

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No	Quantity	Rate	Amount
<u>SECTION 1</u>			
<u>BILL NO. 1</u>			
<u>PRELIMINARIES</u>			
<u>BUILDING AGREEMENT AND PRELIMINARIES</u>			
<p>The JBCC Series 2000 Edition 4.1 Code 2101 March 2005 2005 edition prepared by the Joint Building Contracts Committee, shall be the agreement, amended as hereinafter described</p> <p>The Preliminaries for use with the JBCC Series 2000 Principal Building Agreement (May 2005 edition) prepared by the Joint Building Contracts Committee, shall be deemed to be incorporated in these bills of quantities</p> <p>Contractors are referred to the above-mentioned documents for the full intent and meaning of each clause thereof</p> <p>These clauses are hereinafter referred to by clause number and heading only. Where standard clauses or alternatives are not entirely applicable to this contract such modifications, corrections or supplements as will apply are given under each relevant clause heading and such modifications, corrections or supplements shall take precedence notwithstanding anything contrary contained in the above-mentioned documents</p> <p>Where any item is not relevant to this specific contract such item is marked N/A, signifying "not applicable"</p> <p>Notwithstanding anything to the contrary contained in any of the contract documents including the Principal Building Agreement and the Preliminaries, the provision of the "Preliminaries" as hereinafter set forth shall prevail and shall take precedence</p>			
Carried Forward			R
Section No. 1 Bill No. 1 PRELIMINARIES & GENERALS KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

	<p style="text-align: right;">Brought Forward</p> <p><u>PREAMBLES FOR TRADES</u></p> <p>The Model Preambles for Trades (1999 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claim arising from brevity of description of items fully described in the said Model Preambles for Trades will be entertained</p> <p>Supplementary preambles to the Model Preambles covering clauses of a general nature, clauses pertaining to specific materials and amendments to clauses in the Model Preambles are incorporated in these bills of quantities to satisfy the requirements of this project</p> <p>The contractor's prices for all items throughout these bills of quantities must take account of and include for all of the obligations, requirements and specifications given in the Model Preambles and in any supplementary preambles</p> <p><u>GENERAL</u></p> <p>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 "F", "T" or "V" as the case may be below such item, where "F" denotes a fixed amount (amount not to be varied), "T" denotes an amount variable in proportion to time and "V" denotes an amount variable in proportion to value</p> <p><u>SECTION A - PRINCIPAL BUILDING AGREEMENT</u></p> <p><u>Definitions (A1)</u></p> <p>1 Definitions and interpretation (clause 1)</p> <p>F:..... V:..... T:.....</p>		R	
	<p style="text-align: right;">Carried Forward</p> <p>Section No. 1 Bill No. 1 PRELIMINARIES & GENERALS KUTLO CONSULTING ENGINEERS</p>	Item	R	

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward		R	
<u>Objective and Preparation (A2 to A14)</u>			
2	Offer acceptance and performance (clause 2)		
	F:..... V:..... T:.....	Item	
3	Documents (clause 3)		
	F:..... V:..... T:.....	Item	
4	Design responsibility (clause 4)		
	F:..... V:..... T:.....	Item	
5	Employer's agents (clause 5)		
	F:..... V:..... T:.....	Item	
The principal agent shall:			
- monitor and control progress and scheduling			
- monitor all contract conditions, and			
- coordinate the efforts of the employer's agents, the contractor and subcontractors			
The powers conferred on the principal agent in terms of this clause and/or the exercising of these powers shall not be construed as removing or diminishing any of the obligations of the Contractor in terms of the Principal Building Agreement, whether financial, contractual or otherwise, nor shall the exercising of these powers create any privity of contract as between the Employer or his agents on the one part and the Contractor or subcontractors or suppliers on the other part			
Carried Forward		R	
Section No. 1 Bill No. 1 PRELIMINARIES & GENERALS KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
	The principal agent reserves the right to attend and participate in all contractor/subcontractor's meetings, to invite other employer's agents to attend such meetings at his discretion and to converse and chair any such meetings if the contractor is derelict in his duty in arranging such meetings to the degree of frequency and comprehensiveness dictated in the opinion of the project manager by the circumstances and exigencies of the construction process		
6	Site representative (clause 6)		
	F:..... V:..... T:.....	Item	
7	Compliance with regulations (clause 7)		
	F:..... V:..... T:.....	Item	
8	Works risk (clause 8)		
	F:..... V:..... T:.....	Item	
9	Indemnities (clause 9)		
	F:..... V:..... T:.....	Item	
10	Works insurances (clause 10)		
	F:..... V:..... T:.....	Item	
11	Liability insurances (clause 11)		
	F:..... V:..... T:.....	Item	
Carried Forward			R
Section No. 1 Bill No. 1 PRELIMINARIES & GENERALS KUTLO CONSULTING ENGINEERS			

-5-

-6-

-7-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
	The removal and replacement of materials and/or workmanship that do not conform to specification or drawings shall not constitute grounds for an extension of the construction period nor for an adjustment to the contract sum (clause 29.3)		
30	Penalty for non-completion (clause 30)		
	F:..... V:..... T:.....	Item	
	<u>Payment (A31 - A35)</u>		
31	Interim payment to the contractor (clause 31)		
	F:..... V:..... T:.....	Item	
32	Adjustment to the contract value (clause 32)		
	F:..... V:..... T:.....	Item	
	Where prices are submitted by the contractor or nominated/selected subcontractors 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		
33	Recovery of expense and loss (clause 33)		
	F:..... V:..... T:.....	Item	
Carried Forward			R
Section No. 1 Bill No. 1 PRELIMINARIES & GENERALS KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
34	Final account and final payment (clause 34)		
	F:..... V:..... T:.....	Item	
	The employer shall not pay any interest on amounts payable to the contractor for one hundred and forty two (142) days after the date of issue of the certificate of practical completion		
	The employer shall, however, pay interest to the contractor at the rate stipulated in clause 34.11 on any amounts payable to the contractor more than one hundred and forty two (142) days after the date of issue of the certificate of practical completion but only for such period as the settlement of the final account is delayed by the non-performance of the principal agent or the employer or his agents. In evaluating non-performance for purposes of this clause a reasonable time shall be allowed to the employer or his agents to respond to any matter brought to his/their attention and which may affect the settlement of the final account		
35	Payment to other parties (clause 35)		
	F:..... V:..... T:.....	Item	
	<u>Cancellation (A36-A39)</u>		
36	Cancellation by employer - contractor's default (clause 36)		
	F:..... V:..... T:.....	Item	
37	Cancellation by employer - loss and damage (clause 37)		
	F:..... V:..... T:.....	Item	
Carried Forward			R
Section No. 1 Bill No. 1 PRELIMINARIES & GENERALS KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
38	Cancellation by contractor - employer's default (clause 38) F:..... V:..... T:.....	Item	
39	Cancellation - cessation of the works (clause 39) F:..... V:..... T:.....	Item	
<u>Dispute (A40)</u>			
40	Dispute Settlement (clause 40) F:..... V:..... T:.....	Item	
<u>Substitute Provisions (A41)</u>			
41	State clauses (Clause 41) F:..... V:..... T:..... Information necessary for the completion of those clauses contained in the schedule which are necessary for tender purposes is given hereunder	Item	
<u>THE SCHEDULE</u> Information necessary for completion of those clauses contained in the schedule which are necessary for tender purposes is given hereunder			
42	Pre-tender information (clause 42) F:..... V:..... T:.....	Item	
Carried Forward			R
Section No. 1 Bill No. 1 PRELIMINARIES & GENERALS KUTLO CONSULTING ENGINEERS			

-11-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward		R	
42.2.2 Site Description: as per the information on the tender data			
42.2.3 Work or installations by direct contractors:			
N/A			
42.2.4 This agreement is for a government contract where there are specific options that are applicable to a State organ only			
Yes			
42.2.5 Date on which possession of the site is intended to be given:			
UNKNOWN			
42.2.6 Period for the commencement of the works after the contractor takes possession			
42.2.7 For the works as a whole . Intended date of practical completion and the penalty per calendar day			
3 months after contractual commencement date <i>Date</i>			
<i>Penalty Amount</i> <i>The penalty shall be 7.5c per R100 per calendar day of the tendered amount (inclusive of value added tax)</i>			
Carried Forward		R	
Section No. 1 Bill No. 1 PRELIMINARIES & GENERALS KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward	R
42.2.8 For the works in sections : Intended date of practical completion and the penalty per calender day	
Section 1	
.N/A..... Date	
R.N/A..... Penalty Amount	
42.2.9 The law applicable to this agreement shall be that of	
<i>South Africa (country)</i>	
<u>42.3 INSURANCES</u>	
42.3.1 Contract works insurance to be effected by:	
<i>Contractor:</i>	
<i>For the Sum of R Contract Amount + 20.00 %</i>	
<i>With a deductible of - to be determined by the contractor</i>	
42.3.2 Supplementary insurance is required	
<i>No</i>	
42.3.3 Public liability insurance to be effected by:	
<i>Contractor:</i>	
<i>For the Sum of R 2 500 000-00</i>	
<i>With a deductible of - to be determined by the contractor</i>	
<u>42.4 DOCUMENTS</u>	
42.4.1 Waivers of contractors lien or right of continuing possession is required	
<i>Yes</i>	
Carried Forward	R
Section No. 1 Bill No. 1 PRELIMINARIES & GENERALS KUTLO CONSULTING ENGINEERS	

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

	Brought Forward		R
42.4.2	Number of construction document copies to be supplied to the contractor free of charge:		
	3 Number of		
42.4.3	Bills of Quantities/Lump sum document schedule of rates drawn up in accordance with: "Standard System of Measuring Builders' Work"		
42.4.4	On acceptance of the tender the bills of quantities/lump sum document is to be submitted within working days <i>The priced bills of quantities must be handed in with the tender</i>		
42.4.5	JBCC Engineering General Conditions are to be included in the contract documents : <i>No</i>		
42.4.6	The contract value is to be adjusted using escalation adjustment indices <i>No</i> Where JBCC CPAP is to be used <i>Base Month N/A</i>		
42.4.7	Details of changes made to the provision of JBCC standard documentation:		
	<u>SECTION B: PRELIMINARIES</u>		
	<u>Definitions and interpretation (B1)</u>		
43	Definition and interpretation (B1.1 - B1.4.6) F:..... V:..... T:.....	Item	
	Carried Forward		R
	Section No. 1 Bill No. 1 PRELIMINARIES & GENERALS KUTLO CONSULTING ENGINEERS		

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>Documents (B2)</u>			
44	Checking of documents (B2.1)		
	F:..... V:..... T:.....	Item	
45	Provisional bills of quantities (B2.2)		
	F:..... V:..... T:.....	N/A	
46	Availability of construction documentation (B2.3)		
	F:..... V:..... T:.....	Item	
47	Interests of agents (B2.4)		
	F:..... V:..... T:.....	Item	
48	Priced documents (B2.5)		
	F:..... V:..... T:.....	Item	
49	Tender submission (B2.6)		
	F:..... V:..... T:.....	Item	
50	Defined works area (B3.1)		
	F:..... V:..... T:.....	Item	
Carried Forward			R
Section No. 1 Bill No. 1 PRELIMINARIES & GENERALS KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

	Brought Forward		R	
	<u>The site (B3)</u>			
51	Geotechnical investigation (B3.2)			
	F:..... V:..... T:.....	Item		
52	Inspection of the site (B3.3)			
	F:..... V:..... T:.....	Item		
	Existing premises occupied (B3.4)			
	F:..... V:..... T:.....			
	Previous work - dimensional accuracy (B3.5)			
	F:..... V:..... T:.....			
	Previous work - defects (B3.6)			
	F:..... V:..... T:.....			
53	Services - known (B3.7)			
	F:..... V:..... T:.....	Item		
54	Services - unknown (B3.8)			
	F:..... V:..... T:.....	Item		
	Carried Forward		R	
	Section No. 1 Bill No. 1 PRELIMINARIES & GENERALS KUTLO CONSULTING ENGINEERS			

-17-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

	Brought Forward		R
62	Labour and Plant records (B4.5) F:..... V:..... T:.....	Item	
	<u>Samples, Shop Drawings and Manufacturer's Instructions (B5)</u>		
63	Samples of materials (B5.1) F:..... V:..... T:.....	Item	
64	Workmanship samples (B5.2) F:..... V:..... T:.....	Item	
65	Shop drawings (B5.3) F:..... V:..... T:.....	Item	
66	Compliance with Manufacturer's Instructions (B5.4) F:..... V:..... T:.....	Item	
	<u>Temporary works and plant (B6)</u>		
67	Deposits and fees (B6.1) F:..... V:..... T:.....	Item	
68	Enclosure of the works (B6.2) F:..... V:..... T:.....	Item	
	Carried Forward		R
	Section No. 1 Bill No. 1 PRELIMINARIES & GENERALS KUTLO CONSULTING ENGINEERS		

-19-

-20-

-21-

-22-

-23-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward		R	
12.1.8	Previous work - defects (B3.5)		
12.1.9	Services - known (B3.7)		
12.1.10	Protection of trees (B3.9)		
	All trees should be protected and only on instruction of the Principal Agent may any trees be removed		
12.1.12	Enclosure of the works (B6.2)		
12.1.11	Inspection of adjoining properties (B3.11)		
12.1.13	Offices (B6.4.3)		
	An office for the clerck of works should be provided		
12.1.14	Main notice board (B6.5)		
	YES		
12.1.15	Subcontractors notice board (B6.6)		
	A notice board is required		
	No		
12.1.16	Water (B7.2)		
	Alternative Selected: A		
12.1.17	Electricity (B7.3)		
	Alternative selected: A		
12.1.18	Telecommunications (B7.4)		
12.1.19	Ablution facilities (B7.5)		
	Alternative selected: A		
Carried Forward		R	
Section No. 1			
Bill No. 1			
PRELIMINARIES & GENERALS			
KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward		R	
12.1.20 Protection of existing/sectionally occupied works (B11.2)			
12.1.21 Special attendance (B9.2) Subcontractor (1) details: N/A			
12.1.22 Protection of the works (B11.1) N/A			
12.1.23 Disturbance (B11.5) N/A			
12.1.24 Environmental Disturbance (B11.6) N/A			
<u>Post tender information (B12.2)</u>			
12.2.1 Payment of preliminaries Alternative selected: B			
12.2.2 Adjustment of preliminaries Alternative selected: A			
12.2.3 Additional agreed preliminaries items N/A			
<u>SECTION C: SPECIFIC PRELIMINARIES</u>			
<p>Any special items to meet the particular circumstances of a specific project are embodied in this section. Where required for an aspect of the works to be executed according to a design by a consulting engineer, a recital of the headings to the individual clauses of the JBCC Engineering General Conditions are included</p>			
Carried Forward		R	
Section No. 1 Bill No. 1 PRELIMINARIES & GENERALS KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

	Brought Forward		R
98	Site instructions Instructions issued on site are to be recorded in triplicate in a site instruction book which is to be maintained on site by the contractor F: :..... V:..... T:.....	Item	
99	Black economic empowerment and training F:..... V:..... T:.....	Item	
100	Proprietary branded products F:..... V:..... T:.....	Item	
101	Testing of flat roof waterproofing for watertightness Flat roof waterproof areas shall be prepared with small sand dykes around them of a size and enclosing an area approved by the principal agent, flooded with water and kept "ponded" for at least 36 hours as a test to ensure the watertightness of the waterproofing and before any further construction work is carried out above the waterproofing F:..... V:..... T:..... The contractor shall take delivery of, handle, store, use, apply and/or fix all proprietary branded products in strict accordance with the manufacturers' instructions after consultation with the manufacturer's authorised representative	Item	
102	Contract instructions F:..... V:..... T:.....	Item	
	Carried Forward		R
	Section No. 1 Bill No. 1 PRELIMINARIES & GENERALS KUTLO CONSULTING ENGINEERS		

-27-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

	Brought Forward		R	
	<p>Where guarantees are called for, the contractor shall obtain a written guarantee, addressed to the employer, from the firm supplying the materials and/or doing the work and shall deliver same to the principal agent on the certified completion of the contract. The guarantee shall state that workmanship, materials and installation are guaranteed for a specified period from the date of certified completion of the contract, and that any defects that may arise during the specified period shall be made good at the expense of the firm supplying the materials and/or doing the work, upon written notice from the principal agent to do so. This guarantee will not be enforced if the work is damaged by defects in the construction of the building in which case the responsibility for replacement shall rest entirely with the contractor. The principal agent shall be the sole judge of the cause responsible for defects in the work and his decision shall be final and binding in terms of clause 40.2 of the agreement</p>			
106	<p>Overtime</p> <p>F:..... V:..... T:.....</p> <p>Should overtime be required to be worked for any reason whatsoever, the costs of such overtime are to be borne by the contractor unless the principal agent has specifically authorised, in writing, prior to execution thereof, that costs for such overtime are to be borne by the employer</p>	Item		
107	<p>Co-operation of contractor for cost management</p> <p>F:..... V:..... T:.....</p>	Item		
	Carried Forward		R	
	<p>Section No. 1 Bill No. 1 PRELIMINARIES & GENERALS KUTLO CONSULTING ENGINEERS</p>			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

	Brought Forward		R
	<p>It is specifically agreed that the contractor accepts the obligation of assisting the professional consultants in implementing proper cost management. The contractor will be advised by the principal agent of all cost management procedures which will be implemented to ensure that the final building cost does not exceed the budget. The quantity surveyor undertakes to make available to the contractor all budgetary allowances and cost assessments/reports to enable the proper procedures to be implemented and the contractor will attend all cost plan review and cost management meetings. The contractor undertakes to extend these procedures in regard to all subcontractors</p>		
108	<p>Occupational Health and Safety Specification</p> <p>F:..... V:..... T:.....</p> <p>Any Principal Contractor entering into a contract with The Developer must achieve an acceptable level of Occupational Health and Safety performance. Refer to "Project Specification" and "Safety, Health and Environmental Evaluation Questionnaire" The contractor to comply with all provisions of the above and to be enforced on all selected and or other sub-contractors, as no claim afterwards will be entertained</p> <p><u>SUMMARY OF CATEGORIES</u></p> <p>Category : Fixed R.....</p> <p>Category : Value R.....</p> <p>Category : Time R.....</p>	Item	
	Carried to Final Summary		R
	<p>Section No. 1 Bill No. 1 PRELIMINARIES & GENERALS KUTLO CONSULTING ENGINEERS</p>		

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No		Quantity	Rate	Amount
	<u>SECTION 2</u>			
	<u>BILL NO. 1</u>			
	<u>DEMOLITIONS AND ALTERATIONS</u>			
	<u>View site</u>			
	Before submitting his tender the tenderer shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials salvageable from the alterations. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained			
	<u>Explosives</u>			
	No explosives whatsoever may be used for alteration purposes unless otherwise stated			
	<u>TEMPORARY BARRIERS, SCREENS, ETC</u>			
	<u>Temporary barriers, screens, etc including removal</u>			
1	Dust screen 2m high from ground suitable timber framing with 375 micron polyethylene sheeting stapled on one side, including corners, ends, etc	m	120	
	<u>DEMOLITIONS OF EXISTING TOILET STRUCTURES</u>			
2	Demolish existing pit toilet structures size 6m x 3m x 2.8m high including honey sucking material in pits and disposal, hacking up foundations and surface beds, doors, windows and door frames, ironmongery and plumbing fittings complete. All pits are to be filled and compacted with imported materials.	No	1	
	Carried Forward		R	
	Section No. 2 Bill No. 1 ALTERATIONS AND DEMOLITIONS KUTLO CONSULTING ENGINEERS			

-31-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No		Quantity	Rate	Amount
	<u>SECTION 3</u>			
	<u>BILL NO.1</u>			
	<u>EARTHWORKS</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>SITE CLEARANCE</u>			
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush and trees not exceeding 200mm girth, etc.	m2	67	
2	Stripping average 100mm thick layer of top soil and stockpiling on site	m2	67	
	<u>EXCAVATION, FILLING, ETC</u>			
	<u>Excavation in earth not exceeding 2m deep</u>			
3	Trenches	m3	13	
4	Pit	m3	23	
5	For aprons thickening	m3	2	
	<u>Extra over trench and hole excavations in earth for excavation:</u>			
6	Soft rock	m3	4	
7	Hard rock	m3	2	
	Carried Forward		R	
	Section No. 3 Bill No. 1 EARTHWORKS KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>Extra over all excavations for carting away:</u>			
8	Surplus material from excavations and/or stock piles on site to a dumping site to be allocated by the Contractor	m3	31
<u>Risk of collapse of excavations</u>			
9	Sides of trench and hole excavation not exceeding 1,5m deep.	m2	47
<u>Keeping excavations free of water.</u>			
10	Keeping excavations free of water other than subterranean water	Item	
<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO density</u>			
11	Under floors, steps, pavings, etc.	m3	8
12	Backfilling to trenches, holes, etc.	m3	4
<u>Compaction of surfaces</u>			
13	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	23
14	Compaction of ground surface to pits 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	25
Carried Forward			R
Section No. 3 Bill No. 1 EARTHWORKS KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
15	Compaction of ground surface to aprons 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	29
	<u>Prescribed density tests on filling</u>		
16	Modified AASHTO Density tests	No	4
	<u>SOIL POISONING</u>		
	<u>Soil insecticide</u>		
17	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming.	m2	23
18	To bottom of concrete aprons	m2	23
19	To bottoms and sides of trenches, etc.	m2	19
Carried Forward to Summary of Section No. 3			R
Section No. 3			
Bill No. 1			
EARTHWORKS			
KUTLO CONSULTING ENGINEERS			

-35-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>TEST CUBES</u>			
8	Allow for preparing a set of three test cubes each size 150 x 150 x 150mm, sending them to an approved testing laboratory for testing and paying all charges in connection therewith.	No	4
	<u>Finishing top surfaces of concrete smooth with a steel trowel</u>		
9	Surface beds, slabs, etc.	m2	25
<u>FORMWORK</u>			
	<u>Rough formwork to sides:</u>		
10	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	33
	<u>Permanent formwork to soffits:</u>		
11	Slabs propped up not exceeding 1.5m high	m2	12
12	Leave or form 500mm diameter opening in top of floor slab	No	4
<u>REINFORCEMENT</u>			
	<u>Mesh Reinforcement (measure nett)</u>		
13	Mesh ref. No. 395 fabric reinforcement fixed horizontal in surface beds	m2	23
Carried Forward to Summary of Section No. 3			R
Section No. 3			
Bill No. 2			
CONCRETE, FORMWORK AND REINFORCEMENT			
KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No	Quantity	Rate	Amount
<u>BILL NO.3</u>			
<u>BRICKWORK</u>			
<u>SUPPLEMENTARY PREAMBLES</u>			
For preambles see "Specifications of materials and methods to be used - PW 371"			
<u>BRICKWORK</u>			
Sizes in descriptions			
Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick			
Hollow walls etc			
Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole.			
Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats "Brixéal" bitumen emulsion waterproofing coating.			
User note: The above preamble generally applies for works in hot and humid coastal areas			
Face bricks			
Bricks shall be ordered timeously to obtain uniformity in size and colour			
<u>Pointing</u>			
Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc			
Carried Forward			R
Section No. 3 Bill No. 3 MASONRY KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>SAMPLES</u>			
Samples of all masonry building units, except those for walls units. Samples of building units to be used in walls described as "load bearing" shall consist of 30 units from every 30 000 units delivered to site described as "load bearing", shall consist of a minimum of 6			
<u>FOUNDATIONS</u>			
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class I mortar</u>			
1	One brick walls	m2	9
2	One brick walls in pit	m2	15
3	4Half brick corbelling in pit	m	6
<u>FACE BRICKWORK</u>			
<u>Face bricks (purchase price of R 5000.00/1000 delivered to site excluding VAT) pointed with flush horizontal and vertical joints</u>			
4	Extra over brickwork for face brickwork in foundation	m2	4
<u>SUPERSTRUCTURE</u>			
<u>FACE BRICKWORK</u>			
<u>Face bricks (purchase price of R 5000.00/1000 delivered to site excluding VAT) pointed with flush horizontal and vertical joints</u>			
5	Half brickwork for face brick walls pointed both sides	m2	21
6	One brickwork for face brick walls pointed both sides	m2	79
7	Extra over brickwork for face brickwork in beamfilling	m2	4
Carried Forward			R
Section No. 3 Bill No. 3 MASONRY KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

	Brought Forward			R
8	Fair raking and cutting	m	11	
	<u>Brick-on-edge header course coping, sills, etc. of face bricks (purchase price of R 3 500.00/1000 delivered to site excluding VAT) pointed with recessed joints on all exposed faces</u>			
9	Extra over brickwork for brick-on-edge header course lintels pointed on two sides and 110mm soffit	m	8	
10	Face brick-on-edge window sill 220mm wide pointed on two side and on top and set at a angle	m	6	
11	Fair cutting and fitting around pipe not exceeding 100mm diameter.	No	6	
	<u>BRICKWORK SUNDRIES</u>			
	<u>Brick reinforcement</u>			
12	75mm Wide reinforcement built in horizontally	m	125	
13	150mm Wide reinforcement built in horizontally	m	362	
	<u>Turning pieces</u>			
14	220mm Wide turning piece to lintel etc	m	7	
	<u>Galvanised wire ties etc</u>			
15	6mm Diameter roof tie 2m girth bent double with one end fixed to timber and other built into brickwork	No	11	
	<u>Prestressed fabricated lintels</u>			
16	Pair of 110 x 75mm Lintels in lengths exceeding 3m and not exceeding 4,5m	m	13	
	<u>Ventillation bricks</u>			
17	Set of two 22 x 155mm high terra cotta clay vermin proof air bricks including making good reveals and gauze	No	10	
	Carried Forward to Summary of Section No. 3			R
	Section No. 3			
	Bill No. 3			
	MASONRY			
	KUTLO CONSULTING ENGINEERS			

-40-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No		Quantity	Rate	Amount
	<u>BILL NO.5</u>			
	<u>ROOF COVERINGS</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 124 for CPAP formula purposes			
	<u>PROFILED METAL SHEETING AND ACCESSORIES</u>			
	<u>0,6mm "Kliplok" roof sheeting in chromadek finish fixed to timber purlins (elsewhere)</u>			
1	Roof covering with pitch not exceeding 25 degrees	m2	49	
	<u>Sundries</u>			
2	12" Thermal resistance sisalation laid on purlins	m2	49	
	<u>RAINWATER DISPOSAL</u>			
	<u>Aluzink seamless metal gutters:</u>			
3	100 x 100 x 0.6mm Standard rainwater gutters fixed with gutters brackets	m	9	
4	Extra over for closed ends	No	2	
5	75 x 100 x 0.6mm Thick galvanised rainwater downpipes fixed to wall	m	6	
6	Extra over rainwater pipe for eaves offset	No	2	
7	Ditto, for shoe	No	2	
	Carried Forward to Summary of Section No. 3			
	Section No. 3			
	Bill No. 5			
	ROOF COVERINGS			
	KUTLO CONSULTING ENGINEERS			

R

-42-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward				R
<u>Wrought meranti doors hung to steel frames</u>				
8	44mm Framed batten door 813 x 2 032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding and including weatherboard (D1)	No	1	
9	44mm Purpose made Framed batten door 813 x 1 883mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed (door raised by 120mm from bottom) (D2)	No	3	
10	44mm Framed batten door 900 x 2 032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding and including weatherboard (D1)	No	1	
Carried Forward to Summary of Section No. 3				R
Section No. 3				
Bill No. 6				
CARPENTRY AND JOINERY				
KUTLO CONSULTING ENGINEERS				

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No		Quantity	Rate	Amount
	<u>BILL NO.7</u>			
	<u>IRONMONGERY</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>CATCHES, CABIN, HOOKS, ETC</u>			
	<u>Approved</u>			
1	150mm Cabin hook and eye including 70 x 70 x 20mm chamfered hardwood block twice oiled and plugged	No	2	
	<u>LOCKS</u>			
	<u>"Dorma" or equal approved</u>			
2	Three lever mortice lockset plugged	No	2	
3	Indicator lockset plugged	No	3	
	<u>HANDLES</u>			
	<u>Aluminium Pull Handle</u>			
4	Set of two, 300mm pull handles fixed back to back on doors	No	1	
	<u>DOOR CLOSERS</u>			
	<u>"Dorma" or equal approved</u>			
5	Dormakaba EN 2-4 Parallel Arm DELAYED ACTION Door Closer. Push Side Fixing (Parallel Arm Bracket Included) EN2 750-850, EN3 850-950, EN4 950-1100. Code TS73V PA DC - PAB - SL	No	1	
	<u>DOORSTOPS</u>			
	Carried Forward		R	
	Section No. 3 Bill No. 7 IRONMONGERY KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

	Brought Forward			R
	<u>Approved</u>			
6	38mm Diameter rubber door stop plugged	No	5	
	<u>LETTERS, NAMEPLATES, ETC.</u>			
	<u>"Union" or equal approved</u>			
7	75 x 150mm Natural anodised aluminium plate with male or female symbol	No	2	
	<u>"Vaal Paragon" or similar approved</u>			
8	32mm Type 9 back grab rail 800mm long plugged	No	1	
9	32mm Type 8 side grab rail 900mm girth plugged	No	1	
	<u>BATHROOM FITTINGS</u>			
	<u>"Kimberley-Clark" or equal approved</u>			
10	"Kimberly Clark" SQ2 code 405607B white lockable toilet roll holder	No	4	
Carried Forward to Summary of Section No. 3				R
Section No. 3				
Bill No. 7				
IRONMONGERY				
KUTLO CONSULTING ENGINEERS				

-46-

-47-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No		Quantity	Rate	Amount
	<u>BILL NO. 10</u>			
	<u>PLUMBING AND DRAINAGE (PROVISIONAL)</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>ENVIRO-LOO TOILET SYSTEMS</u>			
1	Supply and Install "Enviro-Loo" Industrial 1040 Model complete, installed strictly in accordance with manufacturers instructions, unit comprising of top unit and two x louvred inlets , drying plate , two x air inlets, standard toilet pan, seat and lid, 3500mm long outlet vent pipe, ventilation extraction unit fixed to wall with vent wall bracket, 1 bag mounting screws and organic starter, enzyme and toilet cleaner including all necessary inter connector piping between multiple tanks, emergency outlet piping, etc	No	4	
2	Supply and Erect "Enviro-loo" "Industrial 1040 Model, 2-bowl Urinal Evaporative Tank system fixed complete as per manufacturers specification unit, comprising of urinal evaporative tank , urinal bowls including brackets , 3500mm long outlet vent pipe , ventilation extraction unit fixed to wall with vent wall bracket, 1 bag mounting screws and organic starter, enzyme and toilet cleaner including all necessary piping, traps, etc	No	2	
	<u>SANITARY FITTINGS</u>			
	<u>White glazed fireclay or vitreous china coupling with SABS specification 497 in</u>			
3	450 x 290mm "Bantam" cloakroom hand basin complete with single punched tapholes fixed to wall with and including two number 10mm bolts	No	1	
	Carried Forward		R	
	Section No. 3 Bill No. 10 PLUMBING AND DRAINAGE KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>PCC WASH TROUGH</u>			
4	Supply and install pre-cast concrete double wash-trough, complete with all necessary pipework including soakaway size 1000 x 1000 x 1000mm covered with "bidim"	No	2
<u>TRAPS, ETC.</u>			
<u>uPVC</u>			
5	32 x 50mm Deep seal "P" or "S" trap	No	2
<u>SOIL DRAINAGE</u>			
<u>uPVC pipes</u>			
<u>Normal duty (Class 51) uPVC sewer and drain pipes</u>			
6	50mm Pipes	m	2
7	110mm Pipes laid in and including trenches not exceeding 1m deep	m	10
<u>Extra over uPVC pipes for fittings</u>			
8	50mm Bend	No	2
9	50 mm Junction	No	2
10	50mm Access junction	No	2
11	50mm Access bend	No	2
12	50mm Access reducing junction	m	2
13	50mm "GI Two-way" vent valve	No	2
Carried Forward			R
Section No. 3 Bill No. 10 PLUMBING AND DRAINAGE KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward				R
<u>Extra over normal duty (Class 51) uPVC sewer and drain pipes for fittings</u>				
14	110mm Bend	No	2	
15	110mm Junction	No	2	
<u>uPVC gulleys</u>				
16	110mm Dished gully trap assembly with head, grid and concrete surround not exceeding 750mm deep	No	3	
<u>WATER SUPPLIES</u>				
<u>Class 0 copper pipes</u>				
17	15 mm Pipes	m	3	
18	15mm Pipes chased in walls	m	10	
<u>Extra over class 0 copper pipes for capillary fittings</u>				
19	15mm Fittings	No	5	
<u>TAPS, VALVES, ETC.</u>				
<u>"Cobra Watertech" or other equal approved</u>				
20	19mm chrome plated push button taps to wash troughs	No	4	
21	15mm Elbow action pillar tap	No	1	
22	15mm gate valve plugged	No	4	
<u>Sundries</u>				
23	Testing water pipe system		Item	
Carried Forward to Summary of Section No. 3				R
Section No. 3				
Bill No. 10				
PLUMBING AND DRAINAGE				
KUTLO CONSULTING ENGINEERS				

-51-

-52-

-53-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No		Quantity	Rate	Amount
	<u>BILL NO.2</u>			
	<u>EARTHWORKS</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>SITE CLEARANCE</u>			
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush and trees not exceeding 200mm girth, etc.	m2	102	
2	Stripping average 100mm thick layer of top soil and stockpiling on site	m2	102	
	<u>EXCAVATION,FILLING, ETC</u>			
	<u>Excavation in earth not exceeding 2m deep</u>			
3	Trenches	m3	10	
4	Pit	m3	21	
5	For aprons thickening	m3	2	
	<u>Extra over trench and hole excavations in earth for excavation:</u>			
6	Soft rock	m3	4	
7	Hard rock	m3	2	
	<u>Extra over all excavations for carting away:</u>			
8	Surplus material from excavations and/or stock piles on site to a dumping site to be allocated by the Contractor	m3	21	
	Carried Forward			
	Section No. 4 Bill No. 1 EARTHWORKS KUTLO CONSULTING ENGINEERS		R	

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
	<u>Risk of collapse of excavations</u>		
9	Sides of trench and hole excavation not exceeding 1,5m deep.	m2	56
	<u>Keeping excavations free of water.</u>		
10	Keeping excavations free of water other than subterranean water	Item	
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO density</u>		
11	Under floors, steps, pavings, etc.	m3	5
12	Backfilling to trenches, holes, etc.	m3	5
	<u>Compaction of surfaces</u>		
13	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	33
14	Compaction of ground surface to pits 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	14
15	Compaction of ground surface to aprons 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	40
	<u>Prescribed density tests on filling</u>		
16	Modified AASHTO Density tests	No	5
Carried Forward			R
Section No. 4 Bill No. 1 EARTHWORKS KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward				R
<u>SOIL POISONING</u>				
<u>Soil insecticide</u>				
17	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming.	m2	33	
18	To bottom of concrete aprons	m2	40	
19	To bottoms and sides of trenches, etc.	m2	42	
Carried Forward to Summary of Section No. 4				R
Section No. 4				
Bill No. 1				
EARTHWORKS				
KUTLO CONSULTING ENGINEERS				

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No		Quantity	Rate	Amount
	<u>BILL NO.3</u>			
	<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>UNREINFORCED CONCRETE, ETC</u>			
	<u>25Mpa/19mm Concrete</u>			
1	Strip footings	m3	10	
2	Ditto, but surface bed in pit	m3	2	
3	2Aprons cast in panels	m3	4	
4	Extra over concrete in surface beds for thickening 85mm deep the bottom including all excavation, backfilling etc.	m	18	
5	Thickening down apron on edge 110mm deep x 200mm wide	m	35	
	<u>REINFORCED CONCRETE, ETC</u>			
	<u>25Mpa/19mm Concrete</u>			
6	Slabs	m3	2	
	<u>CONCRETE SUNDRIES</u>			
	<u>Finishing top surfaces of concrete smooth with a wood float</u>			
7	Aprons and pavings to falls	m2	40	
	Carried Forward			
	Section No. 4 Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT KUTLO CONSULTING ENGINEERS		R	

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>TEST CUBES</u>			
8	Allow for preparing a set of three test cubes each size 150x150x150mm, sending them to an approved testing laboratory for testing and paying all charges in connection therewith.	No	5
	<u>Finishing top surfaces of concrete smooth with a steel trowel</u>		
9	Surface beds, slabs, etc.	m2	33
<u>FORMWORK</u>			
	<u>Rough formwork to sides:</u>		
10	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	35
	<u>Permanent formwork to soffits:</u>		
11	Slabs propped up not exceeding 1.5m high	m2	14
12	Leave or form 500mm diameter opening in top of floor slab	No	6
<u>REINFORCEMENT</u>			
	<u>Mesh Reinforcement (measure nett)</u>		
13	Mesh ref. No. 395 fabric reinforcement fixed horizontal in surface beds	m2	33
Carried Forward to Summary of Section No. 4			R
Section No. 4			
Bill No. 2			
CONCRETE, FORMWORK AND REINFORCEMENT			
KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No	Quantity	Rate	Amount
<u>BILL NO.4</u>			
<u>BRICKWORK</u>			
<u>SUPPLEMENTARY PREAMBLES</u>			
For preambles see "Specifications of materials and methods to be used - PW 371"			
<u>BRICKWORK</u>			
Sizes in descriptions			
Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick			
Hollow walls etc			
Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole.			
Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats "Brixal" bitumen emulsion waterproofing coating.			
User note: The above preamble generally applies for works in hot and humid coastal areas			
Face bricks			
Bricks shall be ordered timeously to obtain uniformity in size and colour			
<u>Pointing</u>			
Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc			
Carried Forward			R
Section No. 4 Bill No. 3 MASONRY KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>SAMPLES</u>			
Samples of all masonry building units, except those for walls units. Samples of building units to be used in walls described as "load bearing" shall consist of 30 units from every 30 000 units delivered to site described as "load bearing", shall consist of a minimum of 6			
<u>FOUNDATIONS</u>			
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class I mortar</u>			
1	One brick walls	m2	11
2	One brick walls in pit	m2	34
3	4Half brick corbelling in pit	m	30
<u>FACE BRICKWORK</u>			
<u>Face bricks (purchase price of R 5000.00/1000 delivered to site excluding VAT) pointed with flush horizontal and vertical joints</u>			
4	Extra over brickwork for face brickwork in foundation	m2	8
<u>SUPERSTRUCTURE</u>			
<u>FACE BRICKWORK</u>			
<u>Face bricks (purchase price of R 5000.00/1000 delivered to site excluding VAT) pointed with flush horizontal and vertical joints</u>			
5	Half brickwork for face brick walls pointed both sides	m2	20
6	One brickwork for face brick walls pointed both sides	m2	78
7	Extra over brickwork for face brickwork in beamfilling	m2	2
8	Fair raking and cutting	m	10
Carried Forward			R
Section No. 4 Bill No. 3 MASONRY KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
	<u>Brick-on-edge header course coping, sills, etc. of face bricks (purchase price of R 3 500.00/1000 delivered to site excluding VAT) pointed with recessed joints on all exposed faces</u>		
9	Extra over brickwork for brick-on-edge header course lintels pointed on two sides and 110mm soffit	m	16
10	Face brick-on-edge window sill 220mm wide pointed on two side and on top and set at a angle	m	8
11	Fair cutting and fitting around pipe not exceeding 100mm diameter.	No	6
<u>BRICKWORK SUNDRIES</u>			
	<u>Brick reinforcement</u>		
12	75mm Wide reinforcement built in horizontally	m	181
13	150mm Wide reinforcement built in horizontally	m	433
	<u>Turning pieces</u>		
14	220mm Wide turning piece to lintel etc	m	8
	<u>Galvanised wire ties etc</u>		
15	6mm Diameter roof tie 2m girth bent double with one end fixed to timber and other built into brickwork	No	20
	<u>Prestressed fabricated lintels</u>		
16	Pair of 110 x 75mm Lintels in lengths exceeding 3m and not exceeding 4,5m	m	13
	<u>Ventillation bricks</u>		
17	Set of two 22 x 155mm high terra cotta clay vermin proof air bricks including making good reveals and gauze	No	12
Carried Forward to Summary of Section No. 4			R
Section No. 4			
Bill No. 3			
MASONRY			
KUTLO CONSULTING ENGINEERS			

-62-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No		Quantity	Rate	Amount
	<u>BILL NO.6</u>			
	<u>ROOF COVERINGS</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 124 for CPAP formula purposes			
	<u>PROFILED METAL SHEETING AND ACCESSORIES</u>			
	<u>0,6mm "Kliplok" roof sheeting in chromadek finish fixed to timber purlins (elsewhere)</u>			
1	Roof covering with pitch not exceeding 25 degrees	m2	45	
	<u>Sundries</u>			
2	12" Thermal resistance sisalation laid on purlins	m2	45	
	<u>RAINWATER DISPOSAL</u>			
	<u>Aluzink seamless metal gutters:</u>			
3	100 x 100 x 0.6mm Standard rainwater gutters fixed with gutters brackets	m	9	
4	Extra over for closed ends	No	2	
5	75 x 100 x 0.6mm Thick galvanised rainwater downpipes fixed to wall	m	6	
6	Extra over rainwater pipe for eaves offset	No	2	
7	Ditto, for shoe	No	2	
	Carried Forward to Summary of Section No. 4			
	Section No. 4			
	Bill No. 5			
	ROOF COVERINGS			
	KUTLO CONSULTING ENGINEERS			

-64-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>Wrought meranti doors hung to steel frames</u>			
8	44mm Framed batten door 813 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding and including weatherboard (D1)	No	2
9	44mm Purpose made Framed batten door 813 x 1883mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed (door raised by 120mm from bottom) (D2)	No	6
Carried Forward to Summary of Section No. 4			
Section No. 4			R
Bill No. 6			
CARPENTRY AND JOINERY			
KUTLO CONSULTING ENGINEERS			

-66-

-67-

-68-

-69-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No		Quantity	Rate	Amount
	<u>BILL NO. 11</u>			
	<u>PLUMBING AND DRAINAGE (PROVISIONAL)</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>ENVIRO-LOO TOILET SYSTEMS</u>			
1	Supply and Install "Enviro-Loo" Industrial 1040 Model complete, installed strictly in accordance with manufacturers instructions, unit comprising of top unit and two x louvred inlets , drying plate , two x air inlets, standard toilet pan, seat and lid, 3500mm long outlet vent pipe, ventilation extraction unit fixed to wall with vent wall bracket, 1 bag mounting screws and organic starter, enzyme and toilet cleaner including all necessary inter connector piping between multiple tanks, emergency outlet piping, etc	No	6	
2	Supply and Erect "Enviro-loo" "Industrial 1040 Model, 3 - bowl Urinal Evaporative Tank system fixed complete as per manufacturers specification unit, comprising of urinal evaporative tank , urinal bowls including brackets , 3500mm long outlet vent pipe , ventilation extraction unit fixed to wall with vent wall bracket, 1 bag mounting screws and organic starter, enzyme and toilet cleaner including all necessary piping, traps, etc	No	2	
	<u>PCC WASH TROUGH</u>			
3	Supply and install pre-cast concrete double wash-trough, complete with all necessary pipework including soakaway size 1000 x 1000 x 1000mm covered with "bidim"	No	2	
	<u>TRAPS, ETC.</u>			
	Carried Forward		R	
	Section No. 4 Bill No. 10 PLUMBING AND DRAINAGE KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>uPVC</u>			
4	32 x 50mm Deep seal "P" or "S" trap	No	2
<u>SOIL DRAINAGE</u>			
<u>uPVC pipes</u>			
<u>Normal duty (Class 51) uPVC sewer and drain pipes</u>			
5	50mm Pipes	m	20
6	110mm Pipes laid in and including trenches not exceeding 1m deep	m	10
<u>Extra over uPVC pipes for fittings</u>			
7	50mm Bend	No	8
8	50 mm Junction	No	8
9	50mm Access junction	No	8
10	50mm Access bend	No	8
11	50mm Access reducing junction	m	8
12	50mm "GI Two-way" vent valve	No	8
<u>Extra over normal duty (Class 51) uPVC sewer and drain pipes for fittings</u>			
13	110mm Bend	No	6
14	110mm Junction	No	6
<u>uPVC gulleys</u>			
15	110mm Dished gulley trap assembly with head, grid and concrete surround not exceeding 750mm deep	No	2
Carried Forward			R
Section No. 4 Bill No. 10 PLUMBING AND DRAINAGE KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>WATER SUPPLIES</u>			
<u>Class 0 copper pipes</u>			
16	15 mm Pipes	m	9
17	15mm Pipes chased in walls	m	10
<u>Extra over class 0 copper pipes for capillary fittings</u>			
18	15mm Fittings	No	5
<u>TAPS, VALVES, ETC.</u>			
<u>"Cobra Watertech" or other equal approved</u>			
19	19mm chrome plated push button taps to wash troughs	No	4
20	15mm Elbow action pillar tap	No	1
21	15mm gate valve plugged	No	4
<u>Sundries</u>			
22	Testing water pipe system	Item	
Carried Forward to Summary of Section No. 4			R
Section No. 4			
Bill No. 10			
PLUMBING AND DRAINAGE			
KUTLO CONSULTING ENGINEERS			

-73-

-74-

-75-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No		Quantity	Rate	Amount
	<u>BILL NO.2</u>			
	<u>EARTHWORKS</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>SITE CLEARANCE</u>			
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush and trees not exceeding 200mm girth, etc.	m2	162	
2	Stripping average 100mm thick layer of top soil and stockpiling on site	m2	162	
	<u>EXCAVATION,FILLING, ETC</u>			
	<u>Excavation in earth not exceeding 2m deep</u>			
3	Trenches	m3	21	
4	Pit	m3	37	
5	For aprons thickening	m3	1	
	<u>Extra over trench and hole excavations in earth for excavation:</u>			
6	Soft rock	m3	2	
7	Hard rock	m3	5	
	<u>Extra over all excavations for carting away:</u>			
8	Surplus material from excavations and/or stock piles on site to a dumping site to be allocated by the Contractor	m3	38	
	Carried Forward			
	Section No. 5 Bill No. 1 EARTHWORKS KUTLO CONSULTING ENGINEERS		R	

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
	<u>Risk of collapse of excavations</u>		
9	Sides of trench and hole excavation not exceeding 1,5m deep.	m2	87
	<u>Keeping excavations free of water.</u>		
10	Keeping excavations free of water other than subterranean water		Item
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO density</u>		
11	Under floors, steps, pavings, etc.	m3	11
12	Backfilling to trenches, holes, etc.	m3	8
	<u>Compaction of surfaces</u>		
13	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	41
14	Compaction of ground surface to pits 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	24
15	Compaction of ground surface to aprons 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	36
	<u>Prescribed density tests on filling</u>		
16	Modified AASHTO Density tests	No	5
Carried Forward			R
Section No. 5 Bill No. 1 EARTHWORKS KUTLO CONSULTING ENGINEERS			

-78-

-79-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>TEST CUBES</u>			
8	Allow for preparing a set of three test cubes each size 150 x 150 x 150mm, sending them to an approved testing laboratory for testing and paying all charges in connection therewith.	No	5
	<u>Finishing top surfaces of concrete smooth with a steel trowel</u>		
9	Surface beds, slabs, etc.	m2	53
<u>FORMWORK</u>			
	<u>Rough formwork to sides:</u>		
10	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	25
	<u>Permanent formwork to soffits:</u>		
11	Slabs propped up not exceeding 1.5m high	m2	20
12	Leave or form 500mm diameter opening in top of floor slab	No	10
<u>REINFORCEMENT</u>			
	<u>Mesh Reinforcement (measure nett)</u>		
13	Mesh ref. No. 395 fabric reinforcement fixed horizontal in surface beds	m2	53
Carried Forward to Summary of Section No. 5			R
Section No. 5			
Bill No. 2			
CONCRETE, FORMWORK AND REINFORCEMENT			
KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No	Quantity	Rate	Amount
<u>BILL NO.4</u>			
<u>BRICKWORK</u>			
<u>SUPPLEMENTARY PREAMBLES</u>			
For preambles see "Specifications of materials and methods to be used - PW 371"			
<u>BRICKWORK</u>			
Sizes in descriptions			
Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick			
Hollow walls etc			
Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole.			
Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats "Brixal" bitumen emulsion waterproofing coating.			
User note: The above preamble generally applies for works in hot and humid coastal areas			
Face bricks			
Bricks shall be ordered timeously to obtain uniformity in size and colour			
<u>Pointing</u>			
Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc			
Carried Forward			R
Section No. 5 Bill No. 3 MASONRY KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>SAMPLES</u>			
Samples of all masonry building units, except those for walls units. Samples of building units to be used in walls described as "load bearing" shall consist of 30 units from every 30 000 units delivered to site described as "load bearing", shall consist of a minimum of 6			
<u>FOUNDATIONS</u>			
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class I mortar</u>			
1	One brick walls	m2	11
2	One brick walls in pit	m2	22
3	4Half brick corbelling in pit	m	21
<u>FACE BRICKWORK</u>			
<u>Face bricks (purchase price of R 4000.00/1000 delivered to site excluding VAT) pointed with flush horizontal and vertical joints</u>			
4	Extra over brickwork for face brickwork in foundation	m2	12
<u>SUPERSTRUCTURE</u>			
<u>FACE BRICKWORK</u>			
<u>Face bricks (purchase price of R 4000.00/1000 delivered to site excluding VAT) pointed with flush horizontal and vertical joints</u>			
5	Half brickwork for face brick walls pointed both sides	m2	40
6	One brickwork for face brick walls pointed both sides	m2	124
7	Extra over for brickwork in beamfilling	m2	5
8	Fair raking and cutting	m	8
Carried Forward			R
Section No. 5 Bill No. 3 MASONRY KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
	<u>Brick-on-edge header course coping, sills, etc. of face bricks (purchase price of R 3 500.00/1000 delivered to site excluding VAT) pointed with recessed joints on all exposed faces</u>		
9	Extra over brickwork for brick-on-edge header course lintels pointed on two sides and 110mm soffit	m	14
10	Face brick-on-edge window sill 220mm wide pointed on two side and on top and set at a angle	m	14
11	Fair cutting and fitting around pipe not exceeding 100mm diameter.	No	14
<u>BRICKWORK SUNDRIES</u>			
	<u>Brick reinforcement</u>		
12	75mm Wide reinforcement built in horizontally	m	158
13	150mm Wide reinforcement built in horizontally	m	285
	<u>Turning pieces</u>		
14	220mm Wide turning piece to lintel etc	m	11
	<u>Galvanised wire ties etc</u>		
15	6mm Diameter roof tie 2m girth bent double with one end fixed to timber and other built into brickwork	No	28
	<u>Prestressed fabricated lintels</u>		
16	Pair of 110 x 75mm Lintels in lengths exceeding 3m and not exceeding 4,5m	m	15
	<u>Ventillation bricks</u>		
17	Set of two 22 x 155mm high terra cotta clay vermin proof air bricks including making good reveals and gauze	No	6
Carried Forward to Summary of Section No. 5			R
Section No. 5			
Bill No. 3			
MASONRY			
KUTLO CONSULTING ENGINEERS			

-84-

-85-

-86-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>Wrought meranti doors hung to steel frames</u>			
8	44mm Framed batten door 813 x 2 032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding and including weatherboard (D1)	No	2
9	44mm Purpose made Framed batten door 813 x 1 883mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed (door raised by 120mm from bottom) (D2)	No	10
Carried Forward to Summary of Section No. 5			
Section No. 5			
Bill No. 6			
CARPENTRY AND JOINERY			
KUTLO CONSULTING ENGINEERS			

-88-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward				R
<u>"Kimberley-Clark" or equal approved</u>				
6	"Kimberly Clark" SQ2 code 405607B white lockable toilet roll holder	No	10	
<u>Sundries</u>				
7	Brushed stainless steel She bin approximately 330 x 280 x 180mm plugged	No	3	
Carried Forward to Summary of Section No. 5				R
Section No. 5				
Bill No. 7				
IRONMONGERY				
KUTLO CONSULTING ENGINEERS				

-90-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
	<u>Cage,etc</u>		
6	She bin cages ,to fit 330 x 280 x 180mm width ,she bin to be able to open ,including pad locking mechanism, complete, etc	No	3
Carried Forward to Summary of Section No. 5			R
Section No. 5			
Bill No. 8			
METALWORK			
KUTLO CONSULTING ENGINEERS			

-92-

-93-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>Normal duty (Class 51) uPVC sewer and drain pipes</u>			
5	50mm Pipes	m	20
6	110mm Pipes laid in and including trenches not exceeding 1m deep	m	10
<u>uPVC pipes</u>			
<u>Extra over uPVC pipes for fittings</u>			
7	50mm Bend	No	3
8	50mm Junction	No	3
9	50mm Access junction	No	3
10	50mm Access bend	No	3
11	50mm Access reducing junction	m	3
12	50mm "GI Two-way" vent valve	No	3
<u>Extra over normal duty (Class 51) uPVC sewer and drain pipes for fittings</u>			
13	110mm Bend	No	3
14	110mm Junction	No	3
<u>uPVC gulleys</u>			
15	110mm Dished gulley trap assembly with head, grid and concrete surround not exceeding 750mm deep	No	3
<u>WATER SUPPLY</u>			
<u>Class 0 copper pipes</u>			
16	15 mm Pipes	m	6
Carried Forward			R
Section No. 5 Bill No. 10 PLUMBING AND DRAINAGE KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

	Brought Forward			R
17	15mm Pipes chased in walls	m	5	
	<u>Extra over class 0 copper pipes for capillary fittings</u>			
18	15mm Fittings	No	5	
	<u>Copper overflow and service pipes</u>			
19	15mm Service pipe 350mm girth	No	1	
	<u>TAPS, VALVES, ETC</u>			
20	19mm Chromium plated push-buton taps to wash troughs	No	6	
21	15mm gate valve plugged	No	4	
	<u>Sundries</u>			
22	Testing water pipe system	Item		
Carried Forward to Summary of Section No. 5				R
Section No. 5				
Bill No. 10				
PLUMBING AND DRAINAGE				
KUTLO CONSULTING ENGINEERS				

-96-

-97-

THE MVULA TRUST

LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME

KGAHLANA MORULANA SECONDARY SCHOOL

SECTION SUMMARY - BUILDING WORKS - F10		Page No	Amount	
Bill No				
1	EARTHWORKS	78		
2	CONCRETE, FORMWORK AND REINFORCEMENT	80		
3	MASONRY	83		
4	WATERPROOFING	84		
5	ROOF COVERINGS	85		
6	CARPENTRY AND JOINERY	87		
7	IRONMONGERY	89		
8	METALWORK	91		
9	IN SITU FINISHES	92		
10	PLUMBING AND DRAINAGE	95		
11	GLAZING	96		
12	PAINTWORK	97		
Carried to Final Summary			R	
Section No. 5				
KUTLO CONSULTING ENGINEERS				

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No		Quantity	Rate	Amount
	<u>BILL NO.2</u>			
	<u>EARTHWORKS</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>SITE CLEARANCE</u>			
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush and trees not exceeding 200mm girth, etc.	m2	162	
2	Stripping average 100mm thick layer of top soil and stockpiling on site	m2	162	
	<u>EXCAVATION,FILLING, ETC</u>			
	<u>Excavation in earth not exceeding 2m deep</u>			
3	Trenches	m3	21	
4	Pit	m3	37	
5	For aprons thickening	m3	1	
	<u>Extra over trench and hole excavations in earth for excavation:</u>			
6	Soft rock	m3	2	
7	Hard rock	m3	5	
	<u>Extra over all excavations for carting away:</u>			
8	Surplus material from excavations and/or stock piles on site to a dumping site to be allocated by the Contractor	m3	38	
	Carried Forward			
	Section No. 6 Bill No. 1 EARTHWORKS KUTLO CONSULTING ENGINEERS		R	

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
	<u>Risk of collapse of excavations</u>		
9	Sides of trench and hole excavation not exceeding 1,5m deep.	m2	87
	<u>Keeping excavations free of water.</u>		
10	Keeping excavations free of water other than subterranean water		Item
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO density</u>		
11	Under floors, steps, pavings, etc.	m3	11
12	Backfilling to trenches, holes, etc.	m3	8
	<u>Compaction of surfaces</u>		
13	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	41
14	Compaction of ground surface to pits 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	24
15	Compaction of ground surface to aprons 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	36
	<u>Prescribed density tests on filling</u>		
16	Modified AASHTO Density tests	No	5
Carried Forward			R
Section No. 6 Bill No. 1 EARTHWORKS KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward				R
<u>SOIL POISONING</u>				
<u>Soil insecticide</u>				
17	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming.	m2	41	
18	To bottom of concrete aprons	m2	36	
19	To bottoms and sides of trenches, etc.	m2	112	
Carried Forward to Summary of Section No. 6				R
Section No. 6				
Bill No. 1				
EARTHWORKS				
KUTLO CONSULTING ENGINEERS				

-102-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>TEST CUBES</u>			
8	Allow for preparing a set of three test cubes each size 150x150x150mm, sending them to an approved testing laboratory for testing and paying all charges in connection therewith.	No	5
	<u>Finishing top surfaces of concrete smooth with a steel trowel</u>		
9	Surface beds, slabs, etc.	m2	53
<u>FORMWORK</u>			
	<u>Rough formwork to sides:</u>		
10	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	25
	<u>Permanent formwork to soffits:</u>		
11	Slabs propped up not exceeding 1.5m high	m2	20
12	Leave or form 500mm diameter opening in top of floor slab	No	10
<u>REINFORCEMENT</u>			
	<u>Mesh Reinforcement (measure nett)</u>		
13	Mesh ref. No. 395 fabric reinforcement fixed horizontal in surface beds	m2	53
Carried Forward to Summary of Section No. 6			R
Section No. 6			
Bill No. 2			
CONCRETE, FORMWORK AND REINFORCEMENT			
KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No	Quantity	Rate	Amount
<u>BILL NO.4</u>			
<u>BRICKWORK</u>			
<u>SUPPLEMENTARY PREAMBLES</u>			
For preambles see "Specifications of materials and methods to be used - PW 371"			
<u>BRICKWORK</u>			
Sizes in descriptions			
Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick			
Hollow walls etc			
Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole.			
Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats "Brixéal" bitumen emulsion waterproofing coating.			
User note: The above preamble generally applies for works in hot and humid coastal areas			
Face bricks			
Bricks shall be ordered timeously to obtain uniformity in size and colour			
<u>Pointing</u>			
Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc			
Carried Forward			R
Section No. 6 Bill No. 3 MASONRY KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>SAMPLES</u>			
Samples of all masonry building units, except those for walls units. Samples of building units to be used in walls described as "load bearing" shall consist of 30 units from every 30 000 units delivered to site described as "load bearing", shall consist of a minimum of 6			
<u>FOUNDATIONS</u>			
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class I mortar</u>			
1	One brick walls	m2	11
2	One brick walls in pit	m2	22
3	Half brick corbelling in pit	m	21
<u>FACE BRICKWORK</u>			
<u>Face bricks (purchase price of R 4000.00/1000 delivered to site excluding VAT) pointed with flush horizontal and vertical joints</u>			
4	Extra over brickwork for face brickwork in foundation	m2	12
<u>SUPERSTRUCTURE</u>			
<u>FACE BRICKWORK</u>			
<u>Face bricks (purchase price of R 4000.00/1000 delivered to site excluding VAT) pointed with flush horizontal and vertical joints</u>			
5	Half brickwork for face brick walls pointed both sides	m2	40
6	One brickwork for face brick walls pointed both sides	m2	124
7	Extra over for brickwork in beamfilling	m2	5
8	Fair raking and cutting	m	8
Carried Forward			R
Section No. 6 Bill No. 3 MASONRY KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
	<u>Brick-on-edge header course coping, sills, etc. of face bricks (purchase price of R 3 500.00/1000 delivered to site excluding VAT) pointed with recessed joints on all exposed faces</u>		
9	Extra over brickwork for brick-on-edge header course lintels pointed on two sides and 110mm soffit	m	14
10	Face brick-on-edge window sill 220mm wide pointed on two side and on top and set at a angle	m	14
11	Fair cutting and fitting around pipe not exceeding 100mm diameter.	No	14
<u>BRICKWORK SUNDRIES</u>			
	<u>Brick reinforcement</u>		
12	75mm Wide reinforcement built in horizontally	m	158
13	150mm Wide reinforcement built in horizontally	m	285
	<u>Turning pieces</u>		
14	220mm Wide turning piece to lintel etc	m	11
	<u>Galvanised wire ties etc</u>		
15	6mm Diameter roof tie 2m girth bent double with one end fixed to timber and other built into brickwork	No	28
	<u>Prestressed fabricated lintels</u>		
16	Pair of 110 x 75mm Lintels in lengths exceeding 3m and not exceeding 4,5m	m	15
	<u>Ventillation bricks</u>		
17	Set of two 22 x 155mm high terra cotta clay vermin proof air bricks including making good reveals and gauze	No	6
Carried Forward to Summary of Section No. 6			R
Section No. 6			
Bill No. 3			
MASONRY			
KUTLO CONSULTING ENGINEERS			

-107-

-108-

-109-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward				R
<u>Wrought meranti doors hung to steel frames</u>				
8	44mm Framed batten door 813 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding and including weatherboard (D1)	No	1	
9	44mm Purpose made Framed batten door 813 x 1883mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed (door raised by 120mm from bottom) (D2)	No	9	
10	44mm Purpose made Framed batten door 900 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed (door raised by 120mm from bottom) (D2)	No	1	
Carried Forward to Summary of Section No. 6				R
Section No. 6				
Bill No. 6				
CARPENTRY AND JOINERY				
KUTLO CONSULTING ENGINEERS				

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No		Quantity	Rate	Amount
	<u>BILL NO.8</u>			
	<u>IRONMONGERY</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>CATCHES, CABIN, HOOKS, ETC</u>			
	<u>Approved</u>			
1	150mm Cabin hook and eye including 70 x 70 x 20mm chamfered hardwood block twice oiled and plugged	No	2	
	<u>LOCKS</u>			
	<u>"Dorma" or equal approved</u>			
2	Three lever mortice lockset plugged	No	2	
3	Indicator lockset plugged	No	9	
	<u>HANDLES</u>			
	<u>Aluminium Pull Handle</u>			
4	Set of two, 300mm pull handles fixed back to back on doors	No	1	
	<u>DOOR CLOSERS</u>			
	<u>"Dorma" or equal approved</u>			
5	Dormakaba EN 2-4 Parallel Arm DELAYED ACTION Door Closer. Push Side Fixing (Parallel Arm Bracket Included) EN2 750-850, EN3 850-950, EN4 950-1100. Code TS73V PA DC - PAB - SL	No	1	
	<u>DOORSTOPS</u>			
	Carried Forward		R	
	Section No. 6 Bill No. 7 IRONMONGERY KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

	Brought Forward			R
	<u>Approved</u>			
6	38mm Diameter rubber door stop plugged	No	11	
	<u>LETTERS, NAMEPLATES, ETC.</u>			
	<u>"Union" or similar approved</u>			
7	75 x 150mm Natural anodised aluminium plate with male or female symbol	No	2	
	<u>"Vaal Paragon" or equal approved</u>			
8	32mm Type 9 back grab rail 800mm long plugged	No	1	
9	32mm Type 8 side grab rail 900mm girth plugged	No	1	
	<u>BATHROOM FITTINGS</u>			
	<u>"Kimberley-Clark" or equal approved</u>			
10	"Kimberly Clark" SQ2 code 405607B white lockable toilet roll holder	No	10	
	<u>Sundries</u>			
11	Brushed stainless steel She bin approximately 330 x 280 x 180mm plugged	No	3	
Carried Forward to Summary of Section No. 6				R
Section No. 6				
Bill No. 7				
IRONMONGERY				
KUTLO CONSULTING ENGINEERS				

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No		Quantity	Rate	Amount
	<u>BILL NO.9</u>			
	<u>METALWORK</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>WELDED SCREENS, GATES, ETC</u>			
	<u>Steel gates and frames</u>			
1	Purpose made square hallow section mild steel security gate, size 813 x 2032mm High	No	1	
2	Purpose made square hallow section mild steel security gate, size 914 x 2032mm High	No	1	
	<u>PRESSED STEEL DOOR FRAMES</u>			
	<u>1,2mm Single rebated frames suitable for half brick walls</u>			
3	Frame for door 813 x 2032mm high	No	9	
	<u>1,6mm Double rebated frames suitable for one brickwalls</u>			
4	Frame for door 813 x 2032mm high	No	1	
5	Frame for door 900 x 2032mm high	No	1	
	<u>STEEL WINDOWS, DOORS, ETC</u>			
6	Window type NE1, 533 x 654mm high including burglar bars	No	11	
7	Window type NE 7,1022 x 654mm high including burglar bars	No	4	
	<u>SUNDRIES ETC</u>			
	Carried Forward		R	
	Section No. 6 Bill No. 8 METALWORK KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST

LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME

KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>Cage,etc</u>			
8	She bin cages ,to fit 330 x 280 x180mm width ,she bin to be able to open ,including pad locking mechanism, complete, etc	No	3
Carried Forward to Summary of Section No. 6			R
Section No. 6			
Bill No. 8			
METALWORK			
KUTLO CONSULTING ENGINEERS			

-115-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No		Quantity	Rate	Amount
	<u>BILL NO. 11</u>			
	<u>PLUMBING AND DRAINAGE (PROVISIONAL)</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>ENVIRO-LOO TOILET SYSTEMS</u>			
1	Supply and Install "Enviro-Loo" Industrial 1040 Model complete, installed strictly in accordance with manufacturers instructions, unit comprising of top unit and two x louvred inlets, drying plate, two x air inlets, standard toilet pan, seat and lid, 3500mm long outlet vent pipe, ventilation extraction unit fixed to wall with vent wall bracket, 1 bag mounting screws and organic starter, enzyme and toilet cleaner including all necessary inter connector piping between multiple tanks, emergency outlet piping, etc	No	10	
	<u>PCC Wash Trough</u>			
	<u>SANITARY FITTINGS</u>			
	<u>White glazed fireclay or vitreous china coupling with SABS specification 497 in</u>			
2	450 x 290mm "Bantam" cloakroom hand basin complete with single punched tapholes fixed to wall with and including two number 10mm bolts	No	1	
	<u>PCC WASH TROUGH</u>			
3	Supply and install pre-cast concrete double wash-trough, complete with all necessary fittings and pipework including soakaway size 1000 x 1000 x 1000mm covered with "bidim"	No	3	
	Carried Forward		R	
	Section No. 6 Bill No. 10 PLUMBING AND DRAINAGE KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

	Brought Forward			R
	<u>WASTE UNIONS, ETC</u>			
4	32mm "301CP" Basin waste union	No	1	
	<u>TRAPS, ETC</u>			
	<u>"Marley"</u>			
5	32 x 50mm Deep seal "P" or "S" trap	No	6	
	<u>SANITARY PLUMBING</u>			
	<u>Normal duty (Class 51) uPVC sewer and drain pipes</u>			
6	50mm Pipes	m	20	
7	110mm Pipes laid in and including trenches not exceeding 1m deep	m	10	
	<u>uPVC pipes</u>			
	<u>Extra over uPVC pipes for fittings</u>			
8	50mm Bend	No	3	
9	50mm Junction	No	3	
10	50mm Access junction	No	3	
11	50mm Access bend	No	3	
12	50mm Access reducing junction	m	3	
13	50mm "GI Two-way" vent valve	No	3	
	<u>Extra over normal duty (Class 51) uPVC sewer and drain pipes for fittings</u>			
14	110mm Bend	No	3	
15	110mm Junction	No	3	
	Carried Forward			R
	Section No. 6			
	Bill No. 10			
	PLUMBING AND DRAINAGE			
	KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
	<u>uPVC gulleys</u>		
16	110mm Dished gully trap assembly with head, grid and concrete surround not exceeding 750mm deep	No	3
	<u>WATER SUPPLY</u>		
	<u>Class 0 copper pipes</u>		
17	15 mm Pipes	m	6
18	15mm Pipes chased in walls	m	5
	<u>Extra over class 0 copper pipes for capillary fittings</u>		
19	15mm Fittings	No	5
	<u>Copper overflow and service pipes</u>		
20	15mm Service pipe 350mm girth	No	1
	<u>TAPS, VALVES, ETC</u>		
21	19mm Chromium plated push-button taps to wash troughs	No	6
22	15mm gate valve plugged	No	6
23	15mm Elbow action pillar tap	No	1
	<u>Sundries</u>		
24	Testing water pipe system	Item	
	Carried Forward to Summary of Section No. 6		R
	Section No. 6		
	Bill No. 10		
	PLUMBING AND DRAINAGE		
	KUTLO CONSULTING ENGINEERS		

-119-

-120-

-121-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No		Quantity	Rate	Amount
	<u>BILL NO.2</u>			
	<u>EARTHWORKS</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>SITE CLEARANCE</u>			
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush and trees not exceeding 200mm girth, etc.	m2	162	
2	Stripping average 100mm thick layer of top soil and stockpiling on site	m2	162	
	<u>EXCAVATION,FILLING, ETC</u>			
	<u>Excavation in earth not exceeding 2m deep</u>			
3	Trenches	m3	21	
4	Pit	m3	37	
5	For aprons thickening	m3	1	
	<u>Extra over trench and hole excavations in earth for excavation:</u>			
6	Soft rock	m3	2	
7	Hard rock	m3	5	
	<u>Extra over all excavations for carting away:</u>			
8	Surplus material from excavations and/or stock piles on site to a dumping site to be allocated by the Contractor	m3	38	
	Carried Forward		R	
	Section No. 7 Bill No. 1 EARTHWORKS KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
	<u>Risk of collapse of excavations</u>		
9	Sides of trench and hole excavation not exceeding 1,5m deep.	m2	87
	<u>Keeping excavations free of water.</u>		
10	Keeping excavations free of water other than subterranean water	Item	
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO density</u>		
11	Under floors, steps, pavings, etc.	m3	11
12	Backfilling to trenches, holes, etc.	m3	8
	<u>Compaction of surfaces</u>		
13	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	41
14	Compaction of ground surface to pits 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	24
15	Compaction of ground surface to aprons 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	36
	<u>Prescribed density tests on filling</u>		
16	Modified AASHTO Density tests	No	5
Carried Forward			R
Section No. 7 Bill No. 1 EARTHWORKS KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward				R
<u>SOIL POISONING</u>				
<u>Soil insecticide</u>				
17	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming.	m2	41	
18	To bottom of concrete aprons	m2	36	
19	To bottoms and sides of trenches, etc.	m2	112	
Carried Forward to Summary of Section No. 7				R
Section No. 7				
Bill No. 1				
EARTHWORKS				
KUTLO CONSULTING ENGINEERS				

-125-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>TEST CUBES</u>			
8	Allow for preparing a set of three test cubes each size 150 x1 50 x1 50mm, sending them to an approved testing laboratory for testing and paying all charges in connection therewith.	No	5
	<u>Finishing top surfaces of concrete smooth with a steel trowel</u>		
9	Surface beds, slabs, etc.	m2	53
<u>FORMWORK</u>			
	<u>Rough formwork to sides:</u>		
10	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	25
	<u>Permanent formwork to soffits:</u>		
11	Slabs propped up not exceeding 1.5m high	m2	20
12	Leave or form 500mm diameter opening in top of floor slab	No	10
<u>REINFORCEMENT</u>			
	<u>Mesh Reinforcement (measure nett)</u>		
13	Mesh ref. No. 395 fabric reinforcement fixed horizontal in surface beds	m2	53
Carried Forward to Summary of Section No. 7			R
Section No. 7			
Bill No. 2			
CONCRETE, FORMWORK AND REINFORCEMENT			
KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No	Quantity	Rate	Amount
<u>BILL NO.4</u>			
<u>BRICKWORK</u>			
<u>SUPPLEMENTARY PREAMBLES</u>			
For preambles see "Specifications of materials and methods to be used - PW 371"			
<u>BRICKWORK</u>			
Sizes in descriptions			
Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick			
Hollow walls etc			
Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole.			
Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats "Brixal" bitumen emulsion waterproofing coating.			
User note: The above preamble generally applies for works in hot and humid coastal areas			
Face bricks			
Bricks shall be ordered timeously to obtain uniformity in size and colour			
<u>Pointing</u>			
Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc			
Carried Forward			R
Section No. 7 Bill No. 3 MASONRY KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>SAMPLES</u>			
Samples of all masonry building units, except those for walls units. Samples of building units to be used in walls described as "load bearing" shall consist of 30 units from every 30 000 units delivered to site described as "load bearing", shall consist of a minimum of 6			
<u>FOUNDATIONS</u>			
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class I mortar</u>			
1	One brick walls	m2	11
2	One brick walls in pit	m2	22
3	Half brick corbelling in pit	m	21
<u>FACE BRICKWORK</u>			
<u>Face bricks (purchase price of R 4000.00/1000 delivered to site excluding VAT) pointed with flush horizontal and vertical joints</u>			
4	Extra over brickwork for face brickwork in foundation	m2	12
<u>SUPERSTRUCTURE</u>			
<u>FACE BRICKWORK</u>			
<u>Face bricks (purchase price of R 4000.00/1000 delivered to site excluding VAT) pointed with flush horizontal and vertical joints</u>			
5	Half brickwork for face brick walls pointed both sides	m2	40
6	One brickwork for face brick walls pointed both sides	m2	124
7	Extra over for brickwork in beamfilling	m2	5
8	Fair raking and cutting	m	8
Carried Forward			R
Section No. 7 Bill No. 3 MASONRY KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
	<u>Brick-on-edge header course coping, sills, etc. of face bricks (purchase price of R 3 500.00/1000 delivered to site excluding VAT) pointed with recessed joints on all exposed faces</u>		
9	Extra over brickwork for brick-on-edge header course lintels pointed on two sides and 110mm soffit	m	14
10	Face brick-on-edge window sill 220mm wide pointed on two side and on top and set at a angle	m	14
11	Fair cutting and fitting around pipe not exceeding 100mm diameter.	No	14
<u>BRICKWORK SUNDRIES</u>			
	<u>Brick reinforcement</u>		
12	75mm Wide reinforcement built in horizontally	m	158
13	150mm Wide reinforcement built in horizontally	m	285
	<u>Turning pieces</u>		
14	220mm Wide turning piece to lintel etc	m	11
	<u>Galvanised wire ties etc</u>		
15	6mm Diameter roof tie 2m girth bent double with one end fixed to timber and other built into brickwork	No	28
	<u>Prestressed fabricated lintels</u>		
16	Pair of 110 x 75mm Lintels in lengths exceeding 3m and not exceeding 4,5m	m	15
	<u>Ventillation bricks</u>		
17	Set of two 22 x 155mm high terra cotta clay vermin proof air bricks including making good reveals and gauze	No	6
Carried Forward to Summary of Section No. 7			R
Section No. 7			
Bill No. 3			
MASONRY			
KUTLO CONSULTING ENGINEERS			

-130-

-131-

-132-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward				R
<u>Wrought meranti doors hung to steel frames</u>				
8	44mm Framed batten door 813 x 2 032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding and including weatherboard (D1)	No	2	
9	44mm Purpose made Framed batten door 813 x 1 883mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed (door raised by 120mm from bottom) (D2)	No	6	
10	44mm Purpose made Framed batten door 900 x 2 032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed (door raised by 120mm from bottom) (D2)	No	1	
Carried Forward to Summary of Section No. 7				R
Section No. 7				
Bill No. 6				
CARPENTRY AND JOINERY				
KUTLO CONSULTING ENGINEERS				

-134-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

	Brought Forward			R
	<u>Approved</u>			
6	38mm Diameter rubber door stop plugged	No	9	
	<u>LETTERS, NAMEPLATES, ETC.</u>			
	<u>"Union" or equal approved</u>			
7	75 x 150mm Natural anodised aluminium plate with male or female symbol	No	2	
	<u>"Vaal Paragon" or equal approved</u>			
8	32mm Type 9 back grab rail 800mm long plugged	No	1	
9	32mm Type 8 side grab rail 900mm girth plugged	No	1	
	<u>BATHROOM FITTINGS</u>			
	<u>"Kimberley-Clark" or equal approved</u>			
10	"Kimberly Clark" SQ2 code 405607B white lockable toilet roll holder	No	7	
	<u>Sundries</u>			
11	Brushed stainless steel She bin approximately 330 x 280 x 180mm plugged	No	2	
Carried Forward to Summary of Section No. 7				R
Section No. 7				
Bill No. 7				
IRONMONGERY				
KUTLO CONSULTING ENGINEERS				

-136-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
	<u>Cage,etc</u>		
7	She bin cages ,to fit 330 x 280 x 180mm width, she bin to be able to open including pad locking mechanism, complete, etc	No	2
Carried Forward to Summary of Section No. 7			R
Section No. 7			
Bill No. 8			
METALWORK			
KUTLO CONSULTING ENGINEERS			

-138-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No		Quantity	Rate	Amount
	<u>BILL NO. 11</u>			
	<u>PLUMBING AND DRAINAGE (PROVISIONAL)</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>ENVIRO-LOO TOILET SYSTEMS</u>			
1	Supply and Install "Enviro-Loo" Industrial 1040 Model complete, installed strictly in accordance with manufacturers instructions, unit comprising of top unit and two x louvred inlets, drying plate, two x air inlets, standard toilet pan, seat and lid, 3 500mm long outlet vent pipe, ventilation extraction unit fixed to wall with vent wall bracket, 1 bag mounting screws and organic starter, enzyme and toilet cleaner including all necessary inter connector piping between multiple tanks, emergency outlet piping, etc	No	7	
2	Supply and Erect "Enviro-loo" "Industrial 1040 Model, 3-bowl Urinal Evaporative Tank system fixed complete as per manufacturers specification unit, comprising of urinal evaporative tank , urinal bowls including brackets , 3500mm long outlet vent pipe , ventilation extraction unit fixed to wall with vent wall bracket, 1 bag mounting screws and organic starter, enzyme and toilet cleaner including all necessary piping, traps, etc	No	1	
	<u>PCC Wash Trough</u>			
3	Supply and install pre-cast concrete double wash-trough, complete with all necessary fittings and pipework including soakaway size 1000 x 1000 x 1000mm covered with "bidim"	No	2	
	<u>WASTE UNIONS, ETC</u>			
4	32mm "301CP" Basin waste union	No	1	
	Carried Forward		R	
	Section No. 7 Bill No. 10 PLUMBING AND DRAINAGE KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>TRAPS, ETC</u>			
<u>"Marley"</u>			
5	32 x 50mm Deep seal "P" or "S" trap	No	3
<u>SANITARY PLUMBING</u>			
<u>Normal duty (Class 51) uPVC sewer and drain pipes</u>			
6	50mm Pipes	m	20
7	110mm Pipes laid in and including trenches not exceeding 1m deep	m	10
<u>uPVC pipes</u>			
<u>Extra over uPVC pipes for fittings</u>			
8	50mm Bend	No	3
9	50 mm Junction	No	3
10	50mm Access junction	No	3
11	50mm Access bend	No	3
12	50mm Access reducing junction	m	3
13	50mm "GI Two-way" vent valve	No	3
<u>Extra over normal duty (Class 51) uPVC sewer and drain pipes for fittings</u>			
14	110mm Bend	No	3
15	110mm Junction	No	3
Carried Forward			R
Section No. 7 Bill No. 10 PLUMBING AND DRAINAGE KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
	<u>uPVC gulleys</u>		
16	110mm Dished gully trap assembly with head, grid and concrete surround not exceeding 750mm deep	No	3
	<u>WATER SUPPLY</u>		
	<u>Class 0 copper pipes</u>		
17	15 mm Pipes	m	6
18	15mm Pipes chased in walls	m	5
	<u>Extra over class 0 copper pipes for capillary fittings</u>		
19	15mm Fittings	No	5
	<u>Copper overflow and service pipes</u>		
20	15mm Service pipe 350mm girth	No	1
	<u>TAPS, VALVES, ETC</u>		
21	19mm Chromium plated push-button taps to wash troughs	No	6
22	15mm Elbow action pillar tap	No	1
23	15mm gate valve plugged	No	4
	<u>Sundries</u>		
24	Testing water pipe system	Item	
	Carried Forward to Summary of Section No. 7		R
	Section No. 7		
	Bill No. 10		
	PLUMBING AND DRAINAGE		
	KUTLO CONSULTING ENGINEERS		

-142-

-143-

-144-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No		Quantity	Rate	Amount
	<u>BILL NO.2</u>			
	<u>EARTHWORKS</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>SITE CLEARANCE</u>			
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush and trees not exceeding 200mm girth, etc.	m2	180	
2	Stripping average 100mm thick layer of top soil and stockpiling on site	m2	180	
	<u>EXCAVATION,FILLING, ETC</u>			
	<u>Excavation in earth not exceeding 2m deep</u>			
3	Trenches	m3	29	
4	Pit	m3	68	
5	For aprons thickening	m3	4	
	<u>Extra over trench and hole excavations in earth for excavation:</u>			
6	Soft rock	m3	10	
7	Hard rock	m3	4	
	<u>Extra over all excavations for carting away:</u>			
8	Surplus material from excavations and/or stock piles on site to a dumping site to be allocated by the Contractor	m3	21	
	Carried Forward			
	Section No. 8 Bill No. 1 EARTHWORKS KUTLO CONSULTING ENGINEERS		R	

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
	<u>Risk of collapse of excavations</u>		
9	Sides of trench and hole excavation not exceeding 1,5m deep.	m2	100
	<u>Keeping excavations free of water.</u>		
10	Keeping excavations free of water other than subterranean water		Item
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO density</u>		
11	Under floors, steps, pavings, etc.	m3	10
12	Backfilling to trenches, holes, etc.	m3	80
	<u>Compaction of surfaces</u>		
13	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	75
14	Compaction of ground surface to pits 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	44
15	Compaction of ground surface to aprons 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	54
	<u>Prescribed density tests on filling</u>		
16	Modified AASHTO Density tests	No	10
Carried Forward			R
Section No. 8 Bill No. 1 EARTHWORKS KUTLO CONSULTING ENGINEERS			

-147-

-148-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
	<u>Finishing top surfaces of concrete smooth with a wood float</u>		
8	Aprons and pavings to falls	m2	52
	<u>TEST CUBES</u>		
9	Allow for preparing a set of three test cubes each size 150 x 150 x 150mm, sending them to an approved testing laboratory for testing and paying all charges in connection therewith.	No	7
	<u>Finishing top surfaces of concrete smooth with a steel trowel</u>		
10	Surface beds, slabs, etc.	m2	71
	<u>FORMWORK</u>		
	<u>Rough formwork to sides:</u>		
11	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	57
	<u>Permanent formwork to soffits:</u>		
12	Slabs propped up not exceeding 1.5m high	m2	6
13	Leave or form 500mm diameter opening in top of floor slab	No	11
	<u>REINFORCEMENT</u>		
	<u>Mesh Reinforcement (measure nett)</u>		
14	Mesh ref. No. 395 fabric reinforcement fixed horizontal in surface beds	m2	71
Carried Forward to Summary of Section No. 8			R
Section No. 8			
Bill No. 2			
CONCRETE, FORMWORK AND REINFORCEMENT			
KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No	Quantity	Rate	Amount
<u>BILL NO.4</u>			
<u>BRICKWORK</u>			
<u>SUPPLEMENTARY PREAMBLES</u>			
For preambles see "Specifications of materials and methods to be used - PW 371"			
<u>BRICKWORK</u>			
Sizes in descriptions			
Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick			
Hollow walls etc			
Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole.			
Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats "Brixéal" bitumen emulsion waterproofing coating.			
User note: The above preamble generally applies for works in hot and humid coastal areas			
Face bricks			
Bricks shall be ordered timeously to obtain uniformity in size and colour			
<u>Pointing</u>			
Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc			
Carried Forward			R
Section No. 8 Bill No. 3 MASONRY KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>SAMPLES</u>			
Samples of all masonry building units, except those for walls units. Samples of building units to be used in walls described as "load bearing" shall consist of 30 units from every 30 000 units delivered to site described as "load bearing", shall consist of a minimum of 6			
<u>FOUNDATIONS</u>			
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class I mortar</u>			
1	One brick walls	m2	34
2	One brick walls in pit	m2	38
3	4Half brick corbelling in pit	m	54
<u>FACE BRICKWORK</u>			
<u>Face bricks (purchase price of R 4000.00/1000 delivered to site excluding VAT) pointed with flush horizontal and vertical joints</u>			
4	Extra over brickwork for face brickwork in foundation	m2	9
<u>SUPERSTRUCTURE</u>			
<u>FACE BRICKWORK</u>			
<u>Face bricks (purchase price of R 4000.00/1000 delivered to site excluding VAT) pointed with flush horizontal and vertical joints</u>			
5	Half brickwork for face brick walls pointed both sides	m2	30
6	One brickwork for face brick walls pointed both sides	m2	146
7	Extra over brickwork for face brickwork in beamfilling	m2	32
8	Fair raking and cutting	m	26
Carried Forward			R
Section No. 8 Bill No. 3 MASONRY KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
	<u>Brick-on-edge header course coping, sills, etc. of face bricks (purchase price of R 3 500.00/1000 delivered to site excluding VAT) pointed with recessed joints on all exposed faces</u>		
9	Extra over brickwork for brick-on-edge header course lintels pointed on two sides and 110mm soffit	m	20
10	Face brick-on-edge window sill 220mm wide pointed on two side and on top and set at a angle	m	22
11	Fair cutting and fitting around pipe not exceeding 100mm diameter.	No	4
<u>BRICKWORK SUNDRIES</u>			
	<u>Brick reinforcement</u>		
12	75mm Wide reinforcement built in horizontally	m	176
13	150mm Wide reinforcement built in horizontally	m	548
	<u>Turning pieces</u>		
14	220mm Wide turning piece to lintel etc	m	12
	<u>Galvanised wire ties etc</u>		
15	6mm Diameter roof tie 2m girth bent double with one end fixed to timber and other built into brickwork	No	54
	<u>Prestressed fabricated lintels</u>		
16	Pair of 110 x 75mm Lintels in lengths exceeding 3m and not exceeding 4,5m	m	20
	<u>Ventillation bricks</u>		
17	Set of two 22 x 155mm high terra cotta clay vermin proof air bricks including making good reveals and gauze	No	10
Carried Forward to Summary of Section No. 8			R
Section No. 8			
Bill No. 3			
MASONRY			
KUTLO CONSULTING ENGINEERS			

-153-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No		Quantity	Rate	Amount
	<u>BILL NO.6</u>			
	<u>ROOF COVERINGS</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 124 for CPAP formula purposes			
	<u>PROFILED METAL SHEETING AND ACCESSORIES</u>			
	<u>0,6mm "Kliplok" roof sheeting in chromadek finish fixed to timber purlins (elsewhere)</u>			
1	Roof covering with pitch not exceeding 25 degrees	m2	76	
	<u>Sundries</u>			
2	12" Thermal resistance sisalation laid on purlins	m2	76	
	<u>RAINWATER DISPOSAL</u>			
	<u>Aluzink seamless metal gutters:</u>			
3	100 x 100 x 0.6mm Standard rainwater gutters fixed with gutters brackets	m	19	
4	Extra over for closed ends	No	4	
5	75 x 100 x 0.6mm Thick galvanised rainwater downpipes fixed to wall	m	12	
6	Extra over rainwater pipe for eaves offset	No	4	
7	Ditto, for shoe	No	4	
	Carried Forward to Summary of Section No. 8			
	Section No. 8			
	Bill No. 5			
	ROOF COVERINGS			
	KUTLO CONSULTING ENGINEERS			

-155-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward				R
<u>Wrought meranti doors hung to steel frames</u>				
8	44mm Framed batten door 813 x 2 032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding and including weatherboard (D1)	No	2	
9	44mm Purpose made Framed batten door 813 x 1 883mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed (door raised by 120mm from bottom) (D2)	No	6	
10	44mm Framed batten door 900 x 2 032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding and including weatherboard (D1)	No	1	
Carried Forward to Summary of Section No. 8				R
Section No. 8				
Bill No. 6				
CARPENTRY AND JOINERY				
KUTLO CONSULTING ENGINEERS				

-157-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
	<u>Approved</u>		
6	38mm Diameter rubber door stop plugged	No	7
	<u>LETTERS, NAMEPLATES, ETC.</u>		
	<u>"Union" or equal approved approved</u>		
7	75 x 150mm Natural anodised aluminium plate with male or female symbol	No	3
	<u>"Vaal Paragon" or equal approved</u>		
8	32mm Type 9 back grab rail 800mm long plugged	No	1
9	32mm Type 8 side grab rail 900mm girth plugged	No	1
	<u>BATHROOM FITTINGS</u>		
	<u>"Kimberley-Clark" or equal approved</u>		
10	"Kimberly Clark" SQ2 code 405607B white lockable toilet roll holder	No	7
	<u>Sundries</u>		
11	Brushed stainless steel She bin approximately 330 x 280 x 180mm plugged	No	1
Carried Forward to Summary of Section No. 8			R
Section No. 8			
Bill No. 7			
IRONMONGERY			
KUTLO CONSULTING ENGINEERS			

-159-

-160-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No		Quantity	Rate	Amount
	<u>BILL NO. 11</u>			
	<u>PLUMBING AND DRAINAGE (PROVISIONAL)</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>ENVIRO-LOO TOILET SYSTEMS</u>			
1	Supply and Install "Enviro-Loo" Industrial 1040 Model complete, installed strictly in accordance with manufacturers instructions, unit comprising of top unit and two x louvred inlets, drying plate, two x air inlets, standard toilet pan, seat and lid, 3500mm long outlet vent pipe, ventilation extraction unit fixed to wall with vent wall bracket, 1 bag mounting screws and organic starter, enzyme and toilet cleaner including all necessary inter connector piping between multiple tanks, emergency outlet piping, etc	No	10	
2	Supply and Erect "Enviro-loo" "Industrial 1040 Model, 3-bowl Urinal Evaporative Tank system fixed complete as per manufacturers specification unit, comprising of urinal evaporative tank , urinal bowls including brackets , 3500mm long outlet vent pipe , ventilation extraction unit fixed to wall with vent wall bracket, 1 bag mounting screws and organic starter, enzyme and toilet cleaner including all necessary piping, traps, etc	No	1	
	<u>PCC Wash Trough</u>			
	<u>SANITARY FITTINGS</u>			
	<u>White glazed fireclay or vitreous china coupling with SABS specification 497 in</u>			
3	450 x 290mm "Bantam" cloakroom hand basin complete with single punched tapholes fixed to wall with and including two number 10mm bolts	No	1	
	Carried Forward		R	
	Section No. 8 Bill No. 10 PLUMBING AND DRAINAGE KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>PCC WASH TROUGH</u>			
4	Supply and install pre-cast concrete double wash-trough, complete with all necessary fittings and pipework including soakaway size 1000 x 1000 x 1000mm covered with "bidim"	No	3
<u>WASTE UNIONS, ETC</u>			
5	32mm "301CP" Basin waste union	No	1
<u>TRAPS, ETC</u>			
<u>"Marley"</u>			
6	32 x 50mm Deep seal "P" or "S" trap	No	6
<u>SANITARY PLUMBING</u>			
<u>Normal duty (Class 51) uPVC sewer and drain pipes</u>			
7	50mm Pipes	m	20
8	110mm Pipes laid in and including trenches not exceeding 1m deep	m	10
<u>uPVC pipes</u>			
<u>Extra over uPVC pipes for fittings</u>			
9	50mm Bend	No	3
10	50 mm Junction	No	3
11	50mm Access junction	No	3
12	50mm Access bend	No	3
13	50mm Access reducing junction	m	3
14	50mm "GI Two-way" vent valve	No	3
Carried Forward			R
Section No. 8 Bill No. 10 PLUMBING AND DRAINAGE KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>Extra over normal duty (Class 51) uPVC sewer and drain pipes for fittings</u>			
15	110mm Bend	No	3
16	110mm Junction	No	3
<u>uPVC gulleys</u>			
17	110mm Dished gully trap assembly with head, grid and concrete surround not exceeding 750mm deep	No	3
<u>WATER SUPPLY</u>			
<u>Class 0 copper pipes</u>			
18	15 mm Pipes	m	6
19	15mm Pipes chased in walls	m	5
<u>Extra over class 0 copper pipes for capillary fittings</u>			
20	15mm Fittings	No	5
<u>Copper overflow and service pipes</u>			
21	15mm Service pipe 350mm girth	No	1
<u>TAPS, VALVES, ETC</u>			
22	19mm Chromium plated push-button taps to wash troughs	No	6
23	15mm gate valve plugged	No	4
24	15mm Elbow action pillar tap	No	1
<u>Sundries</u>			
25	Testing water pipe system	Item	
Carried Forward to Summary of Section No. 8			R
Section No. 8			
Bill No. 10			
PLUMBING AND DRAINAGE			
KUTLO CONSULTING ENGINEERS			

-164-

-165-

-166-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 10</u>			
	<u>BILL NO. 1</u>			
	<u>STORMWATER CONTROL</u>			
	<u>SITE CLEARANCE ETC</u>			
	<u>Site clearance</u>			
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc	m2	200	
	<u>BULK EXCAVATION, FILLING, ETC</u>			
	<u>Excavation in earth</u>			
2	Excavate in earth below natural, reduced or made up ground level , not exceeding 2m deep, to reduced levels under aprons, etc	m3	30	
	<u>Extra over bulk excavation in earth for excavation in</u>			
3	Soft rock	m3	3	
4	Hard rock	m3	11	
	<u>Extra over all excavations for carting away</u>			
5	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	15	
	<u>Keeping excavations free of water</u>			
6	Keeping excavations free of all water other than subterranean water	Item		
	Carried Forward		R	
	Section No. 9 Bill No. 1 STORMWATER CONTROL KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>Compaction of surfaces</u>			
7	Re-compaction of disturbed formation levels, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density	m2	200
<u>Soil poisoning</u>			
8	Treat soil under concrete rain water channels, etc. with an approved insecticide solution at the rate not less than 2 litre per 1m2	m2	200
<u>Unreinforced Concrete</u>			
<u>25Mpa/19mm concrete</u>			
9	25Mpa/19mm Mass concrete in V-shaped channel 2000mm wide x 75mm thick with rounded salient edges and finished on exposed surfaces with 2: 1 cement mortar, with and including one layer of ref.193 mesh reinforcement, laid to falls in panels not exceeding 2,0m long with 12mm bitumen impregnated sailboard movement joints with exposed edges raked out for a depth of 10mm and filled with bituminous compound including all necessary excavations and formwork	m	200
10	Extra for fair open end	No	20
11	Extra for fair stopped end	No	20
12	Extra for angle intersection	No	25
13	Extra over for forming 100mm thick spreader fanning out to 1200mm width at furthest end with seven (7No) concrete bricks cast in as brick-on-end diffusers in three rows including working off concrete to a smooth finish	No	1
Carried Forward to Summary of Section No. 9			R
Section No. 9			
Bill No. 1			
STORMWATER CONTROL			
KUTLO CONSULTING ENGINEERS			

-169-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted as specified</u>		
7	Subbase course of G5 material in 150mm layer, compacted to 93% Mod AASHTO density	m3	134
	<u>Compaction of surfaces</u>		
8	Compaction of ground surface under pavings, 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	446
	<u>Additional tests required by the engineer (Refer to Supplementary Preambles for contractor's tests: SABS 1200)</u>		
9	"Modified AASHTO Density" test	No	10
	<u>Paving of type 60mm interlocking precast concrete paving blocks with butt joints including 50mm thick river sand bed with sand swept into joints, including preparation of ground or filling</u>		
10	Paving to parking areas etc to falls, including necessary straight edge blocks	m2	446
	<u>Weedkiller (active ingredients metalaclor 102,8 g/l, terbitilasien 248,6 g/l and atrasien 248,6 g/l) mixed in the proportion of 100 ml weedkiller to 100 l water and applied at a rate of 10 l/m²</u>		
11	Under paving etc	m2	446
	<u>Kerbs, etc</u>		

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward		
	<u>Precast concrete finished smooth on exposed surfaces including bedding, jointing and pointing</u>	
12	Fig 12 kerb with 150 x 150 x 300mm unreinforced concrete haunching at back of each joint, including excavation, backfilling, etc	m 416
<u>STEEL HANDRAILS, BALUSTRADES, ETC</u>		
	<u>Welded handrails to walkways and ramps</u>	
13	Horizontal welded balustrading 1 000mm high formed of 50 x 50 x 3mm thick square hollow section top and bottom rails, with uprights formed of 50 x 50 x 3mm thick square hollow section steel at 986mm centres, the balustrading with two cross members formed of 50 x 25 x 3mm thick hollow section and welded to 75 x 75 x 3mm thick columns at 1 500mm centres	m 40
14	Raking welded balustrading 1 000mm high formed of 50 x 50 x 3mm thick square hollow section top and bottom rails, with uprights formed of 50 x 50 x 3mm thick square hollow section steel at 986mm centres, the balustrading with two cross members formed of 50 x 25 x 3mm thick hollow section and welded to 75 x 75 x 3mm thick columns at 1 500mm centres	m 50
15	100 x 100 x 5mm Thick base plate, four times holed and welded to bottom of posts (e/m)	No 50
16	Extra over last for closed end to 50 x 50mm rails	No 10
17	M16 x 100mm expansion bolt	No 100

Carried Forward to Summary of Section No. 9

Section No. 9

Bill No. 2

PAVED WALKWAY

KUTLO CONSULTING ENGINEERS

-172-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R	
	<u>Rotary air percussion</u>			
9	165mm diameter	m		
10	254mm diameter	m		
	<u>Odex drilling, including supply, delivery and installation of at least 6mm sidewall Odex casing:</u>			
11	165mm diameter	m		
12	254mm diameter	m		
	<u>Casing, including supply, delivery and installation, but not including reaming</u>			
	<u>Steel casing (plain)</u>			
13	165mm (state wall thickness here as 3 mm)	m		
14	Reaming	m		
15	Formation stabilizer	kg		
16	Concrete collar, complete per borehole	No		
17	Normal Sanitary seal, complete per borehole	m		
18	Data recording and reporting, complete per borehole	No		
19	Borehole development	Hrs		
	<u>PUMPS AND PIPING</u>			
	<u>Submersible pumpset and appurtenant fittings as mar specification</u>			
20	Submersible pump with a duty of: Total head of 40m and flow of 1.6l/s complete with integral non-return valve, flow inducer (cooling) sleeve, complete with a suitable electric motor and automatic control box	No	1	
Carried Forward			R	
Section No. 9 Bill No. 3 EQUIPPING OF BOREHOLE KUTLO CONSULTING ENGINEERS				

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>Class 10 HDPe type IV pipes</u>			
21	40mm Pipes laid in and including trenches not exceeding 1m deep	m	120
<u>Extra over Class 10 HDPe type IV pipes for fittings</u>			
22	40mm pressed steel base plate with 26mm diameter hole drilled for dipper tube	No	1
23	40mm DN MGI barrel nipple	No	8
24	40mm DN x 90° MGI female elbow	No	1
25	40 x 25 DN MGI reducing socket	No	1
26	25mm DN 'Invensys' / 'Kent' domestic water meter (refer to plan HSD1001)	No	1
27	40 x 25 DN MGI reducing bush	No	1
28	40mm cobra brass Ball valve	No	12
<u>Booster pump and appurtenant items</u>			
29	Supply and install a booster pump complete with control box and lockable steel pump cage with the followings specifications: Flow (Q)=2.3l/s ; Total dynamic head=45m	No	1
<u>Submersible pumpset</u>			
30	Submersible pumpset and appurtenant fittings as per manufacturer specifications	No	1
<u>Lockable steel cage</u>			
31	Lockable steel cage for booster borehole	No	1
<u>ELECTRICAL PUMP CONTROL PANEL (AUTOMATIC)</u>			
Carried Forward			R
Section No. 9 Bill No. 3 EQUIPPING OF BOREHOLE KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
<u>Single Phase Control Panel : 0 - 5.6kw</u>			
<u>Switch Gear</u>			
32	60 Amp T/Pole Isolator ABB 5Ka	No 1	
33	60 Amp S/Pole Earth Leakage ABB 5Ka	No 1	
34	20 Amp T/Pole Circuit Breaker ABB 3Ka	No 1	
35	25 Amp S/Pole C/B ABB 5Ka	No 1	
36	Surge arrestor ABB	No 1	
<u>Wires and accessories</u>			
37	Wires and accessories	Item	
38	Pin Lugs 4mm ² Yellow	m 12	
39	Self Trapping Screws	Item	
<u>Control gear</u>			
40	1 x Float switch	No 1	
41	1000mm long x 22mm dia galvanised pipes	No 4	
42	Capture	No 1	
43	20mm Ø CCG Box	No 1	
44	Bends Bosal	No 4	
45	Coupling Bosal 20mm	No 5	
46	Bolts M 8 x 25mm nut & washer	No 1	
Carried Forward			R
Section No. 9 Bill No. 3 EQUIPPING OF BOREHOLE KUTLO CONSULTING ENGINEERS			

-176-

-177-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

		Brought Forward			R
12	50mm Bush	No	8		
13	50mm Elbow	No	8		
Carried Forward to Summary of Section No. 9					R
Section No. 9					
Bill No. 4					
WATER SUPPLY					
KUTLO CONSULTING ENGINEERS					

-179-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
	<u>Keeping excavations free of water</u>		
7	Keeping excavations free of all water other than subterranean water	Item	
	<u>Earth filling obtained from the excavations and /or prescribed stock piles on site including compacted to 93% Mod AASHTO density</u>		
8	Backfilling to trenches, holes, etc	m3	9
<u>SOIL POISONING</u>			
	<u>Soil poisoning mixed in accordance to supplier's specifications</u>		
9	To bottoms and sides of trenches, etc.	m2	19
<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>			
<u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>			
	<u>25MPa/19mm concrete</u>		
10	Strip footings	m3	9
11	Platform surface beds cast in panels	m3	2
<u>FINISHING TOP SURFACE OF CONCRETE</u>			
	<u>Finishing top surfaces of concrete smooth with a wood float/steel trowel</u>		
12	Surface beds, slabs, etc (rainwater tanks)	m2	19
<u>REINFORCEMENT</u>			
Carried Forward			R
Section No. 9 Bill No. 5 RAINWATER WATER TANKS KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
	<u>Fabric reinforcement</u>		
13	Type 295 fabric reinforcement in concrete surface beds, slabs, etc	m2	29
	<u>TEST CUBES</u>		
14	Allow for preparing a set of three concrete strength test cubes, each size 150 x 150 x 150mm, sending them to an approved Testing Laboratory for testing and paying all charges in connection therewith.	Sets	3
	<u>BRICKWORK</u>		
	<u>Brickwork of NFP bricks in class II mortar</u>		
15	One brick walls	m2	23
	<u>BRICKWORK SUNDRIES</u>		
	<u>Brickwork reinforcement</u>		
16	150mm Wide reinforcement built in horizontally	m	70
	<u>FACE BRICKWORK</u>		
	<u>Face bricks (purchase price of R 5000.00/1000 delivered to site excluding VAT) pointed with flush horizontal and vertical joints</u>		
17	Extra over brickwork for face brickwork	m2	23
	<u>Brick-on-edge header course copings, sills, etc of face bricks (Purchase price R3 500.00/1000 VAT excl. delivered to site) pointed with recessed joints on all exposed faces</u>		
18	Coping on top of one brick wall	m	37
	<u>WATERPROOFING</u>		
	Carried Forward		R
	Section No. 9 Bill No. 5 RAINWATER WATER TANKS KUTLO CONSULTING ENGINEERS		

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
	<u>One layer of 375 micron Consol Plastic Brikgrip DPC"</u> <u>embossed damp proof course</u>		
19	In walls	m2	8
	<u>One layer of 250 micron "Consol Plastic USB Green"</u> <u>waterproof sheeting sealed at laps with "Gunplas</u> <u>Pressure Sensitive Tape"</u>		
20	Under surface beds	m2	19
<u>WATER SUPPLIES</u>			
	<u>Galvanized medium normalized mild steel piping</u>		
21	25mm Pipes laid in and including trenches not exceeding 1m deep "Labour Intensive"	m	60
22	50mm Pipes laid in and including trenches not exceeding 1m deep "Labour Intensive"	m	70
	<u>Extra over galvanised mild steel water supply pipes for fittings:</u>		
23	25mm Fittings.	No	30
24	50mm Elbows.	No	30
25	50mm Union.	No	30
26	50mm Reducing bush.	No	30
27	15mm "Cobra Ref. 108LK" brass hose biptap.	No	10
	<u>"Jojo" approved SANS PVC water tanks</u>		
28	5 000 Litre plastic water tank fitted onto and secured to tank platforms	No	6
Carried Forward to Summary of Section No. 9			R
Section No. 9			
Bill No. 5			
RAINWATER WATER TANKS			
KUTLO CONSULTING ENGINEERS			

-183-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward				R
<u>25Mpa/19mm Concrete</u>				
9	Blinding	m3	6	
10	Bases	m3	16	
<u>Finishing top surfaces of concrete smooth with a wood float</u>				
11	On top of bases	m2	18	
<u>"Jojo" or equal approved SANS PVC water tanks</u>				
12	10 000 Litre plastic water tank fitted onto and secured to tank platforms	No	6	
<u>Structural Steel</u>				
<u>Welded columns in single lengths with flat base, cap, bearer and connection plates, bolted to concrete</u>				
13	80 x 80mm x 6mm Angle-section	t	4.74	
<u>Welded beams in single lengths with flat bearer and connection plates, bolted to steel</u>				
14	30 x 30mm x 6mm Flat-section	t	1.07	
15	40 x 40mm x 5mm Angle -section	t	1.36	
16	125 x 50 x 20 x 2mm Lipped channel-section	t	1.85	
17	125 x 75 x 8mm Flat-section	t	0.97	
<u>Bolts to columns, beams, etc</u>				
18	High tensile bolts	t	0.36	
Carried Forward				R
Section No. 9 Bill No. 6 WATER TANK STANDS KUTLO CONSULTING ENGINEERS				

-185-

-186-

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward			R
	<u>Rough formwork to sides</u>		
7	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	18
8	Formwork to sides	m2	8
	<u>Mesh Reinforcement (measure nett)</u>		
9	Mesh ref. No. 395 fabric reinforcement fixed horizontal in surface beds	m2	8
	<u>WATER SUPPLIES</u>		
	<u>Class 0 copper pipes and fittings with capillary soldered type connections</u>		
10	15mm Pipes	m	56
	<u>Extra over class 0 pipes for capillary fittings</u>		
11	15mm fittings	No	12
	<u>Cobra Watertech or equal approved</u>		
12	19mm chrome plated push button taps	No	8
Carried Forward to Summary of Section No. 9			R
Section No. 9			
Bill No. 7			
STAND PIPES			
KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 10</u>			
	<u>BILL NO. 7</u>			
	<u>FENCING</u>			
	<u>FENCING</u>			
	<u>Steel Palisade Fencing</u>			
	<u>The following in steel palisade fencing</u>			
1	1800mm High palisade fencing comprising 40 x 40 x 2mm x 1 750mm angle pales bolted at 175mm centres using M8 anti vandal nuts and round headed bolts onto 50 x 50 x 3mm angle iron crossbars bolted onto 76 x 76 x 2mm square tube posts 2400mm long by means of 40 x 5.00mm flatbar fishplate and M12 antivandal nuts and bolts and including planting posts into 600 x 600 x 600mm deep 25MPa concrete complete with all earthworks, trimmings and fixing.	m	1 430	
2	Pedestrian gate 1 500mm x 1 800mm High formed from 40 x 40 x 2mm welded angle iron paling; 50 x 25 x 1.6mm rectangular tubing frame; gate posts formed of 75 x 75 x 2mm steel square tubing 2400mm overall length planted into 450 x 450 x 600mm concrete base (all concrete work to engineer's specification).	No	1	
3	Swing gate 2 000mm x 1 800mm High formed from 40 x 40 x 2mm welded angle iron paling; 50 x 25 x 1.6mm rectangular tubing frame; gate posts formed of 75 x 75 x 2mm steel square tubing 2400mm overall length planted into 450 x 450 x 600mm concrete base (all concrete work to engineer's specification).	No	1	
	Carried Forward		R	
	Section No. 9			
	Bill No. 8			
	FENCING			
	KUTLO CONSULTING ENGINEERS			

THE MVULA TRUST
LPDE 2022/2023 WATER, SANITATION AND FENCING PROGRAMME
KGAHLANA MORULANA SECONDARY SCHOOL

Brought Forward				R
4	Sliding gate 5 000mm x 1 800mm High formed from 40 x 40 x 2mm welded angle iron paling; 76 x 38 x 2mm rectangular tubing frame; two 80mm roller coaster wheels fitted with ball bearing; track formed of 12mm steel rod welded to 40 x 40 x 5mm angle iron fixed into a 300 x 400 x 5 000mm concrete base; gate posts formed of 75 x 75 x 2mm steel square tubing 2 400mm overall length planted into 450 x 450 x 600mm concrete base (all concrete work to engineer's specification).	No	1	
	<u>PAINTWORK</u>			
	<u>On metal</u>			
	<u>Undercoat and minimum 2 coats gloss enamel</u>			
5	Prime, apply one coat undercoat and two coats of high gloss enamel paint on steel (Measured over the full flat area of both sides according specification)	m2	5 148	
Carried Forward to Summary of Section No. 9				R
Section No. 9				
Bill No. 8				
FENCING				
KUTLO CONSULTING ENGINEERS				

-190-

-191-