

BILL No.1

PRELIMINARIES

6. The Tenderers shall allow opposite each of the clauses whatever costs and charges he may consider necessary for the carrying out, complying with and due observance of the provisions, conditions and requirements set out herein. Only priced items will be considered in respect of any adjustment of this Section. Any items left unpriced will be understood to be provided free of charge and no claim for any extras arising out of the Tenderer's omission to price any item will be entertained.

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

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

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

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SECTION A: PRINCIPAL BUILDING AGREEMENT

DEFINITIONS

Definitions and interpretation (Clause 1).

1 F: V: T:

Item

OBJECTIVE AND PREPARATION

Offer, acceptance and performance (Clause 2).

2 F: V: T:

Item

Documents (Clause 3).

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

Clause 3.3 is deleted and substituted with:

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

3 F: V: T:

Item

Design responsibility (Clause 4).

4 F: V: T:

Item

Employer's agents (Clause 5).

5 F: V: T:

Item

Site representative (Clause 6).

6 F: V: T:

Item

Compliance with regulations (Clause 7).

7 F: V: T:

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	Works risk (Clause 8)			
8	F: V: T: Indemnities (Clause 9). Clause 9.1.1 is deleted and substituted with: Claims from other parties consequent upon death of bodily injury or illness of any person or physical loss or damage to any property, other than the works, arising out or due to the execution of the works or occupation of the site by the contractor or his sub contractors'.	Item		
9	F: V: T: Works insurances (Clause 10).	Item		
10	F: V: T: Liability insurances (Clause 11).	Item		
11	F: V: T: Effecting insurances (Clause 12).	Item		
12	F: V: T: State Provisions (Clause 13).	Item		
13	F: V: T: Security (Clause 14).	Item		
14	F: V: T: <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:

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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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Penalty amount will be R 2000.00 per Calendar day to a maximum of 10% of Contract Value.

Clause 42.2.8

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

N/A

Clause 42.2.9

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

INSURANCES (Clause 42.3)

Clause 42.3.1

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

With a deductible of : 5% of insured amount

Clause 42.3.2

Supplementary insurance is required : Yes

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

Clause 42.3.3

Public liability insurance to be effected by Contractor

For the amount of: R 5million

With a deductible of: 5% of insured amount

DOCUMENTS (Clause 42.4)

Clause 42.4.1

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

Clause 42.4.2

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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)	Item		
	Notwithstanding anything contained in this clause, Tenders shall be valid for a period of 20 (Twenty) weeks from the closing date of tenders.			
47	F: V: T: <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	
	SAMPLES AND SHOP DRAWINGS (B5)		
	Samples of materials (B5.1)		
63	F: V: T:	Item	
	Workmanship samples (B5.2)		
64	F: V: T:	Item	
	Shop drawings (B5.3)		
65	F: V: T:	Item	
	TEMPORARY WORKS AND PLANT (B6)		
	Deposits and fees (B6.1)		
66	F: V: T:	Item	
	Enclosure of the works (B6.2)		
	The contractor shall erect, maintain and remove at completion, hoardings, safety screens, barriers, access gates, covered gangways and the like as necessary for the enclosure of the works and elements thereof all for the protection of the public and others.		
67	F: V: T:	Item	
	Advertising (B6.3)		
68	F: V: T:	Item	
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69	Plant and equipment (B6.4) 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)			
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			
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<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		
<u>Provision for Personal Protective Equipment and Protective Clothing:</u>				
8	Reflective vests.	No		
9	Hard hats.	No		
10	Protective foot wear.	No		
11	Ear Plugs.	No		
12	Dust Masks.	No		
<u>Costs of Medical Certificates and Medical Surveillance:</u>				
13	Initial (baseline) medical examinations.	No		
14	Exit Examinations.	No		
<u>Noise Monitoring:</u>				
15	Establishment of noise zones.	No		
16	Audiograms.	No		
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C16. Covid-19 Compliance Measures

- 17 The Contractor is required to price for Covid 19 compliance and the pricing thereof shall be deemed to include all the mandatory requirements.

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Health and Safety

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Section 1

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ALTERATIONS (PROVISIONAL)

Quantity Split:

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

A1 - DWG 05 - Staff ablutions
AD - DWG 12 - Male ablutions
AE - Renovations to existing ablutions

Note:

For Preambles see "PW 371 - A Edition 2.1 - Construction Works: Specifications, General Specification" as published by the Department of Public Works (Edition 2.1 July 2014).

SUPPLEMENTARY PREAMBLES

Existing Furniture, Equipment, etc

The Contractor shall not remove or damage any furniture, equipment or similar items that belong to the Department except when specifically described in the items to follow: The Contractor must give the Principal Agent sufficient notice if the removal of these items are required before any prescribed alterations can be done

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

Carried to Collection

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Section 2
Bill No. 1
Alterations (Provisional)

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

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

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"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

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

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Section 2
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Alterations (Provisional)

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.

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

Carried to Collection

Section 2
Bill No. 1
Alterations (Provisional)

R

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

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
Alterations (Provisional)

R

TEMPORARY BARRIERS, SCREENS, ETC

Temporary barriers, screens, etc including removal

1	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 A1 : 400 AD : 0 AE : 0	m	400
2	Extra over mesh fence for double leaf gate size 5.5 x 1,8m high. A1 : 1 AD : 0 AE : 0	No	1

REMOVAL OF EXISTING WORK

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

3	Asbestos roof sheeting including timber trusses, purlins, underlay, etc. A1 : 0 AD : 0 AE : 100	m2	100
4	Provision of a certificate of safe disposal for asbestos.	Item	

Hacking up/off and removing granolithic, screeds, plaster, etc. from concrete or brickwork and preparing surfaces for new screeds, plaster, etc

5	Average 30mm Screed from floors. A1 : 0 AD : 0 AE : 62	m2	62
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Taking down and removing

6	Steel diamond mesh fence 1.8m high with timber posts and droppers A1 : 40 AD : 0 AE : 0	m	40
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Doors, frames, security gates etc.

7	Take out from one brick wall and cart away single timber door and timber frame size 813mm wide x 1800mm high including preparing reveals to receive new frame (elsewhere). A1 : 0 AD : 0 AE : 14	No	14
8	Take out from one brick wall steel security gate including frame overall size 900mm wide x 2100mm high including preparing reveals to receive new frame (elsewhere). A1 : 0 AD : 0 AE : 2	No	2

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Section 2
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Alterations (Provisional)

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

<u>Taking out and removing sanitaryware</u>					
9	White glazed WC pan and cistern complete including stopping off water supply. A1 : 0 AD : 0 AE : 14	No	14		
10	Stainless steel wash hand basin including taps, traps, etc. including stopping off water supply. A1 : 0 AD : 0 AE : 8	No	8		
11	White glazed bowl urinal including flushing system including stopping off water supply. A1 : 0 AD : 0 AE : 2	No	2		
<u>Taking out and removing ironmongery</u>					
12	Toilet paper holder from wall A1 : 0 AD : 0 AE : 14	No	14		
<u>Taking out and removing piping, gutters etc including cutting off as necessary, holderbats</u>					
13	Rainwater gutter including fittings A1 : 0 AD : 0 AE : 25	m	25		
14	Rainwater downpipes including fittings. A1 : 0 AD : 0 AE : 9	m	9		
<u>Taking out/off and removing glass and mirrors</u>					
15	4mm thick glass from timber window including preparing frame to receive new glass (elsewhere). A1 : 0 AD : 0 AE : 4	m2	4		
<u>PROVISION OF TEMPORARY TOILETS DURING THE CONSTRUCTION PERIOD</u>					
<u>Portable toilets</u>					
16	Supply and erecting of the portable chemical toilet during the duration of the contract. A1 : 14 AD : 0 AE : 0	No	14		
17	Servicing and maintain the (14) fourteen portable chemical toilets twice a week during duration of the contract. (No = week) A1 : 20 AD : 0 AE : 0	No	20		
18	Removal of the portable chemical toilet on completion of the contract. A1 : 14 AD : 0 AE : 0	No	14		
Carried to Collection					
Section 2 Bill No. 1 Alterations (Provisional)				R	

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

Section 2

Bill No. 1

Alterations (Provisional)

COLLECTION

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Section 2

Bill No. 1

Alterations (Provisional)

Dewatering of excavations:

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

Density testing on filling:

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

Imported fill:

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

Classification of excavated material

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

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

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

Carried to Collection

Section 3
Bill No. 1
Earthworks (Provisional)

R

EXCAVATION OTHER THAN BULK

Excavation in earth not exceeding 2m deep:

1	Trenches. A1 : 20 AD : 12 AE : 0	m3	32
2	Reducing levels and depositing excavated material in prescribed stock piles on site. A1 : 14 AD : 10 AE : 0	m3	23

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

3	Soft rock. A1 : 2 AD : 1 AE : 0	m3	3
4	Hard rock. A1 : 1 AD : 1 AE : 0	m3	2

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. A1 : 19 AD : 13 AE : 0	m3	32
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Risk of collapse of excavations:

6	Sides of trench and hole excavations not exceeding 1,5m deep. A1 : 57 AD : 36 AE : 0	m2	92
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Keeping excavations free of water:

7	Keeping excavations free from mud and all water including subterranean sources.	Item	
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Carried to Collection

Section 3
Bill No. 1
Earthworks (Provisional)

R

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	Backfilling to trenches, holes, etc.	m3	32	
	A1 : 19 AD : 12 AE : 0			

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.

9	Under floors, etc.	m3	33	
	A1 : 20 AD : 13 AE : 0			

Coarse river sand filling supplied by the contractor:

10	Under floors etc.	m3	3	
	A1 : 2 AD : 1 AE : 0			

Compaction of surfaces:

11	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density.	m2	58	
	A1 : 34 AD : 24 AE : 0			

Prescribed density tests on filling:

12	Allow for compaction tests by an approved laboratory to determine density of filling material.	No	23	
	A1 : 12 AD : 11 AE : 0			

SOIL POISONING

Approved brand of anti-termite soil poison applied by a Registered Pest Control company and guaranteed against termite infestation for ten years:

13	Under floors, etc., including forming and poisoning shallow furrows against foundation walls, etc., filling in furrows and ramming.	m2	58	
	A1 : 34 AD : 24 AE : 0			

14	To bottoms and sides of trenches, holes, etc.	m2	138	
	A1 : 85 AD : 53 AE : 0			

Carried to Collection

Section 3
Bill No. 1
Earthworks (Provisional)

R

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

[illegible]

Item No		Quantity	Rate	Amount
	<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: A1 - DWG 05 - Staff ablutions AD - DWG 12 - Male ablutions AE - Renovations to existing ablutions <u>Note:</u> For Preambles see "PW 371 - A Edition 2.1 - Construction Works: Specifications, General Specification" as published by the Department of Public Works (Edition 2.1 July 2014). <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). <u>Formwork:</u> 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.			
	Carried to Collection		R	
	Section 3 Bill No. 2 Concrete, Formwork and Reinforcement			

The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself.

Formwork to soffits of solid slabs etc., shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described.

Formwork to sides of bases, pile caps, ground beams, etc., will only be measured where it is prescribed by the Engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in Earthworks.

Carried to Collection

Section 3
Bill No. 2
Concrete, Formwork and Reinforcement

R

**UNREINFORCED CONCRETE CAST AGAINST
EXCAVATED SURFACES**

15Mpa/19mm Concrete

- | | | | | |
|---|--|----|---|--|
| 1 | Surface blinding under footings and bases. | m3 | 2 | |
| | A1 : 1 AD : 1 AE : 0 | | | |

**REINFORCED CONCRETE CAST AGAINST
EXCAVATED SURFACES**

30MPa/20mm concrete:

- | | | | | |
|---|--------------------------------|----|---|--|
| 2 | Strip footing to walls. | m3 | 9 | |
| | A1 : 6 AD : 4 AE : 0 | | | |
| 3 | Surface beds on waterproofing. | m3 | 6 | |
| | A1 : 3 AD : 2 AE : 0 | | | |

TEST BLOCKS

Test blocks:

- | | | | | |
|---|---|----|----|--|
| 4 | Making and testing of 150x150x150mm concrete strength test cubes (Provisional). | No | 14 | |
| | A1 : 8 AD : 6 AE : 0 | | | |

FINISHING TOP SURFACE OF CONCRETE

Finishing top surfaces of concrete smooth with a wood float:

- | | | | | |
|---|---|----|----|--|
| 5 | Surface beds, suspended slabs, ground slabs, etc. | m2 | 58 | |
| | A1 : 34 AD : 24 AE : 0 | | | |

ROUGH FORMWORK (DEGREE OF ACCURACY III)

Rough Formwork to Sides:

- | | | | | |
|---|---|---|----|--|
| 6 | Edges, risers, ends and reveals not exceeding 300mm high or wide. | m | 48 | |
| | A1 : 27 AD : 21 AE : 0 | | | |

Carried to Collection

Section 3
Bill No. 2
Concrete, Formwork and Reinforcement

R

SMOOTH FORMWORK (DEGREE OF ACCURACY I)

Smooth Formwork to Sides:

7	Edges, risers, ends and reveals not exceeding 300mm high or wide.	m2	24
	A1 : 13 AD : 10 AE : 0		

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)

8	Not exceeding 300mm wide.	m	77
	A1 : 45 AD : 32 AE : 0		

Saw cut joints:

9	6 x 40mm Saw cut joints in top of concrete (Provisional).	m	41
	A1 : 20 AD : 20 AE : 0		

REINFORCEMENT (PROVISIONAL)

10	High tensile steel reinforcement bars to structural concrete work.	t	1.45
	A1 : 0.88 AD : 0.57 AE : 0.00		

Fabric reinforcement:

11	REF. 617 fabric reinforcement in concrete surface beds, raft slabs etc.	m2	58
	A1 : 34 AD : 24 AE : 0		

Carried to Collection

Section 3
Bill No. 2
Concrete, Formwork and Reinforcement

R

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

[illegible]

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

R

Section 3
Bill No. 3
Masonry

**BRICKWORK IN FOUNDATIONS
(PROVISIONAL)**

**Brickwork of NFX bricks (14 MPa nominal
compressive strength) in Class I mortar:**

1	One brick walls.	m2	46
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A1 : 28 AD : 18 AE : 0

BRICKWORK AND BLOCKWORK SUNDRIES

Galvanized brickwork reinforcement

2	115mm Wide reinforcement built in horizontally	m	88
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A1 : 53 AD : 35 AE : 0

3	230mm Wide reinforcement built in horizontally.	m	709
---	---	---	-----

A1 : 409 AD : 300 AE : 0

4	Ditto, but in foundations (Provisional).	m	153
---	--	---	-----

A1 : 94 AD : 59 AE : 0

Cramps, ties, etc:

5	30 x 2mm Galvanized roof tie 1500mm long with one end fixed to timber and other built into brickwork or concrete.	No	52
---	---	----	----

A1 : 26 AD : 26 AE : 0

Air bricks etc:

6	229 x 152mm terracotta clay vermin proof air brick	No	24
---	--	----	----

A1 : 12 AD : 12 AE : 0

**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:**

7	To walls (Provisional).	m2	157
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A1 : 87 AD : 70 AE : 0

Samples

8	Prepare and construct for approval L-Shaped one brickwall faced and pointed both sides as per given specification, size: 1000x1000x1000mm high. same area (1000x1000mm) to be paved as per given specifications.	Item	
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Carried to Collection

Section 3
Bill No. 3
Masonry

R

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

	<u>Turning pieces to lintels etc</u>				
9	230mm Wide turning pieces A1 : 14 AD : 10 AE : 0	m	24		
	<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>				
10	Extra over brickwork for face brickwork externally. A1 : 14 AD : 11 AE : 0	m2	25		
11	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. A1 : 7 AD : 5 AE : 0	m2	12		
12	One brickwall pointed on both sides. A1 : 126 AD : 92 AE : 0	m2	218		
13	Half brickwall pointed on both sides. A1 : 16 AD : 11 AE : 0	m2	27		
14	Fair raking cutting. A1 : 9 AD : 9 AE : 0	m	18		
	<u>Face brick copings, lintels, sills, etc, of "Rustgold FBS/Qunu Travertine" or equal approved face bricks pointed with recessed joints on all exposed faces:</u>				
15	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. A1 : 7 AD : 5 AE : 0	m	12		
16	220mm Wide header course to top of one brick wall bedded and jointed in cement mortar and pointed on both sides. A1 : 7 AD : 5 AE : 0	m	12		
	Carried to Collection			R	
	Section 3				
	Bill No. 3				
	Masonry				

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

[illegible]

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

Item No		Quantity	Rate	Amount
	<u>BILL No. 4</u> <u>WATERPROOFING</u> <u>Quantity Split:</u> Note that the total quantity per each item is split into the various buildings and appears below each description as follows: A1 - DWG 05 - Staff ablutions AD - DWG 12 - Male ablutions AE - Renovations to existing ablutions <u>Note:</u> For Preambles see "PW 371 - A Edition 2.1 - Construction Works: Specifications, General Specification" as published by the Department of Public Works (Edition 2.1 July 2014). <u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary products in descriptions:</u> Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior approval by the Principal Agent. <u>Waterproofing</u> The product and its methodology for application must be approved by Principal Agent before it is used. It is a mandatory requirement for the Contractor to attend training to be provided by Supplier. Proof of attendance will be required prior to application of the approved waterproofing product. Contractor must prepare a 1m x 1m sample in the presence of the Principal Agent or Engineer. In this case, the Contractor must give at least 48 hours notice prior to the date when the application of the waterproofing product is intended to be done. Contractor to provide a Letter of Compliance confirming that waterproofing has been applied as per Manufacturer's instructions and data sheet.			
	Carried to Collection		R	
	Section 3 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.	m2	58	
	A1 : 34 AD : 24 AE : 0			

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

2	Below walls, sills, etc.	m2	6	
	A1 : 3 AD : 2 AE : 0			

JOINT SEALANTS ETC

Clear Neutral silicone sealant:

3	In joint sealing and pointing all round external window and door frames.	m	99	
	A1 : 61 AD : 38 AE : 0			

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

4	10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary (Provisional).	m	41	
	A1 : 20 AD : 20 AE : 0			

Carried to Collection

Section 3
Bill No. 4
Waterproofing

R

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

[illegible]

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

Carried to Collection

Section 3
Bill No. 5
Roof Coverings Etc.

R

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

R

Section 3
Bill No. 5
Roof Coverings Etc.

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 | 200 | |
| | A1 : 47 AD : 34 AE : 120 | | | |

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 | 43 | |
| | A1 : 11 AD : 8 AE : 25 | | | |

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 | 200 | |
| | A1 : 47 AD : 34 AE : 120 | | | |

Carried to Collection

Section 3
Bill No. 5
Roof Coverings Etc.

R

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

[illegible]

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

CARPENTRY

Sawn softwood:

1	38 x 114mm Wall plate. A1 : 21 AD : 15 AE : 40	m	76		
2	50 x 76mm Purlins. A1 : 84 AD : 61 AE : 200	m	345		
3	50 x 76mm Bracing. A1 : 22 AD : 15 AE : 0	m	37		
4	38 x 152mm Rafters. A1 : 44 AD : 36 AE : 93	m	173		

Sundries:

5	TRI FIX or equal approved hurricane clip fixed using 10 x 32mm galvanised clout nails (Provisional). A1 : 70 AD : 60 AE : 42	No	172		
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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. A1 : 21 AD : 15 AE : 25	m	61		
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. A1 : 9 AD : 9 AE : 9	m	27		

Carried to Collection

Section 3
Bill No. 6
Carpentry and Joinery

R

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). A1 : 2 AD : 1 AE : 2	No	5
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). A1 : 1 AD : 0 AE : 0	No	1
10	44mm Framed, ledged, and battened purpose made single door with flush ply panel internally size 813 x 1832mm high comprising 44 x 110mm stiles, 44 x 220mm bottom rail, 44 x 150mm lock rail and 22 x 70mm vertical "v" jointed boards (D4). A1 : 4 AD : 3 AE : 14	No	21

FRAMED FRAMES, ETC

Meranti Frames fixed against brickwall using galvanised steel lugs bolted with expanding masonry bolts - 4No. per style including 20mm quadrant beads all around the frame on both sides:

11	70 x 90mm rebated meranti frame . A1 : 5 AD : 0 AE : 0	m	5
12	60 x 80mm rebated meranti frame . A1 : 14 AD : 10 AE : 59	m	83

Carried to Collection

Section 3
Bill No. 6
Carpentry and Joinery

R

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

[illegible]

R

NAILED UP CEILINGS

4mm Thick fibre-cement boards with and including 6 x 32mm wrought meranti cover strips over joints:

1	Ceilings including 38 x 38mm sawn softwood brandering at 400mm centres with cross brandering at joints, ends of sheets and at light fittings, etc. A1 : 34 AD : 24 AE : 62	m2	120		
2	Extra over 4mm thick fibre cement board ceiling for forming trap door, size 630 x 630mm in clear, formed with 38 x 50mm sawn S.A. pine framing covered with ceiling boarding and set in 38 x 76mm wrought S.A. pine rebated kerb, including all necessary additional supports, trimmers, etc. A1 : 3 AD : 1 AE : 2	No	6		
3	<u>Cornice</u> 75mm gypsum coved cornice. A1 : 51 AD : 33 AE : 36	m	119		

Carried to Collection

R

Section 3
Bill No. 7
Ceilings, Partitions and Access Flooring

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

[illegible]

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

HINGES:

1	75 x 100mm Brass Medium duty ball bearing HMP butt hinges. A1 : 7.0 AD : 4.0 AE : 14.0	Pairs	25.0		
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LOCKS

2	"UNION 2277-78SS" or equal approved three lever sash mortice lockset. A1 : 3 AD : 1 AE : 2	No	6		
3	"UNION w/c indicator bolt satin chrome - Code CZ80941SC A1 : 4 AD : 3 AE : 14	No	21		

HANDLES

4	"Dorma DPH301B" or equal approved Stainless Steel Straight Tubular Pull handle flange fixing. A1 : 5 AD : 3 AE : 0	No	8		
---	---	----	---	--	--

Sundries:

5	Stainless Steel Hat and coat hook, code DHC - SS-030-A or equal approved. A1 : 7 AD : 4 AE : 14	No	25		
6	38mm Diameter black rubber door stop plugged and screwed to wall. A1 : 7 AD : 4 AE : 14	No	25		

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. A1 : 3 AD : 1 AE : 2	No	6		
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Carried to Collection

R

Section 3
Bill No. 8
Ironmongery

SUNDRIES

Halcast or equal approved"

8	Thiefproof toilet roll holder plugged.	No	22	
	A1 : 5 AD : 3 AE : 14			

Grade 304 stainless steel ware:

9	32mm outside diameter x 1,6mm thick tubular wall mounted side stainless steel grab rail 1,06m girth with two 45 degree and two 90 degree formed bends and each end fitted with 80mm diameter x 5mm thick flange welded on and four times countersunk holed for and plugged and screwed to wall with stainless steel crews.	No	3	
	A1 : 1 AD : 0 AE : 2			

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.	No	3	
	A1 : 1 AD : 0 AE : 2			

Satin Grey Plastics or equal approved

11	"Satin plastic N-SBIN-12-SA SHE Bin size 463 x 140 x 480mm, mounted.	No	18	
	A1 : 4 AD : 0 AE : 14			

Carried to Collection

Section 3
Bill No. 8
Ironmongery

R

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

[illegible]

<u>Natural anodised aluminium windows glazed with 6.38mm safety laminated glass and plugged to brickwork:</u>					
1	Window Size 600 x 600mm high complete, including ironmongery etc, all as per Window Type W01. A1 : 12 AD : 8 AE : 13	No	33		
<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 to 25 x 25 x 2mm mild steel square tube welded to form frame. including locks, handles, ironmongery complete and fixed to brickwork:</u>					
2	Security gate size 900 x 2050mm high (G1). A1 : 1 AD : 1 AE : 2	No	4		
3	Double security gate size 1800 x 2050mm high. A1 : 1 AD : 0 AE : 0	No	1		
Carried to Collection					
Section 3 Bill No. 9 Metalwork				R	

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

[illegible]

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

Item No		Quantity	Rate	Amount
	<u>BILL No. 10</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: A1 - DWG 05 - Staff ablutions AD - DWG 12 - Male ablutions AE - Renovations to existing ablutions <u>Note:</u> For Preambles see "PW 371 - A Edition 2.1 - Construction Works: Specifications, General Specification" as published by the Department of Public Works (Edition 2.1 July 2014). <u>SCREEDS</u> <u>Untinted granolithic, on concrete:</u>			
1	30mm Thick on floors. A1 : 34 AD : 24 AE : 62	m2	120	
	Carried Forward to Summary of Section No. 3 Section 3 Bill No. 10 Plastering			R

WALL TILING

200 x 200mm White edward Ivory or equal approved wall tiles, laid adhesive and finished with grouting as per Manufacturer's recommendation:

3	Splashback on walls	m2	7	
	A1 : 2 AD : 1 AE : 4			

Carried to Collection

R

Section 3
Bill No. 11
Tiling

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

[illegible]

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

TAPS, VALVES, ETC

Solid Cast brass taps, valves, etc:

6	15mm Chromium plated brass metered bib tap with non-hold open feature and flow control. A1 : 4 AD : 3 AE : 8	No	15
7	"Flushmaster Junior FJ 6.000" or other equal approved 22mm chromium plated exposed type urinal flushvalve with "FJT 5.5" chromium plated flushpipe, integral non hold-open feature and ball-o-flo valve, with wall plate. A1 : 2 AD : 1 AE : 0	No	3
8	"Cobra FEABIBEA-4FT01" or other approved 15mm chrome plated metered bib tap. A1 : 1 AD : 0 AE : 2	No	3
9	15mm Ball-o-stop valve. A1 : 4 AD : 3 AE : 8	No	15
10	22mm Non Return valve. A1 : 5 AD : 6 AE : 2	No	13

WASTE UNIONS ETC

Outlets, traps, etc:

11	40mm 342/50 CP bottle trap. A1 : 2 AD : 0 AE : 0	No	2
12	40mm Code 316 chrome plated unslotted waste outlet. A1 : 4 AD : 3 AE : 8	No	15
13	40mm Rubber "P" or "S" trap A1 : 4 AD : 3 AE : 8	No	15

Carried to Collection

Section 3
Bill No. 12
Plumbing and Drainage (Provisional)

R

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

SANITARY FITTINGS

Vaal or equal approved:

14	Lavatera White Vitreous china wall mounted bowl urinal with top inlet [code: 704001] 610x385mm, supplied with 38mm chromium plated domical grating [code: 8787], chromium plated spreader [code: 8543], and two hanger brackets [code: 8127]	No	2
	A1 : 2 AD : 0 AE : 0		

15	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	15
	A1 : 4 AD : 3 AE : 8		

16	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	22
	A1 : 5 AD : 3 AE : 14		

Franke Model CB 102 (Automatic flushing) or equal approved flush valve/cistern flat back wall mounted urinal:

17	Flat back stainless steel school trough urinal wall and floor mounted. manufactured from Grade 304 (18/10) Stainless Steel, 0,9 mm gauge. Urinal to be supplied with a concealed sparge pipe and a 22 mm inlet with chrome plated conex fitting for connecting to water inlet (Connection fitting not supplied). Urinal to include a tiling key to sides and rear walls. The back to be fully sound deadened with vermin proof bitumastic material. Outlet to be situated on the left or right of the urinal with a recess for 40 mm chrome plated waste outlet.	No	1
	A1 : 0 AD : 1 AE : 0		

Carried to Collection

Section 3
Bill No. 12
Plumbing and Drainage (Provisional)

R

SANITARY PLUMBING

PVC waste or vent pipes and fittings:

18	50mm Waste pipe. A1 : 32 AD : 28 AE : 98	m	158
19	110mm Pipe. A1 : 5 AD : 3 AE : 42	m	50
20	110mm Pipe and laying in ground or filling not exceeding 2m deep including excavation, filling in and ramming. A1 : 28 AD : 25 AE : 15	m	68

uPVC gulleys

21	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. A1 : 1 AD : 1 AE : 0	No	2
----	---	----	---

Extra for:

22	50mm Bend. A1 : 12 AD : 36 AE : 42	No	90
23	50mm Access bend. A1 : 3 AD : 14 AE : 0	No	17
24	100mm Access bend. A1 : 5 AD : 3 AE : 6	No	14

WATER SUPPLIES

Polycop pipes:

Pipes shall be class 10.

Fixing of pipes

Unless specifically otherwise stated, descriptions of pipes shall be deemed to include for fixing to walls etc. casting in, building in or suspending not exceeding 1m below suspension level

Carried to Collection

Section 3
Bill No. 12
Plumbing and Drainage (Provisional)

R

Polycop pipes chased in walls:

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

Reducing fittings:

Where fittings have reducing ends or branches they are described as 'reducing'. In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the Contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained.

Class 10 Polycop pipes:

25	15mm Pipe chased into brick walls. A1 : 38 AD : 31 AE : 32	m	101
26	22mm Pipe chased into brick walls. A1 : 24 AD : 20 AE : 20	m	64

Extra over polycop pipes for compression fittings:

27	15mm Fittings. A1 : 35 AD : 29 AE : 18	No	82
28	22mm Fittings. A1 : 25 AD : 23 AE : 0	No	48

Connection to existing water supply

29	Allow for connection to existing water supply.	Item	
----	--	------	--

Testing

30	Testing water pipe system	Item	
----	---------------------------	------	--

Carried to Collection

R

Section 3
Bill No. 12
Plumbing and Drainage (Provisional)

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

[illegible]

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

Item No		Quantity	Rate	Amount
	<u>BILL No. 13</u> <u>GLAZING</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: A1 - DWG 05 - Staff ablutions AD - DWG 12 - Male ablutions AE - Renovations to existing ablutions <u>Note:</u> For Preambles see "PW 371 - A Edition 2.1 - Construction Works: Specifications, General Specification" as published by the Department of Public Works (Edition 2.1 July 2014). <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>TOPS, SHELVES, DOORS, MIRRORS, ETC.</u>			
1	4mm Thick polished float glass mirror, size 450 x 600mm, four times plugged to wall with and including chromium plated dome headed screws. A1 : 4 AD : 3 AE : 8	No	15	
	Carried Forward to Summary of Section No. 3 Section 3 Bill No. 13 Glazing		R	

R

ON BRICK SURFACES

Clean down with spirits of salts solution and apply two coats silicone-based brick dressing on:

1	Facings (Externally).	m2	138
	A1 : 0 AD : 0 AE : 138		
2	Facings (Internally).	m2	161
	A1 : 0 AD : 0 AE : 161		

ON FIBRE-CEMENT BOARD SURFACES

Apply one coat DULUX Trade alkali resistant plaster prime followed by two coats of DULUX trade 100 low sheen or equal approved coats of finishing paint or equal approved. All joints to be taped, skimmed and rubbed to a smooth finish. Colour to Architects Approval.

3	Ceilings and cornices.	m2	103
	A1 : 34 AD : 24 AE : 45		

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:

4	On doors	m2	87
	A1 : 24 AD : 13 AE : 50		
5	On door frames	m2	25
	A1 : 8 AD : 4 AE : 13		

Two coats superior quality clear gloss varnish on smooth sanded down surfaces:

6	On doors	m2	87
	A1 : 24 AD : 13 AE : 50		
7	On door frames	m2	25
	A1 : 8 AD : 4 AE : 13		

Prepare and apply two coats carbolenium on:

8	On exposed timbers.	m2	73
	A1 : 15 AD : 12 AE : 46		

Carried to Collection

Section 3
Bill No. 14
Paintwork

R

ON FIBRE-CEMENT

Prepare and apply two coats pure acrylic roof paint on:

9	On fascias and barge boards.	m2	33	
	A1 : 10 AD : 8 AE : 14			

Carried to Collection

R

Section 3
Bill No. 14
Paintwork

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

[illegible]

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

Section 3

SECTION SUMMARY - BUILDING WORKS

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Carried to Final Summary

R

Section 3

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

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

SABS 1200

L : Medium pressure pipelines

LD : Sewers

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

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

Descriptions of pipes laid in trenches:

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

Descriptions of catchpits, junction boxes, manholes, etc:

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

Density testing on filling:

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

THE FOLLOWING IN PLATFORMS, ETC.

Site Clearance, ETC

- | | | | |
|---|---|----|-----|
| 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 | 208 |
| 2 | Stripping average 200mm thick layer of topsoil and stockpiling on site. | m2 | 208 |

Carried to Collection

Section 4
Bill No. 1
External Works

R

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

	<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	410		
	<u>Extra over all excavations for carting away:</u>				
4	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor.	m3	246		
	<u>Earth filling from excavated material</u>				
5	Dig, load and remove filling selected from spoil heaps on site and deposit as filling in platforms including spreading and compacting to cambers and falls in layers not exceeding 150 mm thick to a minimum of 95% Modified AASHTO dry density.	m3	82		
	<u>Filling supplied by the contractor to form platforms</u>				
6	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	164		
	<u>Surface Preparation:</u>				
7	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	358		
	<u>Prescribed density tests on filling:</u>				
8	Modified AASHTO Density test.	No	15		
	<u>THE FOLLOWING IN ONE BRICK WALL (GARDEN WALL)</u>				
	<u>Excavation in earth not exceeding 2m deep:</u>				
9	Trenches.	m3	33		
	<u>Extra over all excavations for carting away:</u>				
10	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.	m3	17		
	Carried to Collection			R	
	Section 4				
	Bill No. 1				
	External Works				

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

	<u>Risk of collapse of excavations:</u>				
11	Sides of trench and hole excavations not exceeding 1,5m deep.	m2	95		
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% MOD AASHTO density:</u>				
12	Backfilling to trenches, holes, etc.	m3	16		
	<u>Filling supplied by the contractor under strip footing</u>				
13	G7 Base course material compacted to 98% Mod AASHTO density	m3	7		
14	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	7		
	<u>Compaction of surfaces</u>				
15	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	47		
	<u>25 Mpa/19mm Concrete</u>				
16	Strip footings.	m3	9		
	<u>Test blocks:</u>				
17	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	6		
	<u>Reinforcement (Provisional)</u>				
18	High tensile steel reinforcement bars to structural concrete work.	t	1.13		
	<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>				
Carried to Collection				R	
Section 4					
Bill No. 1					
External Works					

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

19	One brick walls.	m2	34
	<u>Brickwork reinforcement:</u>		
20	230mm Wide reinforcement built in horizontally.	m	166
21	Ditto but in foundations.	m	67
	<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>		
22	One brickwall faced on both sides.	m2	34
	<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>		
23	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	67

Carried to Collection

Section 4
Bill No. 1
External Works

R

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

<u>STORMWATER CHANNELS</u>					
<u>Excavation not exceeding 2m deep</u>					
24	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	21		
<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>					
25	Off site to a dumping site to be found by the Contractor.	m3	21		
<u>Filling supplied by the contractor under channels</u>					
26	G7 Base course material compacted to 98% Mod AASHTO density	m3	7		
27	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	7		
<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>					
28	700 x 80mm thick V' channel 150mm deep in centre laid in position in ground in 2000mm sections including all formwork, reinforcement, expansion joints, smooth finishing to top of concrete surface etc.	m	61		
29	Extra for 700mm angle	No	4		
30	Extra for forming 200mm thick 700mm wide spreader with 200mm high edges fanning out to 1 960mm width at furthest end with hard burnt bricks pitching cast in ass diffusers including working off concrete to a smooth finish and draining onto natural ground with 150 - 200mm diameter loose stones.	No	4		
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**MOSES MABIDA SENIOR SECONDARY SCHOOL
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THE FOLLOWING IN DISABLED ACCESS

SCREEN WALL

Excavation in earth not exceeding 2m deep:

31	Trenches.	m3	18
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Extra over all excavations for carting away:

32	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.	m3	5
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Risk of collapse of excavations:

33	Sides of trench and hole excavations not exceeding 1,5m deep.	m2	51
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Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% MOD AASHTO density:

34	Backfilling to trenches, holes, etc.	m3	12
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Filling supplied by the contractor under strip footing

35	G7 Base course material compacted to 98% Mod AASHTO density	m3	2
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Compaction of surfaces

36	Compaction of ground surface under floors, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density.	m2	51
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25 Mpa/19mm Concrete

37	Strip footings.	m3	5
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Test blocks:

38	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	2
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	<u>Reinforcement (Provisional)</u>			
39	High tensile steel reinforcement bars to structural concrete work.	t	0.64	
	<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>			
40	One brick walls.	m2	25	
	<u>BRICKWORK IN SUPERSTRUCTURE</u>			
	<u>Brickwork reinforcement:</u>			
41	230mm Wide reinforcement built in horizontally.	m	59	
42	Ditto but in foundations.	m	51	
	<u>FACE BRICK</u>			
	<u>"Rustgold FBS/Qunu Travertine" clay face brick or equal approved, size 222 x 106 x 73mm, bedded and jointed in Class II mortar and pointed with recessed vertical and recessed horizontal joints, suitable for exposure zones 1-2 (Cement to be 42.5N all-purpose cement):</u>			
43	One brickwall faced on both sides.	m2	18	
	<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>			
44	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	25	
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<u>ACCESS RAMPS</u>					
<u>Excavation not exceeding 2m deep</u>					
45	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	10		
<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>					
46	Off site to a dumping site to be found by the Contractor.	m3	7		
<u>Filling supplied by the contractor under floors, aprons, etc</u>					
47	G7 Base course material compacted to 98% Mod AASHTO density	m3	5		
48	Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.	m3	5		
<u>Coarse river sand filling supplied by the contractor:</u>					
49	Under floors etc.	m3	2		
<u>Compaction of surfaces:</u>					
50	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	33		
<u>Prescribed density tests on filling:</u>					
51	In-situ dry density test.	No	4		
<u>Reinforced 25Mpa/19mm Concrete:</u>					
52	Ramps, Landings, etc.	m3	3		
<u>Finishing top surfaces of concrete smooth with a wood float:</u>					
53	Surface beds, slabs, etc to falls and currents.	m2	33		
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	<u>Test blocks:</u>				
54	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>				
55	12mm Joints not exceeding 300mm high.	m	51		
	<u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u>				
56	10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary.	m	51		
	<u>Fabric reinforcement:</u>				
57	REF. 395 fabric reinforcement in concrete surface beds, slabs, etc.	m2	33		
	<u>Waterproofing under Surface beds</u>				
58	350 Micron USB orange polyethylene dampproof membrane in accordance with SABS 952 Type C laid on sand bed (elsewhere measured).	m2	33		
<u>THE FOLLOWING IN WALKWAYS</u>					
<u>EARTHWORKS</u>					
	<u>Excavate in earth not exceeding 2m deep including trimming sides, levelling and ramming bottoms and deposit in spoil heaps for later re-use or cart away</u>				
59	Reduced levels between buildings, retaining walls, etc.	m3	64		
	<u>Carting away of excavated material</u>				
60	Extra over all excavations for loading surplus or unsuitable material from spoil heaps and cart away to a dumping site to be located by the Contractor.	m3	64		
	<u>Base Courses</u>				
61	G7 Base course material, selected and supplied by the Contractor, deposited in layers not exceeding 150mm thick, watered and consolidated to 98% modified AASHTO density under pavings.	m3	48		
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62	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	48		
	<u>Sundries</u>				
63	Rip reduced platform level and recompact to 93% Mod. A.A.S.H.T.O. density.	m2	160		
	<u>Prescribed Testing</u>				
64	Provide and have filling compaction checked, tested by a Consulting Engineer's Laboratory and deliver the results to the Architect within 24 hours of the tests being completed.	No	7		
	<u>Weedkillers, insecticides, etc.</u>				
	<u>Soil insecticide in accordance with SANS 5859</u>				
65	Under paving, etc.	m2	160		
	<u>Pre-cast concrete Pavers</u>				
	<u>Grey interlocking precast concrete pavers type S-A laid in herringbone pattern with header course perimeter margin</u>				
66	50mm Thick laid on and including 25mm sand bed treated with weed killer and cement/sand mixture swept into joints on completion.	m2	160		
	<u>Sundries</u>				
67	Circular cutting on 50mm thick non bevelled concrete pavers.	m	10		
	<u>Channelling, kerbing, edging, etc.</u>				
	<u>Precast concrete kerbing</u>				
68	Precast semi-mountable concrete Fig 8B edge kerb size 300 x 175mm high cast in lengths not exceeding 1m and with expansion joints at not exceeding 10m centres finished smooth off the mould on all exposed surfaces bedded on and including minimum 50mm thick mass concrete 15 MPa base and backing including all necessary excavation, formwork, expansion joints, etc.	m	160		
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69	Ditto, but circular on plan to not exceeding 4m radius.	m	5	
<u>THE FOLLOWING IN BULK WATER RETICULATION</u>				
<u>ALTERATIONS TO EXISTING</u>				
70	Locate, cut into and temporarily stop off 40mm diameter water pipe for insertion of stop end (elsewhere).	No	2	
71	Locate, cut into and temporarily stop off 54mm diameter water pipe for insertion of Tee Junction (elsewhere).	No	1	
<u>HDPE 100PN 12.5 pressure pipes:</u>				
72	32mm pipes laid in depths not exceeding 1m including excavation, bedding, backfilling, compaction and disposal of surplus material.	m	40	
73	40mm Pipes laid in depths not exceeding 1m including excavation, bedding, backfilling, compaction and disposal of surplus material.	m	70	
<u>Extra over (PN12.5) HDPE piping for fittings:</u>				
74	32mm Bend.	No	12	
75	32mm Adaptor.	No	25	
76	40mm Bend.	No	7	
77	32mm Tee.	No	3	
78	40mm Tee.	No	2	
<u>TAPS, VALVES, ETC</u>				
79	32mm "Cobra" Ball Valve complete with adaptors for HDPE pipe.	No	1	
80	32mm Non-return valve.	No	1	
Carried to Collection				R
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**MOSES MABIDA SENIOR SECONDARY SCHOOL
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**MOSES MABIDA SENIOR SECONDARY SCHOOL
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	<u>Coarse river sand filling supplied by the contractor:</u>				
88	Under floors etc.	m3	2		
	<u>Compaction of surfaces:</u>				
89	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density.	m2	38		
	<u>Prescribed density tests on filling:</u>				
90	In-situ dry density test.	No	4		
	<u>Reinforced 25Mpa/19mm Concrete:</u>				
91	Surface beds cast in panels on waterproofing.	m3	6		
	<u>Finishing top surfaces of concrete smooth with a wood float:</u>				
92	Surface beds, slabs, etc to falls and currents.	m2	38		
	<u>Test blocks:</u>				
93	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	2		
	<u>Expansion joints with bitumen impregnated softboard between vertical concrete or brick surfaces:</u>				
94	12mm Joints not exceeding 300mm high.	m	31		
	<u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u>				
95	10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary.	m	10		
	<u>Fabric reinforcement:</u>				
96	REF. 395 fabric reinforcement in concrete surface beds, slabs, etc.	m2	38		
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**MOSES MABIDA SENIOR SECONDARY SCHOOL
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	<u>Waterproofing under Surface beds</u>				
97	350 Micron USB orange polyethylene dampproof membrane in accordance with SABS 952 Type C laid on sand bed (elsewhere measured).	m2	38		
	<u>STORMWATER CHANNELS</u>				
	<u>Excavation not exceeding 2m deep</u>				
98	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	32		
	<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>				
99	Off site to a dumping site to be found by the Contractor.	m3	32		
	<u>Filling supplied by the contractor under channels</u>				
100	G7 Base course material compacted to 98% Mod AASHTO density	m3	16		
101	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	16		
	<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>				
102	700 x 80mm thick V' channel 150mm deep in centre laid in position in ground not exceeding 2000mm sections including all formwork, reinforcement, expansion joints, smooth finishing to top of concrete surface etc.	m	108		
103	Extra for 700mm angle	No	4		
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104	Extra for forming 200mm thick 700mm wide spreader with 200mm high edges fanning out to 1 960mm width at furthest end with hard burnt bricks pitching cast in ass diffusers including working off concrete to a smooth finish and draining onto natural ground with 150 - 200mm diameter loose stones.	No	4		
<u>BULK SEWER RETICULATION</u>					
<u>Heavy duty (Class 34) PVC-U sewer and drain pipes</u>					
105	110mm Pipes laid in and including trenches not exceeding 1m deep	m	80		
106	110mm Pipes laid in and including trenches exceeding 1m but not exceeding 2m deep	m	20		
<u>Extra over heavy duty (Class 34) PVC-U sewer and drain pipes for fittings</u>					
107	110mm Bend	No	8		
108	110mm Rodding eye	No	2		
109	160 x 110mm Reducing junction	No	1		
<u>PRE-CAST CONCRETE MANHOLES</u>					
<u>Pre-cast concrete circular inspection chambers including pre-cast concrete cover slabs, covers and channels in benching</u>					
110	Manhole 1000mm diameter not exceeding 1m deep.	No	4		
111	Manhole 1000mm diameter exceeding 1m and not exceeding 2m deep.	No	2		
<u>SUNDRIES</u>					
<u>Earthworks</u>					
112	Selected granular filling Class 'B' supplied by the Contractor in bedding under pipes.	m3	30		
113	Selected 19mm stone supplied by the Contractor in bedding under pipes.	m3	15		
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**MOSES MABIDA SENIOR SECONDARY SCHOOL
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114	300 x 300 x 75mm Pre-cast concrete inspection eye marker slab set in ground.	No	1		
	<u>Manhole covers</u>				
115	620mm dia Type 2A Heavy duty cast iron manhole to SABS 558	No	6		
	<u>Connection</u>				
116	Allow for connecting to sewer drainage system		Item		
	<u>Testing:</u>				
117	Testing drainage system.		Item		
	<u>THE FOLLOWING IN RETAINING WALLS, ETC.</u>				
	<u>Excavation in earth not exceeding 2m deep</u>				
118	Trenches.	m3	70		
	<u>Risk of collapse of excavations:</u>				
119	Sides of trench and hole excavations not exceeding 1,5m deep.	m2	200		
	<u>Keeping excavations free of water:</u>				
120	Keeping excavations free of all water other than subterranean water.		Item		
	<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>				
121	Off site to a dumping site to be found by the Contractor.	m3	70		
	<u>Filling with approved clean, hard, dry decomposed dolerite filling supplied and carted onto site by the Contractor, compacted to a density of at least 95% Mod. AASHTO maximum density:</u>				
122	Behind walls with selected backfilling supplied by the Contractor compacted to 98% Mod ASSHTO density	m3	27		
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	<u>Compaction of surfaces</u>				
123	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	70		
	<u>15Mpa/19mm unreinforced concrete</u>				
124	Surface blinding under footings and bases.	m3	4		
	<u>30Mpa/19mm reinforced concrete</u>				
125	Strip footings.	m3	14		
	<u>Test blocks:</u>				
126	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	3		
	<u>Fabric reinforcement:</u>				
127	REF. 395 fabric reinforcement in concrete infill, strip footings.	m2	110		
	<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar (Cement to be 42.5N all-purpose cement):</u>				
128	One brickwalls in foundations	m2	50		
129	One brick walls	m2	60		
	<u>Brickwork reinforcement:</u>				
130	230mm Wide reinforcement built in horizontally.	m	424		
	<u>"Rustgold FBS/Quunu 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>				
131	Extra over brickwork for face brickwork externally.	m2	60		
Carried to Collection				R	
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	<u>Brick-on-edge header course copings, sills, etc. of "Rustgold FBS/Qunu Travertine" or equal Architect approved clay face brick size 222 x 106 x 73mm, pointed with recessed joints on all exposed faces:</u>				
132	220mm 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	100		
	<u>Openings in Walls etc.</u>				
133	Leave or form 32mm weephole through one brick wall	No	150		
	<u>Membranes</u>				
134	"Geofabric filter blanket wrapped around stone with 300mm side and 300mm end laps, including stitching.	m2	120		
	<u>Earth filling 300 x 300mm section of 19mm thick stone material surrounding 110mm uPVC pipe, supplied by the contractor compacted to 98% Mod AASHTO density:</u>				
135	19mm Stone.	m3	9		
	<u>THE FOLLOWING IN RAINWATER TANKS AND STANDS</u>				
	<u>Excavation in earth not exceeding 2m deep:</u>				
136	Trenches.	m3	14		
	<u>Extra over trench and hole excavations in earth for excavation:</u>				
137	Soft rock.	m3	1		
138	Hard rock.	m3	0.4		
	<u>Extra over all excavations for carting away:</u>				
139	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.	m3	9		
	<u>Risk of collapse of excavations:</u>				
140	Sides of trench and hole excavations not exceeding 1,5m deep.	m2	47		
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	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93%:</u>				
141	Backfilling to trenches, holes, etc.	m3	5		
	<u>Earth filling supplied by the Contractor compacted to 95% MOD AASHTO:</u>				
142	Under floors, steps, pavings, etc.	m3	13		
	<u>Compaction of surfaces</u>				
143	Compaction of ground surface under floors, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density.	m2	25		
	<u>25Mpa/19mm Un-reinforced Concrete</u>				
144	Strip footings.	m3	6		
	<u>25 MPa/19mm Concrete:</u>				
145	Tank concrete slab.	m3	5		
	<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>				
146	Surface beds, slabs, etc.	m2	34		
	<u>Rough Formwork to Sides (Degree of Accuracy III):</u>				
147	Edges, risers, ends and reveals not exceeding 300mm high or wide.	m	52		
	<u>Allens Meshco Square Mesh Fabric reinforcement:</u>				
148	Type 193 fabric reinforcement in concrete surface beds, slabs, etc.	m2	34		
	<u>Foundation brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:</u>				
149	One brick walls.	m2	14		
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	<u>Super Structure brickwork of NFP bricks (14 MPa nominal compressive strength) in Class II mortar:</u>				
150	One brick walls.	m2	26		
	<u>Brickwork reinforcement:</u>				
151	230mm Wide reinforcement built in horizontally.	m	98		
152	Ditto, but in foundations (Provisional).	m	59		
	<u>"Corobrik Firelight Satin FBX" 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:</u>				
153	Extra over brickwork for face brickwork externally.	m2	25		
	<u>Plastic water tanks etc:</u>				
154	5000 Litre light duty cylindrical tank complete with lid, 15mm brass bibtap with handle suitable for locking and 4 No. galvanised stay wires 2.5m each long connected to tank, with and including 4 No. eye bolts cast into concrete.	No	5		
155	15mm Chromium plated brass metered bib tap.	No	5		
	<u>THE FOLLOWING IN GROUND STORAGE TANKS</u>				
	<u>EXCAVATIONS, FILLING, ETC.</u>				
	<u>Excavate in earth not exceeding 2m deep including trimming sides, levelling and ramming bottoms and deposit in spoil heaps for later re-use or cart away</u>				
156	Reduced levels under solid floors.	m3	9		
	<u>Excavations in earth of more difficult character</u>				
157	Extra over excavations in earth for excavation in soft rock.	m3	1		
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	<u>Carting away of excavated material</u>				
158	Load surplus or unsuitable material from spoil heaps and cart away to a dumping site to be located by the Contractor.	m3	8		
	<u>Risk of collapse of excavations</u>				
159	Allow for risk of collapse to sides of excavations not exceeding 1.5m deep including all necessary timber shoring, etc.	m2	22		
	<u>Keeping excavations free of water</u>				
160	Allow for keeping the excavations free from water.		Item		
	<u>Foundation courses</u>				
161	Imported G5 filling, selected and supplied by the Contractor, including depositing in layers not exceeding 150mm thick and compacting to 95% modified AASHTO dry density under solid floors.	m3	6		
	<u>Compaction of surfaces</u>				
162	Scarify in-situ material to a depth of 150mm and compact to 93% Mod AASHTO density.	m2	27		
	<u>Tests</u>				
163	Allow for Mod AASHTO density tests on filling.	No	6.00		
	<u>CONCRETE (Labour intensive)</u>				
	<u>Reinforced concrete 30MPa (19mm stone) in:</u>				
164	Raft slabs cast against excavated surfaces.	m3	8		
	<u>Testing</u>				
165	Allow for preparing and curing a set of three test cubes, each size 150mm x 150mm x 150mm and pay all transport and testing costs undertaken by an approved independent laboratory. (Provisional)	Sets	3		
	<u>Surface treatment</u>				
166	Float surface of concrete to a wood float finish.	m2	27		
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	<u>FORMWORK</u>				
	<u>Edges, risers, ends and reveals</u>				
167	Edge, riser, etc exceeding 300mm high.	m2	11		
	<u>Projections, grooves, etc.</u>				
168	Labour and material in forming 25 x 25mm chamfer to exposed top edge of concrete.	m	36		
	<u>REINFORCEMENT (PROVISIONAL)</u>				
	<u>High tensile welded steel mesh reinforcement :</u>				
169	Ref: 395 cast into concrete surfaces.	m2	27		
170	High tensile steel reinforcement bars to structural concrete work.	t	0.95		
	<u>Rainwater tanks:</u>				
171	20 000 Litre polyethylene rotomoulded vertical water storage tank provided complete with lid and overflow outlet, fitted with suitable adaptor and setting in position on concrete tankstand (elsewhere measured). (The tanks are to be filled with water for the Practical Completion inspection)	No	3		
172	Hole through side of tank for 40mm diameter pipe including adaptor.	No	3		
	<u>Ties, cramps, etc.</u>				
173	38 x 1,6mm Galvanised hoop iron strap around tank, both ends fitted with once holed 30 x 30 x 3mm thick galvanised flat plate and bolted together with and including M10 bolt and nut.	No	3		
174	38 x 1,6mm Galvanised hoop iron tie down, 2500mm long, one end wrapped around tank strap and twice bolted, the other end folded over and bolted to top of concrete with and including 8 x 60mm masonry anchor.	No	12		
	Carried to Collection			R	
	Section 4				
	Bill No. 1				
	External Works				

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

	<u>Water supply valve or meter chambers</u>				
175	Excavate for and build valve chamber size 565 x 665 x 550mm deep overall formed of precast concrete valve chamber units 1, 2, 3 and 4 with valve box lid-V and 19mm thick layer of 19mm stone in bottom including filling in and ramming.	No	1		
	<u>Pump and Pumphouse</u>				
176	Allow the Budgetary Allowance of R 20 000,00 (Twenty Thousand Rand) for the installation of a 0.75kw water pump including housing, etc.		Item		20 000.00
	<u>ELECTRICAL CONNECTION</u>				
	<u>Electrical Works</u>				
177	Allow the Budgetary Allowance of R 30 000,00 (Thirty Thousand Rand) for the electrical supply to the water pumps, float switches, ect.		Item		30 000.00
	<u>THE FOLLOWING IN SECURITY FENCING AROUND TANKS</u>				
	The Contractor is to allow in his rates for any site clearance, preparation of ground, etc. in order to carry out the work successfully.				
	<u>"Clearvu" or equally approved fencing products to be executed in strict accordance with the Manufacturer's instructions</u>				
	<u>Fencing</u>				
178	High security galvanised, marine fusion bond coated, mesh fencing panel, size 3350 x 1800mm high fixed to posts (elsewhere).	m	40		
	<u>Posts</u>				
179	Intermediate locking taper post, marine fusion bond coated, 2400mm long, with UV stabilised polymer cap including embedding in 400 x 400 x 600mm (25Mpa) concrete base including all necessary excavations, backfilling, etc.	No	8		
	Carried to Collection			R	
	Section 4				
	Bill No. 1				
	External Works				

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

180	End or corner square post, marine fusion bond coated, 2400mm long, with UV stabilised polymer cap including embedding in 400 x 400 x 600mm (25Mpa) concrete base including all necessary excavations, backfilling, etc.	No	4		
181	Square gate post, marine fusion bond coated, 2400mm long, with UV stabilised polymer cap and gate mooring bracket including embedding in 400 x 400 x 600mm (25Mpa) concrete base including all necessary excavations, backfilling, etc.	No	2		
	<u>Gates</u>				
182	Single gate, size 1000 x 1800mm high overall formed of square section perimeter framing, rails, etc. and the gate covered with high security galvanised, marine fusion bond coated, mesh including locking mechanism, hinges, drop bolts, etc. as per manufacturer's specifications.	No	1		
	<u>Accessories</u>				
183	100mm High, marine fusion bond coated, steel shark spikes in 1500mm lengths pre-drilled and bolted to top of fencing panels (elsewhere).	m	40		
184	"Union 3122" or other approved 51mm brass padlock with stainless steel shackle.	No	1		
	<u>Sundries</u>				
185	Extra over excavations in earth (concrete bases) for excavation in soft rock.	m3	1		
186	Extra over excavations in earth (concrete bases) for excavation in hard rock.	m3	1		
Carried to Collection				R	
Section 4					
Bill No. 1					
External Works					

**THE FOLLOWING IN SECURITY FENCING
AROUND BUILDINGS**

SECURITY FENCING

The Contractor is to allow in his rates for any site clearance, preparation of ground, etc. in order to carry out the work successfully.

"Clearvu" or equally approved fencing products to be executed in strict accordance with the Manufacturer's instructions

Fencing

187	High security galvanised, marine fusion bond coated, mesh fencing panel, size 3350 x 1800mm high fixed to posts (elsewhere).	m	60
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Posts

188	Intermediate locking taper post, marine fusion bond coated, 2400mm long, with UV stabilised polymer cap including embedding in 400 x 400 x 600mm (25Mpa) concrete base including all necessary excavations, backfilling, etc.	No	8
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189	End or corner square post, marine fusion bond coated, 2400mm long, with UV stabilised polymer cap including embedding in 400 x 400 x 600mm (25Mpa) concrete base including all necessary excavations, backfilling, etc.	No	4
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190	Square gate post, marine fusion bond coated, 2400mm long, with UV stabilised polymer cap and gate mooring bracket including embedding in 400 x 400 x 600mm (25Mpa) concrete base including all necessary excavations, backfilling, etc.	No	2
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Gates

191	Single gate, size 1000 x 1800mm high overall formed of square section perimeter framing, rails, etc. and the gate covered with high security galvanised, marine fusion bond coated, mesh including locking mechanism, hinges, drop bolts, etc. as per manufacturer's specifications.	No	1
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Carried to Collection

R

Section 4
Bill No. 1
External Works

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

	<u>Accessories</u>				
192	100mm High, marine fusion bond coated, steel shark spikes in 1500mm lengths pre-drilled and bolted to top of fencing panels (elsewhere).	m	60		
193	"Union 3122" or other approved 51mm brass padlock with stainless steel shackle.	No	1		
	<u>Sundries</u>				
194	Extra over excavations in earth (concrete bases) for excavation in soft rock.	m3	2		
195	Extra over excavations in earth (concrete bases) for excavation in hard rock.	m3	2		
Carried to Collection					R
Section 4					
Bill No. 1					
External Works					

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

[illegible]

Section 4

Bill No. 1

External Works

Section 4
Bill No. 1
External Works

**MOSES MABIDA SENIOR SECONDARY SCHOOL
THE MVULA TRUST FLUSH MAINTENANCE PROGRAMME**

Section No	<u>FINAL SUMMARY</u>	Page No	Amount
1	PRELIMINARIES	30	
2	ALTERATIONS (PROVISIONAL)	38	
3	BUILDING WORKS	91	
4	EXTERNAL WORKS (PROVISIONAL)	120	
5	PROVISIONAL SUMS	121	
	SUB-TOTAL		R
	<u>CONTINGENCIES</u>		
	Allow five per cent (5%) of the above sub-total for contingencies to be used as directed and deducted in whole or in part if not required.		R
	SUB-TOTAL		R
	Add Value Added Tax at the rate of 15%		R
	Carried to Form of Offer and Acceptance		R