

Item No	Quantity	Rate	Amount
<u>SECTION 1</u>			
<u>BILL No.1</u>			
<u>PRELIMINARIES</u>			
1. The Principal Building Agreement shall be the JBCC Series Edition 4.1, March 2005 as recommended by the Joint Building Contract Committee and as amended by this Tender Enquiry. 2. The Preliminaries shall be JBCC Series 2000, May 2005 for use with the Principal Building Agreement as recommended by the Joint Building Contracts Committee and as amended by this Tender Enquiry shall be deemed to be incorporated herein. 3. Tenderers are referred to the abovementioned documents for the full intent and meaning of each clause thereof. These clauses are hereinafter referred to by clause number and heading only. 4. Where standard clauses or alternatives are not entirely applicable to this contract, such modifications, corrections or additions as are necessary, are given as far as possible under each relevant clause heading. Additional Preliminary clauses are contained in Section C hereof. 5. No claim whatsoever shall be entertained in respect of errors or omissions in pricing due to brevity of descriptions of items which are fully described when read in conjunction with the relevant clauses of the said Principal Building Agreement, Preliminaries and Preambles. 6. The Tenderers shall allow opposite each of the clauses whatever costs and charges he may consider necessary for the carrying out, complying with and due observance of the provisions, conditions and requirements set out herein. Only priced items will be considered in respect of any adjustment of this Section. Any items left unpriced will be understood to be provided free of charge and no claim for any extras arising out of the Tenderer's omission to price any item will be entertained.			
Carried to Collection			R
Section 1			
Bill No. 1			
Preliminaries			

7. Where modifications or amendments as described are made, such modifications and/or amendments shall supercede any conflicting provisions in the relevant clauses of the Standard Preliminaries or the Principal Building Agreement and the Tenderer shall make due allowance for whatever costs and charges he may consider necessary for the carrying out and observance of the provisions of the clauses as modified and/or amended.

8. Where any item is not relevant to this specific contract, such item is marked N/A.

9. If Alternative A as set out in clause B10.3 hereinafter is to be used for the adjustment of the preliminaries, each item priced is to be allocated to one or more of the three categories by insertion of "F","V","T" as the case may be against the price in the "rate" column immediately preceding the "amount" column, where "F" denotes a fixed amount (amount not to be varied), "V" denotes an amount variable in proportion to value, and "T" denotes an amount proportionate to time.

Carried to Collection

Section 1
Bill No. 1
Preliminaries

R

SECTION A: PRINCIPAL BUILDING AGREEMENT

DEFINITIONS

Definitions and interpretation (Clause 1).

1 F: V: T:

Item

OBJECTIVE AND PREPARATION

Offer, acceptance and performance (Clause 2).

2 F: V: T:

Item

Documents (Clause 3).

Clause 3.1 is deleted and substituted with: 'This tender is for a Government Contract. No Payment Guarantee will be provided.'

Clause 3.3 is deleted and substituted with:

The principal agent shall complete the schedule and arrange for formal signing of the agreement once the priced bill of quantities/lump sum document, security, insurances and waiver of lien, where acceptable, have been provided and effected'.

3 F: V: T:

Item

Design responsibility (Clause 4).

4 F: V: T:

Item

Employer's agents (Clause 5).

5 F: V: T:

Item

Site representative (Clause 6).

6 F: V: T:

Item

Compliance with regulations (Clause 7).

7 F: V: T:

Item

Carried to Collection

R

Section 1
Bill No. 1
Preliminaries

	Works risk (Clause 8)			
8	F: V: T: Indemnities (Clause 9). Clause 9.1.1 is deleted and substituted with: Claims from other parties consequent upon death of bodily injury or illness of any person or physical loss or damage to any property, other than the works, arising out or due to the execution of the works or occupation of the site by the contractor or his sub contractors'.	Item		
9	F: V: T: Works insurances (Clause 10).	Item		
10	F: V: T: Liability insurances (Clause 11).	Item		
11	F: V: T: Effecting insurances (Clause 12).	Item		
12	F: V: T: State Provisions (Clause 13).	Item		
13	F: V: T: Security (Clause 14).	Item		
14	F: V: T: <u>EXECUTION</u> Preparation for and execution of the works (Clause 15).	Item		
15	F: V: T: Access to the works (Clause 16).	Item		
16	F: V: T: Contract instructions (Clause 17).	Item		
Carried to Collection			R	
Section 1 Bill No. 1 Preliminaries				

17	F: V: T: Setting out of the works (Clause 18.3). The contractor shall notify the principal agent if any encroachments of adjoining foundations, buildings, structures, pavements, boundaries, etc., exist in order that the necessary arrangements may be made for the rectification of any such encroachments. Should incorrect information be given to the contractor in terms of 18.1 and 18.2, which causes the incorrect setting out of the works, the contractor shall not be liable for such incorrect setting out.	Item		
18	F: V: T: Assignment (Clause 19).	Item		
19	F: V: T: Nominated subcontractors (Clause 20).	Item		
20	F: V: T: Selected subcontractors (Clause 21).	Item		
21	F: V: T: Employer's Direct contractors (Clause 22).	Item		
22	F: V: T: Contractor's Domestic subcontractors (Clause 23).	Item		
23	F: V: T: <u>COMPLETION</u> Practical completion (Clause 24).	Item		
24	F: V: T: Works completion (Clause 25).	Item		
25	F: V: T: Final completion (Clause 26).	Item		
Carried to Collection			R	
Section 1 Bill No. 1 Preliminaries				

Latent defects liability period (Clause 27).

Clause 27.0 is amended by the addition of the following clauses:

"27.3 Any water leakage into the building, whether in the roof, external wall or other element of the building susceptible to water leakage shall, unless proven to be a design defect, or as a result of obvious storm damage, be classified as a latent defect in terms of clause 1.0 Definitions and Interpretations".

"27.4 The Contractor shall attend to defects during the Defects Liability Period on a progressive basis, to the satisfaction of the Principal Agent and will not be permitted to wait until the end of the Defect Liability Period or until the amount of defects accumulates in order to attend to a comprehensive list of defects"

26 F: V: T:

Item

Sectional completion (Clause 28).

27 F: V: T:

Item

Revision of date for practical completion (Clause 29).

28 F: V: T:

Item

Penalty for non-completion (Clause 30).

29 F: V: T:

Item

PAYMENT

Interim payment to the contractor (Clause 31).

The inclusion of materials and goods stored off site in the amount authorised for payment in terms of clause 31.3 shall be at the sole discretion of the principal agent and such inclusion shall only be considered upon the provision, by the contractor, of an approved guarantee issued by a registered commercial bank.

Carried to Collection

R

Section 1
Bill No. 1
Preliminaries

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DISPUTE

Dispute Settlement (Clause 40)

38 F: V: T:

Item

SUBSTITUTE PROVISIONS

State Clauses (Clause 41)

39 F: V: T:

Item

CONTRACT VARIABLES

The Schedule: Pre-Tender information (Clause 42).

40 F: V: T:

Item

CONTRACTING AND OTHER PARTIES (Clause 42.1)

Employer: The Mvula Trust

Postal Address: 67 Devereux Avenue, Vincent, East
London

Telephone: 043 726 2255

Facsimile: 043 726 5967

Physical address: 67 Devereux Avenue, Vincent, East
London

Principal Agent: The Mvula Trust

Postal Address: 67 Devereux Avenue, Vincent, East
London

Telephone: 043 726 2255

Facsimile: 043 726 5967

Physical address: 67 Devereux Avenue, Vincent, East
London

Carried to Collection

R

Section 1
Bill No. 1
Preliminaries

<u>CONTRACT DETAILS (Clause 42.2)</u> Clause 42.2.1 Works Description: Construction of new ablution facilities. Clause 42.2.2 Site Description: The site is the existing school. Clause 42.2.3 Work or Installations by Others: NIL Clause 42.2.4 This Agreement is for a State Contract :- Yes Payment will be made for materials and goods:- Yes Dispute resolution :- Mediation (in terms of clause 40) followed by litigation. Arbitration rules as recommended by the Association of Arbitrators (SA) :- N/A Clause 42.2.5 Date on which possession of the site is intended to be given on :- To be advised. Clause 42.2.6 Period for the commencement of the works after the contractor takes possession of the site :- 5 Working days. Completion in Sections are required : NO Clause 42.2.7 Intended date of practical completion and the penalty per calendar day for the works as a whole :- To be advised. Carried to Collection Section 1 Bill No. 1 Preliminaries			
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Penalty amount will be R 2000 per calendar day to a maximum of 10% of Contract Value.

Clause 42.2.8

Intended dates of practical completion and the penalties per calendar day for the works in sections :

N/A

Clause 42.2.9

The law applicable to this agreement shall be that of - Republic of South Africa.

INSURANCES (Clause 42.3)

Clause 42.3.1

Contract works insurance to be effected by Contractor for the sum of: Contract Sum plus 10%

With a deductible of : Not exceeding 5% of Insured Amount

Clause 42.3.2

Supplementary insurance is required : Yes

SASRIA insurance required to be effected by the Contractor for the amount of: Contract Sum plus 20% (with a deductible to be determined by the Insurance company issuing the policy).

Clause 42.3.3

Public liability insurance to be effected by Contractor

For the amount of: R 5 million

With a deductible of: Not exceeding 5% of Insured Amount

DOCUMENTS (Clause 42.4)

Clause 42.4.1

Waiver of the contractor's lien is required :- YES

Carried to Collection

Section 1
Bill No. 1
Preliminaries

R

	Clause 42.4.2			
	Number of construction document copies to be supplied to the Contractor free of charge :- 1			
	Clause 42.4.3			
	Bills of Quantities drawn up in accordance with :- Standard System of Measuring Building Work - Seventh Edition including all amendments			
	Clause 42.4.4			
	Number of days for submission of priced documents : 5 working days from the Letter of Appointment.			
	Clause 42.4.5			
	JBCC Engineering General Conditions are to be included in the documents :- No			
	Clause 42.4.6			
	The contract value is to be adjusted using CPAP:- NO			
	<u>SECTION B: PRELIMINARIES</u>			
	<u>DEFINITIONS AND INTERPRETATION (B1)</u>			
	Definitions and Interpretation (B1)			
41	F: V: T:	Item		
	<u>DOCUMENTS (B2)</u>			
	Checking of documents (B2.1)			
	Notwithstanding the issue of the tender drawings, it will remain the responsibility of the Tenderer to study all available drawings at the offices of the Principal Agent during normal working hours in order to acquaint himself with all the cost implications of the design, programming, phasing, etc.			
42	F: V: T:	Item		
	Provisional Bills of Quantities (B2.2) YES			
	Carried to Collection		R	
	Section 1			
	Bill No. 1			
	Preliminaries			

	Prime Cost Amounts, Budgetary Allowances, Provisional Amounts, etc., contained herein may be omitted or reduced at the Principal Agent's sole discretion and the Contractor shall not be entitled to claim for any loss by way of reduction or omission of any discount, or percentage relating to Prime Cost Amounts, Budgetary Allowances, Provisional Amounts, Provisional Quantities, etc., or loss of profit related thereto.			
43	F: V: T: Availability of construction documentation (B2.3)	Item		
44	F: V: T: Interests of Agents (B2.4)	Item		
45	F: V: T: Priced documents (B2.5)	Item		
46	F: V: T: Tender submission (B2.6) Notwithstanding anything contained in this clause, Tenders shall be valid for a period of 20 (Twenty) weeks from the closing date of tenders.	Item		
47	F: V: T: <u>THE SITE (B3)</u> Defined works area (B3.1) The area of the works to be occupied by the contractor, any restriction on the area and the limit of access or exit will be pointed out to the contractor by the principal agent on handing over of the site. Workmen employed on the site are to be restricted to the immediate area of the site and access thereto. The Tenderer shall make all necessary provision in all rates to take into account these requirements as no claims for extras arising from these matters will be subsequently entertained or admitted.	Item		
48	F: V: T:	Item		
Carried to Collection			R	
Section 1 Bill No. 1 Preliminaries				

	Geotechnical investigation (B3.2)			
	A desktop geotechnical report is available upon request.			
49	F: V: T:	Item		
	Inspection of the Site (B3.3)			
50	F: V: T:	Item		
	Existing premises occupied (B3.4)			
51	F: V: T:	Item		
	Previous work - dimensional accuracy (B3.5)			
52	F: V: T:	Item		
	Previous work - defects (B3.6)			
53	F: V: T:	Item		
	Services - known (B3.7)			
54	F: V: T:	Item		
	Services - unknown (B3.8)			
55	F: V: T:	Item		
	Protection of trees (B3.9)			
56	F: V: T:	Item		
	Articles of value (B3.10)			
57	F: V: T:	Item		
	Inspection of adjoining properties (B3.11)			
58	F: V: T:	Item		
	<u>MANAGEMENT OF CONTRACT (B4)</u>			
	Management of the Works (B4.1)			
59	F: V: T:	Item		
	Carried to Collection		R	
	Section 1 Bill No. 1 Preliminaries			

	Programme for the Works (B4.2)			
60	F: V: T:	Item		
	Progress meetings (B4.3)			
61	F: V: T:	Item		
	Technical meetings (B4.4)			
62	F: V: T:	Item		
	SAMPLES AND SHOP DRAWINGS (B5)			
	Samples of materials (B5.1)			
63	F: V: T:	Item		
	Workmanship samples (B5.2)			
64	F: V: T:	Item		
	Shop drawings (B5.3)			
65	F: V: T:	Item		
	TEMPORARY WORKS AND PLANT (B6)			
	Deposits and fees (B6.1)			
66	F: V: T:	Item		
	Enclosure of the works (B6.2) The contractor shall erect, maintain and remove at completion, hoardings, safety screens, barriers, access gates, covered gangways and the like as necessary for the enclosure of the works and elements thereof all for the protection of the public and others.			
67	F: V: T:	Item		
	Advertising (B6.3)			
68	F: V: T:	Item		
	Carried to Collection		R	
	Section 1 Bill No. 1 Preliminaries			

	Plant and equipment (B6.4)			
69	F: V: T:	Item		
	Main notice board (B6.5)			
	One notice board shall be provided by the Contractor			
70	F: V: T:	Item		
	Subcontractors notice board (B6.6) (N/A)			
71	F: V: T:	Item		
	<u>TEMPORARY SERVICES (B7)</u>			
	Location (B7.1)			
72	F: V: T:	Item		
	Water (B7.2)			
	The contractor shall provide water for the works in accordance with:			
	Alternative A (i.e. to be provided for by the Contractor).			
73	F: V: T:	Item		
	Electricity (B7.3)			
	The contractor shall provide electricity for the works in accordance with:			
	Alternative A (i.e. to be provided for by the Contractor).			
74	F: V: T:	Item		
	Telecommunication equipment (B7.4)			
	The contractor shall provide telephones on site for the works in accordance with:			
	Alternative A (i.e. to be provided for by the Contractor).			
75	F: V: T:	Item		
	Carried to Collection		R	
	Section 1 Bill No. 1 Preliminaries			

	Ablution facilities (B7.5) The contractor shall provide toilet facilities on site for the works in accordance with: Alternative A (i.e. to be provided for by the Contractor).			
76	F: V: T: <u>PRIME COST AMOUNTS (B8)</u> Responsibility for prime cost amounts (B8.1)	Item		
77	F: V: T: <u>ATTENDANCE ON N/S SUBCONTRACTORS (B9)</u> General Attendance (B9.1)	Item		
78	F: V: T: Special Attendance (B9.2)	Item		
79	F: V: T: Commissioning - fuel, water and power (B9.3)	Item		
80	F: V: T: <u>FINANCIAL ASPECTS (B10)</u> Statutory taxes, duties and levies (B10.1) Provision is made in the Final Summary of these Bills of Quantities for the inclusion of Value Added Tax (VAT).	Item		
81	F: V: T: Payment of Preliminaries (B10.2)	Item		
82	F: V: T: Adjustment of Preliminaries (B10.3)	Item		
83	F: V: T: Payment certificate cash flow (B10.4)	Item		
			R	
Carried to Collection				
Section 1 Bill No. 1 Preliminaries				

84	F: V: T: Contractor information supply (B10.5)	Item		
85	F: V: T: <u>GENERAL (B11)</u> Protection of the Works (B11.1)	Item		
86	F: V: T: Protection/isolation of existing/sectionally occupied works (B11.2)	Item		
87	F: V: T: Site security (B11.3)	Item		
88	F: V: T: Notice before covering work (B11.4)	Item		
89	F: V: T: Disturbance (B11.5)	Item		
90	F: V: T: Works cleaning and clearing (B11.6)	Item		
91	F: V: T: Vermin (B11.7)	Item		
92	F: V: T: Overhand work (B11.8)	Item		
93	F: V: T:	Item		
Carried to Collection			R	
Section 1 Bill No. 1 Preliminaries				

SECTION C: SPECIFIC PRELIMINARIES

Section C: Specific Preliminaries:

C1. 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 instructions after consultation with the manufacturer's authorised representative.

94 F: V: T:

Item

C2. Trade Names, etc.

All materials, fittings, finishings, etc., specified hereinafter under a trade name, catalogue number or reference, must be exactly as described. The Architect's approval in writing must be obtained for the use of any alternative to the specification before the submission of tenders otherwise the specified materials, fittings, finishings, etc., will be assumed to have been allowed for in the tender.

The Contractor must take delivery of, handle, store, use, apply and/or fix all proprietary branded products in strict accordance with the manufacturer's instructions after consultation with the manufacturer's authorised representative.

95 F: V: T:

Item

C3. Contractors responsibility

The Employer, the Principal Agent and the other professional consultants shall not be responsible for any act or omission on the part of the Contractor which may result in any patent or latent defects, in materials or workmanship, breach or neglect of any local regulations. The Contractor shall at all times be responsible for any such neglect, deviation or wrong act, whether the same is discovered before or after the final certificate, or any other Certificate, has been approved.

96 F: V: T:

Item

C4. Overtime

Carried to Collection

R

Section 1
Bill No. 1
Preliminaries

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 authorised in writing, prior to the execution thereof, that costs for such overtime are to be borne by the employer.

Item

The position of construction breaks and the extent of individual concrete pours are to be recorded by the contractor on the structural engineer's drawings and are to be submitted to the principal agent and the structural engineer for their records.

Item

Contract 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. The Contractor shall supply and have available at the site of the works at all times, the following site books:

Receiving and recording instructions in a suitable A4 size triplicate book kept on site. Instructions issued shall be recorded by the Architect or other Employer's Agents to whom the Architect has delegated authority to in the book.

b) Daily Record Book:

R

Section 1
Bill No. 1
Preliminaries

	The Contractor shall record in triplicate in a suitable A4 size triplicate book kept at the site, a daily record of work done, all site visits by the Principal Agent and other professional personnel and all events affecting the Works, such as progress, issue of plans, breakdown of machinery, etc. The labour, plant and material on site shall be recorded as well as work performed. Entries must be made by the Contractor and must be signed and forwarded to the Principal Agent for his counter-signature on a daily basis. Copies of these records shall be for the Architect, Quantity Surveyor and Contractor.			
99	F: V: T: C7. 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 tradesmen and labourers employed by him and all subcontractors on the works each day.	Item		
100	F: V: T: C8. Plant record At the end of each week the contractor shall provide the principal agent with a written record, in schedule form, reflecting the number, type and capacity of all plant, excluding hand tools, currently used on the works.	Item		
101	F: V: T: C9. 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.	Item		
102	F: V: T: C10. Method Statement	Item		
Carried to Collection			R	
Section 1 Bill No. 1 Preliminaries				

	The Tenderer shall produce, when 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 and proper timeous execution of the Works.			
103	F: V: T: C11. Unauthorised Persons/Workmen on Premises The Contractor shall at all times strictly exclude all unauthorised persons from the Works and the site and shall set up notice boards to that effect. No workmen or labourers (except security guards) are to be 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 Employer.	Item		
104	F: V: T: C12. Mode of Procedure Notwithstanding anything to the contrary contained herein the Principal Agent 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 Contractor's cost.	Item		
105	F: V: T:	Item		
Carried to Collection			R	
Section 1 Bill No. 1 Preliminaries				

	C13. Location of Temporary Buildings and Temporary Services The Contractor shall provide all necessary temporary works, including temporary roads, tracks, crossings, hardstanding and services, hoardings, dust screens, tunnelling, etc., required for his own and sub-contractors use during the construction and maintenance period. There is no guarantee given or implied that Site conditions will be such that the Contractor will be able to erect such temporary works, roads, hardhats, offices, stores and temporary accommodation within the site boundaries and it shall be the Contractor's responsibility to adopt whatever measures he deems necessary in this regard and to obtain all necessary permission and pay all costs in connection therewith.				
106	F: V: T: <u>C14. Office accommodation</u> The contractor shall provide, maintain and remove on practical completion air conditioned office accommodation with suitable tables and chairs for meetings to be held on the site. Such offices shall be kept clean and fit for use at all times [12.2.18]	Item			
107	F: V: T: <u>C15. Storage Facilities</u>	Item			
108	The Contractor shall provide a Container for storage of materials.	Item			
109	F: V: T: C16. Removal and Making Good of Temporary Works, etc, on Completion The Contractor shall remove (except where specifically stated otherwise) 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 therefrom.	Item			
110	F: V: T:	Item			
Carried to Collection					
Section 1 Bill No. 1 Preliminaries				R	

**BHELE PUBLIC SCHOOL
THE MVULA TRUST SAFE PROGRAMME**

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**BHELE PUBLIC SCHOOL
THE MVULA TRUST SAFE PROGRAMME**

Section 1

Bill No. 1

Preliminaries

COLLECTION

Total Brought Forward from Page No.

**Page
No**

Amount

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

Carried Forward

R

Section 1

Bill No. 1

Preliminaries

Carried to Collection

R

OCCUPATIONAL HEALTH AND SAFETY

General:

1	Preparation of Contractor's site specific Health and Safety Plan.	Item	
2	Submission of the Health and Safety File.	Item	
3	Principal Contractor's initial obligations in respect of the OHS Act and Construction Regulations.	Item	
4	Principal Contractor's time related obligations in respect of the OHS Act and Construction Regulations for the entire construction period.	Item	
5	Provision of full time Health and Safety Officer for the entire construction period.	Item	
6	Induction training of personnel.	Item	
7	Provision of first aid boxes.	Item	
8	Rental of temporary plastic ablutions approximate size 1,2 x 1,2 x 2,3m high for the sole use by the school, for 8 months inclusive of servicing on a regular basis. Ablutions are to be kept clean and in operation for the duration.	Item	
9	Transportation and establishment on site and de-establishment on completion temporary ablutions approximate size 1,2 x 1,2 x 2,3m high.	Item	
10	SANS approved weld mesh type temporary barrier fencing 1,8m high covered with a net fixed to and including 100mm diameter gum poles set securely min 300mm deep in ground at max 3m spacing including excavation, backfilling, etc	m	148
11	Extra over mesh fence for double leaf gate size 5.5 x 1,8m high.	No	1

Provision for Personal Protective Equipment and Protective Clothing:

12	Reflective vests.	Item	
13	Hard hats.	Item	

Carried to Collection

R

Section 1
Bill No. 2
Health and Safety

14	Protective foot wear.	Item		
15	Ear Plugs.	Item		
16	Dust Masks.	Item		
<u>Costs of Medical Certificates and Medical Surveillance:</u>				
17	Initial (baseline) medical examinations.	Item		
18	Exit Examinations.	Item		
<u>Noise Monitoring:</u>				
19	Establishment of noise zones.	Item		
20	Audiograms.	Item		
<u>C16. Covid-19 Compliance Measures</u>				
21	The Contractor is required to price for Covid 19 compliance and the pricing thereof shall be deemed to include all the mandatory requirements.	Item		
Carried to Collection			R	
Section 1				
Bill No. 2				
Health and Safety				

Section 1

Bill No. 2

Health and Safety

COLLECTION

Total Brought Forward from Page No.

**Page
No**

26

27

28

Amount

Carried Forward to Summary of Section No. 1

R

Section 1

Bill No. 2

Health and Safety

Section 1

SECTION SUMMARY - PRELIMINARIES

**Bill
No**

Preliminaries
Health and Safety

**Page
No**

25
29

Amount

Carried to Final Summary

Section 1

R

Item No	Quantity	Rate	Amount
<u>SECTION 2</u>			
<u>BILL No. 1</u>			
<u>DEMOLITIONS</u>			
<u>MODEL PREAMBLES</u>			
The tenderer is referred to the "General Preambles for Trades 2017" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates.			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>View site</u>			
Before submitting his tender the tenderer 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			
<u>Explosives</u>			
No explosives whatsoever may be used for demolition purposes unless otherwise stated.			
<u>General</u>			
Water supply pipes and other piping in ground 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.			
Unless otherwise described all materials are to become the property of the contractor and are to be removed from the site.			
Carried to Collection			R
Section 2			
Bill No. 1			
Demolitions			

Removal of asbestos material

All preparatory work, alterations, etc., to existing asbestos cement roof sheeting, gutters, rainwater pipes, etc., is to be carried out strictly by an approved and certified specialist company and in accordance with statutory requirements (Occupational Health and Safety Act, 1993 - Asbestos Regulations 2001) and all necessary precautions must be taken when working with and disposing of asbestos cement products and the disposal of waste water resulting from cleaning operations, etc.

The following shall apply in respect of asbestos removal

The removal of asbestos shall be carried out by a certified entity, registered in accordance with the Occupational Health and Safety Act, 1993 and the Asbestos Regulations 2001

Asbestos in all forms/building elements that is to be removed, shall be carried out in strict accordance with aforementioned regulation and a certificate issued by the entity as contemplated in the above, shall be provided per block for the removal thereof, where the term block shall in this context refer to any single, free standing building structure, regardless of size or purpose

Corresponding disposal certificates shall be issued by the facility at which the asbestos is disposed off, with said facility to, prior to the disposal of any asbestos material provide satisfactory proof that the facility is duly registered and fully compliant in terms of the act, to receive the asbestos material

Under no circumstances is the Contractor nor any of his duly authorised representatives to sell and/or give away asbestos material to any member/s of the school community, the community in general or the public at large. Should this be found to be occurring, the Contractor will be held responsible contractually and may further be prosecuted criminally

The cost for complying with the above, and all requirements of regulation as reflected above is to be priced for in terms for removal of asbestos material. No further claims in this regard will therefore be entertained

Carried to Collection

Section 2
Bill No. 1
Demolitions

R

DEMOLISHING AND REMOVING

1	Demolish pit latrine structure comprising of brick/block work with asbestos roof sheeting, approximate size 6 x 3m wide with 3,5m high top structure and 2,0m deep pit. Demolition is to only commence once the latrine has been completely emptied (elsewhere measured).	No	1
2	Cart away rubble from demolitions and dispose off site.		Item
3	Backfill existing hole with G7 fill material in max. 150mm layers and compact to 95% MOD AASHTO density.	m3	33
4	Allow for compaction tests by an approved laboratory to determine density of filling material.	No	3

SUNDRIES

Desludging

5	Clean out pit latrine by desludging including removal of all debris and waste including solid waste as per Health and Safety requirements and make good on completion including disposing of all debris and waste at an authorised municipal waste disposal facility. Contractor to price per seat	No	6
6	Issue of Certificate of Waste Disposal.		Item

Carried to Collection

R

Section 2
Bill No. 1
Demolitions

Section 2

Bill No. 1

Demolitions

COLLECTION

Total Brought Forward from Page No.

**Page
No**

Amount

31

32

33

Carried to Final Summary

R

Section 2
Bill No. 1
Demolitions

Item No		Quantity	Rate	Amount
	<u>SECTION 3</u> <u>BILL No. 1</u> <u>EARTHWORKS (PROVISIONAL)</u> <u>Quantity Split:</u> Note that the total quantity per each item is split into the various buildings and appears below each description as follows: A0 - DWG 38 - Male Ablutions A1 - DWG 39 - Female Ablutions A2 - DWG 36 - Grade R Ablutions A3 - DWG 37 - Staff Ablutions <u>MODEL PREAMBLES</u> The tenderer is referred to the "General Preambles for Trades 2017" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates. <u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary products in descriptions:</u> Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior approval by the Principal Agent. <u>Nature of material to be excavated:</u> 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". <u>Carting away of excavated material:</u> 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.			
	Carried to Collection		R	
	Section 3 Bill No. 1 Earthworks (Provisional)			

Dewatering of excavations:

The Contractor shall allow for removing seepage and other water from subterranean sources from the excavations by pumping, baling or otherwise. Accurate records of all such dewatering shall be kept to determine the total volume of water so removed and a clear distinction shall be made between water from subterranean sources and other water

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.

Imported fill:

"Filling and bedding to trenches etc. to be in compliance with SABS 1200 DB and LB respectively"

Classification of excavated material

"Hard rock" shall mean granite, quartzitic sandstone or other rock of similar hardness, the removal of which requires drilling, wedging and splitting or the use of explosives.

"Soft rock" shall mean hard material, the removal of which warrants the use of pneumatic tools and includes hard shale, ferricite, compact outcrop and material of similar hardness.

"Earth" shall mean all ground other than that classified as "hard rock" or "soft rock" and shall include made-up ground and any loose stones or pieces of concrete not exceeding 0,03m³ in volume.

Carried to Collection

Section 3
Bill No. 1
Earthworks (Provisional)

R

EXCAVATION OTHER THAN BULK

Excavation in earth not exceeding 2m deep:

1	Trenches.	m3	13
	A0 : 3 A1 : 3 A2 : 3 A3 : 3		
2	Holes.	m3	110
	A0 : 22 A1 : 26 A2 : 27 A3 : 35		
3	Reduced levels under floors.	m3	44
	A0 : 11 A1 : 11 A2 : 12 A3 : 10		

Extra over trench and hole excavations in earth for excavation in:

4	Soft rock 10%.	m3	17
	A0 : 4 A1 : 4 A2 : 4 A3 : 5		
5	InterMediate rock 5%.	m3	8
	A0 : 2 A1 : 2 A2 : 2 A3 : 2		
6	Hard rock 2%.	m3	3
	A0 : 1 A1 : 1 A2 : 1 A3 : 1		

Extra over all excavations for carting away:

7	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor.	m3	167
	A0 : 36 A1 : 40 A2 : 43 A3 : 48		

Risk of collapse of excavations:

8	Sides of trench and hole excavations not exceeding 1,5m deep.	m2	39
	A0 : 10 A1 : 9 A2 : 11 A3 : 9		
9	Ditto, but from ground level to exceeding 1,5m.	m2	134
	A0 : 30 A1 : 33 A2 : 33 A3 : 38		

Keeping excavations free of water:

10	Keeping excavations free from mud and all water including subterranean sources.	Item	
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EARTH FILLING, ETC.

Carried to Collection

Section 3
Bill No. 1
Earthworks (Provisional)

R

	<u>Earth filling obtained from the excavations and / or prescribed stock piles on site (minimum G7 tested material) compacted to 93% Mod. AASHTO density:</u>				
11	Backfilling to trenches, holes, etc. A0 : 0 A1 : 1 A2 : 1 A3 : 1	m3	2		
12	Under floors, steps, pavings, trenches, etc. A0 : 3 A1 : 3 A2 : 3 A3 : 3	m3	12		
	<u>Imported G5 filling, selected and supplied by the Contractor, including depositing in layers not exceeding 150mm thick and compacting to 98% modified AASHTO dry density to trenches, holes, etc.</u>				
13	Under floors, steps, pavings, trenches, etc. A0 : 5 A1 : 6 A2 : 7 A3 : 7	m3	25		
	<u>Imported G7 filling, selected and supplied by the Contractor, including depositing in layers not exceeding 150mm thick and compacting to 98% modified AASHTO dry density to holes, trenches etc.</u>				
14	Under floors, steps, pavings, trenches, etc. A0 : 4 A1 : 4 A2 : 5 A3 : 5	m3	18		
15	Backfilling to holes, trenches, etc. A0 : 2 A1 : 2 A2 : 2 A3 : 2	m3	9		
	<u>Coarse river sand filling supplied by the contractor:</u>				
16	Under floors etc. A0 : 1 A1 : 1 A2 : 2 A3 : 2	m3	6		
	<u>Compaction of surfaces:</u>				
17	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density. A0 : 28 A1 : 29 A2 : 33 A3 : 32	m2	122		
Carried to Collection					
Section 3 Bill No. 1 Earthworks (Provisional)					R

<u>Prescribed density tests on filling:</u>					
18	Allow for compaction tests by an approved laboratory to determine density of filling material. A0 : 8 A1 : 8 A2 : 8 A3 : 8	No	32		
<u>SOIL POISONING</u>					
<u>Approved brand of anti-termite soil poison applied by a Registered Pest Control company and guaranteed against termite infestation for ten years:</u>					
19	Under floors, etc., including forming and poisoning shallow furrows against foundation walls, etc., filling in furrows and ramming. A0 : 19 A1 : 19 A2 : 22 A3 : 18	m2	79		
20	To bottoms and sides of holes, etc. A0 : 39 A1 : 43 A2 : 44 A3 : 52	m2	177		
Carried to Collection					
Section 3 Bill No. 1 Earthworks (Provisional)				R	

Section 3

Bill No. 1

Earthworks (Provisional)

COLLECTION

Total Brought Forward from Page No.

**Page
No**

Amount

35

36

37

38

39

Carried Forward to Summary of Section No. 3

R

Section 3

Bill No. 1

Earthworks (Provisional)

Section 3
Bill No. 2
Concrete, Formwork and Reinforcement

Quantity	Rate	Amount
	R	

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 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.

Carried to Collection

Section 3
Bill No. 2
Concrete, Formwork and Reinforcement

R

**UNREINFORCED CONCRETE CAST AGAINST
EXCAVATED SURFACES**

1	Surface blinding under footings and bases. A0 : 1 A1 : 1 A2 : 1 A3 : 1	m3	4
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**REINFORCED CONCRETE CAST AGAINST
EXCAVATED SURFACES**

30MPa/20mm concrete:

2	Raft slab on waterproofing. A0 : 6 A1 : 6 A2 : 7 A3 : 6	m3	26
3	Ground base slabs. A0 : 2 A1 : 2 A2 : 2 A3 : 3	m3	9

**REINFORCED CONCRETE CAST IN
FORMWORK**

30MPa/20mm concrete:

4	Suspended Slabs. A0 : 2 A1 : 2 A2 : 2 A3 : 2	m3	8
5	Cavity walls. A0 : 3 A1 : 3 A2 : 4 A3 : 4	m3	14

TEST BLOCKS

Test blocks:

6	Making and testing of 150x150x150mm concrete strength test cubes (Provisional). A0 : 6 A1 : 6 A2 : 6 A3 : 6	No	24
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Carried to Collection

Section 3
Bill No. 2
Concrete, Formwork and Reinforcement

R

FINISHING TOP SURFACE OF CONCRETE

Finishing top surfaces of concrete smooth with a wood float:

7	Surface beds, suspended slabs, base slabs, etc.	m2	122	
	A0 : 28 A1 : 29 A2 : 33 A3 : 32			

Finishing top surfaces of concrete smooth with a steel float:

8	Surface beds, suspended slabs, etc.	m2	19	
	A0 : 4 A1 : 4 A2 : 5 A3 : 6			

Charmfers at corners

9	19 x 19mm triangular fillet at internal corners of bottom slab.	m	49	
	A0 : 11 A1 : 12 A2 : 12 A3 : 14			

ROUGH FORMWORK (DEGREE OF ACCURACY III)

Rough Formwork to Sides:

10	Edges, risers, ends and reveals not exceeding 300mm high or wide.	m	53	
	A0 : 12 A1 : 13 A2 : 13 A3 : 15			

Permanent Formwork:

11	Soffit of slab over pit.	m2	37	
	A0 : 7 A1 : 9 A2 : 9 A3 : 12			

Extra on permanent formwork for boxing or blocking in or boxing out to form:

12	835mm diameter circular opening through 370mm thick slab.	No	8	
	A0 : 2 A1 : 2 A2 : 2 A3 : 2			

13	450mm Diameter opening through 255mm thick slab.	No	4	
	A0 : 0 A1 : 0 A2 : 1 A3 : 3			

14	200mm Diameter opening through 255mm thick slab.	No	5	
	A0 : 2 A1 : 3 A2 : 0 A3 : 0			

15	150mm Diameter opening through 255mm thick slab.	No	2	
	A0 : 0 A1 : 0 A2 : 2 A3 : 0			

16	110mm Diameter opening through 255mm thick slab.	No	11	
	A0 : 2 A1 : 3 A2 : 3 A3 : 3			

Carried to Collection

Section 3
Bill No. 2
Concrete, Formwork and Reinforcement

R

**SMOOTH FORMWORK (DEGREE OF
ACCURACY I)**

Smooth Formwork to Sides:

17	Edges, risers, ends and reveals not exceeding 300mm high or wide.	m	23		
	A0 : 7 A1 : 5 A2 : 5 A3 : 6				

REINFORCEMENT (PROVISIONAL)

18	High tensile steel reinforcement bars to structural concrete work.	t	2.48		
	A0 : 0.58 A1 : 0.60 A2 : 0.65 A3 : 0.65				

Fabric reinforcement:

19	REF. 888 fabric reinforcement in concrete footings, walls, base slabs etc.	m2	304		
	A0 : 67 A1 : 73 A2 : 78 A3 : 87				

Carried to Collection

Section 3
Bill No. 2
Concrete, Formwork and Reinforcement

R

Section 3
Bill No. 2
Concrete, Formwork and Reinforcement

COLLECTION

Total Brought Forward from Page No.

**Page
No**

Amount

41

42

43

44

45

Carried Forward to Summary of Section No. 3

R

Section 3
Bill No. 2
Concrete, Formwork and Reinforcement

Item No		Quantity	Rate	Amount
	<u>SECTION 3</u> <u>BILL No. 3</u> <u>MASONRY</u> <u>Quantity Split:</u> Note that the total quantity per each item is split into the various buildings and appears below each description as follows: A0 - DWG 38 - Male Ablutions A1 - DWG 39 - Female Ablutions A2 - DWG 36 - Grade R Ablutions A3 - DWG 37 - Staff Ablutions <u>MODEL PREAMBLES</u> The tenderer is referred to the "General Preambles for Trades 2017" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates. All references to SABS shall be deemed to be the relevant SANS specification <u>SUPPLEMENTARY PREAMBLES</u> <u>BRICKWORK</u> <u>Sizes in descriptions</u> Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick <u>Hollow walls etc</u> Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole. Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats "Brixal" bitumen emulsion waterproofing coating.			
	Carried to Collection		R	
	Section 3 Bill No. 3 Masonry			

Face bricks

Bricks shall be ordered timeously to obtain uniformity in size and colour

Pointing

Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc

Samples

Samples of all masonry building units, except those of walls described as "loadbearing", shall consist of a minimum of 6 units. Samples of building units to be used in walls described as "loadbearing" shall consist of 30 units from every 30 000 units delivered to site

Trade names

Where trade names are specified it will read "or equal approved"

Carried to Collection

Section 3
Bill No. 3
Masonry

R

**BRICKWORK IN FOUNDATIONS
(PROVISIONAL)**

Brickwork consisting of solid bricks with 10.5 MPa minimum nominal compressive strength in Class I mortar with Coprox masonry waterproofing or equal approved waterproof cement additive. Add 2.5kg Coprox waterproof cement additive for every 50kg of cement used in mortar mix (Cement to be 42.5N all-purpose cement):

1	345mm thick cavity brick walls made of two leafs of 110mm wall with 135mm concrete fill (concrete elsewhere measured).	m2	110		
	A0 : 25 A1 : 27 A2 : 27 A3 : 31				

BRICKWORK AND BLOCKWORK SUNDRIES

Galvanized brickwork reinforcement

2	230mm Wide reinforcement in foundations (Provisional).	m	378		
	A0 : 85 A1 : 92 A2 : 94 A3 : 107				

FACE BRICK

"Rustgold FBS/Qunu Travertine" clay face brick or equal approved, size 222 x 106 x 73mm, bedded and jointed in Class II mortar and pointed with recessed vertical and recessed horizontal joints, suitable for exposure zones 1-2 (Cement to be 42.5N all-purpose cement):

3	Extra over for face brick in foundations (Provisional).	m2	9		
	A0 : 2 A1 : 2 A2 : 2 A3 : 2				

Carried to Collection

Section 3
Bill No. 3
Masonry

R

Section 3

Bill No. 3

Masonry

COLLECTION

Total Brought Forward from Page No.

**Page
No**

Amount

47

48

49

Carried Forward to Summary of Section No. 3

R

Section 3

Bill No. 3

Masonry

Item No		Quantity	Rate	Amount
	<u>SECTION 3</u> <u>BILL No. 4</u> <u>WATERPROOFING</u> <u>Quantity Split:</u> Note that the total quantity per each item is split into the various buildings and appears below each description as follows: A0 - DWG 38 - Male Ablutions A1 - DWG 39 - Female Ablutions A2 - DWG 36 - Grade R Ablutions A3 - DWG 37 - Staff Ablutions <u>MODEL PREAMBLES</u> The tenderer is referred to the "General Preambles for Trades 2017" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates. <u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary products in descriptions:</u> Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior approval by the Principal Agent. <u>Waterproofing</u> Complete pit sealing/waterproofing from seepage due to underground water ingress as result of high water table, perched water tables etc Contractor to provide water proofing product that will be 100% resistant to extreme hydrostatic pressure at depth of 2m, from the positive (water from inside) of substrate. Resistant to aggressive chemicals i.e oil, salt water, sewage, weak acids and aggressive sulphate soils. The product must be able to withstand backfilling without protection and must not be subject to deterioration. The product must be able to ensure that the pit structure is fully sealed (100% free from water ingress from outside and it will not penetrate the pit).			
	Carried to Collection		R	
	Section 3 Bill No. 4 Waterproofing			

The product and its methodology for application must be approved by Principal Agent before it is used.

It is a mandatory requirement for the Contractor to attend training to be provided by Supplier. Proof of attendance will be required prior to application of the approved waterproofing product.

Contractor must prepare a 1m x 1m sample in the presence of the Principal Agent or Engineer. In this case, the Contractor must give at least 48 hours notice prior to the date when the application of the waterproofing product is intended to be done.

Contractor to provide a Letter of Compliance confirming that waterproofing has been applied as per Manufacturer's instructions and data sheet.

Carried to Collection

Section 3
Bill No. 4
Waterproofing

R

DAMPPROOFING OF WALLS AND FLOORS

One layer of 250 micron 'USB GREEN' waterproof sheeting sealed at laps with 'Gunplas Pressure Sensitive Tape':

1	Under surface beds, bases, etc.	m2	122	
	A0 : 28 A1 : 29 A2 : 33 A3 : 32			

WATERPROOFING TO PIT WALLS

Waterproofing product to plastered walls, subject to approval by the Principal Agent prior to application.

2	On plastered wall surfaces including 100mm overlap at the base slab	m2	107	
	A0 : 24 A1 : 26 A2 : 27 A3 : 31			

Carried to Collection

Section 3
Bill No. 4
Waterproofing

R

Section 3

Bill No. 4

Waterproofing

COLLECTION

Total Brought Forward from Page No.

**Page
No**

Amount

51

52

53

Carried Forward to Summary of Section No. 3

R

Section 3

Bill No. 4

Waterproofing

SIGN PLATES:

All sign plates are to be with engraved blue perspex all in accordance with the standard sign plates for Schools.

- | | | | | |
|---|--|----|----|--|
| 1 | Sign plate plugged and screwed to walls with chromium plated dome headed screws. | No | 10 | |
| | A0 : 2 A1 : 2 A2 : 3 A3 : 3 | | | |

SUNDRIES

- | | | | | |
|---|---|----|---|--|
| 2 | Stainless Steel Hat and coat hook, code DHC - SS-030-A or equal approved. | No | 4 | |
| | A0 : 0 A1 : 1 A2 : 3 A3 : 0 | | | |

- | | | | | |
|---|---|----|----|--|
| 3 | 38mm Diameter black rubber door stop plugged and screwed to wall. | No | 11 | |
| | A0 : 2 A1 : 3 A2 : 3 A3 : 3 | | | |

Halcast or equal approved"

- | | | | | |
|---|--|----|----|--|
| 4 | Thiefproof toilet roll holder plugged. | No | 11 | |
| | A0 : 2 A1 : 3 A2 : 3 A3 : 3 | | | |

Grade 304 stainless steel ware:

- | | | | | |
|---|--|----|---|--|
| 5 | 32mm outside diameter x 1,6mm thick tubular wall mounted side stainless steel grab rail 1,06m girth with two 45 degree and two 90 degree formed bends and each end fitted with 80mm diameter x 5mm thick flange welded on and four times countersunk holed for and plugged and screwed to wall with stainless steel crews. | No | 2 | |
| | A0 : 0 A1 : 0 A2 : 1 A3 : 1 | | | |

- | | | | | |
|---|---|----|---|--|
| 6 | 32mm outside diameter x 1,6mm thick tubular wall mounted around cistern back stainless steel grab rail 1,23m girth with two 90 degree formed bends and each end fitted with 80mm diameter x 5mm thick flange welded on and four times countersunk holed for and plugged and screwed to wall with stainless steel crews. | No | 2 | |
| | A0 : 0 A1 : 0 A2 : 1 A3 : 1 | | | |

Satin Grey Plastics or equal approved

- | | | | | |
|---|---|----|---|--|
| 7 | "Satin plastic N-SBIN-12-SA SHE Bin size 463 x 140 x 480mm, floor standing loose. | No | 8 | |
| | A0 : 2 A1 : 2 A2 : 2 A3 : 2 | | | |

Carried to Collection

Section 3
Bill No. 5
Ironmongery

R

Section 3

Bill No. 5

Ironmongery

COLLECTION

Total Brought Forward from Page No.

**Page
No**

55

56

Amount

Carried Forward to Summary of Section No. 3

R

Section 3

Bill No. 5

Ironmongery

<u>Extra for:</u>							
4	50mm Bend.	No	33				
	A0 : 6 A1 : 9 A2 : 9 A3 : 9						
5	50mm Access bend.	No	11				
	A0 : 2 A1 : 3 A2 : 3 A3 : 3						
6	Envirosan or equal approved fly screens to top of 110 diameter vent pipe.	No	11				
	A0 : 2 A1 : 3 A2 : 3 A3 : 3						
<u>WATER SUPPLIES</u>							
<u>Polycop pipes:</u>							
Pipes shall be class 10.							
<u>Fixing of pipes</u>							
Unless specifically otherwise stated, descriptions of pipes shall be deemed to include for fixing to walls etc. casting in, building in or suspending not exceeding 1m below suspension level							
<u>Reducing fittings:</u>							
Where fittings have reducing ends or branches they are described as 'reducing'. In the case of pipes with diameters not exceeding 60mm 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. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained.							
<u>Class 10 Polycop pipes:</u>							
7	15mm Pipes.	m	58				
	A0 : 14 A1 : 14 A2 : 15 A3 : 15						
8	22mm Pipes.	m	65				
	A0 : 20 A1 : 15 A2 : 15 A3 : 15						
<u>Extra over polycop pipes for compression fittings:</u>							
9	15mm Fittings.	No	62				
	A0 : 17 A1 : 15 A2 : 15 A3 : 15						
10	22mm Fittings.	No	49				
	A0 : 10 A1 : 12 A2 : 12 A3 : 15						
Carried to Collection						R	
Section 3							
Bill No. 7							
Plumbing and Drainage (Provisional)							

LOCKABLE MANHOLE COVERS

11 600mm diameter lockable circular type M4A product or similar approved manhole SANS 1882 medium duty Dough Moulding compound 4A hinged lid and frame cast into concrete upstand.

A0 : 2 A1 : 2 A2 : 2 A3 : 2

No

8

Carried to Collection

R

Section 3
Bill No. 7
Plumbing and Drainage (Provisional)

Section 3

Bill No. 7

Plumbing and Drainage (Provisional)

COLLECTION

Total Brought Forward from Page No.

**Page
No**

59

60

61

Amount

Carried Forward to Summary of Section No. 3

R

Section 3

Bill No. 7

Plumbing and Drainage (Provisional)

Section 3

SECTION SUMMARY - BUILDING WORKS

**Bill
No**

**Page
No**

Amount

Earthworks (Provisional)

40

Concrete, Formwork and Reinforcement

46

Masonry

50

Waterproofing

54

Ironmongery

57

Plastering

58

Plumbing and Drainage (Provisional)

62

Carried to Final Summary

R

Section 3

Item No		Quantity	Rate	Amount
	<u>SECTION No. 4</u>			
	<u>BILL No. 1</u>			
	<u>EXTERNAL WORKS (PROVISIONAL)</u>			
	<u>MODEL PREAMBLES</u>			
	The tenderer is referred to the "General Preambles for Trades 2017" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates.			
	<u>THE FOLLOWING IN PLATFORMS, ETC.</u>			
	<u>Site Clearance, ETC</u>			
1	Allow for clearing the area of the site to be built upon of all grass, weeds, shrubs, trees with trunks not exceeding 200mm girth, debris, etc., including grubbing up all roots, scoffling up as required and cart away all vegetation and debris.	m2	666	
2	Stripping average 200mm thick layer of topsoil and stockpiling on site.	m2	666	
	<u>Open face excavation not exceeding 2m deep:</u>			
3	Excavate to cut in open face, not exceeding 2m deep to reduce levels and grade to fill and compact to 93% mod AASHTO density at optimum moisture content.	m3	333	
	<u>Extra over all excavations for carting away:</u>			
4	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor.	m3	333	
	<u>Earth filling from excavated material</u>			
5	Dig, load and remove filling selected from spoil heaps on site and deposit as filling in platforms including spreading and compacting to cambers and falls in layers not exceeding 150 mm thick to a minimum of 95% Modified AASHTO dry density.	m3	333	
	Carried to Collection			
	Section 4			
	Bill No. 1			
	External Works			
			R	

	<u>Surface Preparation:</u>			
6	Trim and level off surface of ground (excavated or filled under this Contract) including excavating or filling, ripping and scarifying as necessary and compacting the whole area for a depth of 300mm to a density of at least 90% Mod. AASHTO maximum density, part to falls.	m2	666	
	<u>Prescribed density tests on filling:</u>			
7	Modified AASHTO Density test.	No	3	
	<u>THE FOLLOWING IN WALKWAYS</u>			
	<u>Excavation not exceeding 2m deep</u>			
8	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	39	
	<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>			
9	Off site to a dumping site to be found by the Contractor.	m3	39	
	<u>Filling supplied by the contractor under walkways</u>			
10	G7 Base course material compacted to 98% Mod AASHTO density	m3	28	
11	Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.	m3	11	
	<u>Rip and Re - compact insitu material on site compacted to 93% Mod. AASHTO density:</u>			
12	Under floors,etc.	m2	216	
	<u>Prescribed density tests on filling:</u>			
13	In-situ dry density test.	No	3	
	Carried to Collection			R
	Section 4 Bill No. 1 External Works			

	<u>Approved brand of anti-termite soil poison applied by a Registered Pest Control Company and guaranteed against termite infestation for ten years:</u>				
14	Treat filling under paving with 'Chlordane Heptachlor Aldrin' or equal approved.	m2	216		
	<u>Concrete Paving Blocks</u>				
	<u>Paving of 50mm thick 200x100mm 25MPa Bevel Bond paver blocks grey in colour in herringbone pattern on and including 20mm thick sand bed with dry filler sand swept and vibrated into joints all laid on subgrade (elsewhere measured) conforming to SABS 1200D degree of accuracy I:</u>				
15	Paving to walkway areas, etc laid to falls.	m2	216		
16	Extra over ordinary paving for 200mm wide block-on-flat header course edging on 100mm thick mortar bed including unreinforced concrete haunching along outside edge.	m	288		
	<u>Kerbing</u>				
	<u>Precast or in situ mass concrete (25 MPa - 19 mm stone) kerbs cast in convenient lengths with exposed faces finished smooth from the mould and all salient angles rounded, jointed and pointed in 1:3 cement mortar, including excavations, formwork, etc.</u>				
17	Figure 8B (300 x 275 x 175mm) semi mountable kerb laid in lengths not exceeding 1000mm on a well rammed earth bottom or base course.	m	288		
Carried to Collection					
Section 4					R
Bill No. 1					
External Works					

<u>THE FOLLOWING IN ONE BRICK WALL (GARDEN WALL)</u>							
<u>Excavation in earth not exceeding 2m deep:</u>							
18	Trenches.	m3	20				
<u>Extra over all excavations for carting away:</u>							
19	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.	m3	6				
<u>Risk of collapse of excavations:</u>							
20	Sides of trench and hole excavations not exceeding 1,5m deep.	m2	79				
<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% MOD AASHTO density:</u>							
21	Backfilling to trenches, holes, etc.	m3	6				
<u>Earth filling (G7 material) supplied by the contractor in layers not exceeding 150mm thick and compacted to 98% Mod AASHTO density:</u>							
22	Under footings.	m3	1				
<u>Compaction of surfaces</u>							
23	Compaction of ground surface under floors, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density.	m2	42				
<u>25 Mpa/19mm Concrete</u>							
24	Strip footings.	m3	8				
<u>Test blocks:</u>							
25	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	3				
Carried to Collection						R	
Section 4							
Bill No. 1							
External Works							

	<u>Reinforcement (Provisional)</u>				
26	High tensile steel reinforcement bars to structural concrete work.	t	0.80		
	<u>BRICKWORK IN FOUNDATIONS.</u>				
	<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar (Cement to be 42.5N all-purpose cement):</u>				
27	One brick walls.	m2	23		
	<u>BRICKWORK IN SUPERSTRUCTURE</u>				
	<u>Brickwork of NFP bricks (14 MPa nominal compressive strength) in Class II mortar (Cement to be 42.5N all-purpose cement):</u>				
28	One brick walls.	m2	39		
	<u>Brickwork reinforcement:</u>				
29	230mm Wide reinforcement built in horizontally.	m	89		
30	Ditto but in foundations.	m	151		
	<u>FACE BRICK</u>				
	<u>"Rustgold FBS/Qunu Travertine" clay face brick or equal approved, size 222 x 106 x 73mm, bedded and jointed in Class II mortar and pointed with recessed vertical and recessed horizontal joints, suitable for exposure zones 1-2 (Cement to be 42.5N all-purpose cement):</u>				
31	One brickwall faced on both sides.	m2	79		
	<u>Brick-on-edge header course copings, sills, etc, of "Rustgold FBS/Qunu Travertine" or equal approved face bricks pointed with recessed joints on all exposed faces. 220mm wide sill set sloping and slightly projecting:</u>				
32	230mm wide header course to top of one brick wall bedded and jointed in cement mortar and pointed on top and both sides as described.	m	84		
Carried to Collection					R
Section 4					
Bill No. 1					
External Works					

<u>STORMWATER CHANNELS</u>					
<u>Excavation not exceeding 2m deep</u>					
33	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	10		
<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>					
34	Off site to a dumping site to be found by the Contractor.	m3	10		
<u>Filling supplied by the contractor under channels</u>					
35	G7 Base course material compacted to 98% Mod AASHTO density	m3	4		
36	Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.	m3	1		
<u>Cast in-situ Ref 395 mesh reinforced concrete (25MPa) open stormwater channels having V-shaped waterway formed in top, finished smooth on all exposed surfaces in 3:1 cement plaster trowelled smooth and with angles rounded, cast in suitable lengths not exceeding 2m, including all formwork, moulds, shallow excavation, filling and ramming, laying to falls, bedding and pointing in 3:1 cement mortar. Concrete apron to be tinted, colour to be specified by the Engineer.</u>					
37	700 x 80mm thick V' channel 150mm deep in centre laid in position in ground in 2000mm sections including all formwork, reinforcement, expansion joints, smooth finishing to top of concrete surface etc.	m	42		
38	Extra for 700mm angle	No	2		
39	Extra for forming 200mm thick 700mm wide spreader with 200mm high edges fanning out to 1 960mm width at furthest end with hard burnt bricks pitching cast in ass diffusers including working off concrete to a smooth finish and draining onto natural ground with 150 - 200mm diameter loose stones.	No	1		
Carried to Collection				R	
Section 4					
Bill No. 1					
External Works					

<u>THE FOLLOWING IN DISABLED ACCESS</u>					
<u>SCREEN WALL</u>					
<u>Excavation in earth not exceeding 2m deep:</u>					
40	Trenches.	m3	3		
<u>Extra over all excavations for carting away:</u>					
41	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.	m3	1		
<u>Risk of collapse of excavations:</u>					
42	Sides of trench and hole excavations not exceeding 1,5m deep.	m2	12		
<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% MOD AASHTO density:</u>					
43	Backfilling to trenches, holes, etc.	m3	1		
<u>Earth filling (G7 material) supplied by the contractor in layers not exceeding 150mm thick and compacted to 98% Mod AASHTO density:</u>					
44	Under footings.	m3	1		
<u>Compaction of surfaces</u>					
45	Compaction of ground surface under floors, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density.	m2	7		
<u>25 Mpa/19mm Concrete</u>					
46	Strip footings.	m3	1		
<u>Test blocks:</u>					
47	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	3		
Carried to Collection				R	
Section 4					
Bill No. 1					
External Works					

	<u>Reinforcement (Provisional)</u>				
48	High tensile steel reinforcement bars to structural concrete work.	t	0.10		
	<u>BRICKWORK IN FOUNDATIONS.</u>				
	<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar (Cement to be 42.5N all-purpose cement):</u>				
49	One brick walls.	m2	4		
	<u>BRICKWORK IN SUPERSTRUCTURE</u>				
	<u>Brickwork of NFP bricks (14 MPa nominal compressive strength) in Class II mortar (Cement to be 42.5N all-purpose cement):</u>				
50	One brick walls.	m2	26		
	<u>Brickwork reinforcement:</u>				
51	230mm Wide reinforcement built in horizontally.	m	101		
52	Ditto but in foundations.	m	16		
	<u>FACE BRICK</u>				
	<u>"Rustgold FBS/Qunu Travertine" clay face brick or equal approved, size 222 x 106 x 73mm, bedded and jointed in Class II mortar and pointed with recessed vertical and recessed horizontal joints, suitable for exposure zones 1-2 (Cement to be 42.5N all-purpose cement):</u>				
53	One brickwall faced on both sides.	m2	52		
	<u>Brick-on-edge header course copings, sills, etc, of "Rustgold FBS/Qunu Travertine" or equal approved face bricks pointed with recessed joints on all exposed faces. 220mm wide sill set sloping and slightly projecting:</u>				
54	230mm wide header course to top of one brick wall bedded and jointed in cement mortar and pointed on top and both sides as described.	m	13		
Carried to Collection					R
Section 4					
Bill No. 1					
External Works					

<u>ACCESS RAMPS</u>					
<u>Excavation not exceeding 2m deep</u>					
55	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	11		
<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>					
56	Off site to a dumping site to be found by the Contractor.	m3	11		
<u>Filling supplied by the contractor under floors, aprons, etc</u>					
57	G7 Base course material compacted to 98% Mod AASHTO density	m3	16		
58	Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.	m3	3		
<u>Coarse river sand filling supplied by the contractor:</u>					
59	Under floors etc.	m3	1		
<u>Compaction of surfaces:</u>					
60	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density.	m2	63		
<u>Prescribed density tests on filling:</u>					
61	In-situ dry density test.	No	3		
<u>Reinforced 25Mpa/19mm Concrete:</u>					
62	Ramps, Landings, etc.	m3	9		
<u>Finishing top surfaces of concrete smooth with a wood float:</u>					
63	Surface beds, slabs, etc to falls and currents.	m2	63		
Carried to Collection					
Section 4					
Bill No. 1					
External Works					

	<u>Test blocks:</u>			
64	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	3	
	<u>Expansion joints with bitumen impregnated softboard between vertical concrete or brick surfaces:</u>			
65	12mm Joints not exceeding 300mm high.	m	42	
	<u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u>			
66	10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary.	m	42	
	<u>Fabric reinforcement:</u>			
67	REF. 395 fabric reinforcement in concrete surface beds, slabs, etc.	m2	63	
	<u>Waterproofing under Surface beds</u>			
68	350 Micron USB orange polyethylene dampproof membrane in accordance with SABS 952 Type C laid on sand bed (elsewhere measured).	m2	63	
Carried to Collection				
Section 4 Bill No. 1 External Works				R

<u>THE FOLLOWING IN ACCESS DRIVEWAY, ETC.</u>					
<u>Excavation not exceeding 2m deep</u>					
69	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	15		
<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>					
70	Off site to a dumping site to be found by the Contractor.	m3	15		
<u>Filling supplied by the contractor under driveways</u>					
71	G7 Base course material compacted to 98% Mod AASHTO density	m3	15		
72	Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.	m3	5		
<u>Rip and Re - compact insitu material on site compacted to 93% Mod. AASHTO density:</u>					
73	Under floors,etc.	m2	100		
<u>Prescribed density tests on filling:</u>					
74	In-situ dry density test.	No	3		
<u>Approved brand of anti-termite soil poison applied by a Registered Pest Control Company and guaranteed against termite infestation for ten years:</u>					
75	Treat filling under paving with 'Chlordane Heptachlor Aldrin' or equal approved.	m2	100		
<u>150-175mm diameter bollards</u>					
76	2100mm long tanalith treated gum pole planted 800mm deep including excavations, cartaways, concrete base etc.	No	20		
<u>Gravel</u>					
77	Gravel laid to falls	m2	100		
Carried to Collection				R	
Section 4					
Bill No. 1					
External Works					

<u>THE FOLLOWING IN RETAINING WALLS, ETC.</u>							
	<u>Excavation in earth not exceeding 2m deep</u>						
78	Trenches.	m3	15				
	<u>Risk of collapse of excavations:</u>						
79	Sides of trench and hole excavations not exceeding 1,5m deep.	m2	32				
	<u>Keeping excavations free of water:</u>						
80	Keeping excavations free of all water other than subterranean water.			Item			
	<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>						
81	Off site to a dumping site to be found by the Contractor.	m3	14				
	<u>Filling with approved clean, hard, dry decomposed dolerite filling supplied and carted onto site by the Contractor, compacted to a density of at least 95% Mod. AASHTO maximum density:</u>						
82	Behind walls with selected backfilling supplied by the Contractor compacted to 98% Mod ASSHTO density	m3	24				
	<u>Compaction of surfaces</u>						
83	Compaction of ground surface under floors, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density.	m2	29				
	<u>15Mpa/19mm Concrete</u>						
84	Surface blinding under footings and bases.	m3	1				
	<u>30Mpa/19mm Concrete</u>						
85	Strip footings.	m3	7				
86	Cavity walls.	m3	3				
Carried to Collection							
Section 4							
Bill No. 1							
External Works							

	<u>Test blocks:</u>				
87	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	3		
	<u>Fabric reinforcement:</u>				
88	REF. 395 fabric reinforcement in concrete infill, strip footings.	m2	29		
	<u>Reinforcement (Provisional)</u>				
89	High tensile steel reinforcement bars to structural concrete work.	t	1.00		
	<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar (Cement to be 42.5N all-purpose cement):</u>				
90	330mm thick cavity brick Walls made of two leafs of 110mm wall with 110mm mesh reinforced concrete fill (concrete and reinforcement elsewhere measured).	m2	54		
	<u>Brickwork reinforcement:</u>				
91	330mm Wide reinforcement built in horizontally.	m	210		
	<u>"Rustgold FBS/Qunu Travertine" clay face brick or equal approved, size 222 x 106 x 73mm, bedded and jointed in Class II mortar and pointed with recessed vertical and recessed horizontal joints, suitable for exposure zones 1-2 (Cement to be 42.5N all-purpose cement):</u>				
92	Extra over brickwork for face brickwork externally.	m2	54		
	<u>Brick-on-edge header course copings, sills, etc, of "Rustgold FBS/Qunu Travertine" or equal Architect approved clay face brick size 222 x 106 x 73mm, pointed with recessed joints on all exposed faces:</u>				
93	320mm Wide header course to top of one brick wall bedded and jointed in cement mortar and pointed on top and both sides as described.	m	30		
	<u>Openings in Walls etc.</u>				
94	Leave or form 32mm weephole through one brick wall	No	10		
Carried to Collection					R
Section 4					
Bill No. 1					
External Works					

	<u>Membranes</u>				
95	"Geofabric filter blanket wrapped around stone with 150mm side and 300mm end laps, including stitching.	m2	83		
	<u>Earth filling 300 x 300mm section of 19mm thick stone material surrounding 110mm uPVC pipe, supplied by the contractor compacted to 98% Mod AASHTO density:</u>				
96	19mm Stone.	m3	7		
	<u>110mm Diameter perforated uPVC pipe surrounded with 300 x 300mm section of 20mm stone wrapped in A3 geotextile material.</u>				
97	110mm uPVC pipe.	m	30		
	<u>Extra for:</u>				
98	110mm Tee.	No	6		
99	110mm Y junction.	No	6		
	<u>THE FOLLOWING IN STORMWATER DRAINAGE, APRONS ETC.</u>				
	<u>STORMWATER APRONS</u>				
	<u>Excavation not exceeding 2m deep</u>				
100	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	11		
	<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>				
101	Off site to a dumping site to be found by the Contractor.	m3	11		
	<u>Filling supplied by the contractor under floors, aprons, etc</u>				
102	G7 Base course material compacted to 98% Mod AASHTO density	m3	6		
	Carried to Collection			R	
	Section 4				
	Bill No. 1				
	External Works				

103	Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.	m3	2		
	<u>Coarse river sand filling supplied by the contractor:</u>				
104	Under floors etc.	m3	1		
	<u>Compaction of surfaces:</u>				
105	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density.	m2	38		
	<u>Prescribed density tests on filling:</u>				
106	In-situ dry density test.	No	3		
	<u>Reinforced 25Mpa/19mm Concrete:</u>				
107	Surface beds cast in panels on waterproofing.	m3	6		
108	Edge thickening	m3	6		
	<u>Finishing top surfaces of concrete smooth with a wood float:</u>				
109	Surface beds, slabs, etc to falls and currents.	m2	38		
	<u>Test blocks:</u>				
110	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	3		
	<u>Expansion joints with bitumen impregnated softboard between vertical concrete or brick surfaces:</u>				
111	12mm Joints not exceeding 300mm high.	m	40		
	<u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u>				
112	10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary.	m	40		
Carried to Collection				R	
Section 4					
Bill No. 1					
External Works					

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<u>STORMWATER CHANNELS</u>					
<u>Excavation not exceeding 2m deep</u>					
115	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	14		
<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>					
116	Off site to a dumping site to be found by the Contractor.	m3	14		
<u>Filling supplied by the contractor under channels</u>					
117	G7 Base course material compacted to 98% Mod AASHTO density	m3	6		
118	Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.	m3	2		
<u>Cast in-situ Ref 395 mesh reinforced concrete (25MPa) open stormwater channels having V-shaped waterway formed in top, finished smooth on all exposed surfaces in 3:1 cement plaster trowelled smooth and with angles rounded, cast in suitable lengths not exceeding 2m, including all formwork, moulds, shallow excavation, filling and ramming, laying to falls, bedding and pointing in 3:1 cement mortar. Concrete apron to be tinted, colour to be specified by the Engineer.</u>					
119	700 x 80mm thick V' channel 150mm deep in centre laid in position in ground not exceeding 2000mm sections including all formwork, reinforcement, expansion joints, smooth finishing to top of concrete surface etc.	m	61		
120	Extra for 700mm angle	No	11		
121	Extra for forming 200mm thick 700mm wide spreader with 200mm high edges fanning out to 1 960mm width at furthest end with hard burnt bricks pitching cast in ass diffusers including working off concrete to a smooth finish and draining onto natural ground with 150 - 200mm diameter loose stones.	No	3		
Carried to Collection				R	
Section 4					
Bill No. 1					
External Works					

	<u>Sundries:</u>				
122	Create earth berm for stormwater control with in situ material 1,5m wide at base x 500mm high	m	20		
	<u>THE FOLLOWING IN STORMWATER DISH DRAIN, ETC.</u>				
	<u>Excavation not exceeding 2m deep</u>				
123	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	4		
	<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>				
124	Off site to a dumping site to be found by the Contractor.	m3	4		
	<u>Filling supplied by the contractor under floors, aprons, channels etc</u>				
125	G7 Base course material compacted to 98% Mod AASHTO density	m3	2		
126	Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.	m3	2		
	<u>Coarse river sand filling supplied by the contractor:</u>				
127	Under floors etc.	m3	0.3		
	<u>Compaction of surfaces:</u>				
128	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density.	m2	13		
	<u>Prescribed density tests on filling:</u>				
129	In-situ dry density test.	No	3		
	<u>Reinforced 25Mpa/19mm Concrete:</u>				
130	Surface beds cast in panels on waterproofing.	m3	2		
	Carried to Collection			R	
	Section 4				
	Bill No. 1				
	External Works				

	<u>Finishing top surfaces of concrete smooth with a wood float:</u>				
131	Surface beds, slabs, etc to falls and currents.	m2	13		
	<u>Test blocks:</u>				
132	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	3		
	<u>Expansion joints with bitumen impregnated softboard between vertical concrete or brick surfaces:</u>				
133	12mm Joints not exceeding 300mm high.	m	35		
	<u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u>				
134	10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary.	m	35		
	<u>Fabric reinforcement:</u>				
135	REF. 617 fabric reinforcement in concrete surface beds, slabs, etc.	m2	13		
	<u>THE FOLLOWING IN SUB-SOIL DRAINAGE, ETC.</u>				
	<u>Site Clearance, ETC</u>				
136	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc	m2	100		
	<u>Excavation in earth not exceeding 2m deep:</u>				
137	Trenches.	m3	39		
	<u>Extra over all excavations for carting away:</u>				
138	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.	m3	24		
	<u>Risk of collapse of excavations:</u>				
139	Sides of trench and hole excavations not exceeding 1,5m deep.	m2	260		
	Carried to Collection			R	
	Section 4				
	Bill No. 1				
	External Works				

	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% MOD AASHTO density:</u>				
140	Backfilling to trenches, holes, etc.	m3	15		
	<u>Earth filling 300 x 300mm section of 19mm thick stone material surrounding 110mm uPVC pipe, supplied by the contractor compacted to 98% Mod AASHTO density:</u>				
141	19mm Stone.	m3	15		
	<u>Membrane</u>				
142	""Geofabric filter blanket wrapped around stone with 150mm side and 300mm end laps, including stitching.	m2	54		
	<u>Keeping excavations free of water:</u>				
143	Keeping excavations free from mud and all water including subterranean sources.		Item		
	<u>Compaction of surfaces</u>				
144	Compaction of ground surface under floors, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density.	m2	30		
Carried to Collection					
Section 4					
Bill No. 1					
External Works					

	<u>SOIL DRAINAGE</u>				
	<u>110mm Diameter perforated uPVC pipe surrounded with 300 x 300mm section of 20mm stone wrapped in A3 geotextile material.</u>				
145	110mm uPVC pipe.	m	100		
	<u>Extra for:</u>				
146	110mm Tee.	No	20		
147	110mm Y junction.	No	20		
	<u>THE FOLLOWING IN SOAKAWAY</u>				
	<u>Site Clearance, Etc</u>				
148	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc	m2	20		
	<u>Excavation in earth not exceeding 2m deep:</u>				
149	Holes	m3	22		
	<u>Extra over all excavations for carting away</u>				
150	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor within 5km from the building site	m3	10		
	<u>Risk of collapse of excavations</u>				
151	Sides of trench and hole excavations exceeding 1,5m deep but not exceeding 3,0m deep	m2	44		
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 90% Mod AASHTO density</u>				
152	Backfilling to holes	m3	12		
	<u>Earth filling with stone material supplied by the contractor:</u>				
153	Stone (>63mm).	m3	10		
	Carried to Collection			R	
	Section 4				
	Bill No. 1				
	External Works				

	<u>Membranes</u>				
154	"BidimGeotextile or equal approved, lined on all sides including the top and bottom faces.	m2	20		
	<u>Keeping excavations free of water</u>				
155	Keeping excavations free of all water other than subterranean water		Item		
	<u>THE FOLLOWING IN CULVERTS</u>				
	<u>Class 50D concrete pipes:</u>				
156	450mm Diameter Concrete pipe laid in trenches not exceeding 1m deep including excavation, backfill, bedding, cart away and compaction.	m	10		
	<u>Manholes:</u>				
157	Manhole size 600 x 600mm not exceeding 1m deep internally to invert level formed of hard burnt half brick sides in 1:3 cement mortar on and including 100mm thick mass concrete (25 MPa at 28 days in 19 mm stone) bottom reinforced with Y10 bars at 200c/c both directions and projecting 150mm beyond sides, cast on 50mm thick concrete Blinding (15Mpa) and mass concrete (15 MPa at 28 days in 12 mm stone) benching, rendered internally in 1:3 cement plaster with with C.I step irons staggered at 300c/c with 150mm thick grade 25 reinforced precast concrete manhole cover rebated for and fitted with and including cast iron double seal cover and frame type 14B in accordance with SABS 558, bedded in 1:3 cement mortar and sealed in to allow including all necessary vitrified clay channels and fittings, excavations, formwork, holes through sides for pipes, etc	No	1		
	<u>THE FOLLOWING IN HEADWALLS</u>				
158	Excavation not exceeding 2m deep.	m3	2		
159	Risk of collapse not exceeding 1,5m deep	m2	6		
160	Keeping excavations free from water		Item		
161	Carting away surplus excavated material	m3	1		
	Carried to Collection			R	
	Section 4				
	Bill No. 1				
	External Works				

162	150mm layer of G7 material compacted to 95% MOD AASHTO under concrete slab.	m3	0.3		
163	150mm layer of G5 material compacted to 95% MOD AASHTO under concrete slab.	m3	0.3		
164	25Mpa/19mm Reinforced concrete in bottom slabs and footings.	m3	0.2		
165	Formwork to edges, risers, ends and reveals not exceeding 300mm wide or high.	m	4		
166	Weld Mesh Ref 193 in Concrete bottom slab.	m2	2		
167	One brick wall of 14 MPa NFX bricks.	m2	1		
168	230mm Wide reinforcement built in horizontally.	m	7		
	<u>FACE BRICK</u>				
	<u>"Rustgold FBS/Qunu Travertine" clay face brick or equal approved, size 222 x 106 x 73mm, bedded and jointed in Class II mortar and pointed with recessed vertical and recessed horizontal joints, suitable for exposure zones 1-2(Cement to be 42.5N all-purpose cement):</u>				
169	Extra over brickwork for face brickwork externally.	m2	1		
170	Gabion mattress comprising of 20 to 30mm stones wrapped in A3 geotextile with voids filled with 1:3 cement/sand mortar.	m2	1		
	<u>THE FOLLOWING IN RAINWATER TANKS AND STANDS</u>				
	<u>Excavation in earth not exceeding 2m deep:</u>				
171	Trenches.	m3	9		
	<u>Extra over all excavations for carting away:</u>				
172	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.	m3	6		
	<u>Risk of collapse of excavations:</u>				
173	Sides of trench and hole excavations not exceeding 1,5m deep.	m2	38		
	Carried to Collection			R	
	Section 4				
	Bill No. 1				
	External Works				

	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% MOD AASHTO density:</u>				
174	Backfilling to trenches, holes, etc.	m3	1		
	<u>Earth filling (G7 material) supplied by the contractor in layers not exceeding 150mm thick and compacted to 98% Mod AASHTO density:</u>				
175	Under footings.	m3	3		
	<u>Compaction of surfaces</u>				
176	Compaction of ground surface under floors, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density.	m2	24		
	<u>25 Mpa/19mm Concrete</u>				
177	Strip footings.	m3	4		
	<u>25 MPa/19mm Concrete:</u>				
178	Tank concrete slab.	m3	3		
	<u>Test blocks:</u>				
179	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	3		
	<u>Finishing top surfaces of concrete smooth with a steel trowel including adding additional cement while concrete is still green to attain a smooth, hard surface:</u>				
180	Surface beds, slabs, etc.	m2	20		
	<u>Rough Formwork to Sides:</u>				
181	Edges, risers, ends and reveals not exceeding 300mm high.	m	40		
	<u>Allens Meshco Square Mesh Fabric reinforcement:</u>				
182	Type 617 fabric reinforcement in concrete slabs.	m2	20		
Carried to Collection					R
Section 4					
Bill No. 1					
External Works					

	<u>BRICKWORK IN FOUNDATIONS.</u>				
	<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar (Cement to be 42.5N all-purpose cement):</u>				
183	One brick walls.	m2	11		
	<u>BRICKWORK IN SUPERSTRUCTURE</u>				
	<u>Brickwork of NFP bricks (14 MPa nominal compressive strength) in Class II mortar (Cement to be 42.5N all-purpose cement):</u>				
184	One brick walls.	m2	19		
	<u>Brickwork reinforcement:</u>				
185	230mm Wide reinforcement built in horizontally.	m	88		
186	Ditto but in foundations.	m	51		
	<u>FACE BRICK</u>				
	<u>"Rustgold FBS/Qunu Travertine" clay face brick or equal approved, size 222 x 106 x 73mm, bedded and jointed in Class II mortar and pointed with recessed vertical and recessed horizontal joints, suitable for exposure zones 1-2(Cement to be 42.5N all-purpose cement):</u>				
187	Extra over brickwork for face brickwork externally.	m2	19		
	<u>Brick-on-edge header course copings, sills, etc, of "Rustgold FBS/Qunu Travertine" or equal approved face bricks pointed with recessed joints on all exposed faces, 220mm wide sill set sloping and slightly projecting:</u>				
188	230mm wide header course to top of one brick wall bedded and jointed in cement mortar and pointed on top and both sides as described.	m	40		
	<u>Plastic water tanks etc:</u>				
189	5000 Litre roto molded or equal approved plastic tank complete with lid, 15mm brass bibtap with handle suitable for locking and 4 No. galvanised stay wires 2.5m each long connected to tank, with and including 4 No. eye bolts cast into concrete.	No	5		
	Carried to Collection			R	
	Section 4				
	Bill No. 1				
	External Works				

190	Hole top of tank for 100mm pipe.	No	5		
<u>THE FOLLOWING IN SECURITY FENCING, ETC</u>					
<u>Site clearance</u>					
191	Allow for clearing site for the width of 1 000 mm where fencing is to be erected including removing trees, shrubs etc. not exceeding 200 mm girth, grubbing up roots and roughly levelling.	m2	78		
<u>Straining wires, fencing and razor wire:</u>					
192	Four strands of 4mm Class'A' galvanised straining wires secured to fencing posts with doubled 2 mm galvanised wire inserted through hole in post and turned a minimum of four turns around straining wire and attached to straining frame at one end with not less than four turns at the other end to straining bolts (elsewhere measured).	m	78		
193	3 Strands of galvanised barbed wire tied to standards, posts and eye bolts	m	78		
194	Fencing formed of 50 x 50 x 2.0mm diameter galvanised fencing 1 800mm high and fixed to each straining wire with 8 guage binding wire at 500mm centres including Y12 pegs at 900mm c/c between posts (straining wires elsewhere measured).	m	78		
<u>Posts for 1 800mm high security fence:</u>					
195	60mm Diameter galvanised steel intermediate fencing post 1800mm long fitted with a pressed steel mushroom cap one end and 150 x 150 x 5 mm baseplate at bottom and embedded in and including 350 x 350 x 600 mm mass concrete (15 MPa) base.	No	34		
196	100mm Ditto as corner post, fitted with two 50mm diameter galvanised steel stay set raking and with top end flattened and bolted through post, with post and stay both embedded in mass concrete (15 MPa) bases as last.	No	5		
197	150mm Ditto as gate post 1 800mm long, fitted with two 50mm diameter galvanised steel stay set raking and with top end flattened and bolted through post, with post and stay both embedded in mass concrete (15 MPa) bases as last.	No	2		
Carried to Collection				R	
Section 4					
Bill No. 1					
External Works					

**BHELE PUBLIC SCHOOL
THE MVULA TRUST SAFE PROGRAMME**

198	12mm Diameter galvanised mild steel straining eye bolt with hook, threaded portion and two nuts and washers.	No	47		
199	Form 12mm diameter hole through fence post.	No	47		
	<u>Gates:</u>				
200	Security fence single gate, size 1 000 mm wide x 1 800 mm high, formed of 50 mm diameter nominal bore x 3,25 mm wall thickness hot dip galvanised mild steel pipe framing all round with mitred and welded angles and cross braces mullion and transome, scribed and welded into angles and at cross intersections, with two 50 mm diameter nominal bore x 3,25 mm wall thickness security posts each 600 mm long with one end welded to top rail of gate and closure plate to other end, the gate covered with 100 x 50 x 2,5 mm weld mesh with four straining wires as before described and with four 2,37 mm four point core diameter single "kampeon" wires with crimped droppers to security posts as before described; including three strands flat wrap razor barbed tape wire fixed as before described, leaf fitted with three 24 mm diameter x 300 mm long eyebolt hinges and stops including all holes, etc., welded or bolted to adjoining galvanised gatepost with and including 500 mm long approved chain spot welded to gate	No	1		
201	Two leafed vehicular swing gate. Size 5500mm x 1800mm high.	No	1		
	<u>PADLOCKS</u>				
202	Supply 50 mm "Viro" Padlocks and Keys (or equal approved)	No	2		
Carried to Collection				R	
Section 4					
Bill No. 1					
External Works					

Section 4

Bill No. 1

External Works

COLLECTION

Total Brought Forward from Page No.

**Page
No**

Amount

64

65

66

67

68

69

70

71

72

73

74

75

76

77

78

79

80

81

82

83

84

Carried Forward

R

Section 4

Bill No. 1

External Works

Section 4

Bill No. 1

External Works

COLLECTION

Brought Forward

**Page
No**

Amount

R

Total Brought Forward from Page No.

85

86

87

88

89

90

Carried to Final Summary

R

Section 4

Bill No. 1

External Works

The Structures to be erected will be as follows:

Boys ablution structure on concrete slab, size 3860 x 3080 x 3120mm high complete with 1No. external door including security gate, 2No. internal doors, 6No. windows, 2No. WCs, 2No. urinals, 1No. wash hand basin etc.

Girls ablution structure on concrete slab, size 4480 x 3080 x 3120mm high complete with 1No. external door including security gate, 3No. internal doors, 6No. windows, 3No. WCs, 2No. wash hand basins etc.

Staff ablution structure on concrete slab, size 4360 x 3080 x 3120mm high complete with 3No. external doors including security gate, 3No. windows, 3No. WCs, 3No. wash hand basins etc.

Grade R ablution structure on concrete slab, size 5400 x 3080 x 3120mm high complete with 1No. external doors including security gate, 7No. windows, 1No. WC, 2No. junior WCs, 2No. wash hand basins etc.

Pre-fabricated Modular Units shall comprise of:

- Internal and external walls made of 40mm thick wall panel which consist of 0.5mm rigidised pre-painted white galvanised chromadek sheeting on both sides including base rails, top rails all joined with aluminium rivets
- 600 x 600mm high casement type (W1) natural anodised aluminium window including frames and 4mm obscure glass with one top hung opener; Windows are to be secured with aluminium profile burglar proofing
- 813 x 2032mm high external doors manufactured from the same materials as the walls and fitted with hinges, five lever mortice lock, complete with striker plates, two keys chrome plated handles, etc
- 813 x 1882mm high internal door manufactured from the same materials as the walls and fitted with hinges, 3 lever mortice lock complete with striker plates, two keys chrome plated handles, etc
- Galvanised mild steel security gate 900 x 2050mm high overall size

Carried to Collection

Section 5
Bill No. 1
Provisional Sums

R

	<u>2mm thick vinyl sheeting on floors</u> <u>The roof is to be 0.5mm Chromadek IBR sheeting mono pitched roof with mono pitched galvanised ridge capping, 255mm lapping secured onto the roof including light steel frame roof at 6 degree slope</u> <u>125mm half round PVC gutters including gutter brackets at 1000mm centres with 75mm rainwater PVC fluted downpipes connected to 5000L plastic water tanks (elsewhere measured)</u> <u>Medium density plain un-grooved fascia boards</u> <u>85 x 275 x 6.0mm barge board drilled and brass screwed to purlin ends including galvanised steel H-profile jointing strips, screws, holes, etc</u> <u>Plumbing and sanitary fittings shall comprise of WCs, Urinals, Wash hand basins, 15mm and 22mm polycop water supply pipes, 50mm diameter PVC drainage pipes and associated accessories</u>			
1	Provide the sum of R795 000.00 for the supply and installation of Alternative Building Technology (ABT) toilet structures, as above described, by a nominated sub-contractor.	Item		795 000.00
2	Add: Profit on above		%	
3	Add: Attendance on above		%	
<u>ELECTRICAL INSTALLATION</u>				
4	Provide the sum of R80 000.00 for Electrical supply cables, flexible sleeves, terminations and lightning protection including COCs.	Item		80 000.00
5	Add: Profit on above		%	
6	Add: Attendance on above		%	
Carried to Collection			R	
Section 5				
Bill No. 1				
Provisional Sums				

COMMUNITY LIAISON OFFICER

- 7 Provide the sum of R58 500.00 for the employment of a
Community Liaison Officer to be employed by the Main
Contractor and be paid an allowance of R6 500.00 a
month for the duration (9 months)
- 8 Add: Profit on above
- 9 Add: Attendance on above

Item

58 500.00

%

%

Carried to Collection

R

Section 5
Bill No. 1
Provisional Sums

Section 5

Bill No. 1

Provisional Sums

COLLECTION

Total Brought Forward from Page No.

**Page
No**

Amount

93

94

95

96

Carried to Final Summary

R

Section 5
Bill No. 1
Provisional Sums

Section No	<u>FINAL SUMMARY</u>	Page No	Amount	
1	PRELIMINARIES	30		
2	DEMOLITIONS (PROVISIONAL)	34		
3	BUILDING WORKS	63		
4	EXTERNAL WORKS (PROVISIONAL)	92		
5	PROVISIONAL SUMS	97		
	SUB-TOTAL		R	
	<u>CONTINGENCIES</u>			
	Allow five per cent (5%) of the above sub-total for contingencies to be used as directed and deducted in whole or in part if not required.		R	
	SUB-TOTAL		R	
	Add Value Added Tax at the rate of 15%		R	
	Carried to Form of Offer and Acceptance		R	