

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:

Item

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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: <u>EXECUTION</u> Preparation for and execution of the works (Clause 15).	Item		
15	F: V: T: Access to the works (Clause 16).	Item		
16	F: V: T: Contract instructions (Clause 17).	Item		
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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: <u>COMPLETION</u> Practical completion (Clause 24).	Item		
24	F: V: T: Works completion (Clause 25).	Item		
25	F: V: T: Final completion (Clause 26).	Item		
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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:

Item

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DISPUTE

Dispute Settlement (Clause 40)

38 F: V: T:

Item

SUBSTITUTE PROVISIONS

State Clauses (Clause 41)

39 F: V: T:

Item

CONTRACT VARIABLES

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

40 F: V: T:

Item

CONTRACTING AND OTHER PARTIES (Clause 42.1)

Employer: The Mvula Trust

Postal Address: 67 Devereux Avenue, Vincent, East
London

Telephone: 043 726 2255

Facsimile: 043 726 5967

Physical address: 67 Devereux Avenue, Vincent, East
London

Principal Agent: The Mvula Trust

Postal Address: 67 Devereux Avenue, Vincent, East
London

Telephone: 043 726 2255

Facsimile: 043 726 5967

Physical address: 67 Devereux Avenue, Vincent, East
London

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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 R 2,000.00 per calendar day.

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

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

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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:

Item

Provisional Bills of Quantities (B2.2) YES

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	Prime Cost Amounts, Budgetary Allowances, Provisional Amounts, etc., contained herein may be omitted or reduced at the Principal Agent's sole discretion and the Contractor shall not be entitled to claim for any loss by way of reduction or omission of any discount, or percentage relating to Prime Cost Amounts, Budgetary Allowances, Provisional Amounts, Provisional Quantities, etc., or loss of profit related thereto.			
43	F: V: T: Availability of construction documentation (B2.3)	Item		
44	F: V: T: Interests of Agents (B2.4)	Item		
45	F: V: T: Priced documents (B2.5)	Item		
46	F: V: T: Tender submission (B2.6) Notwithstanding anything contained in this clause, Tenders shall be valid for a period of 20 (Twenty) weeks from the closing date of tenders.	Item		
47	F: V: T: <u>THE SITE (B3)</u> Defined works area (B3.1) The area of the works to be occupied by the contractor, any restriction on the area and the limit of access or exit will be pointed out to the contractor by the principal agent on handing over of the site. Workmen employed on the site are to be restricted to the immediate area of the site and access thereto. The Tenderer shall make all necessary provision in all rates to take into account these requirements as no claims for extras arising from these matters will be subsequently entertained or admitted.	Item		
48	F: V: T:	Item		
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	Geotechnical investigation (B3.2)		
	A desktop geotechnical report is available upon request.		
49	F: V: T:	Item	
	Inspection of the Site (B3.3)		
50	F: V: T:	Item	
	Existing premises occupied (B3.4)		
51	F: V: T:	Item	
	Previous work - dimensional accuracy (B3.5)		
52	F: V: T:	Item	
	Previous work - defects (B3.6)		
53	F: V: T:	Item	
	Services - known (B3.7)		
54	F: V: T:	Item	
	Services - unknown (B3.8)		
55	F: V: T:	Item	
	Protection of trees (B3.9)		
56	F: V: T:	Item	
	Articles of value (B3.10)		
57	F: V: T:	Item	
	Inspection of adjoining properties (B3.11)		
58	F: V: T:	Item	
	<u>MANAGEMENT OF CONTRACT (B4)</u>		
	Management of the Works (B4.1)		
59	F: V: T:	Item	
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	Programme for the Works (B4.2)		
60	F: V: T:	Item	
	Progress meetings (B4.3)		
61	F: V: T:	Item	
	Technical meetings (B4.4)		
62	F: V: T:	Item	
	<u>SAMPLES AND SHOP DRAWINGS (B5)</u>		
	Samples of materials (B5.1)		
63	F: V: T:	Item	
	Workmanship samples (B5.2)		
64	F: V: T:	Item	
	Shop drawings (B5.3)		
65	F: V: T:	Item	
	<u>TEMPORARY WORKS AND PLANT (B6)</u>		
	Deposits and fees (B6.1)		
66	F: V: T:	Item	
	Enclosure of the works (B6.2)		
	The contractor shall erect, maintain and remove at completion, hoardings, safety screens, barriers, access gates, covered gangways and the like as necessary for the enclosure of the works and elements thereof all for the protection of the public and others.		
67	F: V: T:	Item	
	Advertising (B6.3)		
68	F: V: T:	Item	
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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: <u>TEMPORARY SERVICES (B7)</u> Location (B7.1)	Item	
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	
	<u>PRIME COST AMOUNTS (B8)</u>		
	Responsibility for prime cost amounts (B8.1)		
77	F: V: T:	Item	
	<u>ATTENDANCE ON N/S SUBCONTRACTORS (B9)</u>		
	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	
	<u>FINANCIAL ASPECTS (B10)</u>		
	Statutory taxes, duties and levies (B10.1)		
	Provision is made in the Final Summary of these Bills of Quantities for the inclusion of Value Added Tax (VAT).		
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: <u>GENERAL (B11)</u> Protection of the Works (B11.1)	Item		
86	F: V: T: Protection/isolation of existing/sectionally occupied works (B11.2)	Item		
87	F: V: T: Site security (B11.3)	Item		
88	F: V: T: Notice before covering work (B11.4)	Item		
89	F: V: T: Disturbance (B11.5)	Item		
90	F: V: T: Works cleaning and clearing (B11.6)	Item		
91	F: V: T: Vermin (B11.7)	Item		
92	F: V: T: Overhand work (B11.8)	Item		
93	F: V: T:	Item		
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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:

Item

C2. Trade Names, etc.

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

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

95 F: V: T:

Item

C3. Contractors responsibility

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

96 F: V: T:

Item

C4. Overtime

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	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.			
97	F: V: T: C5. As built drawings The position of construction breaks and the extent of individual concrete pours are to be recorded by the contractor on the structural engineer's drawings and are to be submitted to the principal agent and the structural engineer for their records. Three full sets of as-built drawings shall be submitted to the Principal Agent no later than fourteen days after practical completion.	Item		
98	F: V: T: C6. Construction Instructions 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: a) Construction Instruction Book: 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. Only instructions issued in such book shall be recognised. b) Daily Record Book:	Item		
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	The Contractor shall record in triplicate in a suitable A4 size triplicate book kept at the site, a daily record of work done, all site visits by the Principal Agent and other professional personnel and all events affecting the Works, such as progress, issue of plans, breakdown of machinery, etc. The labour, plant and material on site shall be recorded as well as work performed. Entries must be made by the Contractor and must be signed and forwarded to the Principal Agent for his counter-signature on a daily basis. Copies of these records shall be for the Architect, Quantity Surveyor and Contractor.			
99	F: V: T: C7. Labour record At the end of each week the contractor shall provide the principal agent with a written record, in schedule form, reflecting the number and description of tradesmen and labourers employed by him and all subcontractors on the works each day.	Item		
100	F: V: T: C8. Plant record At the end of each week the contractor shall provide the principal agent with a written record, in schedule form, reflecting the number, type and capacity of all plant, excluding hand tools, currently used on the works.	Item		
101	F: V: T: C9. Encroachment During the course of the building operations, the Contractor shall be held entirely responsible for any encroachment onto any adjoining properties, buildings, etc., or servitudes and the cost of any remedial measures as required by the Principal Agent shall be borne by the Contractor.	Item		
102	F: V: T: C10. Method Statement	Item		
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	The Tenderer shall produce, when required to do so by the Principal Agent, a Method Statement outlining the methods of construction and labour and plant resources that he proposes to use in the execution of the Works. Any approval given or observation made by the Principal Agent shall not relieve the Contractor of his sole responsibility to adopt the methods of construction and to provide the labour and plant resources necessary for the due and proper timeous execution of the Works.			
103	F: V: T: C11. Unauthorised Persons/Workmen on Premises The Contractor shall at all times strictly exclude all unauthorised persons from the Works and the site and shall set up notice boards to that effect. No workmen or labourers (except security guards) are to be allowed under any circumstances to sleep or deposit any kit on the premises. The Contractor must provide any necessary independent shelter or shed required for any labour or watchmen on site, to the approval of the Employer.	Item		
104	F: V: T: C12. Mode of Procedure Notwithstanding anything to the contrary contained herein the Principal Agent at all times reserves the right to direct the order in which the various parts of the Contract are to be executed. The Contractor shall give priority to any individual section or portion of the Works that, in the opinion of the Principal Agent, requires to be expedited. Should it appear, in the Principal Agent's opinion, that work in any area is not being executed in accordance with the requirements of the Contract Programme, the Contractor shall provide additional manpower and resources and shall work additional overtime and do everything else required to bring the work back to programme to the satisfaction of the Principal Agent and to the Contractor's cost.	Item		
105	F: V: T:	Item		
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	C13. Location of Temporary Buildings and Temporary Services The Contractor shall provide all necessary temporary works, including temporary roads, tracks, crossings, hardstanding and services, hoardings, dust screens, tunnelling, etc., required for his own and sub-contractors use during the construction and maintenance period. There is no guarantee given or implied that Site conditions will be such that the Contractor will be able to erect such temporary works, roads, hardhats, offices, stores and temporary accommodation within the site boundaries and it shall be the Contractor's responsibility to adopt whatever measures he deems necessary in this regard and to obtain all necessary permission and pay all costs in connection therewith.			
106	F: V: T: <u>C14. Office accommodation</u> The contractor shall provide, maintain and remove on practical completion air conditioned office accommodation with suitable tables and chairs for meetings to be held on the site. Such offices shall be kept clean and fit for use at all times [12.2.18]	Item		
107	F: V: T: <u>C15. Storage Facilities</u>	Item		
108	The Contractor shall provide a Container for storage of materials.	Item		
109	F: V: T: C16. Removal and Making Good of Temporary Works, etc, on Completion The Contractor shall remove (except where specifically stated otherwise) all temporary works, roads, services and the like used for this contract and shall make good to the entire satisfaction of the Principal Agent any damage resulting therefrom.	Item		
110	F: V: T:	Item		
Carried to Collection			R	
Section 1 Bill No. 1 Preliminaries				

NONYAMEKO PRIMARY SCHOOL
THE MVULA TRUST SAFE PROGRAMME

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**NONYAMEKO PRIMARY SCHOOL
THE MVULA TRUST SAFE PROGRAMME**

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Section 1
Bill No. 2
Health and Safety

<u>OCCUPATIONAL HEALTH AND SAFETY</u>				
<u>General:</u>				
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		
7	Provision of first aid boxes.	No		
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	79	
9	Extra over mesh fence for pedestrian gate size 1.8 x 1,8m high.	No	1	
<u>Provision for Personal Protective Equipment and Protective Clothing:</u>				
10	Reflective vests.	No		
11	Hard hats.	No		
12	Protective foot wear.	No		
13	Ear Plugs.	No		
14	Dust Masks.	No		
<u>Costs of Medical Certificates and Medical Surveillance:</u>				
15	Initial (baseline) medical examinations.	No		
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Bill No. 2				
Health and Safety				

**NONYAMEKO PRIMARY SCHOOL
THE MVULA TRUST SAFE PROGRAMME**

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**NONYAMEKO PRIMARY SCHOOL
THE MVULA TRUST SAFE PROGRAMME**

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Health and Safety

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Health and Safety

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SECTION SUMMARY - PRELIMINARIES

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Item No	Quantity	Rate	Amount
<u>SECTION 2</u>			
<u>BILL No. 1</u>			
<u>DEMOLITIONS</u>			
<u>MODEL PREAMBLES</u>			
The tenderer is referred to the "General Preambles for Trades 2017" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates.			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>View site</u>			
Before submitting his tender the tenderer shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained			
<u>Explosives</u>			
No explosives whatsoever may be used for demolition purposes unless otherwise stated.			
<u>General</u>			
Water supply pipes and other piping in ground that may be encountered and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings to the satisfaction of the principal agent.			
Unless otherwise described all materials are to become the property of the contractor and are to be removed from the site.			
Carried to Collection		R	
Section 2 Bill No. 1 Demolitions			

Removal of asbestos material

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

The following shall apply in respect of asbestos removal

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

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

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

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

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

Carried to Collection

Section 2
Bill No. 1
Demolitions

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DEMOLISHING AND REMOVING

Taking down and removing roofs, floors, panelling, ceilings, partitions, etc:

- | | | | | | |
|---|---|----|------|--|--|
| 1 | Asbestos roof sheeting including timber roof trusses and dispose thereof. | m2 | 95 | | |
| 2 | Provision of a certificate of safe disposal for asbestos. | | Item | | |

SUNDRIES

Desludging

- | | | | | | |
|---|---|----|------|--|--|
| 3 | Clean out septic tank by desludging including removal of all debris and waste including solid waste as per Health and Safety requirements and make good on completion including disposing of all debris and waste at an authorised municipal waste disposal facility. | No | 1 | | |
| 4 | Issue of Certificate of Waste Disposal. | | Item | | |

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Demolitions

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Damage to existing finishes

The Contractor will be held responsible for all damage however caused to existing finishes and fittings, etc. and he must make good all damage at his own expense to the approval of the Principal Agent.

Breaking down, demolition and alteration activities and tasks, hacking off of existing plaster, etc. is to be executed with care so as to prevent damage to remaining floor and wall surfaces and finishes (where these are to be retained). Tenders will be deemed to include allowance for any necessary protection of existing surfaces and structures as may be necessary to effect the above, as the cost of repairing damage to existing surfaces and structures will be solely for the Contractors account

Responsibility for site

The Contractor is to note that upon possession of the site by himself, and extending until practical completion is achieved, he is solely responsible for the site, site security, general upkeep and cleaning of the site and all other responsibilities in maintaining a construction site in conformance with but not limited to, the Construction Regulations 2014, all local by-laws, all user client regulations, and all Client regulations and procedures. Tenderers are therefore urged to study all available material and to investigate the site fully and areas contiguous to the site, in order to determine the range and extent of responsibility. No additional monetary and/or time claims will be entertained in respect of the above

Explosives

No explosives whatsoever may be used for demolition purposes unless otherwise stated

General

The Contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum amount of disturbance to adjoining classroom blocks and their students. He shall provide proper protection of the works and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the Principal Agent

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Section 3
Bill No. 1
Alterations, etc.

R

Water supply pipes and other piping that may be encountered and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings, to the satisfaction of the Principal Agent

Doors, fanlights, fittings, frames, linings, etc which are to be re-used shall be thoroughly overhauled before refixing including taking off, easing and rehanging, cramping up, re-wedging as required and making good cramps, dowels, etc, and easing, oiling, adjusting and repairing ironmongery as necessary, replacing any glass damaged in removal or subsequently and stopping up all nail and screw holes with tinted plastic wood to match timber, unless otherwise described. Re-painting or re-varnishing is given separately

"Taking out and removing doors, windows, etc" implies that the door, etc is to be carefully taken down together with the frame, linings, architraves, window sills, etc complete and where brick lintels occur, it must be supported and propped until the openings are built up or new doors or windows built in position

Prices for taking out and removing doors and frames shall include for removing door stops, cabin hooks, etc. and making good floor and wall finishes to match existing

"Forming openings" for doors or windows, etc implies that the plaster or any other covering is to be hacked off and an opening formed sufficient in size to receive the building in of the frame and cramps, and the forming of new dampproof courses, lintels, sills, etc. After building in of the new frame, the opening is to be built against the frame, plaster or faced brickwork to be made good both sides and reveals and floor screeds prepared for finishings to match existing

"Making good" implies that all necessary repairs are to be made to reinstate articles that may be damaged through the removal or otherwise, and the supplying of any new materials to match existing work, and is to include any necessary repairs to adjacent finishings such as floors, skirtings, plaster, painting, etc and such making good is to match adjoining work in all respects and in all trades

Carried to Collection

Section 3
Bill No. 1
Alterations, etc.

R

The Contractor will be required to take all dimensions affecting the existing buildings on the site and he will be held solely responsible for the accuracy of all such dimensions where used in the manufacture of new items (doors, windows, fittings, etc)

The Contractor to acknowledge that sequencing of the work will be necessary to accommodate the operational aspects of the school. The Contractor to accordingly factor the above requirement in the construction programme and pricing

"Breaking down and removing" walls, etc implies that the wall is to be taken down to the extent shown on the drawings or as may be described and that all necessary shoring is to be provided and allowed for to ensure the safety of the building during the pulling down or until new walls are erected and all portions of the remaining walls where disturbed or affected by the removal are to be made good and left ready for plaster or other finishings as described

Where removal is included in the heading, sub-heading or item description, prices shall be deemed to include for the necessary costs of removal and appropriate disposal of materials including but not limited to labour, transportation and disposal costs. No further claims in this regard will be entertained

"Building up openings" implies that after the removal of any doors, windows or screens that may be described to be taken down, the opening is to be filled up solid (or to the thickness as shown) with new brickwork and is to include all necessary cutting away to form toothings to thoroughly bond to the new work and new finishes to both sides as described.

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.

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Bill No. 1
Alterations, etc.

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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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<u>REMOVAL OF EXISTING WORK</u>					
<u>Taking out and removing doors, windows, etc. and preparing opening to receive new doors, windows, etc. including making good cement plaster on both sides (making good paintwork elsewhere).</u>					
1	Timber single door not exceeding 2.5m2.	No	4		
2	Take out damaged steel door frame not exceeding 2,5m2.	No	2		
<u>Hacking up/off and removing granolithic, screeds, plaster, etc. from concrete or brickwork and preparing surfaces for new screeds, plaster, etc</u>					
3	Average 30mm Screed from floors.	m2	49		
<u>Hack up and remove glazing including preparing surface to receive new glazing:</u>					
4	Take carefully out cracked or broken glass of steel window frames including all putty and prepare frame to receive new glazing	m2	1		
<u>Taking out and removing plumbing pipes including all connectors, tee pieces etc (Provisional):</u>					
5	15-28mm Water piping.	m	35		
6	40-110mm PVC piping.	m	10		
<u>Carefully loosen existing, sanitaryware, taps, traps, etc. and take out and remove complete with brackets, claws, bolts, etc. Block off all piping and repair walls and floors complete:</u>					
7	Ceramic wash hand basin complete including all pillar taps, waste, trap etc.	No	2		
8	Ceramic water closet complete including cistern, pan collar etc.	No	2		
<u>Prepare existing surfaces for new finish</u>					
9	Clean down, etc. existing painted internal and external plastered walls, prepare by removing all loose and flaking paint, dirt, grease and grime to receive new enamel paint finish.	m2	410		
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10	Clean existing facebrick walls externally by applying sodium hypochlorite solution (1 part household bleach to 2 parts water by volume), clean by using high pressure water jet and suitable mechanical methods to remove loose and unsound substrate material, paint, dirt, bleach, algae/fungi residues and any other surface contaminants including the removal of any plant growth and point with approved epoxy patching mortar, to flush square horizontal and vertical joints, in patchwork to walls.	m2	162		
	<u>Repairs to existing:</u>				
11	Service existing steel windows 600mm x 540mm high including replacing damaged glazing putty and handle mechanism to leave in perfect working order.	No	2		
12	Service existing steel door frames 813 x 2032mm high including replacing damaged strike plates and hinges to leave in perfect working order.	No	2		
13	Service existing vitreous china wash hand basin including replacing all washers, checking piping for and repairing leaks and corrosion, to leave clean and in perfect working order.	No	7		
14	Service existing stainless steel flatback Urinal including replacing all washers, checking piping for and repairing leaks and corrosion, to leave clean and in perfect working order.	No	1		
15	Service existing vitreous china WC pan with cistern including replacing all washers, checking piping for and repairing leaks and corrosion, to leave clean and in perfect working order.	No	15		
	<u>Breaking out for and forming openings through brick walls for windows including necessary pre-cast concrete lintels and making good plater on both sides and into reveals and with sloping brick sill on outside and flat sill on inside. (new windows and making good paintwork elsewhere measured)</u>				
16	Opening for window 600 x 600mm high through 220mm brick wall.	No	13		
	<u>Sundries:</u>				
17	Cutting toothings and bonding new brickwork to existing.	m2	1		
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Section 3

Bill No. 1

Alterations, etc.

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BILL No. 2

MASONRY

The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (1999 Edition), the Department of Public Works document No. OW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.

SUPPLEMENTARY PREAMBLES

Proprietary products in descriptions:

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.

Sizes in descriptions:

Where sizes in descriptions are given in brick units, 'one brick' shall represent the length and 'half brick' the width of a brick.

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, and cleaning etc.

Samples, etc:

Rates for brickwork, faced brickwork, etc shall include for all required samples.

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Bill No. 2
Masonry

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Concrete masonry units:

Blocks are to be either solid or hollow modular dense concrete masonry units having a compressive strength of 7 MPa

Wall ties for blockwork:

Wall ties shall be polypropylene "Permaties" complying with BS 76377. Ties for hollow walls shall be of sufficient length to allow not less than 75mm of each end to be built into the blockwork. Ties are to be spaced at intervals of not more than 1m in the horizontal direction and not more than 400mm staggered in the vertical direction except at openings, vertical joints or ends of walls where they are to be placed vertically above each other

Blockwork:

Blockwork shall comply with SABS 0145 "Concrete Masonry Construction"

Surfaces shall have joints raked out to a depth of at least 10mm and pointed on exposed surfaces. Cavities of hollow walls shall be kept free of mortar droppings or other undesirable matter. Every second perpend of the bottom course of the external skin of hollow walls shall be left open as a weep hole.

Standard complementary blocks:

Descriptions of blockwork shall be deemed to include standard complementary blocks such as corner, three-quarter, half and quarter blocks required in the construction of corners, reveals, jambs, ends, etc to solid and hollow walls and for bonding as necessary

BRICKWORK IN SUPERSTRUCTURE

Brickwork of NFP bricks (14 MPa nominal compressive strength) in Class II mortar:

1	Half brick walls in beamfilling.	m2	4
2	One brick walls.	m2	4

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**NONYAMEKO PRIMARY SCHOOL
THE MVULA TRUST SAFE PROGRAMME**

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Masonry

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Masonry

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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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Section 3
Bill No. 4
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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Section 3
Bill No. 4
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	95		
---	-------------------------------------	----	----	--	--

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	27		
---	--	---	----	--	--

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	95		
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**NONYAMEKO PRIMARY SCHOOL
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Roof Coverings Etc.

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Section 3

Bill No. 4

Roof Coverings Etc.

Trusses shall be assembled in truss fabricating jigs with the truss having the proper camber, all tightly clamped together with joints secured using approved connector plates of galvanised steel sheet. Connector plates shall be pressed into the timber simultaneously from both sides of the truss with a hydraulic press capable of exerting such pressure as will ensure complete penetration of the teeth into the timber.

The connector plates shall be of such size as will ensure that the joints so made will adequately withstand the forces exerted on the joints.

In coastal areas connector plates in buildings without ceilings shall be painted with two coats of epoxy tar complying with SABS Specification 801 Type 2, or rust neutralising paint.

Approval of pre-fabricated roofing systems, whether measured as an alternative or not, shall be subject to the following requirements:

(a) The Manufacturer of the pre-fabricated trusses shall hold a certificate of competence issued by the Institute for Timber Construction.

(b) A polyester print, size A1 having a minimum thickness of 0,5mm, shall be submitted by the Contractor to the Regional Representative at an early stage for approval by the Directorate: Structural Engineering Services.

(c) The drawings shall be signed by a Registered Professional Engineer whose name appears on the Departmental panel for structural work.

(d) In the case of systems buildings, approval shall be given with submission of the contract drawings on acceptance of the tender.

The following minimum information shall be shown on the drawings:

- (a) Details of the roof system with the position of the rafters and purlins indicated thereon as well as typical elevations.
- (b) Bracing as recommended by the Institute for Timber Construction.

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- (c) Sizes and grading of the timber components.
- (d) Truss sizes, e.g. height of ridge or angle of pitch.
- (e) Plate sizes for every construction point. (Code numbers only are deemed insufficient).
- (f) Separate connection details for hip, valley and jack rafters.
- (g) Maximum spacing for purlins and bracing to ceilings shall be according to Subclauses 7.6.1 and 7.6.2 and Clauses 7.8, 7.9 and 9.5.
- (h) The type of roof covering as well as the design load. Over and above the supervision undertaken by the Representative / Agent, the Truss Fabricator or his Design Engineer shall inspect the completed roof structure and issue a certificate of confirmation to the Department that:

"The roof structure(s) has (have) been erected in accordance with the Design Engineer's drawings, as accepted by the Department, and the relevant details given in the manual "THE ERECTION AND BRACING OF TIMBER ROOF TRUSSES" issued by the National Timber Research Institute and the Institute for Timber Construction".

Joinery:

Descriptions of frames shall be deemed to include frames, transoms, mullions, rails, etc.

Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes.

Fixing:

All nailing of timber roof trusses, purlins, etc shall be done with galvanised nails. In coastal areas, copper, aluminium or stainless steel nails shall be used.

Items described as "nailed" shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete.

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Carpentry and Joinery

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Where items are described as "bolted" the bolts have been measured elsewhere.

ROOFS ETC

Sawn softwood:

1	38 x 114mm Wall plate.	m	52		
2	50 x 76mm Purlins.	m	109		
3	50 x 76mm Bracing.	m	10		
4	38 x 152mm Rafters.	m	44		

Sundries:

5	TRI FIX or equal approved hurricane clip fixed using 10 x 32mm galvanised clout nails (Provisional).	No	92		
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EAVES, VERGES, ETC

"Everite Nutec" or equal approved fibre cement

6	12 x 225mm Fascia board drilled and brass screwed to rafter feet including galvanised steel H-profile jointing strips, etc.	m	52		
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	7		

DOORS ETC

Approved semi-solid flush doors, with Commercial veneer both sides and with hardwood edge strips, tongued and grooved on to edges:

8	44mm Thick, single flush door, size 813 x 2,032mm high.	No	2		
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Carpentry and Joinery

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Carpentry and Joinery

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<u>SECTION 3</u>			
<u>BILL No. 6</u>			
<u>IRONMONGERY</u>			
<u>MODEL PREAMBLES</u>			
The tenderer is referred to the "General Preambles for Trades 2017" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates.			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Keys/Locks</u>			
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			
<u>Trade Names</u>			
Where trade names are specified other ironmongery approved by the Principal Agent may be used			
<u>Fixing</u>			
Fixing of ironmongery is deemed to be fixed to timber unless otherwise described			
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Section 3 Bill No. 6 Ironmongery			R

HINGES:

- | | | | | |
|---|--|-------|-----|--|
| 1 | 75 x 100mm Brass Medium duty ball bearing HMP butt hinges. | Pairs | 6.0 | |
|---|--|-------|-----|--|

LOCKS

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

HANDLES

- | | | | | |
|---|---|----|---|--|
| 3 | "Dorma DPH301B" or equal approved Stainless Steel Straight Tubular Pull handle flange fixing. | No | 2 | |
|---|---|----|---|--|

SIGN PLATES:

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

- | | | | | |
|---|--|----|---|--|
| 4 | Sign plate plugged and screwed to walls with chromium plated dome headed screws. | No | 2 | |
|---|--|----|---|--|

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Section 3
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Ironmongery

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Ironmongery

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Section 3

Bill No. 6

Ironmongery

Section 3
Bill No. 7
Metalwork

PLASTERING

SUPPLEMENTARY PREAMBLES

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.

SCREEDS

Grind and Prime existing surface with 4 to 5mm thick self-leveling Tal-Screed Master or Equal approved, in strict accordance with manufacturer's instructions, to form an even surface to receive vinyl sheeting (elsewhere measured):

1	On new screeded floors (Provisional).	m2	49
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Section 3 Bill No. 8 Plastering			

BILL No. 9

PLUMBING AND DRAINAGE (PROVISIONAL)

The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (1999 Edition), the Department of Public Works document No. OW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.

SUPPLEMENTARY PREAMBLES

Proprietary products in descriptions:

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.

Copper pipes:

Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-siphon pipes, capillary solder fittings and compression fittings shall be 'Cobra Watertech' type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.

Chasing:

Chasing pipes into new walls shall be regarded as "building in" and is not measured separately. The cost of chasing, wrapping in suitable bown paper and making good shall be included in the rates for pipes.

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Section 3
Bill No. 9
Plumbing and Drainage

Holes for pipes through new walls:

No allowance for holes and drilling for pipes through new walls has been made in these bills of quantities, the price for all holes and making good shall be deemed to be included in the description of pipes.

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.

Description of pipes laid in trenches:

Descriptions of pipes laid in trenches shall be deemed to include for carting away all surplus excavated material to a dumping site located by the contractor.

Excavations:

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'.

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 1200DB: Earthworks (Pipe trenches) Clause 5.7.2 will only be applicable if authorised by the Engineer in writing.

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Plumbing and Drainage

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Flush pans:

Flush pans shall have straight or side outlets and 'P' or 'S' traps as necessary.

Stainless steel basins, sinks, wash troughs, urinals, etc:

Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.

Fixing:

Descriptions of wall mounted, floor standing, drop-in, etc type sanitary fittings shall be deemed to include fixing in position and all fixing accessories.

Descriptions of proprietary items shall include fixing in position and all fixing accessories as specified by the manufacturer.

Waste unions:

Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.

Sleeve pipes:

Electrical sleeve pipes to be Class 34 and are to include for draw wires.

RAINWATER DISPOSAL (PROVISIONAL):

Watertite or equal approved Aluminium Gutters and Downpipes:

1	125 x 85 x 0.6mm Ogee domestic gutters including gutter brackets at 600mm centres.	m	26
2	Extra over eaves gutter for stopped end.	No	1
3	Extra over eaves gutter for outlet for 100 x 75mm aluminium downpipe.	No	1
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	12
5	Extra over rainwater downpipe for bends.	No	1

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SANITARY FITTINGS

Vitreous china:

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 | 2 |
| 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 | 2 |

WASTE UNIONS ETC

Waste unions etc:

- | | | | |
|---|--|----|---|
| 8 | 32mm Chrome plated anti theft plug (code 309-32) with spindle basin waste union. | No | 2 |
|---|--|----|---|

TRAPS ETC

Traps etc:

- | | | | |
|---|--|----|---|
| 9 | 40mm Chrome plated deep seal bottle trap with outlet for 40mm PVC (code 365/40). | No | 2 |
|---|--|----|---|

TAPS, VALVES, ETC

Solid Cast brass taps, valves, etc:

- | | | | |
|----|--|----|---|
| 10 | "Cobra KM2-200" or other approved 15mm chrome plated metered bib tap with non-hold open feature and flow controller. | No | 2 |
|----|--|----|---|

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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:

18	15mm Pipe building into walls.	m	20
19	22mm Ditto.	m	15

Extra over polycop pipes for compression fittings:

20	15mm Fittings.	No	14
21	22mm Fittings.	No	12

Testing:

22	Testing water supply pipe system.	Item	
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Plumbing and Drainage

GLAZING

SUPPLEMENTARY PREAMBLES

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.

GLAZING TO STEEL WITH PUTTY

6,38mm Normal strength clear laminated safety glass:

1	Panes exceeding 0,1m ² and not exceeding 0,5m ² .	m ²	1		
				R	

3	Frames, skirtings, rails, etc not exceeding 300mm girth. <u>2 - 4mm Epoxy resin screed floor coating, laid to manufacturers specifications. Colour specification as per Architects instruction.</u>	m	10		
4	On concrete floated or screeded floors (Provisional). <u>RENOVATIONS</u> <u>ON PLASTER, etc</u> <u>Scrub surface with degreaser, rinse thoroughly with tap water, and apply one coat sealer and two coats two coats premium quality acrylic paint interior use on:</u>	m2	49		
5	Interior toilet walls. <u>ON METAL</u> <u>Sand down thoroughly existing paint, prepare and paint one coat Zinc Chromate primer, one universal undercoat and two coats high gloss enamel paint on :</u>	m2	410		
6	On Door frames.	m2	10		
7	Existing steel windows with glazing bars (One side measured).	m2	3		
8	Exterior gates, grilles, burglar screens, balustrades, etc. (both sides measured over the full flat area). <u>ON TIMBER</u> <u>Strip old flaking paint, prepare surfaces and clean with degreaser, treat defects with all purpose adhesive filler, and prepare for and paint 1 universal undercoat and 2 coats quality universal enamel:</u>	m2	10		
9	On doors (all surfaces measured).	m2	4		
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Section 3 Bill No. 11 Paintwork					

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Bill No. 11

Paintwork

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Paintwork

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Item No	Labour Ref		Unit	Quantity	Rate	Amount
<u>SECTION 3</u>						
<u>BILL No. 12</u>						
<u>EXTERNAL WORK (PROVISIONAL)</u>						
The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (1999 Edition), the Department of Public Works document No. OW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.						
<u>SUPPLEMENTARY PREAMBLES</u>						
<u>Proprietary products in descriptions:</u>						
Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior approval by the Principal Agent.						
<u>THE FOLLOWING IN STORMWATER APRONS, CHANNELS, ETC.</u>						
<u>STORMWATER APRONS</u>						
	85	<u>Excavation not exceeding 2m deep</u>				
1	85	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	41		
	86	<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>				
2	86	Off site to a dumping site to be found by the Contractor.	m3	41		
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Section 3 Bill No. 12 External Work						

	<u>Filling supplied by the contractor under floors, aprons, etc</u>				
3	G7 Base course material compacted to 98% Mod AASHTO density	m3	13		
4	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	13		
	<u>Coarse river sand filling supplied by the contractor:</u>				
5	Under floors etc.	m3	4		
	<u>Compaction of surfaces:</u>				
6	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	89		
	<u>Prescribed density tests on filling:</u>				
7	In-situ dry density test.	No	1		
86	<u>Reinforced 25Mpa/19mm Concrete:</u>				
8	Surface beds cast in panels on waterproofing.	m3	9		
9	Edge thickening	m3	1		
86	<u>Finishing top surfaces of concrete smooth with a wood float:</u>				
10	Surface beds, slabs, etc to falls and currents.	m2	89		
	<u>Test blocks:</u>				
11	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	1		
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	External Work				

	<u>Expansion joints with bitumen impregnated softboard between vertical concrete or brick surfaces:</u>				
12	12mm Joints not exceeding 300mm high.	m	10		
	<u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u>				
13	10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary.	m	44		
87	<u>Fabric reinforcement:</u>				
14	REF. 395 fabric reinforcement in concrete surface beds, slabs, etc.	m2	112		
	<u>Waterproofing under Surface beds</u>				
15	350 Micron USB orange polyethylene dampproof membrane in accordance with SABS 952 Type C laid on sand bed (elsewhere measured).	m2	89		
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		<u>STORMWATER CHANNELS</u>			
	85	<u>Excavation not exceeding 2m deep</u>			
16	85	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	24	
	86	<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>			
17	86	Off site to a dumping site to be found by the Contractor.	m3	24	
		<u>Filling supplied by the contractor under channels</u>			
18		Oversite of G7-Selected Layer compacted to 98% Mod AASHTO density	m3	8	
19		Over site of G5-Selected material compacted to 95% Mod AASHTO density.	m3	8	
		<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>			
20		900 x 150mm thick 80mm deep 'V' channel cast in panels not exceeding 3m including all formwork, reinforcement, expansion joints, smooth finishing to top of concrete surface etc.	m	59	
21		Extra for an angle	No	8	
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Extra for forming 2000mm x 150mm thick spreader with 150mm x 300mm Deep concrete cut off wall at furthest end and 150 x 150 x 150 concrete blocks set into in-situ concrete invert slab (energy dissipaters).

No

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		<u>ACCESS RAMPS</u>			
	85	<u>Excavation not exceeding 2m deep</u>			
23	85	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	4	
	86	<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>			
24	86	Off site to a dumping site to be found by the Contractor.	m3	2	
		<u>Filling supplied by the contractor under floors, aprons, etc</u>			
25		Oversite of G7-Selected Layer compacted to 98% Mod AASHTO density	m3	2	
26		Over site of G5-Selected material compacted to 95% Mod AASHTO density.	m3	2	
		<u>Coarse river sand filling supplied by the contractor:</u>			
27		Under floors etc.	m3	1	
		<u>Compaction of surfaces:</u>			
28		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	
		<u>Prescribed density tests on filling:</u>			
29		In-situ dry density test.	No	1	
	86	<u>Reinforced 25Mpa/19mm Concrete:</u>			
30		Ramps, Landings, etc.	m3	1	
		Carried to Collection			
		Section 3 Bill No. 12 External Work			

86	<u>Finishing top surfaces of concrete smooth with a wood float:</u>				
31	Surface beds, slabs, etc to falls and currents.	m2	10		
	<u>Test blocks:</u>				
32	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	1		
	<u>Expansion joints with bitumen impregnated softboard between vertical concrete or brick surfaces:</u>				
33	12mm Joints not exceeding 300mm high.	m	2		
	<u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u>				
34	10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary.	m	2		
87	<u>Fabric reinforcement:</u>				
35	REF. 395 fabric reinforcement in concrete surface beds, slabs, etc.	m2	8		
	<u>Waterproofing under Surface beds</u>				
36	350 Micron USB orange polyethylene dampproof membrane in accordance with SABS 952 Type C laid on sand bed (elsewhere measured).	m2	8		
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	<u>SCREEN WALL</u>				
	<u>Excavation in earth not exceeding 2m deep:</u>				
37	Trenches.	m3	5		
	<u>Extra over all excavations for carting away:</u>				
38	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.	m3	5		
	<u>Risk of collapse of excavations:</u>				
39	Sides of trench and hole excavations not exceeding 1,5m deep.	m2	16		
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% MOD AASHTO density:</u>				
40	Backfilling to trenches, holes, etc.	m3	2		
	<u>Filling supplied by the contractor under strip footing</u>				
41	G7 Base course material compacted to 98% Mod AASHTO density	m3	1		
42	Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.	m3	1		
	<u>Compaction of surfaces</u>				
43	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	6		
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44	25 Mpa/19mm Concrete			
	Strip footings.	m3	2	
45	<u>Test blocks:</u>			
	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	1	
46	<u>Reinforcement (Provisional)</u>			
	High tensile steel reinforcement bars to structural concrete work.	t	0.01	
47	<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>			
	One brick walls.	m2	6	
48	<u>BRICKWORK IN SUPERSTRUCTURE</u>			
	<u>Brickwork reinforcement:</u>			
49	230mm Wide reinforcement built in horizontally.	m	80	
50	Ditto but in foundations.	m	22	
	<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>			
	One brickwall faced on both sides.	m2	20	
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51	<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> 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	10		
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Dewatering of excavations:

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

Density testing on filling:

Rates for filling, etc. shall include for all density and soil type testing to prove that the specified compaction is achieved. When additional testing is done on instruction of the Principal Agent and these tests are successful, they will be paid for additionally.

Imported fill:

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

Classification of excavated material

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

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

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

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Earthworks (Provisional)

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EXCAVATION OTHER THAN BULK

Excavation in earth not exceeding 2m deep:

1	Trenches. A6 : 6	m3	6
2	Reducing levels and depositing excavated material in prescribed stock piles on site. A6 : 11	m3	11

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

3	Soft rock. A6 : 0.0	m3	
4	Hard rock. A6 : 0.0	m3	

Extra over all excavations for carting away:

5	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor. A6 : 17	m3	17
---	--	----	----

Risk of collapse of excavations:

6	Sides of trench and hole excavations not exceeding 1,5m deep. A6 : 28	m2	28
---	--	----	----

Keeping excavations free of water:

7	Keeping excavations free from mud and all water including subterranean sources.	Item	
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Section 4
Bill No. 1
Earthworks (Provisional)

EARTH FILLING, ETC.

Earth filling obtained from the excavations and / or prescribed stock piles on site (minimum G7 tested material) compacted to 93% Mod. AASHTO density:

8	Under floors, etc. A6 : 4	m3	4		
---	------------------------------	----	---	--	--

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.

9	Under floors, etc. A6 : 4	m3	4		
---	------------------------------	----	---	--	--

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.

10	Under floors, etc. A6 : 13	m3	13		
----	-------------------------------	----	----	--	--

Coarse river sand filling supplied by the contractor:

11	Under floors etc. A6 : 2	m3	2		
----	-----------------------------	----	---	--	--

Compaction of surfaces:

12	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. A6 : 28	m2	28		
----	---	----	----	--	--

Prescribed density tests on filling:

13	Allow for compaction tests by an approved laboratory to determine density of filling material. A6 : 8	No	8		
----	--	----	---	--	--

SOIL POISONING

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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:**

- 14 Under floors, etc., including forming and poisoning
shallow furrows against foundation walls, etc., filling in
furrows and ramming.

A6 : 28

m2

28

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Item No	Quantity	Rate	Amount
<u>SECTION 4</u>			
<u>BILL No. 2</u>			
<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>			
<u>Quantity Split:</u>			
Note that the total quantity per each item is split into the various buildings and appears below each description as follows:			
A6 - DWG 07 - Grade R Ablution			
<u>MODEL PREAMBLES</u>			
The tenderer is referred to the "General Preambles for Trades 2017" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates.			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Proprietary products in descriptions:</u>			
Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior approval by the Principal Agent.			
<u>Cost of tests:</u>			
The costs of making, storing and testing of concrete test cubes as required under clause 7 'Tests' of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the Architect. The testing shall be undertaken by an independent firm or institution nominated by the Contractor to the approval of the Architect. (Test cubes are measured separately).			
Carried to Collection			R
Section 4			
Bill No. 2			
Concrete, Formwork and Reinforcement			

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.

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Concrete, Formwork and Reinforcement

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**UNREINFORCED CONCRETE CAST AGAINST
EXCAVATED SURFACES**

15Mpa/19mm Concrete

- | | | | |
|---|--|----|---|
| 1 | Surface blinding under footings and bases.
A6 : 1 | m3 | 1 |
|---|--|----|---|

**REINFORCED CONCRETE CAST AGAINST
EXCAVATED SURFACES**

30MPa/20mm concrete:

- | | | | |
|---|--|----|---|
| 2 | Concrete raft slab on waterproofing.
A6 : 8 | m3 | 8 |
|---|--|----|---|

TEST BLOCKS

Test blocks:

- | | | | |
|---|--|----|---|
| 3 | Making and testing of 150x150x150mm concrete
strength test cubes (Provisional).
A6 : 6 | No | 6 |
|---|--|----|---|

FINISHING TOP SURFACE OF CONCRETE

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

- | | | | |
|---|--|----|----|
| 4 | Surface beds, suspended slabs, ground slabs, etc.
A6 : 28 | m2 | 28 |
|---|--|----|----|

**ROUGH FORMWORK (DEGREE OF ACCURACY
III)**

Rough Formwork to Sides:

- | | | | |
|---|---|---|----|
| 5 | Edges, risers, ends and reveals not exceeding 300mm
high or wide.
A6 : 23 | m | 23 |
|---|---|---|----|

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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. A6 : 12	m2	12		
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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. A6 : 33	m	33		
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Saw cut joints:

8	6 x 40mm Saw cut joints in top of concrete (Provisional). A6 : 20	m	20		
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REINFORCEMENT (PROVISIONAL)

9	High tensile steel reinforcement bars to structural concrete work. A6 : 0.76	t	0.76		
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Fabric reinforcement:

10	REF. 617 fabric reinforcement in concrete surface beds, raft slabs etc. A6 : 28	m2	28		
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Bill No. 2

Concrete, Formwork and Reinforcement

Item No		Quantity	Rate	Amount
	<u>SECTION 4</u> <u>BILL No. 3</u> <u>MASONRY</u> <u>Quantity Split:</u> Note that the total quantity per each item is split into the various buildings and appears below each description as follows: A6 - DWG 07 - Grade R Ablution <u>MODEL PREAMBLES</u> The tenderer is referred to the "General Preambles for Trades 2017" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates. All references to SABS shall be deemed to be the relevant SANS specification <u>SUPPLEMENTARY PREAMBLES</u> <u>BRICKWORK</u> <u>Sizes in descriptions</u> Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick <u>Hollow walls etc</u> Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole. Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats "Brixal" bitumen emulsion waterproofing coating. <u>Face bricks</u> Bricks shall be ordered timeously to obtain uniformity in size and colour			
	Carried to Collection		R	
	Section 4 Bill No. 3 Masonry			

Pointing

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

Samples

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

Trade names

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

Carried to Collection

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Section 4
Bill No. 3
Masonry

BRICKWORK AND BLOCKWORK SUNDRIES

Galvanized brickwork reinforcement

1	115mm Wide reinforcement built in horizontally A6 : 53	m	53		
2	230mm Wide reinforcement built in horizontally. A6 : 283	m	283		

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. A6 : 26	No	26		
---	--	----	----	--	--

Air bricks etc:

4	229 x 152mm terracotta clay vermin proof air brick A6 : 12	No	12		
---	---	----	----	--	--

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

5	To walls (Provisional). A6 : 74	m2	74		
---	------------------------------------	----	----	--	--

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	
---	--	--	--	------	--

Turning pieces to lintels etc

7	230mm Wide turning pieces A6 : 12	m	12		
---	--------------------------------------	---	----	--	--

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Section 4
Bill No. 3
Masonry

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. A6 : 6	m2	6
9	One brickwall pointed on both sides. A6 : 87	m2	87
10	Half brickwall pointed on both sides. A6 : 16	m2	16
11	Fair raking cutting. A6 : 9	m	9

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. A6 : 6	m	6
13	220mm Wide header course to top of one brick wall bedded and jointed in cement mortar and pointed on both sides. A6 : 7	m	7

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Masonry

**NONYAMEKO PRIMARY SCHOOL
THE MVULA TRUST SAFE PROGRAMME**

Section 4

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Masonry

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Section 4
Bill No. 4
Waterproofing

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.
A6 : 28 | m2 | 28 | |
|---|--|----|----|--|

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

- | | | | | |
|---|------------------------------------|----|---|--|
| 2 | Below walls, sills, etc.
A6 : 3 | m2 | 3 | |
|---|------------------------------------|----|---|--|

JOINT SEALANTS ETC

Clear Neutral silicone sealant:

- | | | | | |
|---|---|---|----|--|
| 3 | In joint sealing and pointing all round external window and door frames.
A6 : 45 | m | 45 | |
|---|---|---|----|--|

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).
A6 : 20 | m | 20 | |
|---|--|---|----|--|

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Waterproofing

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Waterproofing

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Section 4

Bill No. 4

Waterproofing

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

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

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Roof Coverings Etc.

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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

Section 4
Bill No. 5
Roof Coverings Etc.

R

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.
A6 : 39 | m2 | 39 |
|---|--|----|----|

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.
A6 : 9 | m | 9 |
|---|--|---|---|

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
A6 : 39 | m2 | 39 |
|---|---|----|----|

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Roof Coverings Etc.

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Roof Coverings Etc.

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Roof Coverings Etc.

All nailing of timber roof rafters, purlins, etc shall be done with galvanised nails. In coastal areas, copper, aluminium or stainless steel nails shall be used.

R

Section 4
Bill No. 6
Carpentry and Joinery

CARPENTRY

Sawn softwood:

1	38 x 114mm Wall plate. A6 : 17	m	17		
2	50 x 76mm Purlins. A6 : 70	m	70		
3	50 x 76mm Bracing. A6 : 12	m	12		
4	38 x 152mm Rafters. A6 : 49	m	49		

Sundries:

5	TRI FIX or equal approved hurricane clip fixed using 10 x 32mm galvanised clout nails (Provisional). A6 : 40	No	40		
---	---	----	----	--	--

EAVES, VERGES, ETC

"Everite Nutec" or equal approved fibre cement

6	12 x 225mm Fascia board drilled and brass screwed to rafter feet including galvanised steel H-profile jointing strips, etc. A6 : 17	m	17		
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. A6 : 9	m	9		

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Section 4
Bill No. 6
Carpentry and Joinery

DOORS ETC

SANS Approved meranti:

8	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 (D1). A6 : 1	No	1
9	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). A6 : 1	No	1
10	44mm Braced and ledged door size 862 x 1000mm Type (D3). A6 : 4	No	4

FRAMED FRAMES, ETC

Meranti Frames bolted to wall with expanding masonry bolts - four per style including quadrant beads on both sides:

11	70 x 108mm rebated meranti frame . A6 : 16	m	16
----	---	---	----

Meranti Frames fixed against brickwall using galvanised steel lugs bolted with expanding masonry bolts - four per style including quadrant beads on both sides:

12	70 x 108mm rebated meranti frame . A6 : 5	m	5
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Carpentry and Joinery

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Carpentry and Joinery

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Section 4

Bill No. 6

Carpentry and Joinery

R

HINGES:

- | | | | |
|---|--|-------|-----|
| 1 | 75 x 100mm Brass Medium duty ball bearing HMP butt hinges.
A6 : 6.0 | Pairs | 6.0 |
|---|--|-------|-----|

LOCKS

- | | | | |
|---|---|----|---|
| 2 | "UNION 2277-78SS" or equal approved three lever sash mortice lockset.
A6 : 2 | No | 2 |
| 3 | "UNION w/c indicator bolt satin chrome - Code CZ80941SC
A6 : 4 | No | 4 |

HANDLES

- | | | | |
|---|---|----|---|
| 4 | "Dorma DPH301B" or equal approved Stainless Steel Straight Tubular Pull handle flange fixing.
A6 : 6 | No | 6 |
|---|---|----|---|

Sundries:

- | | | | |
|---|---|----|---|
| 5 | Stainless Steel Hat and coat hook, code DHC - SS-030-A or equal approved.
A6 : 4 | No | 4 |
| 6 | 38mm Diameter black rubber door stop plugged and screwed to wall.
A6 : 6 | No | 6 |

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.
A6 : 2 | No | 2 |
|---|--|----|---|

Carried to Collection

Section 4
Bill No. 7
Ironmongery

R

SUNDRIES

Halcast or equal approved"

- 8 Thiefproof toilet roll holder plugged.
A6 : 5

No

5

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.
A6 : 1

No

1

- 10 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.
A6 : 1

No

1

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Bill No. 7
Ironmongery

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Ironmongery

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Section 4

Bill No. 7

Ironmongery

Item No		Quantity	Rate	Amount
	<u>SECTION 4</u> <u>BILL No. 8</u> <u>METALWORK</u> <u>Quantity Split:</u> Note that the total quantity per each item is split into the various buildings and appears below each description as follows: A6 - DWG 07 - Grade R Ablution <u>MODEL PREAMBLES</u> The tenderer is referred to the "General Preambles for Trades 2017" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates. <u>SUPPLEMENTARY PREAMBLES</u> The Contractor is to check and verify on site that the item specified in the BoQ matches existing prior to placing orders. Additional costs will not be borne by the client for items that do not match existing and are not approved by the Principal Agent <u>ALUMINIUM WINDOWS</u> 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.			
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	Section 4 Bill No. 8 Metalwork			

1	<u>Natural anodised aluminium windows glazed with 6.38mm safety laminated glass and plugged to brickwork:</u> Window Size 600 x 600mm high complete, including ironmongery etc, all as per Window Type W01. A6 : 10	No	10	
	<u>HOT DIP GALVANIZED STEEL GATES</u> <u>Note: The contractor is to check on site measurements before placing of order.</u> <u>Security Gate consisting of 25 x 25 x 2mm galvanised mild steel frame with 12mm galvanised mild steel square bars infill placed at 109mm centres, hung with one pair of galvanised mild steel hinges including locks, handles, ironmongery complete and fixed to brickwork:</u>			
2	Security gate size 900 x 2050mm high (G1). A6 : 1	No	1	
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	Section 4 Bill No. 8 Metalwork			

Section 4

Bill No. 8

Metalwork

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Section 4

Bill No. 8

Metalwork

Item No		Quantity	Rate	Amount
	<u>SECTION 4</u>			
	<u>BILL No. 9</u>			
	<u>PLASTERING</u>			
	<u>Quantity Split:</u>			
	Note that the total quantity per each item is split into the various buildings and appears below each description as follows:			
	A6 - DWG 07 - Grade R Ablution			
	<u>MODEL PREAMBLES</u>			
	The tenderer is referred to the "General Preambles for Trades 2017" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates.			
	<u>SCREEDS</u>			
	<u>Untinted granolithic, on concrete:</u>			
1	30mm Thick on floors and landings. A6 : 28	m2	28	
	<u>Skirtings</u>			
2	75mm High coved granolithic skirting. A6 : 32	m	32	
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	Section 4			
	Bill No. 9			
	Plastering			

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. A6 : 4	No	4
7	15mm Ball-o-stop valve. A6 : 4	No	4
8	22mm Non Return valve. A6 : 5	No	5

WASTE UNIONS ETC

Outlets, traps, etc:

9	40mm Code 316 chrome plated unslotted waste outlet. A6 : 4	No	4
10	40mm Rubber "P" or "S" trap A6 : 4	No	4

Carried to Collection

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Section 4
Bill No. 10
Plumbing and Drainage (Provisional)

SANITARY FITTINGS

Vaal or equal approved:

11	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. A6 : 4	No	4
12	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] A6 : 1	No	1
13	Junior vitreous china low level suite colour White (Code: 751358), comprising 104° outlet washdown pan (Code: 751301) with matching 6 litre front single flush cistern (Code: 712034) including lid, fitments and flushpipe and Junior double flap wooden seat (Code: 8518Z0). A6 : 4	No	4

SANITARY PLUMBING

PVC waste or vent pipes and fittings:

14	50mm Waste pipe. A6 : 30	m	30
15	110mm Pipe. A6 : 5	m	5
16	110mm Pipe and laying in ground or filling not exceeding 2m deep including excavation, filling in and ramming. A6 : 25	m	25

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Section 4
Bill No. 10
Plumbing and Drainage (Provisional)

	<u>uPVC gulleys</u>				
17	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. A6 : 1	No	1		
	<u>Extra for:</u>				
18	50mm Bend. A6 : 10	No	10		
19	50mm Access bend. A6 : 3	No	3		
20	100mm Access bend. A6 : 5	No	5		
	<u>WATER SUPPLIES</u>				
	<u>Polycop pipes:</u>				
	Pipes shall be class 10.				
	<u>Fixing of pipes</u>				
	Unless specifically otherwise stated, descriptions of pipes shall be deemed to include for fixing to walls etc. casting in, building in or suspending not exceeding 1m below suspension level				
	<u>Polycop pipes chased in walls:</u>				
	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.				
	<u>Reducing fittings:</u>				
	Where fittings have reducing ends or branches they are described as 'reducing'. In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the Contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained.				
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Bill No. 10

Plumbing and Drainage (Provisional)

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Bill No. 10

Plumbing and Drainage (Provisional)

Quantity Split:

A6 - DWG 07 - Grade R Ablution

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

Trade Names

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

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PAINTWORK ETC TO NEW WORK

ON WOOD

Stop, sand down and prepare wood surfaces and apply one coat wood primer, one undercoat and two coats eggshell enamel paint as per Plascon or equal approved:

1	On doors	m2	15	
	A6 : 15			

2	On door frames	m2	5	
	A6 : 5			

Prepare and apply two coats carbolenium on:

3	On exposed timbers.	m2	13	
	A6 : 13			

ON FIBRE-CEMENT

Prepare and apply two coats pure acrylic roof paint on:

4	On fascias and barge boards.	m2	9	
	A6 : 9			

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Paintwork

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Bill No. 11

Paintwork

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<u>SECTION No. 5</u>			
<u>BILL No. 1</u>			
<u>EXTERNAL WORKS (PROVISIONAL)</u>			
<u>MODEL PREAMBLES</u>			
The tenderer is referred to the "General Preambles for Trades 2017" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates.			
<u>THE FOLLOWING IN PLATFORMS, ETC.</u>			
<u>Site Clearance, ETC</u>			
1	Allow for clearing the area of the site to be built upon of all grass, weeds, shrubs, trees with trunks not exceeding 200mm girth, debris, etc., including grubbing up all roots, scoffling up as required and cart away all vegetation and debris.	m2	200
2	Stripping average 200mm thick layer of topsoil and stockpiling on site.	m2	200
<u>Open face excavation not exceeding 2m deep:</u>			
3	Excavate to cut in open face, not exceeding 2m deep to reduce levels and grade to fill and compact to 93% mod AASHTO density at optimum moisture content.	m3	120
<u>Extra over bulk excavation in earth for excavation in:</u>			
4	Soft rock.	m3	24
5	Hard rock.	m3	12
<u>Extra over all excavations for carting away:</u>			
6	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor.	m3	54
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Section 5 Bill No. 1 External Works			

	<u>Earth filling from excavated material</u>				
7	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	18		
	<u>Filling supplied by the contractor to form platforms</u>				
8	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	54		
	<u>Surface Preparation:</u>				
9	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	200		
	<u>Prescribed density tests on filling:</u>				
10	Modified AASHTO Density test.	No	3		
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External Works					

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External Works

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WATER RETICULATION

WATER SUPPLY IN GROUND

HDPE 100PN 12.5 pressure pipes:

11	32mm pipes laid in depths not exceeding 1m including excavation, bedding, backfilling, compaction and disposal of surplus material.	m	15
12	40mm Pipes laid in depths not exceeding 1m including excavation, bedding, backfilling, compaction and disposal of surplus material.	m	10

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

13	32mm Bend.	No	8
14	32mm Adaptor.	No	8
15	40mm Bend.	No	6
16	32mm Tee.	No	2
17	40mm Tee.	No	2

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Section 5
Bill No. 1
External Works

**THE FOLLOWING IN STORMWATER APRONS,
CHANNELS ETC.**

STORMWATER APRONS

Excavation not exceeding 2m deep

18	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	7	
----	--	----	---	--

Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):

19	Off site to a dumping site to be found by the Contractor.	m3	7	
----	---	----	---	--

Filling supplied by the contractor under floors, aprons, etc

20	G7 Base course material compacted to 98% Mod AASHTO density	m3	2	
----	---	----	---	--

21	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	
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Coarse river sand filling supplied by the contractor:

22	Under floors etc.	m3	1	
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Compaction of surfaces:

23	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density.	m2	15	
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Prescribed density tests on filling:

24	In-situ dry density test.	No	3	
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Reinforced 25Mpa/19mm Concrete:

25	Surface beds cast in panels on waterproofing.	m3	2	
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26	Edge thickening	m3	0.2	
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	<u>Finishing top surfaces of concrete smooth with a wood float:</u>				
27	Surface beds, slabs, etc to falls and currents.	m2	15		
	<u>Test blocks:</u>				
28	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	3		
	<u>Expansion joints with bitumen impregnated softboard between vertical concrete or brick surfaces:</u>				
29	12mm Joints not exceeding 300mm high.	m	2		
	<u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u>				
30	10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary.	m	8		
	<u>Fabric reinforcement:</u>				
31	REF. 395 fabric reinforcement in concrete surface beds, slabs, etc.	m2	19		
	<u>Waterproofing under Surface beds</u>				
32	350 Micron USB orange polyethylene dampproof membrane in accordance with SABS 952 Type C laid on sand bed (elsewhere measured).	m2	15		
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<u>STORMWATER CHANNELS</u>					
	<u>Excavation not exceeding 2m deep</u>				
33	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	16		
	<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>				
34	Off site to a dumping site to be found by the Contractor.	m3	16		
	<u>Filling supplied by the contractor under channels</u>				
35	Oversite of G7-Selected Layer compacted to 98% Mod AASHTO density	m3	5		
36	Over site of G5-Selected material 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>				
37	900 x 150mm thick 80mm deep 'V' channel cast in panels not exceeding 3m including all formwork, reinforcement, expansion joints, smooth finishing to top of concrete surface etc.	m	34		
38	700 x 150mm thick 80mm deep 'V' channel, 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	8		
39	Extra for 700mm angle	No	6		
40	Extra for forming 2000mm x 150mm thick spreader with 150mm x 300mm Deep concrete cut off wall at furthest end and 150 x 150 x 150 concrete blocks set into in-situ concrete invert slab (energy dissipaters).	No	1		
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SEWER RETICULATION

MODEL PREAMBLES

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

SUPPLEMENTARY PREAMBLES

uPVC pipes and fittings

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.

Excavations:

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.

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.

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<u>Descriptions of pipes laid in trenches:</u>					
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					
<u>Descriptions of catchpits, junction boxes, manholes, etc:</u>					
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.					
<u>Density testing on filling:</u>					
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.					
<u>BULK SEWER RETICULATION</u>					
<u>Heavy duty (Class 34) PVC-U sewer and drain pipes</u>					
41	110mm Pipes laid in and including trenches not exceeding 1m deep	m	18		
42	160mm Pipes laid in and including trenches not exceeding 1m deep	m	31		
43	Ditto, but laid in and including trenches exceeding 1m but not exceeding 2m deep	m	3		
<u>Extra over heavy duty (Class 34) PVC-U sewer and drain pipes for fittings</u>					
44	110mm Bend	No	5		
45	160mm Bend	No	1		
46	110mm Rodding eye	No	1		
47	110 x 45mm Reducing junction	No	1		
48	160 x 110mm Reducing junction	No	4		
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<u>Connection</u>				
49	Allow for connecting to sewer drainage system		Item	
<u>Testing:</u>				
50	Testing drainage system.		Item	
<u>THE FOLLOWING IN WALKWAYS</u>				
<u>Excavation not exceeding 2m deep</u>				
51	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>				
52	Off site to a dumping site to be found by the Contractor.	m3	12	
<u>Filling supplied by the contractor under walkways</u>				
53	Oversite of G7-Selected Layer compacted to 98% Mod AASHTO density	m3	6	
54	Over site of G5-Selected Layer compacted to 95% Mod AASHTO density.	m3	6	
<u>Rip and Re - compact insitu material on site compacted to 93% Mod. AASHTO density:</u>				
55	Under floors,etc.	m2	40	
<u>Prescribed density tests on filling:</u>				
56	In-situ dry density test.	No	3	
<u>Approved brand of anti-termite soil poison applied by a Registered Pest Control Company and guaranteed against termite infestation for ten years:</u>				
57	Treat filling under paving with 'Chlordane Heptachlor Aldrin' or equal approved.	m2	40	
<u>Concrete Paving Blocks</u>				
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THE FOLLOWING IN DISABLED ACCESS

ACCESS RAMPS

Excavation not exceeding 2m deep

61	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	7		
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Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):

62	Off site to a dumping site to be found by the Contractor.	m3	7		
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Filling supplied by the contractor under floors, aprons, etc

63	Oversite of G7-Selected Layer compacted to 98% Mod AASHTO density	m3	3		
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64	Over site of G5-Selected material compacted to 95% Mod AASHTO density.	m3	3		
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Coarse river sand filling supplied by the contractor:

65	Under floors etc.	m3	1		
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Compaction of surfaces:

66	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	15		
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Prescribed density tests on filling:

67	In-situ dry density test.	No	3		
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Reinforced 25Mpa/19mm Concrete:

68	Ramps, Landings, etc.	m3	2		
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Finishing top surfaces of concrete smooth with a wood float:

69	Surface beds, slabs, etc to falls and currents.	m2	21		
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<u>THE FOLLOWING IN ACCESS DRIVEWAY, ETC.</u>					
<u>Excavation not exceeding 2m deep</u>					
75	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	27		
<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>					
76	Off site to a dumping site to be found by the Contractor.	m3	27		
<u>Filling supplied by the contractor under driveways</u>					
77	Oversite of G7-Selected Layer compacted to 98% Mod AASHTO density	m3	9		
78	Over site of G5-Subbase material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.	m3	9		
79	Oversite of Gravel wearing course compacted to 95% Mod AASHTO	m3	9		
<u>Rip and Re - compact insitu material on site compacted to 93% Mod. AASHTO density:</u>					
80	Under floors,etc.	m2	60		
<u>Prescribed density tests on filling:</u>					
81	In-situ dry density test.	No	1		
<u>Approved brand of anti-termite soil poison applied by a Registered Pest Control Company and guaranteed against termite infestation for ten years:</u>					
82	Treat filling under paving with 'Chlordane Heptachlor Aldrin' or equal approved.	m2	60		
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<u>THE FOLLOWING IN RAINWATER TANKS AND STANDS</u>					
<u>Excavation in earth not exceeding 2m deep:</u>					
<u>Site clearance etc:</u>					
83	Allow for clearing site including removing trees, shrubs etc. not exceeding 200mm girth, grubbing up roots and roughly levelling.	m2	9		
84	Trenches.	m3	13		
85	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	0.4		
<u>Extra over trench and hole excavations in earth for excavation in:</u>					
86	Soft rock.	m3	1		
87	Hard rock.	m3	1		
<u>Extra over all excavations for carting away:</u>					
88	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.	m3	3		
<u>Risk of collapse of excavations:</u>					
89	Sides of trench and hole excavations not exceeding 1,5m deep.	m2	13		
<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% MOD AASHTO density:</u>					
90	Backfilling to trenches, holes, etc.	m3	2		
<u>Filling supplied by the contractor under strip footing, floors etc.</u>					
91	Oversite of G7-Selected Layer compacted to 98% Mod AASHTO density	m3	1		
92	Over site of G5-Selected material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.	m3	1		
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	<u>Compaction of surfaces</u>				
93	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	4		
	<u>25 MPa/19mm Concrete:</u>				
94	Strip footings.	m3	2		
95	Concrete raft slab on waterproofing.	m3	0.4		
	<u>Test blocks:</u>				
96	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	1		
	<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>				
97	Surface beds, slabs, etc.	m2	4		
	<u>Rough Formwork to Sides:</u>				
98	Edges, risers, ends and reveals not exceeding 300mm high.	m	8		
	<u>Allens Meshco Square Mesh Fabric reinforcement:</u>				
99	Type 617 fabric reinforcement in concrete slabs.	m2	4		
	<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>				
100	One brick walls.	m2	4		
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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>				
101	One brick walls.	m2	4		
	<u>Brickwork reinforcement:</u>				
102	230mm Wide reinforcement built in horizontally.	m	9		
103	Ditto but in foundations.	m	10		
	<u>"Rustgold FBS/Qunu Travertine" clay face brick or equal approved pointed with square ruled recessed horizontal and vertical joints:</u>				
104	Extra over brickwork for face brickwork externally.	m2	5		
	<u>One layer of 250 micron 'USB GREEN' waterproof sheeting sealed at laps with 'Gunplas Pressure Sensitive Tape':</u>				
105	Under surface beds.	m2	4		
	<u>Plastic water tanks etc:</u>				
106	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	1		
107	Hole top of tank for 100mm pipe.	No	1		
	<u>THE FOLLOWING IN SECURITY FENCING, ETC</u>				
	<u>Site clearance</u>				
108	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	67		
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	<u>Straining wires, fencing and razor wire:</u>				
109	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	67		
110	3 Strands of galvanised barbed wire tied to standards, posts and eye bolts	m	67		
111	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	67		
	<u>Posts for 1 800mm high security fence:</u>				
112	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	19		
113	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	6		
114	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		
115	12mm Diameter galvanised mild steel straining eye bolt with hook, threaded portion and two nuts and washers.	No	24		
116	Form 12mm diameter hole through fence post.	No	4		
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