

Item No	Quantity	Rate	Amount
<b><u>SECTION 1</u></b>			
<b><u>BILL No.1</u></b>			
<b><u>PRELIMINARIES</u></b>			
<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>			
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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.

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**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: .....

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	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: .....  <b><u>EXECUTION</u></b>  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		
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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: .....  <b><u>COMPLETION</u></b>  Practical completion (Clause 24).	Item		
24	F: ..... V: ..... T: .....  Works completion (Clause 25).	Item		
25	F: ..... V: ..... T: .....  Final completion (Clause 26).	Item		
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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.

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Where prices are submitted by the contractor or nominated/selected sub contractor during the progress of the works in respect of contract instructions or in regard to a claim under the terms of the contract and notwithstanding the fact that such prices may be used in an interim payment certificate, there is to be no presumption of acceptance. Should the principal agent wish to accept any such prices prior to the issue of the final certificate, it will be in writing.

Adjustment to the contract value (Clause 32).

30 F: ..... V: ..... T: .....

Item

Recovery of expense and loss (Clause 33).

31 F: ..... V: ..... T: .....

Item

Final account and final payment (Clause 34).

32 F: ..... V: ..... T: .....

Item

Payment to other parties (Clause 35).

33 F: ..... V: ..... T: .....

Item

### **CANCELLATION**

Cancellation by Employer - Contractor's default (Clause 36).

34 F: ..... V: ..... T: .....

Item

Cancellation by Employer - Loss and damage (Clause 37).

35 F: ..... V: ..... T: .....

Item

Cancellation by Contractor - Employer's default (Clause 38).

36 F: ..... V: ..... T: .....

Item

Cancellation - Cessation of the works (Clause 39).

37 F: ..... V: ..... T: .....

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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: .....

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**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

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**CONTRACT DETAILS (Clause 42.2)**

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.

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Penalty amount will be R2000 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 each and every claim.

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 5million

With a deductible of: Not exceeding 5% of each and every claim.

### **DOCUMENTS (Clause 42.4)**

Clause 42.4.1

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

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

## **SECTION B: PRELIMINARIES**

### **DEFINITIONS AND INTERPRETATION (B1)**

Definitions and Interpretation (B1)

41 F: ..... V: ..... T: .....

Item

### **DOCUMENTS (B2)**

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: .....

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	Provisional Bills of Quantities (B2.2) YES		
	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: .....	Item	
	Availability of construction documentation (B2.3)		
44	F: ..... V: ..... T: .....	Item	
	Interests of Agents (B2.4)		
45	F: ..... V: ..... T: .....	Item	
	Priced documents (B2.5)		
46	F: ..... V: ..... T: .....	Item	
	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.		
47	F: ..... V: ..... T: .....	Item	
	<b><u>THE SITE (B3)</u></b>		
	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.		
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48	F: ..... V: ..... T: .....  Geotechnical investigation (B3.2)  A desktop geotechnical report is available upon request.	Item		
49	F: ..... V: ..... T: .....  Inspection of the Site (B3.3)	Item		
50	F: ..... V: ..... T: .....  Existing premises occupied (B3.4)	Item		
51	F: ..... V: ..... T: .....  Previous work - dimensional accuracy (B3.5)	Item		
52	F: ..... V: ..... T: .....  Previous work - defects (B3.6)	Item		
53	F: ..... V: ..... T: .....  Services - known (B3.7)	Item		
54	F: ..... V: ..... T: .....  Services - unknown (B3.8)	Item		
55	F: ..... V: ..... T: .....  Protection of trees (B3.9)	Item		
56	F: ..... V: ..... T: .....  Articles of value (B3.10)	Item		
57	F: ..... V: ..... T: .....  Inspection of adjoining properties (B3.11)	Item		
58	F: ..... V: ..... T: .....  <b><u>MANAGEMENT OF CONTRACT (B4)</u></b>  Management of the Works (B4.1)	Item		
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59	F: ..... V: ..... T: ..... Programme for the Works (B4.2)	Item		
60	F: ..... V: ..... T: ..... Progress meetings (B4.3)	Item		
61	F: ..... V: ..... T: ..... Technical meetings (B4.4)	Item		
62	F: ..... V: ..... T: ..... <b><u>SAMPLES AND SHOP DRAWINGS (B5)</u></b> Samples of materials (B5.1)	Item		
63	F: ..... V: ..... T: ..... Workmanship samples (B5.2)	Item		
64	F: ..... V: ..... T: ..... Shop drawings (B5.3)	Item		
65	F: ..... V: ..... T: ..... <b><u>TEMPORARY WORKS AND PLANT (B6)</u></b> Deposits and fees (B6.1)	Item		
66	F: ..... V: ..... T: ..... 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.	Item		
67	F: ..... V: ..... T: ..... Advertising (B6.3)	Item		
68	F: ..... V: ..... T: .....	Item		
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	Plant and equipment (B6.4)		
69	F: ..... V: ..... T: .....  Main notice board (B6.5)  One notice board shall be provided by the Contractor	Item	
70	F: ..... V: ..... T: .....  Subcontractors notice board (B6.6) (N/A)	Item	
71	F: ..... V: ..... T: .....  <b><u>TEMPORARY SERVICES (B7)</u></b>  Location (B7.1)		
72	F: ..... V: ..... T: .....  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).	Item	
73	F: ..... V: ..... T: .....  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).	Item	
74	F: ..... V: ..... T: .....  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).	Item	
75	F: ..... V: ..... T: .....	Item	
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	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: .....	Item	
	<b><u>PRIME COST AMOUNTS (B8)</u></b>		
	Responsibility for prime cost amounts (B8.1)		
77	F: ..... V: ..... T: .....	Item	
	<b><u>ATTENDANCE ON N/S SUBCONTRACTORS (B9)</u></b>		
	General Attendance (B9.1)		
78	F: ..... V: ..... T: .....	Item	
	Special Attendance (B9.2)		
79	F: ..... V: ..... T: .....	Item	
	Commissioning - fuel, water and power (B9.3)		
80	F: ..... V: ..... T: .....	Item	
	<b><u>FINANCIAL ASPECTS (B10)</u></b>		
	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).		
81	F: ..... V: ..... T: .....	Item	
	Payment of Preliminaries (B10.2)		
82	F: ..... V: ..... T: .....	Item	
	Adjustment of Preliminaries (B10.3)		
83	F: ..... V: ..... T: .....	Item	
	Payment certificate cash flow (B10.4)		
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84	F: ..... V: ..... T: ..... Contractor information supply (B10.5)	Item		
85	F: ..... V: ..... T: ..... <b><u>GENERAL (B11)</u></b> 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		
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## **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: .....

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#### 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: .....

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#### 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: .....

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#### C4. Overtime

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	<p>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.</p>			
97	<p>F: ..... V: ..... T: .....</p> <p>C5. As built drawings</p> <p>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.</p> <p>Three full sets of as-built drawings shall be submitted to the Principal Agent no later than fourteen days after practical completion.</p>	Item		
98	<p>F: ..... V: ..... T: .....</p> <p>C6. Construction Instructions</p> <p>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:</p> <p>a) Construction Instruction Book:</p> <p>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.</p> <p>Only instructions issued in such book shall be recognised.</p> <p>b) Daily Record Book:</p>	Item		
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	<p>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.</p>			
99	<p>F: ..... V: ..... T: .....</p> <p>C7. Labour record</p> <p>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.</p>	Item		
100	<p>F: ..... V: ..... T: .....</p> <p>C8. Plant record</p> <p>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.</p>	Item		
101	<p>F: ..... V: ..... T: .....</p> <p>C9. Encroachment</p> <p>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.</p>	Item		
102	<p>F: ..... V: ..... T: .....</p> <p>C10. Method Statement</p>	Item		
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	<p>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.</p>			
103	<p>F: ..... V: ..... T: .....</p> <p>C11. Unauthorised Persons/Workmen on Premises</p> <p>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.</p> <p>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.</p>	Item		
104	<p>F: ..... V: ..... T: .....</p> <p>C12. Mode of Procedure</p> <p>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.</p> <p>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.</p>	Item		
105	<p>F: ..... V: ..... T: .....</p>	Item		
	<p style="text-align: right;"><b>Carried to Collection</b></p> <p>Section 1 Bill No. 1 Preliminaries</p>		R	

	<p>C13. Location of Temporary Buildings and Temporary Services</p> <p>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.</p> <p>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.</p>				
106	<p>F: ..... V: ..... T: .....</p> <p><b><u>C14. Office accommodation</u></b></p> <p>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]</p>	Item			
107	<p>F: ..... V: ..... T: .....</p> <p><b><u>C15. Storage Facilities</u></b></p>	Item			
108	<p>The Contractor shall provide a Container for storage of materials.</p>	Item			
109	<p>F: ..... V: ..... T: .....</p> <p>C16. Removal and Making Good of Temporary Works, etc, on Completion</p> <p>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.</p>	Item			
110	<p>F: ..... V: ..... T: .....</p>	Item			
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**OVISTON PRIMARY SCHOOL**  
**THE MVULA TRUST SAFE PROGRAMME**

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<b><u>BILL No. 2</u></b>			
<b><u>HEALTH AND SAFETY</u></b>			
<b><u>MODEL PREAMBLES</u></b>			
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.			
<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
Supplementary preambles and/or specifications are incorporated in these bills of quantities to satisfy the requirements of this project. Such supplementary preambles and/or specifications shall take precedence over the provisions of the General Preambles.			
The contractor's prices for all items throughout these bills of quantities shall take account of and include where applicable for all of the obligations, requirements and specifications given in the General Preambles and in any supplementary preambles and/or specifications.			
Prior to pricing the principal contractor must familiarize him/herself with the Occupational Health and Safety Act No. 85 Of 1993, Construction Regulations 2014, other relevant Regulations and Standards as well as project specific Health & Safety specifications.			
The items in this Bill do not contain quantities hence the Contractor must insert his own quantities based on his individual requirements to comply with the Health and Safety obligations and demands of the Occupational Health and Safety Act No. 85 of 1993, Construction Regulations 2014, other relevant Regulations and Standards as well as project specific Health & Safety Specifications.			
The costs included herein must incorporate Community Liaison Officer (CLO).			
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Health and Safety			

<b><u>OCCUPATIONAL HEALTH AND SAFETY</u></b>			
<b><u>General:</u></b>			
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.	No	1
7	Provision of first aid boxes.	No	1
8	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	150
9	Extra over mesh fence for pedestrian gate size 1.8 x 1,8m high.	No	1
<b><u>Provision for Personal Protective Equipment and Protective Clothing:</u></b>			
10	Reflective vests.	No	20
11	Hard hats.	No	20
12	Protective foot wear.	No	20
13	Ear Plugs.	No	10
14	Dust Masks.	No	15
<b><u>Costs of Medical Certificates and Medical Surveillance:</u></b>			
15	Initial (baseline) medical examinations.	No	20
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**OVISTON PRIMARY SCHOOL**  
**THE MVULA TRUST SAFE PROGRAMME**

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**SECTION SUMMARY - PRELIMINARIES**

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<b><u>DEMOLITIONS</u></b>			
<b><u>MODEL PREAMBLES</u></b>			
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.			
<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
<b><u>View site</u></b>			
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			
<b><u>Explosives</u></b>			
No explosives whatsoever may be used for demolition purposes unless otherwise stated.			
<b><u>General</u></b>			
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.			
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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

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**DEMOLISHING AND REMOVING**

1 Taking out and remove 1 800mm high diamond mesh fence

m

12

2 Take out and remove pedestrian gate size 1 800 x 2 000mm high

No

1

**Relocating of Grade R play area**

3 Allow a sum of R10 000.00 for relocating grade R play area

SUM

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All alteration work is to be performed in a safe, practical and workmanlike manner and at all times a competent general foreman is to be in charge and shall direct operations. The contractor shall acquaint himself and comply with all requirements and regulations of the Municipal/Local authority.

Special care is to be exercised not to interfere unnecessarily with any electrical light, power, telephone or bell lines and fittings that may be encountered. Notice is to be given when disconnections or removal of wires, etc., are necessary and the contractor is to afford every facility to the electricians, etc. carrying out this work.

"Making good" existing work where disturbed or damaged shall mean the provision of the necessary new material to match the existing and the necessary workmanship so that complete and perfect restoration is achieved to the satisfaction of the architect.

"Making good" existing work where abutting walls, etc., are removed shall mean the provision of the necessary new material and workmanship in filling the gaps to match surrounding finishes so that a complete and perfect surface, is obtained to the satisfaction of the architect.

The rates for "taking out", "taking down", of windows, doors, etc., from brickwork to remain are to include for making good all work disturbed to match surrounding finishes.

The whole of the old materials arising from the alteration shall become the property of the Employer and shall be handed over to the Employer.

Materials and articles described as "set aside for re-use" are to be carefully removed, stored and protected from damage before being re-fixed in new positions. These materials are measured as at present fixed in the existing buildings and the contractor must allow in his prices for replacing with new any of these materials that may be damaged when removing, etc., and for making up with new any loss in quantity arising from the removal or re-fixing.

The remainder of the old materials such as concrete, etc., together with all rubbish, rubble and debris are to be carted away or removed, i.e. they are to be immediately removed from the site which is to be left clean and unencumbered.

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The contractor will not be permitted to use skips paid for by other direct contractors for the removal of old materials, but shall be required to provide his own.

Prices for the removal of doors and frames shall included for removal of fanlights, ironmongery, architraves and other associated trim.

Prices for the removal of sanitary fittings shall include for the removal of copper service pipes, traps, brackets and cisterns.

### **REMOVAL OF EXISTING WORK**

#### **Breaking up and removing unreinforced concrete**

1	85mm Thick concrete paving	m2	39	
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#### **Breaking down and removing brickwork etc**

2	Half brick wall	m2	36	
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#### **Taking out and removing doors, windows, etc from brickwork to be demolished**

3	Timber single door not exceeding 2,5m2	No	16	
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#### **Taking out and removing doors, windows, etc including thresholds, sills, etc (building up openings elsewhere)**

4	Gate door size 813 x 2 032mm high from brick walls	No	4	
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#### **Taking out/off and removing glass and mirrors**

5	Glass from steel windows, including cleaning out rebates and preparing for new glass	m2	3	
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#### **Taking down and removing roofs, floors, panelling, ceilings, partitions, etc**

6	Roof sheeting from timber trusses	m2	70	
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7	Gypsum plasterboard ceilings, including timber brandering, cornices, etc	m2	63	
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	<b><u>Taking out and removing sundry joinery work, fittings, etc</u></b>			
8	Fascia board	m	42	
	<b><u>Hacking up/off and removing granolithic, screeds, plaster, etc from concrete or brickwork and preparing surfaces for new screed, plaster, tile finishes, etc</u></b>			
9	30mm cement screed from floors	m2	63	
10	Internal plaster from walls	m2	30	
	<b><u>Hacking up/off and removing ceramic tile floor and wall finishes including removing mortar bed or backing and preparing concrete or brick surfaces for new screed, plaster or tile finishes</u></b>			
11	Wall tiling from plastered walls	m2	2	
	<b><u>Taking out and removing piping, sanitary fittings, etc including disconnecting piping from fittings and making good floor and wall finishes (making good tiling and paintwork elsewhere)</u></b>			
12	Gutters and down pipes including brackets	m	77	
13	Urinal from walls	No	5	
14	Wash hand basin from walls	No	7	
15	Vitreous china WC pan with cistern	No	10	
	<b><u>REPAIR AND SERVICING OF EXISTING</u></b>			
	<b><u>Repair and servicing of existing doors</u></b>			
16	Inspect and service steel door frames 813 x 2032 mm high including replacing striking plates and leave in good working order.	No	16	
	<b>Carried to Collection</b>			
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	<b><u>Servicing of existing steel windows including thoroughly cleaning down of all dirt, scale and general contamination from all surfaces, pulleys, handles, rods, openners, catches, etc, and servicing and lubricating all moving parts, carefully removing all paint, from and polishing all brassware and replacing of damaged or missing screws, nuts, etc (replacement of ironmongery ,removal of glass, etc else where measured)</u></b>				
17	Window size 500 x 600mm high	No	16		
	<b><u>Repair and servicing of existing sanitary fittings</u></b>				
	<u>Repair leaking water supply pipe</u>				
18	Investigate as necessary to identify location and extent of leaks in plastered walls finish	No	5		
19	Hack into existing plastered wall finish to allow for repair including temporarily blanking off branch and reinstating ,all to match existing (pipe repair elsewhere measured)	No	5		
20	Cut into existing copper pipe not exceeding 30mm diameter to remove damaged portion and reinstate,including testing (cutting into plaster and making good elsewhere measured)	No	5		
	<u>Repair to waste and vent pipes</u>				
21	Investigate as necessary to identify location and extent of leaks in plastered walls finish	No	6		
22	Hack into existing plastered wall finish to allow for repair including temporarily blanking off branch and reinstating ,all to match existing (pipe repair elsewhere measured)	No	4		
23	Cut into existing copper pipe not exceeding 30mm diameter to remove damaged portion and reinstate,including testing (cutting into plaster and making good elsewhere measured)	No	4		
	<b><u>CUTTING THROUGH FLOORS AND CEILINGS</u></b>				
	<b><u>Sundries</u></b>				
24	Cutting toothings and bonding new brickwork to existing	m	3		
	<b><u>FACE BRICKWORK</u></b>				
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Alterations

Item No	Quantity	Rate	Amount
<p><b><u>SECTION 3</u></b></p> <p><b><u>BILL No. 2</u></b></p> <p><b><u>EARTHWORKS (PROVISIONAL)</u></b></p> <p><b><u>Quantity Split:</u></b></p> <p>Note that the total quantity per each item is split into the various buildings and appears below each description as follows:</p> <p>A0 - Male &amp; Female Ablutions Renovations</p> <p><b><u>MODEL PREAMBLES</u></b></p> <p>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.</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><u>Proprietary products in descriptions:</u></p> <p>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.</p> <p><u>Nature of material to be excavated:</u></p> <p>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".</p> <p><u>Carting away of excavated material:</u></p> <p>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.</p>			
<p><b>Carried to Collection</b></p>			
<p>Section 3 Bill No. 2 Earthworks (Provisional)</p>			

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 0,03m<sup>3</sup> in volume.

**EARTH FILLING, ETC.**

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Earthworks (Provisional)

	<b><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></b>				
1	Under floors, etc.	m3	3		
	<b><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></b>				
2	Under floors, etc.	m3	2		
	<b><u>Coarse river sand filling supplied by the contractor:</u></b>				
3	Under floors etc.	m3	1		
	<b><u>Compaction of surfaces:</u></b>				
4	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.	m2	8		
	<b><u>Prescribed density tests on filling:</u></b>				
5	Allow for compaction tests by an approved laboratory to determine density of filling material.	No	2		
	<b><u>SOIL POISONING</u></b>				
	<b><u>Approved brand of anti-termite soil poison applied by a Registered Pest Control company and guaranteed against termite infestation for ten years:</u></b>				
6	Under floors, etc., including forming and poisoning shallow furrows against foundation walls, etc., filling in furrows and ramming.	m2	8		
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Earthworks (Provisional)



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.

**UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES**

**25MPa/20mm concrete:**

1	Concrete cast in panels.	m3	4	
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**REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES**

**30MPa/20mm concrete:**

2	Concrete raft slab on waterproofing.	m3	6	
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**TEST BLOCKS**

**Test blocks:**

3	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	2	
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Concrete, Formwork and Reinforcement

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**FINISHING TOP SURFACE OF CONCRETE**

**Finishing top surfaces of concrete smooth with a wood float:**

4	Surface beds, suspended slabs, ground slabs, etc.	m2	86	
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**Fabric reinforcement:**

5	REF. 617 fabric reinforcement in concrete surface beds, raft slabs etc.	m2	44	
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Concrete, Formwork and Reinforcement

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Concrete, Formwork and Reinforcement



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.

**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"

**BRICKWORK IN WALLS**

**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	Half brickwalls	m2	36	
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**BRICKWORK AND BLOCKWORK SUNDRIES**

**Galvanized brickwork reinforcement**

2	115mm Wide reinforcement built in horizontally	m	163	
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3	230mm Wide reinforcement built in horizontally.	m	33	
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Masonry

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**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):**

- 4 One brickwall pointed on both sides.

m2

11

**Face brick copings, lintels, sills, etc, of "Rustgold FBS/Qunu Travertine" or equal approved face bricks pointed with recessed joints on all exposed faces:**

- 5 220mm Wide header course to top of one brick wall bedded and jointed in cement mortar and pointed on both sides.

m

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Masonry

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Masonry

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Masonry



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.

**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	8	
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**One layer of 350 micron embossed dampcourse waterproof sheeting below walls, sills, etc:**

2	Below walls, sills, etc.	m2	1	
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Waterproofing



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Waterproofing

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Waterproofing

# BILL No. 6

## ROOF COVERINGS

### Quantity Split:

Note that the total quantity per each item is split into the various buildings and appears below each description as follows:

### A0 - Male & Female Ablutions Renovations

## MODEL PREAMBLES

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.

## SUPPLEMENTARY PREAMBLES

## Flashings

Flashings shall be approved by roof sheeting manufacturer and fixed to the sheeting with S10 clips to obviate any direct fixing perforations. Prior to flashings being fixed, all troughs at the apex shall be stop-ended to the full depth of the sheet in order to prevent any penetration of wind driven water. The trough shall be lipped at the eaves end to form a drip. Flashing flanges shall be notched to the sheet profile where necessary. All these operations must be performed with special tools available from the manufacturer. Care shall be taken to ensure that no sheeting or flashing will be cut with abrasive disc on roof surface in order to prevent steel splatter from penetrating colour coated areas. The flashings shall be supplied with a paint finish consisting of a full top coat silicon modified polyester Colour : White to one side

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Roof Coverings Etc.

R

**Quality Assurance**

The manufacturer shall be assessed and certified as complying with ISO 9001: 2008 Quality Management System

**Guarantee**

Z200 Galvanized Metal or equal approved sheeting shall be laid in strict accordance with manufacturer's specifications by an approved contractor. The employer shall be provided with a ten year written guarantee on materials by the manufacturer.

**Safety**

The contractor shall exercise special care when handling long length sheeting, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting and incomplete sections must be adequately secured against possible movement by wind and gravity

**Handling and Storage**

The contractor shall ensure that all materials used on site for cladding, etc are transported, handled and stored in accordance with the manufacturer's recommendations. Material damaged shall be rejected and replaced with undamaged material at the contractor's expense. Repair of damaged material will not generally be permitted. Rates are to include for preventing damage and protecting sheets through all stages of construction

**Carried to Collection**

Section 3  
Bill No. 6  
Roof Coverings Etc.

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**Inspection Prior to Installation or Erection**

Before commencing with installation, the contractor shall verify that the following items have been checked and accepted:

- a. The entire structure or the portion thereof to be sheeted has been correctly aligned, levelled and grouted
- b. Purlins and sheeting rails are at the correct spacing and are within the specified tolerances
- c. The corners of the roof are square and the wall framework is perpendicular or as specified
- d. No protrusions such as bolt heads, splice plates, cleats, etc. appear on the face of the framework
- e. All members to which roofing and cladding are to be fixed in aesthetically sensitive areas are true and square
- f. Paint and any other materials that may be incompatible with the sheeting, have been painted over or so dealt with that direct contact with the sheeting is avoided
- g. The contact faces between the purlins or the girts and the cladding are in the same plane. Should the alignment be inadequate, the contractor shall request instructions from the engineer before proceeding with the fixing of the cladding

**Protrusion through Sheeted Surfaces**

Protrusions such as pipes, ducts and the like, shall be adequately flashed where they pass through the sheeting surface. Where ribs have to be cut away to permit penetration, additional framing is to be installed as required to support the sheeting. Depending on the position of the penetration through the roof, special attention shall be given to back flashing the sheeting to the ridge or point of water entry. In all cases, all cutting and flashings shall be so arranged that adequate provision is made for the drainage of all troughs and corrugation

**Cleaning of Roofs, etc**

All debris, etc arising from the fixing of the cladding shall be removed from the sheetin as the fixing progresses. In addition, off-cuts of insulation, surplus fastners and sealants, mandrels from pop rivets, off-cuts of flashings and sheeting, surplus flashing, food packaging, cartons, bottles, cans, etc shall not be left on the roof or in the gutters. Care shall be taken to ensure that no such material enters, blocks or partially impedes the flow of water into the outlets, downpipes, etc

**Carried to Collection**

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Roof Coverings Etc.

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**ROOF COVERINGS**

**PROFILED METAL SHEETING AND ACCESSORIES**

**0.58mm Thick Z200 "IBR Profile" galvanised metal roof sheeting, in single sheet lengths, with "Chromadek" finish to external face and standard backing coat to internal face :**

1	Roof sheeting laid to a mono-pitch.	m2	70
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**0.58mm Flashings pre-painted to match roof sheeting and fixed in strict accordance with manufacturer's instructions:**

2	Mono pitched ridge capping with 225mm lapping secured onto the roof.	m	17
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**ROOF AND WALL INSULATION**

**"Sisalation Grade FR430" or equal approved heavy industrial insulation**

3	Insulation laid taut over roof trusses (at approximately 1 100mm centres) and fixed concurrent with SA Pine purlins at 900mm centres, etc including galvanised steel straining wires	m2	70
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Section 3

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Roof Coverings Etc.

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Bill No. 6

Roof Coverings Etc.



**"Everite Nutec" or equal approved fibre cement**

4	12 x 225mm Fascia board drilled and brass screwed to rafter feet including galvanised steel H-profile jointing strips, etc.	m	32		
5	85 x 275 x 6mm Barge board drilled and brass screwed to purlin ends including galvanised steel H-profile jointing strips, screws, holes, etc.	m	10		

**DOORS ETC**

**SANS Approved meranti:**

6	44mm Framed, ledged, and battened single door with flush ply panel internally size 813 x 2032mm high comprising 44 x 110mm top rail and stiles, 44 x 220mm bottom rail, 44 x 150mm lock rail and 22 x 70mm vertical "v" jointed boards (D2).	No	4		
7	44mm Framed, ledged, and battened single door with flush ply panel internally size 950 x 2032mm high comprising 44 x 110mm top rail and stiles, 44 x 220mm bottom rail, 44 x 150mm lock rail and 22 x 70mm vertical "v" jointed boards (D2).	No	2		
8	44mm Framed, ledged, and battened purpose made single door with flush ply panel internally size 813 x 1832mm high comprising 44 x 110mm stiles, 44 x 220mm bottom rail, 44 x 150mm lock rail and 22 x 70mm vertical "v" jointed boards (D4).	No	10		

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Section 3  
Bill No. 7  
Carpentry and Joinery



Section 3

Bill No. 7

Carpentry and Joinery

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Section 3

Bill No. 7

Carpentry and Joinery

Item No	Quantity	Rate	Amount
<b><u>SECTION 3</u></b>			
<b><u>BILL NO. 8</u></b>			
<b><u>CEILINGS, PARTITIONS AND ACCESS FLOORING</u></b>			
<b><u>Quantity Split:</u></b>			
Note that the total quantity per each item is split into the various buildings and appears below each description as follows:			
A0 - Male & Female Ablutions Renovations			
<b><u>MODEL PREAMBLES</u></b>			
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.			
<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
<b><u>Descriptions</u></b>			
Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete			
Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as "bolted", the bolts are measured elsewhere			
<b><u>INSULATION, ETC</u></b>			
Carried to Collection			R
Section 3 Bill No. 8 Ceilings			

<b><u>Fibreglass insulation</u></b>		
1	100mm Non-combustible lightweight fibreglass insulation blanket closely fitted between tie beams and laid loose on top of bracing, etc, all as per manufacturers instructions	m2 63
<b><u>NAILED UP CEILINGS</u></b>		
<b><u>6.4mm Gypsum Plasterboard ceilings finished smooth with gypsum skim plaster</u></b>		
2	Horizontal ceiling formed of 6.4mm thick x 1200mm wide boards with and including H-type pressed steel jointing strips over joints, 38 x 50mm sawn softwood bracing at 400mm centres in one direction and around edges where required for fixing cornices, bracing spiked to roof timber, and finished with gypsum skim plaster trowelled to a smooth polished surface to the thickness recommended by the manufacturer	m2 63
3	Extra over ceiling for hinged pressed metal trap door size 600 x 600mm including all necessary ironmongery	No 2
<b><u>Cornices</u></b>		
4	76mm Gypsum coved trim cornice	m 109
<b>Carried to Collection</b>		
Section 3 Bill No. 8 Ceilings		R

Section 3

Bill No. 8

Ceilings

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Section 3

Bill No. 8

Ceilings



**LOCKS**

1	"UNION 2277-78SS" or equal approved three lever sash mortice lockset.	No	16
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2	"UNION w/c indicator bolt satin chrome - Code CZ80941SC	No	12
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**HANDLES**

3	"Dorma DPH301B" or equal approved Stainless Steel Straight Tubular Pull handle flange fixing.	No	16
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**Sundries:**

4	Stainless Steel Hat and coat hook, code DHC - SS-030-A or equal approved.	No	16
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5	38mm Diameter black rubber door stop plugged and screwed to wall.	No	16
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**SIGN PLATES:**

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

6	Sign plate plugged and screwed to walls with chromium plated dome headed screws.	No	4
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**SUNDRIES**

**Halcast or equal approved"**

7	Thiefproof toilet roll holder plugged.	No	12
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**Grade 304 stainless steel ware:**

8	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	3
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**Carried to Collection**

Section 3  
Bill No. 9  
Ironmongery

R

9	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	3		
Section 3 Bill No. 9 Ironmongery		Carried to Collection		R	

Section 3

Bill No. 9

Ironmongery

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Bill No. 9

Ironmongery





Item No		Quantity	Rate	Amount
<b><u>SECTION 3</u></b>				
<b><u>BILL No. 11</u></b>				
<b><u>PLASTERING</u></b>				
<b><u>Quantity Split:</u></b>				
Note that the total quantity per each item is split into the various buildings and appears below each description as follows:				
A0 - Male & Female Ablutions Renovations				
<b><u>MODEL PREAMBLES</u></b>				
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.				
<b><u>SCREEDS</u></b>				
<b><u>Untinted granolithic, on concrete:</u></b>				
1	30mm Thick on floors and landings.	m2	63	
<b><u>Skirtings</u></b>				
2	75mm High covered granolithic skirting.	m	109	
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Section 3				
Bill No. 11				
Plastering				



Item No	Quantity	Rate	Amount
<b><u>SECTION 3</u></b>			
<b><u>BILL No. 13</u></b>			
<b><u>PLUMBING AND DRAINAGE</u></b>			
<b><u>(PROVISIONAL)</u></b>			
<b><u>Quantity Split:</u></b>			
Note that the total quantity per each item is split into the various buildings and appears below each description as follows:			
A0 - Male & Female Ablutions Renovations			
<b><u>MODEL PREAMBLES</u></b>			
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.			
<b><u>RAINWATER DISPOSAL:</u></b>			
<b><u>Watertite or equal approved Aluminium Gutters and Downpipes:</u></b>			
1	125 x 85 x 0.6mm Ogee domestic gutters including gutter brackets at 600mm centres.	m	32
2	Extra over eaves gutter for stopped end.	No	4
3	Extra over eaves gutter for outlet for 100 x 75mm aluminium downpipe.	No	10
4	100 x 75 x 0.6mm rectangular fluted downpipes fixed to wall with and including proprietary holderbats to 5000L rainwater tanks (elsewhere measured).	m	45
5	Extra over rainwater downpipe for bends.	No	10
<b><u>SANITARY FITTINGS</u></b>			
<b>Carried to Collection</b>			R
Section 3 Bill No. 13 Plumbing and Drainage (Provisional)			

**Vaal or equal approved:**

6	Hibiscus White Vitreous china 510 x 405mm rounded basin [code: 7050] with one tap hole on left hand side, including integrated overflow, bolted to wall with two 8mm bolts [code 8448Z0], to manufacturer's specification.	No	7
7	Orchid back inlet white vitreous china wall hung pan [code 439016] with floor bracket [code 8082Z0] fitted as per manufacturer's specifications and combined with: GEBERIT Kombifix UP172 for wall hung WC, [G110.150.00.1], front actuated with Delta21 dual flush actuator [G115.125.46.1] in matt finish, including flushpipe and Pan connector, water supply connection with angle stop valve, Netting for direct plastering, protection cover for service opening and protection cover for flushpipe, fixed with included fastening materials inside a single solid wall [80mm]	No	10
8	Wall urinal size 600 x 385 x 380mm with spreader and waste union (flush valve elsewhere)	No	5

**WASTE UNIONS ETC**

**Outlets, traps, etc:**

9	40mm 342/50 CP bottle trap.	No	7
10	40mm Code 316 chrome plated unslotted waste outlet.	No	7
11	40mm Rubber "P" or "S" trap	No	7

**TAPS, VALVES, ETC**

**Solid Cast brass taps, valves, etc:**

12	"Cobra KM2-200" or other approved 15mm chrome plated metered bib tap with non-hold open feature and flow controller.	No	7
13	15mm Ball-o-stop valve.	No	22
14	22mm Non Return valve.	No	22
15	32mm Chromium plated exposed type urinal flush valve including flush pipe	No	5

**Carried to Collection**

Section 3  
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Plumbing and Drainage (Provisional)

R

**SANITARY PLUMBING**

**PVC waste or vent pipes and fittings:**

16	50mm Waste pipe.	m	60
17	110mm Pipe.	m	35
18	110mm Pipe and laying in ground or filling not exceeding 2m deep including excavation, filling in and ramming.	m	45
<b><u>Extra for:</u></b>			
19	50mm Bend.	No	12
20	50mm Access bend.	No	10
21	50mm Access bend	No	8
22	50mm Junction	No	6
23	50mm Access junction	No	8
24	110mm Bend	No	16
25	100mm Access bend.	No	16
26	110mm Socket	No	16
27	110mm Junction	No	16
28	110mm Reducing junction	No	16
29	110mm Access junction	No	16
30	110mm Two-way vent valve	No	16
31	110mm Pan connector	No	12

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Plumbing and Drainage (Provisional)

R

**uPVC gulleys**

- 32 200mm Precast concrete gully dish and uPVC lowback assembly complete with 110mm P trap gulley (code UGB 40) including 190mm diameter head (code UGA 40) and grate (code UGG 40), not exceeding 750mm deep, jointed to 110mm drain pipe, including excavations for and encasing in concrete (15MPa crushing strength after 28 days) worked up to form kerb, finished smooth on top in 1:3 cement mortar.

No

6

**Connection to existing water supply**

- 33 Allow for connection to existing sewer pipe line.

Item

**Testing**

- 34 Testing sewer pipe system

Item

**WATER SUPPLIES**

**Polycop pipes:**

Pipes shall be class 10.

**Fixing of pipes**

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

**Polycop pipes chased in walls:**

Where pipes have been chased in walls, the price for making good of plaster and paint etc shall be deemed to be included in the description of pipe chased in walls.

**Reducing fittings:**

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.

**Carried to Collection**

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Section 3  
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Plumbing and Drainage (Provisional)

<b><u>Class 10 Polycop pipes:</u></b>					
35	15mm Pipe chased into brick walls.	m	25		
36	22mm Pipe chased into brick walls.	m	35		
<b><u>Extra over polycop pipes for compression fittings:</u></b>					
37	15mm Fittings.	No	15		
38	22mm Fittings.	No	10		
<b><u>Class "O" copper pipes:</u></b>					
39	15mm Pipes chased in brickwork	m	60		
40	22mm Pipes chased in brickwork	m	60		
41	28mm Pipes	m	30		
<b><u>Extra over class "O" copper pipes for capillary fittings</u></b>					
42	15mm Fittings	No	15		
43	22mm Fittings	No	15		
44	28mm Fittings	No	10		
<b><u>Copper flexible service pipes</u></b>					
45	15mm Service pipe 340mm girth	No	2		
<b><u>Connection to existing water supply</u></b>					
46	Allow for connection to existing water supply.		Item		
<b><u>Testing</u></b>					
47	Testing water pipe system		Item		
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Plumbing and Drainage (Provisional)

Item No	Quantity	Rate	Amount
<b><u>SECTION 3</u></b>			
<b><u>BILL NO. 14</u></b>			
<b><u>GLAZING</u></b>			
<b><u>Quantity Split:</u></b>			
Note that the total quantity per each item is split into the various buildings and appears below each description as follows:			
A0 - Male & Female Ablutions Renovations			
<b><u>MODEL PREAMBLES</u></b>			
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.			
<b><u>GLAZING TO STEEL WITH PUTTY</u></b>			
<b><u>4mm Obscure glass</u></b>			
1	Panes exceeding 0,1m <sup>2</sup> but not ne 0.5m <sup>2</sup>	m2	5
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Bill No. 14			
Glazing			



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Bill No. 15

Paintwork

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Bill No. 15  
Paintwork

Section 3

**SECTION SUMMARY - REPAIR AND RENOVATIONS**

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Concrete, Formwork and Reinforcement

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Masonry

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Waterproofing

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Ceilings

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Plumbing and Drainage (Provisional)

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Section 3

Item No	Quantity	Rate	Amount
<b><u>SECTION 4</u></b>			
<b><u>BILL No. 1</u></b>			
<b><u>EARTHWORKS (PROVISIONAL)</u></b>			
<b><u>Quantity Split:</u></b>			
Note that the total quantity per each item is split into the various buildings and appears below each description as follows:			
A1 - Staff Toilet AR - Grade R x 3 seats			
<b><u>MODEL PREAMBLES</u></b>			
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.			
<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
<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.			
<b>Carried to Collection</b>			R
Section 4 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 0,03m<sup>3</sup> in volume.

**EXCAVATION OTHER THAN BULK**

**Excavation in earth not exceeding 2m deep:**

1	Trenches.	m3	39
2	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	20

**Carried to Collection**

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Section 4  
Bill No. 1  
Earthworks (Provisional)

	<b><u>Extra over trench and hole excavations in earth for excavation in:</u></b>				
3	Soft rock.	m3	10		
4	Hard rock.	m3	4		
	<b><u>Extra over all excavations for carting away:</u></b>				
5	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor.	m3	34		
	<b><u>Risk of collapse of excavations:</u></b>				
6	Sides of trench and hole excavations not exceeding 1,5m deep.	m2	50		
	<b><u>Keeping excavations free of water:</u></b>				
7	Keeping excavations free from mud and all water including subterranean sources.		Item		
	<b><u>EARTH FILLING, ETC.</u></b>				
	<b><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></b>				
8	Under floors, etc.	m3	7		
	<b><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></b>				
9	Under floors, etc.	m3	7		
	<b><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></b>				
10	Under floors, etc.	m3	7		
	<b>Carried to Collection</b>			R	
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Section 4

Bill No. 1

Earthworks (Provisional)

Section 4  
Bill No. 2  
Concrete, Formwork and Reinforcement

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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.

**UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES**

**15Mpa/19mm Concrete**

1	Surface blinding under footings and bases.	m3	2	
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**REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES**

**30MPa/20mm concrete:**

2	Concrete raft slab on waterproofing.	m3	10	
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**TEST BLOCKS**

**Test blocks:**

3	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	10	
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**Carried to Collection**

Section 4  
Bill No. 2  
Concrete, Formwork and Reinforcement

R

**FINISHING TOP SURFACE OF CONCRETE**

**Finishing top surfaces of concrete smooth with a wood float:**

4	Surface beds, suspended slabs, ground slabs, etc.	m2	43	
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**ROUGH FORMWORK (DEGREE OF ACCURACY III)**

**Rough Formwork to Sides:**

5	Edges, risers, ends and reveals not exceeding 300mm high or wide.	m	28	
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**SMOOTH FORMWORK (DEGREE OF ACCURACY I)**

**Smooth Formwork to Sides:**

6	Edges, risers, ends and reveals not exceeding 300mm high or wide.	m2	16	
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**MOVEMENT JOINTS ETC**

**Two layers of 375 micron damp proof course in slip joints between horizontal concrete and brick surfaces including cement mortar bed (Provisional)**

7	Not exceeding 300mm wide.	m	48	
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**Saw cut joints:**

8	6 x 40mm Saw cut joints in top of concrete (Provisional).	m	39	
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**REINFORCEMENT (PROVISIONAL)**

9	High tensile steel reinforcement bars to structural concrete work.	t	3.05	
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**Fabric reinforcement:**

10	REF. 617 fabric reinforcement in concrete surface beds, raft slabs etc.	m2	43	
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Section 4  
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Concrete, Formwork and Reinforcement

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Concrete, Formwork and Reinforcement

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Concrete, Formwork and Reinforcement





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.

**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"

**BRICKWORK AND BLOCKWORK SUNDRIES**

**Galvanized brickwork reinforcement**

1	115mm Wide reinforcement built in horizontally	m	374
2	230mm Wide reinforcement built in horizontally.	m	517

**Cramps, ties, etc:**

3	30 x 2mm Galvanized roof tie 1500mm long with one end fixed to timber and other built into brickwork or concrete.	No	31
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**Air bricks etc:**

4	229 x 152mm terracotta clay vermin proof air brick	No	20
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Masonry

**Bagging and sealing the outer face of the inner skin of walls with 1:3 cement and sand mixture and seal with two coats "Brixeal" bitumen emulsion waterproofing coating:**

5	To walls (Provisional).	m2	102	
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**Samples**

6	Prepare and construct for approval L-Shaped one brickwall faced and pointed both sides as per given specification, size: 1000x1000x1000mm high. same area (1000x1000mm) to be paved as per given specifications.			Item
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**Turning pieces to lintels etc**

7	230mm Wide turning pieces	m	23	
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## 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):**

- |    |   |    |     |
|----|---|----|-----|
| 8  | Half brick wall in beam filling pointed one side including cutting and fitting around roof timbers and bedding roofing solid on top in cement mortar. | m2 | 9   |
| 9  | One brickwall pointed on both sides.  | m2 | 181 |
| 10 | Half brickwall pointed on both sides.   | m2 | 13  |
| 11 | Fair raking cutting.  | m  | 15  |

**Face brick copings, lintels, sills, etc. of "Rustgold FBS/Qunu Travertine" or equal approved face bricks pointed with recessed joints on all exposed faces:**

- |    |  |   |    |
|----|--|---|----|
| 12 | 220mm Brick on edge sill bedded sloping and jointed in cement mortar and pointed on top, edge and projecting soffit including cutting and fitting between reveals and splay cutting brickwork under. | m | 13 |
| 13 | 220mm Wide header course to top of one brick wall bedded and jointed in cement mortar and pointed on both sides.   | m | 15 |

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<p><b><u>SECTION 4</u></b></p> <p><b><u>BILL No. 4</u></b></p> <p><b><u>WATERPROOFING</u></b></p> <p><b><u>Quantity Split:</u></b></p> <p>Note that the total quantity per each item is split into the various buildings and appears below each description as follows:</p> <p>A1 - Staff Toilet AR - Grade R x 3 seats</p> <p><b><u>MODEL PREAMBLES</u></b></p> <p>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.</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>Proprietary products in descriptions:</u></b></p> <p>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.</p> <p><b><u>Waterproofing</u></b></p> <p>The product and its methodology for application must be approved by Principal Agent before it is used.</p> <p>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.</p>			
<p><b>Carried to Collection</b></p>			<p>R</p>
<p>Section 4 Bill No. 4 Waterproofing</p>			

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.

### **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	43
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**One layer of 350 micron embossed dampcourse waterproof sheeting below walls, sills, etc:**

2	Below walls, sills, etc.	m2	5
---	--------------------------	----	---

### **JOINT SEALANTS ETC**

**Clear Neutral silicone sealant:**

3	In joint sealing and pointing all round external window and door frames.	m	100
---	--	---	-----

**Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc**

4	10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary (Provisional).	m	36
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Waterproofing



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<b><u>BILL No. 5</u></b>			
<b><u>ROOF COVERINGS</u></b>			
<b><u>Quantity Split:</u></b>			
Note that the total quantity per each item is split into the various buildings and appears below each description as follows:			
A1 - Staff Toilet			
AR - Grade R x 3 seats			
<b><u>MODEL PREAMBLES</u></b>			
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.			
<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
<b><u>Flashings</u></b>			
Flashings shall be approved by roof sheeting manufacturer and fixed to the sheeting with S10 clips to obviate any direct fixing perforations. Prior to flashings being fixed, all troughs at the apex shall be stop-ended to the full depth of the sheet in order to prevent any penetration of wind driven water. The trough shall be lipped at the eaves end to form a drip. Flashing flanges shall be notched to the sheet profile where necessary. All these operations must be performed with special tools available from the manufacturer. Care shall be taken to ensure that no sheeting or flashing will be cut with abrasive disc on roof surface in order to prevent steel splatter from penetrating colour coated areas. The flashings shall be supplied with a paint finish consisting of a full top coat silicon modified polyester Colour : White to one side			
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Roof Coverings Etc.			

**Quality Assurance**

The manufacturer shall be assessed and certified as complying with ISO 9001: 2008 Quality Management System

**Guarantee**

Z200 Galvanized Metal or equal approved sheeting shall be laid in strict accordance with manufacturer's specifications by an approved contractor. The employer shall be provided with a ten year written guarantee on materials by the manufacturer.

**Safety**

The contractor shall exercise special care when handling long length sheeting, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting and incomplete sections must be adequately secured against possible movement by wind and gravity

**Handling and Storage**

The contractor shall ensure that all materials used on site for cladding, etc are transported, handled and stored in accordance with the manufacturer's recommendations. Material damaged shall be rejected and replaced with undamaged material at the contractor's expense. Repair of damaged material will not generally be permitted. Rates are to include for preventing damage and protecting sheets through all stages of construction

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Roof Coverings Etc.

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### **Inspection Prior to Installation or Erection**

Before commencing with installation, the contractor shall verify that the following items have been checked and accepted:

- a. The entire structure or the portion thereof to be sheeted has been correctly aligned, levelled and grouted
- b. Purlins and sheeting rails are at the correct spacing and are within the specified tolerances
- c. The corners of the roof are square and the wall framework is perpendicular or as specified
- d. No protrusions such as bolt heads, splice plates, cleats, etc. appear on the face of the framework
- e. All members to which roofing and cladding are to be fixed in aesthetically sensitive areas are true and square
- f. Paint and any other materials that may be incompatible with the sheeting, have been painted over or so dealt with that direct contact with the sheeting is avoided
- g. The contact faces between the purlins or the girts and the cladding are in the same plane. Should the alignment be inadequate, the contractor shall request instructions from the engineer before proceeding with the fixing of the cladding

### **Protrusion through Sheeted Surfaces**

Protrusions such as pipes, ducts and the like, shall be adequately flashed where they pass through the sheeting surface. Where ribs have to be cut away to permit penetration, additional framing is to be installed as required to support the sheeting. Depending on the position of the penetration through the roof, special attention shall be given to back flashing the sheeting to the ridge or point of water entry. In all cases, all cutting and flashings shall be so arranged that adequate provision is made for the drainage of all troughs and corrugation

### **Cleaning of Roofs, etc**

All debris, etc arising from the fixing of the cladding shall be removed from the sheetin as the fixing progresses. In addition, off-cuts of insulation, surplus fastners and sealants, mandrels from pop rivets, off-cuts of flashings and sheeting, surplus flashing, food packaging, cartons, bottles, cans, etc shall not be left on the roof or in the gutters. Care shall be taken to ensure that no such material enters, blocks or partially impedes the flow of water into the outlets, downpipes, etc

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Roof Coverings Etc.

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**ROOF COVERINGS**

**PROFILED METAL SHEETING AND ACCESSORIES**

**0.58mm Thick Z200 "IBR Profile" galvanised metal roof sheeting, in single sheet lengths, with "Chromadek" finish to external face and standard backing coat to internal face :**

1	Roof sheeting laid to a mono-pitch.	m2	43
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**0.58mm Flashings pre-painted to match roof sheeting and fixed in strict accordance with manufacturer's instructions:**

2	Mono pitched ridge capping with 225mm lapping secured onto the roof.	m	18
---	--	---	----

**ROOF AND WALL INSULATION**

**"Sisalation Grade FR430" or equal approved heavy industrial insulation**

3	Insulation laid taut over roof trusses (at approximately 1 100mm centres) and fixed concurrent with SA Pine purlins at 900mm centres, etc including galvanised steel straining wires	m2	43
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Roof Coverings Etc.

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<b><u>Sundries:</u></b>					
5	TRI FIX or equal approved hurricane clip fixed using 10 x 32mm galvanised clout nails (Provisional).	No	95		
<b><u>EAVES, VERGES, ETC</u></b>					
<b><u>"Everite Nutec" or equal approved fibre cement</u></b>					
6	12 x 225mm Fascia board drilled and brass screwed to rafter feet including galvanised steel H-profile jointing strips, etc.	m	28		
7	85 x 275 x 6mm Barge board drilled and brass screwed to purlin ends including galvanised steel H-profile jointing strips, screws, holes, etc.	m	16		
<b><u>DOORS ETC</u></b>					
<b><u>SANS Approved meranti:</u></b>					
8	44mm Framed, ledged, and battened single door with flush ply panel internally size 950 x 2032mm high comprising 44 x 110mm top rail and stiles, 44 x 220mm bottom rail, 44 x 150mm lock rail and 22 x 70mm vertical "v" jointed boards (D2).	No	6		
9	44mm Framed, ledged, and battened purpose made single door with flush ply panel internally size 813 x 1832mm high comprising 44 x 110mm stiles, 44 x 220mm bottom rail, 44 x 150mm lock rail and 22 x 70mm vertical "v" jointed boards (D4).	No	3		
<b><u>FRAMED FRAMES, ETC</u></b>					
<b><u>Meranti Frames bolted to wall with expanding masonry bolts - four per style including quadrant beads on both sides:</u></b>					
10	70 x 108mm rebated meranti frame .	m	38		
<b><u>Meranti Frames fixed against brickwall using galvanised steel lugs bolted with expanding masonry bolts - four per style including quadrant beads on both sides:</u></b>					
11	70 x 108mm rebated meranti frame .	m	10		
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Bill No. 6					
Carpentry and Joinery					

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Bill No. 6

Carpentry and Joinery

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<b><u>SECTION 4</u></b>			
<b><u>BILL No. 8</u></b>			
<b><u>IRONMONGERY</u></b>			
<b><u>Quantity Split:</u></b>			
Note that the total quantity per each item is split into the various buildings and appears below each description as follows:			
A1 - Staff Toilet			
AR - Grade R x 3 seats			
<b><u>MODEL PREAMBLES</u></b>			
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.			
<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
<b><u>Keys/Locks</u></b>			
Each lock is to be distinctly numbered with consecutive numbers and each key is to be stamped with the corresponding number to the lock that it controls. All locks are to have two keys			
<b><u>Trade Names</u></b>			
Where trade names are specified other ironmongery approved by the Principal Agent may be used			
<b><u>Fixing</u></b>			
Fixing of ironmongery is deemed to be fixed to timber unless otherwise described			
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Section 4			
Bill No. 7			
Ironmongery			

**HINGES:**

1	75 x 100mm Brass Medium duty ball bearing HMP butt hinges.	Pairs	9.0
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**LOCKS**

2	"UNION 2277-78SS" or equal approved three lever sash mortice lockset.	No	9
---	---	----	---

3	"UNION w/c indicator bolt satin chrome - Code CZ80941SC	No	5
---	---	----	---

**HANDLES**

4	"Dorma DPH301B" or equal approved Stainless Steel Straight Tubular Pull handle flange fixing.	No	9
---	---	----	---

**Sundries:**

5	Stainless Steel Hat and coat hook, code DHC - SS-030-A or equal approved.	No	5
---	---	----	---

6	38mm Diameter black rubber door stop plugged and screwed to wall.	No	9
---	---	----	---

**SIGN PLATES:**

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

7	Sign plate plugged and screwed to walls with chromium plated dome headed screws.	No	9
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**SUNDRIES**

**Halcast or equal approved"**

8	Thiefproof toilet roll holder plugged.	No	7
---	--	----	---

**Grade 304 stainless steel ware:**

9	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
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Ironmongery

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Ironmongery

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Bill No. 7

Ironmongery



### **ALUMINIUM WINDOWS**

All aluminium windows are to be manufactured by manufacturers who are members of AAAMSA. All aluminium systems to be approved by AAAMSA.

All aluminium work is to be protected by covering with plastic sheeting fixed with low tack adhesive prior to leaving the factory. Plastic sheeting is to remain in place during construction.

All glazing shall be in accordance with SABS 0400 - 1990, SABS 1263 - 1. All safety glazing materials (individual panes) shall be permanently marked. Such marking shall be visible after glazing process. If it is not marked, it is not safety glass.

### **Natural anodised aluminium windows glazed with 6.38mm safety laminated glass and plugged to brickwork:**

- |   |   |    |    |
|---|---|----|----|
| 2 | Window Size 600 x 600mm high complete, including ironmongery etc, all as per Window Type W01. | No | 11 |
|---|---|----|----|

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Metalwork

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<b><u>BILL No. 11</u></b>			
<b><u>PLUMBING AND DRAINAGE</u></b>			
<b><u>(PROVISIONAL)</u></b>			
<b><u>Quantity Split:</u></b>			
Note that the total quantity per each item is split into the various buildings and appears below each description as follows:			
A1 - Staff Toilet			
AR - Grade R x 3 seats			
<b><u>MODEL PREAMBLES</u></b>			
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.			
<b><u>RAINWATER DISPOSAL:</u></b>			
<b><u>Watertite or equal approved Aluminium Gutters and Downpipes:</u></b>			
1	125 x 85 x 0.6mm Ogee domestic gutters including gutter brackets at 600mm centres.	m	13
2	Extra over eaves gutter for stopped end.	No	4
3	Extra over eaves gutter for outlet for 100 x 75mm aluminium downpipe.	No	4
4	100 x 75 x 0.6mm rectangular fluted downpipes fixed to wall with and including proprietary holderbats to 5000L rainwater tanks (elsewhere measured).	m	16
5	Extra over rainwater downpipe for bends.	No	8
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Plumbing and Drainage (Provisional)			

**TAPS, VALVES, ETC**

**Solid Cast brass taps, valves, etc:**

6	"Cobra KM2-200" or other approved 15mm chrome plated metered bib tap with non-hold open feature and flow controller.	No	6
7	15mm Ball-o-stop valve.	No	4
8	22mm Non Return valve.	No	13

**WASTE UNIONS ETC**

**Outlets, traps, etc:**

9	40mm 342/50 CP bottle trap.	No	2
10	40mm Code 316 chrome plated unslotted waste outlet.	No	4
11	40mm Rubber "P" or "S" trap	No	4

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Plumbing and Drainage (Provisional)

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**SANITARY FITTINGS**

**Vaal or equal approved:**

12	Hibiscus White Vitreous china 510 x 405mm rounded basin [code: 7050] with one tap hole on left hand side, including integrated overflow, bolted to wall with two 8mm bolts [code 8448Z0], to manufacturer's specification.	No	8
13	Orchid back inlet white vitreous china wall hung pan [code 439016] with floor bracket [code 8082Z0] fitted as per manufacturer's specifications and combined with: GEBERIT Kombifix UP172 for wall hung WC, [G110.150.00.1], front actuated with Delta21 dual flush actuator [G115.125.46.1] in matt finish, including flushpipe and Pan connector, water supply connection with angle stop valve, Netting for direct plastering, protection cover for service opening and protection cover for flushpipe, fixed with included fastening materials inside a single solid wall [80mm]	No	5
14	Orchid back inlet white vitreous china wall hung paraplegic pan [code 439016] with floor bracket [code 8082Z0] fitted as per manufacturer's specifications and combined with: GEBERIT Kombifix UP172 for wall hung WC, [G110.150.00.1], front actuated with Delta21 dual flush actuator [G115.125.46.1] in matt finish, including flushpipe and Pan connector, water supply connection with angle stop valve, Netting for direct plastering, protection cover for service opening and protection cover for flushpipe, fixed with included fastening materials inside a single solid wall [80mm]	No	2

**SANITARY PLUMBING**

**PVC waste or vent pipes and fittings:**

15	50mm Waste pipe.	m	83
16	110mm Pipe.	m	43
17	110mm Pipe and laying in ground or filling not exceeding 2m deep including excavation, filling in and ramming.	m	91

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	<b><u>Extra for:</u></b>			
18	50mm Bend.	No	12	
19	50mm Access bend.	No	10	
20	50mm Access bend	No	12	
21	50mm Junction	No	8	
22	50mm Access junction	No	8	
23	110mm Bend	No	6	
24	100mm Access bend.	No	8	
25	110mm Socket	No	8	
26	110mm Junction	No	8	
27	110mm Reducing junction	No	8	
28	110mm Access junction	No	8	
29	110mm Two-way vent valve	No	8	
30	110mm Pan connector	No	7	
	<b><u>uPVC gulleys</u></b>			
31	200mm Precast concrete gully dish and uPVC lowback assembly complete with 110mm P trap gulley (code UGB 40) including 190mm diameter head (code UGA 40) and grate (code UGG 40), not exceeding 750mm deep, jointed to 110mm drain pipe, including excavations for and encasing in concrete (15MPa crushing strength after 28 days) worked up to form kerb, finished smooth on top in 1:3 cement mortar.	No	4	
	<b><u>Connection to existing sewer line</u></b>			
32	Allow for connection to existing water supply.		Item	
	<b><u>Testing</u></b>			
33	Testing sewer pipe system		Item	
	<b><u>WATER SUPPLIES</u></b>			
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	Bill No. 10			
	Plumbing and Drainage (Provisional)			

**Polycop pipes:**

Pipes shall be class 10.

**Fixing of pipes**

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

**Polycop pipes chased in walls:**

Where pipes have been chased in walls, the price for making good of plaster and paint etc shall be deemed to be included in the description of pipe chased in walls.

**Reducing fittings:**

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.

**Class 10 Polycop pipes:**

34	15mm Pipe chased into brick walls.	m	78
35	22mm Pipe chased into brick walls.	m	60

**Extra over polycop pipes for compression fittings:**

36	15mm Fittings.	No	50
37	22mm Fittings.	No	40

**Class "O" copper pipes:**

38	15mm Pipes chased in brickwork	m	36
39	22mm Pipes chased in brickwork	m	50
40	28mm Pipes	m	35

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Plumbing and Drainage (Provisional)





3	<u>Prepare and apply two coats carbolenium on:</u>				
	On exposed timbers.	m2	31		
	<b><u>ON FIBRE-CEMENT</u></b>				
4	<u>Prepare and apply two coats pure acrylic roof paint on:</u>				
	On fascias and barge boards.	m2	19		
	<b><u>ON METAL</u></b>				
5	<u>Prepare and apply one coat zinc phosphate alkyd resin primer, one coat universal undercoat and two full coats high gloss enamel paint</u>				
	On gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area)	m2	7		
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Paintwork					

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Paintwork

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Waterproofing  
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Ironmongery  
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96  
101  
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120  
127  
130

**Amount**

**Carried to Final Summary**

R

Section 4

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	<u>Extra over all excavations for carting away:</u>			
7	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor.	m3	45	
	<u>Earth filling from excavated material</u>			
8	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	22	
	<u>Filling supplied by the contractor to form platforms</u>			
9	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	46	
	<u>Surface Preparation:</u>			
10	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	300	
	<u>Prescribed density tests on filling:</u>			
11	Modified AASHTO Density test.	No	5	
	<b><u>WATER RETICULATION</u></b>			
	<b><u>WATER SUPPLY IN GROUND</u></b>			
	<b><u>Repair to water supply line</u></b>			
12	Investigate existing water pipe line and trace leaks	m	50	
13	Investigate as necessary to identify location and extent of leaks including excavations, cartaway, backfilling, etc	No	5	
14	Cut into existing pipe not exceeding 32mm diameter to remove damaged portion and reinstate, including testing (cutting into plaster and making good elsewhere measured)	No	5	
	<b>Carried to Collection</b>			R
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**HDPE 100PN 12.5 pressure pipes:**

15	32mm pipes laid in depths not exceeding 1m including excavation, bedding, backfilling, compaction and disposal of surplus material.	m	80		
16	40mm Pipes laid in depths not exceeding 1m including excavation, bedding, backfilling, compaction and disposal of surplus material.	m	30		

**Extra over (PN12.5) HDPE piping for fittings:**

17	32mm Bend.	No	8		
18	32mm Adaptor.	No	8		
19	40mm Bend.	No	8		
20	32mm Tee.	No	8		
21	40mm Tee.	No	8		

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<b><u>WATER SUPPLY</u></b>			
<b><u>HDPE 100PN 12.5 pressure pipes:</u></b>			
22	32mm pipes laid in depths not exceeding 1m including excavation, bedding, backfilling, compaction and disposal of surplus material.	m	80
<b><u>Extra over (PN12.5) HDPE piping for fittings:</u></b>			
23	32mm Bend.	No	7
24	32mm Adaptor.	No	7
25	32mm Tee.	No	4
<b><u>TAPS, VALVES, ETC</u></b>			
26	32mm "Cobra" Ball Valve complete with adaptors for HDPE pipe.	No	1
27	32mm Non-return valve.	No	1
<b><u>Municipal connection</u></b>			
<b><u>Sundries:</u></b>			
28	Allow for amount of R20 000.00 (Twenty Thousand Rand) for municipal water connection to be used at the discretion of the Principal Agent and deducted in whole or in part if not required.	Item	20 000.00
29	Allow for profit if required.	Item	
<b><u>Testing:</u></b>			
30	Testing water pipe system.	Item	
<b><u>THE FOLLOWING IN STORMWATER DRAINAGE, APRONS ETC.</u></b>			
<b><u>STORMWATER APRONS</u></b>			
<b><u>Excavation not exceeding 2m deep</u></b>			
31	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	11
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	<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>				
32	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>				
33	G7 Base course material compacted to 98% Mod AASHTO density	m3	5		
34	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>Coarse river sand filling supplied by the contractor:</u>				
35	Under floors etc.	m3	1		
	<u>Compaction of surfaces:</u>				
36	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	27		
	<u>Prescribed density tests on filling:</u>				
37	In-situ dry density test.	No	4		
	<u>Reinforced 25Mpa/19mm Concrete:</u>				
38	Surface beds cast in panels on waterproofing.	m3	2		
39	Edge thickening	m3	1		
	<u>Finishing top surfaces of concrete smooth with a wood float:</u>				
40	Surface beds, slabs, etc to falls and currents.	m2	27		
	<u>Test blocks:</u>				
41	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	5		
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<b><u>STORMWATER CHANNELS</u></b>					
<u>Excavation not exceeding 2m deep</u>					
46	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	8		
<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>					
47	Off site to a dumping site to be found by the Contractor.	m3	4		
<u>Filling supplied by the contractor under channels</u>					
48	G7 Base course material compacted to 98% Mod AASHTO density	m3	2		
49	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>					
50	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	36		
51	Extra for 700mm angle	No	3		
52	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		
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	<u>Sundries:</u>			
53	Create earth berm for stormwater control with in situ material 1,5m wide at base x 500mm high	m	45	
	<b><u>THE FOLLOWING IN STORMWATER DISH DRAIN, ETC.</u></b>			
	<u>Excavation not exceeding 2m deep</u>			
54	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	12	
	<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>			
55	Off site to a dumping site to be found by the Contractor.	m3	6	
	<u>Filling supplied by the contractor under floors, aprons, channels etc</u>			
56	G7 Base course material compacted to 98% Mod AASHTO density	m3	3	
57	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>			
58	Under floors etc.	m3	2	
	<u>Compaction of surfaces:</u>			
59	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	40	
	<u>Prescribed density tests on filling:</u>			
60	In-situ dry density test.	No	4	
	<u>Reinforced 25Mpa/19mm Concrete:</u>			
61	Surface beds cast in panels on waterproofing.	m3	4	
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[illegible]

	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 90% Mod AASHTO density</u>			
71	Backfilling to holes	m3	5	
	<u>Earth filling with stone material supplied by the contractor:</u>			
72	Stone (>63mm).	m3	10	
	<u>Membranes</u>			
73	"BidimGeotextile or equal approved, lined on all sides including the top and bottom faces.	m2	21	
	<b><u>Keeping excavations free of water</u></b>			
74	Keeping excavations free of all water other than subterranean water		Item	
	<b><u>SEWER RETICULATION</u></b>			
	<b><u>MODEL PREAMBLES</u></b>			
	The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates			
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
	<u>uPVC pipes and fittings</u>			
	Soil, waste and vent pipes and fittings shall be solvent weld jointed.			
	Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings.			
	<u>Excavations:</u>			
	No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling.			
	Soft rock and hard rock shall be as defined in Earthworks.			
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Laying, backfilling, bedding, etc of pipes:

Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions.

Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following:

**SABS 1200**

L : Medium pressure pipelines

LD : Sewers

LE : Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SABS 1200

DB: Earthworks (Pipe trenches) Clause 5.7.2 will only be applicable if authorised by the Engineer in writing.

Descriptions of pipes laid in trenches:

Descriptions of pipes laid in and including trenches and of inspection chambers, catch pits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 95% Mod AASHTO density and disposal of surplus material on site

Descriptions of catchpits, junction boxes, manholes, etc:

Descriptions of catchpits, junction boxes, manholes, etc, shall be deemed to include for compaction, disposal of surplus excavated material to a dumping site located by the contractor, risk of collapse and keeping excavations free from 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.

**Repair to soil drainage**

75	Investigate existing soil drainage pipe and trace leaks	m	75
76	Investigate as necessary to identify location and extent of leaks including excavations, cartaway, backfilling, etc	No	5

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77	Cut into existing pipe not exceeding 110mm diameter to remove damaged portion and reinstate, including testing (cutting into plaster and making good elsewhere measured)	No	5		
<b><u>BULK SEWER RETICULATION</u></b>					
<b><u>Heavy duty (Class 34) PVC-U sewer and drain pipes</u></b>					
78	110mm Pipes laid in and including trenches not exceeding 1m deep	m	80		
79	110mm Pipes laid in and including trenches exceeding 1m but not exceeding 2m deep	m	10		
<b><u>Extra over heavy duty (Class 34) PVC-U sewer and drain pipes for fittings</u></b>					
80	110mm Bend	No	6		
81	110mm Rodding eye	No	4		
<b><u>PRE-CAST CONCRETE MANHOLES</u></b>					
<b><u>Pre-cast concrete circular inspection chambers including pre-cast concrete cover slabs, covers and channels in benching</u></b>					
82	Manhole 1000mm diameter not exceeding 1m deep.	No	1		
83	Manhole 1000mm diameter exceeding 1m and not exceeding 2m deep.	No	1		
<b><u>SUNDRIES</u></b>					
<b><u>Earthworks</u></b>					
84	Selected granular filling Class 'B' supplied by the Contractor in bedding under pipes.	m3	6		
85	Selected 19mm stone supplied by the Contractor in bedding under pipes.	m3	6		
86	300 x 300 x 75mm Pre-cast concrete inspection eye marker slab set in ground.	No	4		
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	<b><u>Manhole covers</u></b>			
87	620mm dia Type 2A Heavy duty cast iron manhole to SABS 558	No	2	
	<b><u>Connection</u></b>			
88	Allow for connecting to Waste Water Treatment System (WWTS).		Item	
	<b><u>Testing:</u></b>			
89	Testing drainage system.		Item	
	<b><u>THE FOLLOWING IN WALKWAYS</u></b>			
	<u>Excavation not exceeding 2m deep</u>			
90	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	32	
	<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>			
91	Off site to a dumping site to be found by the Contractor.	m3	8	
	<u>Filling supplied by the contractor under walkways</u>			
92	G7 Base course material compacted to 98% Mod AASHTO density	m3	13	
93	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	19	
	<u>Rip and Re - compact insitu material on site compacted to 93% Mod. AASHTO density:</u>			
94	Under floors,etc.	m2	137	
	<u>Prescribed density tests on filling:</u>			
95	In-situ dry density test.	No	8	
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	<u>Approved brand of anti-termite soil poison applied by a Registered Pest Control Company and guaranteed against termite infestation for ten years:</u>				
96	Treat filling under paving with 'Chlordane Heptachlor Aldrin' or equal approved.	m2	137		
	<b><u>Concrete Paving Blocks</u></b>				
	<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>				
97	Paving to walkway areas, etc laid to falls.	m2	137		
	<b><u>Kerbing</u></b>				
	<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>				
98	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	80		
99	Ditto but circular on plan.	m	4		
	<b><u>Fibre glass grating</u></b>				
	<u>Fibre glass grating</u>				
100	Supply and install 600mm wide fibre glass grating on top of v-drains including galvanised angle iron bedded in 25Mpa concrete with lugs	m	12		
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<b><u>THE FOLLOWING IN ONE BRICK WALL (GARDEN WALL)</u></b>							
<u>Excavation in earth not exceeding 2m deep:</u>							
101	Trenches.	m3	15				
<u>Extra over all excavations for carting away:</u>							
102	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.	m3	15				
<u>Risk of collapse of excavations:</u>							
103	Sides of trench and hole excavations not exceeding 1,5m deep.	m2	60				
<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% MOD AASHTO density:</u>							
104	Backfilling to trenches, holes, etc.	m3	10				
<u>Filling supplied by the contractor under strip footing</u>							
105	G7 Base course material compacted to 98% Mod AASHTO density	m3	4				
106	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	4				
<u>Compaction of surfaces</u>							
107	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	19				
<u>25 Mpa/19mm Concrete</u>							
108	Strip footings.	m3	4				
<b>Carried to Collection</b>						R	
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	<u>Test blocks:</u>				
109	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	5		
	<u>Reinforcement (Provisional)</u>				
110	High tensile steel reinforcement bars to structural concrete work.	t	0.50		
	<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>				
111	One brick walls.	m2	8		
	<u>Brickwork reinforcement:</u>				
112	230mm Wide reinforcement built in horizontally.	m	66		
113	Ditto but in foundations.	m	12		
	<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>				
114	One brickwall faced on both sides.	m2	30		
	<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>				
115	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	15		
<b>Carried to Collection</b>					R
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<b><u>STORMWATER CHANNELS</u></b>					
<u>Excavation not exceeding 2m deep</u>					
116	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>					
117	Off site to a dumping site to be found by the Contractor.	m3	10		
<u>Filling supplied by the contractor under channels</u>					
118	G7 Base course material compacted to 98% Mod AASHTO density	m3	6		
119	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>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>					
120	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	38		
121	Extra for 700mm angle	No	4		
122	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		
<b>Carried to Collection</b>				R	
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**THE FOLLOWING IN DISABLED ACCESS**

**SCREEN WALL**

Excavation in earth not exceeding 2m deep:

123	Trenches.	m3	3
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Extra over all excavations for carting away:

124	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.	m3	3
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Risk of collapse of excavations:

125	Sides of trench and hole excavations not exceeding 1,5m deep.	m2	8
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Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% MOD AASHTO density:

126	Backfilling to trenches, holes, etc.	m3	3
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Filling supplied by the contractor under strip footing

127	G7 Base course material compacted to 98% Mod AASHTO density	m3	3
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128	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
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Compaction of surfaces

129	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	12
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25 Mpa/19mm Concrete

130	Strip footings.	m3	2
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	<u>Test blocks:</u>				
131	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	3		
	<u>Reinforcement (Provisional)</u>				
132	High tensile steel reinforcement bars to structural concrete work.	t	0.50		
	<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>				
133	One brick walls.	m2	12		
	<u>BRICKWORK IN SUPERSTRUCTURE</u>				
	<u>Brickwork reinforcement:</u>				
134	230mm Wide reinforcement built in horizontally.	m	36		
135	Ditto but in foundations.	m	6		
	<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>				
136	One brickwall faced on both sides.	m2	24		
	<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>				
137	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	6		
<b>Carried to Collection</b>					R
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<b><u>ACCESS RAMPS</u></b>					
<u>Excavation not exceeding 2m deep</u>					
138	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	9		
<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>					
139	Off site to a dumping site to be found by the Contractor.	m3	9		
<u>Filling supplied by the contractor under floors, aprons, etc</u>					
140	G7 Base course material compacted to 98% Mod AASHTO density	m3	4		
141	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>Coarse river sand filling supplied by the contractor:</u>					
142	Under floors etc.	m3	3		
<u>Compaction of surfaces:</u>					
143	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	57		
<u>Prescribed density tests on filling:</u>					
144	In-situ dry density test.	No	5		
<u>Reinforced 25Mpa/19mm Concrete:</u>					
145	Ramps, Landings, etc.	m3	6		
<u>Finishing top surfaces of concrete smooth with a wood float:</u>					
146	Surface beds, slabs, etc to falls and currents.	m2	57		
<b>Carried to Collection</b>				R	
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**THE FOLLOWING IN ACCESS DRIVEWAY, ETC.**

Excavation not exceeding 2m deep

152	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	20
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Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):

153	Off site to a dumping site to be found by the Contractor.	m3	5
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Filling supplied by the contractor under driveways

154	G7 Base course material compacted to 98% Mod AASHTO density	m3	5
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155	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
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Rip and Re - compact insitu material on site compacted to 93% Mod. AASHTO density:

156	Under floors,etc.	m2	48
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Prescribed density tests on filling:

157	In-situ dry density test.	No	5
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Approved brand of anti-termite soil poison applied by a Registered Pest Control Company and guaranteed against termite infestation for ten years:

158	Treat filling under paving with 'Chlordane Heptachlor Aldrin' or equal approved.	m2	48
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150-175mm diameter bollards

159	2100mm long tanalith treated gum pole planted 800mm deep including excavations, cartaways, concrete base etc.	No	6
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**THE FOLLOWING IN RAINWATER TANKS AND STANDS**

Excavation in earth not exceeding 2m deep:

160	Trenches.	m3	7
161	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	2

Extra over all excavations for carting away:

162	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.	m3	4
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Risk of collapse of excavations:

163	Sides of trench and hole excavations not exceeding 1,5m deep.	m2	25
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Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% MOD AASHTO density:

164	Backfilling to trenches, holes, etc.	m3	3
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Filling supplied by the contractor under strip footing, floors etc.

165	G7 Base course material compacted to 98% Mod AASHTO density	m3	3
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166	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
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Compaction of surfaces

167	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	8
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25 MPa/19mm Concrete:

168	Concrete raft slab on waterproofing.	m3	2
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	<u>Test blocks:</u>				
169	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>				
170	Surface beds, slabs, etc.	m2	8		
	<u>Rough Formwork to Sides:</u>				
171	Edges, risers, ends and reveals not exceeding 300mm high.	m	15		
	<u>Smooth Formwork to Sides:</u>				
172	Edges, risers, ends and reveals exceeding 300mm high.	m2	15		
	<u>Allens Meshco Square Mesh Fabric reinforcement:</u>				
173	Type 617 fabric reinforcement in concrete slabs.	m2	8		
	<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>				
174	One brick walls.	m2	16		
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<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>					
175	One brick walls.	m2	16		
<u>Brickwork reinforcement:</u>					
176	230mm Wide reinforcement built in horizontally.	m	53		
177	Ditto but in foundations.	m	15		
<u>Plastic water tanks etc:</u>					
178	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	2		
179	Hole top of tank for 100mm pipe.	No	2		
<u>THE FOLLOWING IN SECURITY FENCING, ETC</u>					
<u>Site clearance</u>					
180	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	65		
<u>Straining wires, fencing and razor wire:</u>					
181	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	6		
182	3 Strands of galvanised barbed wire tied to standards, posts and eye bolts	m	65		
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183	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	65		
	<u>Posts for 1 800mm high security fence:</u>				
184	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	2		
185	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	2		
186	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		
187	12mm Diameter galvanised mild steel straining eye bolt with hook, threaded portion and two nuts and washers.	No	2		
188	Form 12mm diameter hole through fence post.	No	2		
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