvanized mild steel fittings				
30	25mm Fittings	No	10		
	Isolation valves				
31	50mm Ball valve	No	2		
	Valve boxes				
32	600 x 600mm Stopcock box complete as per detail drawing "Valve chamber" including 400 x 400 cast iron cover and frame depth not exceeding 750mm internally.	No	5		
	Sundries				
33	300 x 300 x 50mm Precast concrete pipeline marker Slab set in Ground	No	5		
CARRIED FORWARD TO SECTION					

	BILL NO. 6 **PAINTWORK** **PREAMBLES** The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be included in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles Note that the text of the Standard System of Measuring Building Work (seventh edition) has been utilized in the measurement of all items in these bills of quantities **SUPPLEMENTARY PREAMBLES** **Previously painted plastered surfaces** Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and cracks shall be opened, filled with a suitable filler and finished smooth **Previously painted metal surfaces** Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal **Previously painted wood surfaces** Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with suitable filler and finished smooth **Trade Names** Where trade names are specified it will read "or equal approved" **Colours** Unless otherwise described paintwork on all the components shall be deemed to be in the "deep" colour group in accordance with the Natural Colour System (NCS) adopted by the South African National Standards. **ON EXISTING WORK** **On Internal Walls** Dulux or other approved alkali resistant primer and two coats "Dulux Trade 100 Lowsheen" emulsion paint for interior use				
1	On walls	m2	150		
	On External Walls Dulux or other approved alkali resistant primer and two coats "Dulux Trade 100 Lowsheen" emulsion paint for interior use				
TOTAL CARRIED FORWARD					

BROUGHT FORWARD					
2	On walls	m2	110		
	On Wood Surfaces				
	Plascon or other approved primer, one coat alkyd based universal undercoat and two coats "Velvaglo" paint				
3	On Doors	m2	118		
	On Metal Surfaces				
	Plascon or other approved alkyd based zinc phosphate primer, one coat alkyd based universal undercoat and two coats "Velvaglo", on steel				
4	Door frames	m2	50		
	On Concrete Surfaces				
	Prepare floors including all necessary degreasing, patching, grinding and sanding, and install solvent free epoxy build-up system at 4mm thickness in strict accordance to manufactures specifications (F04: Epoxy 01)				
5	On floors	m2	60		
6	75mm High skirting	m	65		
	On Fibre-Cement Board Surfaces				
	Plascon or other approved alkali resistant primer and two coats "Nu-Roof" emulsion paint for exterior use				
7	Fascias and barge boards	m2	24		
CARRIED FORWARD TO SECTION					

	SECTION SUMMARY - ABLUTIONS ALTERATIONS CARPENTRY AND JOINERY METALWORK IRONMONGERY PLUMBING AND DRAINAGE PAINTWORK				
CARRIED FORWARD TO SUMMARY					

	SECTION 3 **ELEVATED WATER TANK** **BILL NO. 1** **EARTHWORKS (PROVISIONAL)** **PREAMBLES** The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be included in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles Note that the text of the Standard System of Measuring Building Work (seventh edition) has been utilized in the measurement of all items in these bills of quantities. **SUPPLEMENTARY PREAMBLES** Carting away of excavated material Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site Imported fill: Filling and bedding to trenches etc. to be in compliance with SABS 1200 DB and LB respectively Density testing on filling: Rates for filling, etc. shall include for all density and soil type testing to prove that the specified compaction is achieved. When additional testing is done on instruction of the Principal Agent and these tests are successful, they will be paid for additionally. Nature of material to be excavated: The material to be excavated is assumed to be predominantly of a composition that will allow excavation in "earth" as specified, but including a percentage of excavation in "soft rock" and "hard rock". Excavation in earth exceeding not exceeding 2m deep				
1	Tank stand foundation	m3	40		
2	Extra over excavations in earth for tank stand foundation, etc. for excavating in soft rock	m3	12		
3	Extra over excavations in earth for tank stand foundation, etc. for excavating in hard rock	m3	6		
	Risk of collapse of excavations				
4	Sides of excavations for tank stand foundation not exceeding 1,5m deep	m2	104		
	Keeping excavations free of water				
5	Keeping excavations free of water	Item	1		
TOTAL CARRIED FORWARD					

BROUGHT FORWARD					
	Earth filling obtained from the excavations and/or stock piles on site compacted to 93% Modified AASHTO density				
6	Backfilling to tank stand foundation, etc.	m3	23		
	Cart Away				
7	Surplus material from excavations and/or from stockpiles on site to a dumping site to be located by the Contractor	m3	17		
	Compaction of surfaces				
8	Compaction of ground surface under surface beds etc., including scarifying for a depth of 300mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density	m2	27		
9	Soil insecticide				
	To bottoms and sides of trenches, etc.	m2	132		
	Tests				
	Prescribed tests to determine degree of compaction or other properties of ground or filling				
10	Modified AASHTO Density test	No	2		
CARRIED FORWARD TO SUMMARY					

	BILL NO. 2 **CONCRETE, FORMWORK AND REINFORCEMENT** **PREAMBLES** The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be included in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles Note that the text of the Standard System of Measuring Building Work (seventh edition) has been utilized in the measurement of all items in these bills of quantities **SUPPLEMENTARY PREAMBLES** Cost of tests The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests for approval. The testing shall be undertaken by an approved independent firm or institution nominated by the contractor (test cubes are measured separately) Breeze concrete Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter, to one part cement (1:12); the ash graded up to particles which will pass a 16,5mm ring from a minimum which fails to pass a 4,75mm mesh. The finer materials from the screening are to be first mixed with the cement into a mortar and the ash added afterwards and thoroughly incorporated Formwork Descriptions of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself Formwork to soffits of solid slabs etc. shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described Formwork to soffits of slabs, beams, etc. shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described Formwork to sides of bases, pile caps, ground beams, etc. will only be measured where it is prescribed by the engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in "Earthworks"				
TOTAL CARRIED FORWARD					

BROUGHT FORWARD					
	SUPPLEMENTARY PREAMBLES				
	REINFORCED CONCRETE				
	25Mpa/19mm Concrete				
1	Bases	m3	14		
2	Columns	m3	3		
	Finishing top surfaces of concrete smooth with a wood float				
3	On top of columns	m2	3		
	FORMWORK				
	Rough formwork to sides				
4	Edges of slabs exceeding 300mm high or wide	m2	6		
	REINFORCEMENT				
	High tensile steel reinforcement to structural concrete work				
5	12mm Diameter bars	kg	390		
	Test Cubes				
6	Allow for preparing a set of three test cubes each size 150x150x150mm, sending them to an approved testing laboratory for testing and paying all charges in connection therewith.	No	3		
CARRIED FORWARD TO SECTION					

	BILL NO. 3				
	PLUMBING AND DRAINAGE				
	PREAMBLES				
	The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be included in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles				
	Note that the text of the Standard System of Measuring Building Work (seventh edition) has been utilized in the measurement of all items in these bills of quantities				
	WATER SUPPLIES				
	"Jojo" or equal approved SANS PVC water tank and stand				
1	Supply and install 10 000 Litre plastic water tank inclusive of galvanized steel tank stand complete as per engineers drawing (Drawing No: G158-5281-01)	No	2		
	Galvanized medium normalized mild steel piping				
2	50mm Pipes	m	39		
	Extra over galvanized mild steel water supply pipes for Fittings				
3	50mm Fittings.	No	12		
4	50mm Elbows.	No	12		
5	50mm Union.	No	12		
6	50mm Reducing bush.	No	4		
	Cobra Watertech or other equal approved				
7	50mm Fullway gate valve	No	5		
	TESTING				
	On-site testing of installed JoJo water storage tanks to confirm water tightness and structural integrity, including full filling of each tank, 24-hour observation for leaks or deformation, inspection of fittings and connections, identification and rectification of defects, retesting where required, and submission of a signed test certificate in accordance with SANS standards and manufacturer specifications.				
8	Testing	Item	1		
CARRIED FORWARD TO SECTION					

	SECTION SUMMARY - ELEVATED WATER TANK EARTHWORKS CONCRETE, FORMWORK AND REINFORCEMENT PLUMBING AND DRAINAGE				
CARRIED FORWARD TO SUMMARY					

	SECTION 4				
	SEPTIC TANK WITH MANHOLE AND SOAKAWAY				
	BILL NO. 1				
	EARTHWORKS				
	PREAMBLES				
	The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be included in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles				
	Note that the text of the Standard System of Measuring Building Work (seventh edition) has been utilized in the measurement of all items in these bills of quantities				
	SUPPLEMENTARY PREAMBLES				
	Carting away of excavated material				
	Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site				
	Imported fill:				
	Filling and bedding to trenches etc. to be in compliance with SABS 1200 DB and LB respectively				
	Density testing on filling:				
	Rates for filling, etc. shall include for all density and soil type testing to prove that the specified compaction is achieved. When additional testing is done on instruction of the Principal Agent and these tests are successful, they will be paid for additionally.				
	Nature of material to be excavated:				
	The material to be excavated is assumed to be predominantly of a composition that will allow excavation in "earth" as specified, but including a percentage of excavation in "soft rock" and "hard rock".				
	Excavation in earth exceeding 2m and not exceeding 4m deep				
1	Septic tanks	m3	79		
2	Extra over excavations in earth for septic tanks, etc. for excavating in soft rock	m3	8		
3	Extra over excavations in earth for septic tanks, etc. for excavating in hard rock	m3	4		
	Risk of collapse of excavations				
4	Sides of excavations for septic tanks not exceeding 1,5m deep	m2	41		
5	Sides of excavations for septic tanks exceeding 1,5m deep	m2	28		
TOTAL CARRIED FORWARD					

BROUGHT FORWARD					
	Back excavation of vertical sides of excavation in earth for working space including backfilling compacted to 93% Mod AASHTO density				
6	Back excavation in earth material exceeding 1500mm and not exceeding 3000m deep for working space for formwork to sides of concrete walls with face of wall 1000mm away from excavated face	m2	68		
7	Extra over back excavation in earth for working space for excavation in soft rock	m2	7		
8	Ditto, but in hard rock	m2	4		
	Extra over all excavations for carting away				
9	Surplus material from excavations on site to a dumping site to be located by the contractor	m3	31		
	Keeping excavations free of water				
10	Keeping excavations free of water	Item	1		
	Earth filling obtained from the excavations and/or stock piles on site compacted to 93% Modified AASHTO density				
11	Backfilling to septic tanks, etc.	m3	31		
	Soil poisoning in accordance with SANS 5859				
12	To bottoms and sides of trenches etc.	m3	99		
	Compaction of surfaces				
13	Compaction of ground surface under surface beds etc., including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density	m2	32		
TOTAL CARRIED FORWARD					

BROUGHT FORWARD					
	The following in soakaway to septic tank:				
	Excavation in earth exceeding 2m and not exceeding 4m deep				
14	French drains	m3	121		
15	Extra over excavations in earth for french drains, etc. for excavating in soft rock	m3	12		
16	Extra over excavations in earth for french drains, etc. for excavating in hard rock	m3	6		
	Risk of collapse of excavations				
17	Sides of excavations for french drains not exceeding 1,5m deep	m2	347		
18	Sides of excavations for french drains exceeding 1,5m deep	m2	17		
	Extra over all excavations for carting away				
19	Surplus material from excavations on site to a dumping site to be located by the contractor	m3	97		
	Keeping excavations free of water Item				
20	Keeping excavations free of water	Item	1		
	Earth filling obtained from the excavations and /or prescribed stock piles on site compacted to 93% Mod. AASHTO density				
21	In backfilling to top of french drain	m3	24		
	Stone pitching of approximately 20-75mm diameter river stones tightly packed				
22	In french drains	m3	97		
	Bidem B3 filter fabric with 200mm laps				
23	Around stone filling in sub-soil french drains	m2	347		
	TESTS				
	Prescribed tests to determine degree of compaction or other properties of ground or filling				
24	Modified AASHTO Density test	No	8		
CARRIED FORWARD TO SECTION					

	BILL NO. 2 **CONCRETE, FORMWORK & REINFORCEMENT** **PREAMBLES** The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be included in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles Note that the text of the Standard System of Measuring Building Work (seventh edition) has been utilized in the measurement of all items in these bills of quantities **SUPPLEMENTARY PREAMBLES** Cost of tests The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests for approval. The testing shall be undertaken by an approved independent firm or institution nominated by the contractor (test cubes are measured separately) Formwork Descriptions of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself Formwork to soffits of solid slabs etc. shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described Formwork to soffits of slabs, beams, etc. shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described Formwork to sides of bases, pile caps, ground beams, etc. will only be measured where it is prescribed by the engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in "Earthworks" **REINFORCED CONCRETE** 25MPa/19mm Reinforced concrete				
1	Slabs	m3	7		
TOTAL CARRIED FORWARD					

BROUGHT FORWARD					
	FORMWORK				
	Rough formwork to sides				
2	Edges of slabs not exceeding 300mm high or wide	m	27		
	TEST CUBES				
	Allow for preparing a set of three test cubes each size 150x150x150mm, sending them to an approved testing laboratory for testing and paying all charges in connection therewith.				
3	Making and testing 150 x 150 x 150mm concrete strength test cube	No	3		
	REINFORCEMENT				
	High tensile steel reinforcement to structural concrete work				
4	12mm Diameter bars	kg	292		
CARRIED FORWARD TO SECTION					

	BILL NO. 3				
	PLUMBING AND DRAINAGE				
	PREAMBLES				
	The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be included in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles				
	Note that the text of the Standard System of Measuring Building Work (seventh edition) has been utilized in the measurement of all items in these bills of quantities				
	SUPPLEMENTARY PREAMBLES				
	French drains				
	Descriptions of french drains shall be deemed to include excavation, stone filling graded from 300mm diameter at bottom to 75mm diameter at top, geofabric filter blanket over stone, 300mm earthfilling over and disposal of surplus material on site				
	Septic tanks				
	Descriptions of proprietary type septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc. all in accordance with the manufacturer's instructions and disposal of surplus material on site				
	PVC-U pipes and fittings				
	Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings Soil, waste and vent pipes and fittings shall be solvent weld jointed or sealed with butyl rubber rings				
	Fixing of pipes				
	Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls, etc., casting in, building in or suspending not exceeding 1m below suspension level				
	The following in septic tank:				
	UPVC drain pipes (SANS 791) normal duty with socket and rubber ring type including all excavations, backfilling, Class C bedding, compaction, etc. in accordance with SANS 1200				
1	Supply and install 27500l "calcamite" or similar approved SABS certified modular septic tank, size 9660mm x 2180mm x 2305mm high including an inlet and outlet pipe on opposite ends, to be priced in accordance with engineers drawing (Drawing No: G158-3250-01)	No	1		
2	110mm Pipes fixed to wall	m	2		
3	110mm Pipes laid in and including trenches not exceeding 1m deep	m	20		
	Extra over uPVC pipes for fittings				
4	110mm Junction	No	10		
	The following in soakaway to septic tank:				
	UPVC perforated drain pipes (SANS 791) normal duty with socket and rubber ring type including all excavations, backfilling, Class C bedding, compaction, etc. in accordance with SANS 1200				
5	110mm Pipes laid in and including trenches not exceeding 1m deep	m	173		
TOTAL CARRIED FORWARD					

BROUGHT FORWARD					
	Extra over uPVC pipes for fittings				
6	110mm Stop end	No	8		
	Cast iron plain ended pipes with "Besaans du Plessis type SSN" couplings				
7	100mm Inspection pipe, 1200mm long	No	8		
	Sundries				
8	100mm Cast iron "ABC" cleaning eye inserted in top inspection pipe	No	8		
9	110mm Dished gulley not exceeding 1m deep with 150mm cast iron grating and standard concrete gulley surround	No	4		
10	100mm Cast iron cleaning eye fixed to 110mm PVC drain pipe, including 350 x 350 x 75mm thick in-situ 15 smooth on all exposed faces with exposed angles MPa/19mm mass concrete surround, the whole finished smooth on all exposed faces with exposed angles rounded, including all necessary excavations, formwork, backfilling, etc.	No	4		
CARRIED FORWARD TO SECTION					

	SECTION SUMMARY - SEPTIC TANK WITH MANHOLE AND SOAKAWAY EARTHWORKS CONCRETE, FORMWORK AND REINFORCEMENT PLUMBING AND DRAINAGE				
CARRIED FORWARD TO SUMMARY					

	SECTION 5 **ELECTRICAL INSTALLATION** **BILL NO.1** The following selected sub-contract amounts are for work to be carried out by selected sub-contractors in terms of the Principal Building Agreement: **ELECTRICAL INSTALLATION (Based on Conceptual Site Investigation)** **GENERAL ITEMS: ELECTRICAL SUBCONTRACTOR**				
1	Preliminary and General	Month	3		
2	Operational and Maintenance manuals	L/Sum	1		
3	Testing and commissioning of each complete electrical installation	No	1		
4	Issuing of Certificate of Completion for each complete electrical installation	No	3		
5	Connection of system into main street electrical distribution board, from supply authority, on the customer side after metering unit and main incomer protection, inclusive of supply and installation of acceptable protection breakers to supply power to the borehole, booster pump and filtration system where applicable. **RETICULATION SYSTEM (Supply, Install, Test and Commission)** **Electrical Kiosks**	Sum	1		
6	Borehole kiosk i) Secure IP65 Steel electrical distribution Kiosk with Plinth, containing electrical control gear and protection gear to allow the borehole pump to be safely operated, safely isolated for maintenance, adequately controlled and protected, labelled. ii) Required in terms of SANS 10142-1 Wiring Code and OHS Regulations.	No	0		
7	Booster pump kiosk a.) Secure electrical distribution point, containing electrical control gear and protection gear to allow the booster pump to be safely operated, safely isolated for maintenance, adequately controlled and protected, ii) Required in terms of SANS 10142-1 Wiring Code and OHS Regulations including VSD control. b.) Required in terms of SANS 10142-1 Wiring Code and OHS Regulations	No	1		
8	Borehole Pump (Similar is specification to Grundfos SQ-70 1.85kW, 240V, with soft start, run dry protection)	No	0		
9	Variable Speed Booster Pump (Similar to DAB E.sybox VSD pump 1.1kW, 240V)	No	1		
10	4 mm² Copper 3-core PVC FR LV cable	m	200		
11	1,5 mm² Copper 4-core Neoprene Submersible Cable	m	0		
12	4 mm² 4-core Complete termination with gland	No	4		
13	Cable warning tape **TRENCHING AND EARTH WORKS** **Trenching (450mm width by 1150mm depth MV Cables)** **Trenching (450mm width by 950mm depth LV Cables)**	m	200		
14	Hand pickable soil (soft soil)	m³	120		
TOTAL CARRIED FORWARD					

BROUGHT FORWARD					
15	Machine excavation (soft rock)	m^3	.		
16	Hard rock (Hydraulic Breakers, Blasting)	m^3			
17	Back-filling and compaction	m^3	122		
18	Sifting of local soil for bedding of the cables	m^3	90		
	SERVICE WAYS				
19	110mm Diameter PVC Sleeves	m			
20	50mm Diameter Galvanised Sleeve	m	10		
21	25mm Diameter PVC Conduit (4m lengths)	No			
22	IP68 Termination Box (Similar to Pratley Box)	No	1		
	WATER PURIFICATION INSTALLATION				
23	Allow the sum of R 200,000.00 for the supply and installation of an SABS-approved chlorine dosing system, including all necessary equipment, fittings, pipework, electrical connections, calibration, testing, and commissioning to ensure full compliance with relevant standards and proper operational performance.	Item	1	R	200 000,00
24	Profit and Attendance.	Item	1		
CARRIED FORWARD TO SUMMARY					

	FINAL SUMMARY				
	SECTION 1 - PRELIMINARIES AND GENERAL				
	SECTION 2 - ABLUTION BLOCK				
	SECTION 3 - ELEVATED WATER TANK FOUNDATION				
	SECTION 4 - SEPTIC TANK WITH MANHOLE AND SOAKAWAY				
	SECTION 5 - ELECTRICAL INSTALLATION				
	Sub-Total	ST			
	Contingencies	%	10		
	Sub-Total	ST			
	Value Added Tax (VAT)	%	15		
	TOTAL				