

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

Item No	Quantity	Rate	Amount
<p><u>SECTION 1</u></p> <p><u>BILL NO. 1</u></p> <p><u>PRELIMINARIES</u></p> <p><u>BUILDING AGREEMENT AND PRELIMINARIES</u></p> <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
<p>Section No. 1 Bill No. 1 PRELIMINARIES & GENERALS KUTLO CONSULTING ENGINEERS</p>			

	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		
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	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	
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	Brought Forward		R	
12	Effecting insurance (clause 12) F:..... V:..... T:.....	Item		
13	NO CLAUSE	N/A		
14	Security (clause 14) F:..... V:..... T:.....	Item		
<u>Execution (A15-A23)</u>				
15	Preparation for and execution of the works (clause 15) F:..... V:..... T:.....	Item		
16	Access to the works (clause 16) F:..... V:..... T:.....	Item		
17	Contract instructions (clause 17) F:..... V:..... T:.....	Item		
18	Setting out of the works (clause 18) F:..... V:..... T:.....	Item		
Carried Forward			R	
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	Brought Forward		R
	The contractor shall notify the principal agent if any encroachments of adjoining foundations, buildings, structures, pavements, boundaries, etc exist in order that the necessary arrangements may be made for the rectification of any such encroachments		
19	Assignment (clause 19) F:..... V:..... T:.....	Item	
	The contractor shall not cede his rights or delegate his obligations in terms of this agreement unless specifically called for by the employer		
20	Nominated subcontractors (clause 20) F:..... V:..... T:.....	Item	
21	Selected subcontractors (clause 21) F:..... V:..... T:.....	Item	
	Written proof is required from subcontract tenderers at tendering that they can meet the JBCC Selected Subcontract Agreement or other tender agreements and provide security in terms of the agreement. If the above is not provided the tender may not be accepted		
	All amounts allowed under Provisional Amounts are intended to be awarded to Selected Subcontractors		
22	Employer's Direct Contractors (clause 22) F:..... V:..... T:.....	Item	
	Carried Forward		R
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Brought Forward			R
23	Contractor's Domestic Sub-Contractors (Clause 23) F:..... V:..... T:.....	Item	
<u>Completion (A24-A30)</u>			
24	Practical completion (clause 24) F:..... V:..... T:.....	Item	
25	Works completion (clause 25) F:..... V:..... T:.....	Item	
26	Final completion (clause 26) F:..... V:..... T:.....	Item	
27	Latent defects liability period (clause 27) F:..... V:..... T:.....	Item	
28	Sectional completion (clause 28) F:..... V:..... T:.....	Item	
29	Revision of date of practical completion (clause 29) F:..... V:..... T:.....	Item	
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	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	
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	Brought Forward		R
34	<p>Final account and final payment (clause 34)</p> <p>F:..... V:..... T:.....</p> <p>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</p> <p>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</p>	Item	
35	<p>Payment to other parties (clause 35)</p> <p>F:..... V:..... T:.....</p> <p><u>Cancellation (A36-A39)</u></p>	Item	
36	<p>Cancellation by employer - contractor's default (clause 36)</p> <p>F:..... V:..... T:.....</p>	Item	
37	<p>Cancellation by employer - loss and damage (clause 37)</p> <p>F:..... V:..... T:.....</p>	Item	
	Carried Forward		R
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	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	
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Brought Forward		R	
<u>42.1 CONTRACTING AND OTHER PARTIES</u>			
42.1.1 Employer: As per infomation on the tender data			
42.1.2 Principal Agent: As per the infomation on the Tender data			
42.1.3 Architect: Afro Architectural			
42.1.4 Quantity Surveyor:			
Structural :			
42.1.5 Civil:			
42.1.6 Electrical Engineer:			
42.1.6 Mechanical Engineer:			
<u>42.2 CONTRACT DETAILS</u>			
42.2.1 Works Description: Construction of sanitation facilities			
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	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>			
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42.2.8 For the works in sections : Intended date of practical completion and the penalty per calender day				
Section 1				
.N/A..... <i>Date</i>				
R.N/A..... <i>Penalty Amount</i>				
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>				
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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</i> N/A				
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	
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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	
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	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	
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	Brought Forward		R
55	Protection of trees etc (B3.9) F:..... V:..... T:.....	Item	
56	Articles of value (B3.10) F:..... V:..... T:.....	Item	
<u>Management of contract (B4)</u>			
57	Inspection of adjoining properties etc (B3.11) F:..... V:..... T:.....	Item	
58	Management of the works (B4.1) F:..... V:..... T:.....	Item	
59	Programme for the works (B4.2) F:..... V:..... T:.....	Item	
60	Progress meetings (B4.3) F:..... V:..... T:.....	Item	
61	Technical meetings (B4.4) F:..... V:..... T:.....	Item	
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	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	
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	Brought Forward			R
69	Advertising (B6.3) F:..... V:..... T:.....	Item		
70	Plant, equipment, sheds and offices (B6.4) F:..... V:..... T:.....	Item		
71	Main notice board (B6.5) F:..... V:..... T:.....	Item		
72	Subcontractors' notice board (B6.6) F:..... V:..... T:.....	N/A		
	<u>Temporary services (B7)</u>			
73	Location (B7.1) F:..... V:..... T:.....	Item		
74	Water (B7.2) Option [A] shall apply F:..... V:..... T:.....	Item		
75	Electricity (B7.3) Option [A] shall apply F:..... V:..... T:.....	Item		
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76	Telecommunication facilities (B7.4) F:..... V:..... T:.....	Item	
77	Ablution facilities (B7.5) Option [A] shall apply F:..... V:..... T:.....	Item	
	<u>Prime cost amounts (B8)</u>		
78	Responsibility for prime cost amounts (B8.1) F:..... V:..... T:.....	Item	
	<u>Attendance on N/S Subcontractors (B9)</u>		
79	General attendance (B9.1) F:..... V:..... T:.....	Item	
80	Special attendance (B9.2) F:..... V:..... T:.....	Item	
81	Commissioning - Fuel, water and power (B9.3) F:..... V:..... T:.....	Item	
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	Brought Forward		R
	<u>Financial aspects (B10)</u>		
	Statutory taxes, duties and levies (B10.1)		
	F:..... V:..... T:.....	Item	
82	Payment of preliminaries (B10.2) Option [B] shall apply		
	F:..... V:..... T:.....	Item	
83	Adjustment of preliminaries (B10.3) Option [A] shall apply		
	F:..... V:..... T:.....	Item	
84	Payment certificate cash flow (B10.4)		
	F:..... V:..... T:.....	Item	
	<u>General (B11)</u>		
85	Protection of works (B11.1)		
	F:..... V:..... T:.....	Item	
86	Protection/isolation of existing/sectionally occupied works (B11.2)		
	F:..... V:..... T:.....	Item	
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87	Security of the Works (B11.3) F:..... V:..... T:.....	Item		
88	Notice before covering work (B11.4) F:..... V:..... T:.....	Item		
89	Disturbance (B11.5) F:..... V:..... T:.....	Item		
90	Environmental Disturbance (B11.6) F:..... V:..... T:.....	Item		
91	Works cleaning and clearing (B11.7) F:..... V:..... T:.....	Item		
92	Vermin (B11.8) F:..... V:..... T:.....	Item		
93	Overhand work (B11.9) F:..... V:..... T:.....	Item		
94	Instruction manuals and guarantees (B11.10) F:..... V:..... T:.....	Item		
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95	As built information (B11.11) F:..... V:..... T:.....	Item		
96	Tenant Installations (B11.12) F:..... V:..... T:.....	Item		
	<u>Schedule of variables (B12)</u>			
97	Pre-tender information (B12.1) F:..... V:..... T:.....	Item		
	12.1.1 Provisional bills of quantities (B2.2) The quantities are provisional:			No
	12.1.2 Availability of construction documentation (B2.3) Construction documentation is not complete			No
	12.1.3 Interest of agents (B2.4)			
	12.1.4 Defined works area (B3.1)			
	12.1.5 Geotechnical investigation (B3.2)			
	N/A			
	12.1.6 Existing premises occupied (B3.4)			
	12.1.7 Previous work - dimensional accuracy (B3.4)			
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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			
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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>			
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	Brought Forward		R
98	<p>Site instructions</p> <p>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</p> <p>F: V:..... T:.....</p>	Item	
99	<p>Black economic empowerment and training</p> <p>F:..... V:..... T:.....</p>	Item	
100	<p>Proprietary branded products</p> <p>F:..... V:..... T:.....</p>	Item	
101	<p>Testing of flat roof waterproofing for watertightness</p> <p>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</p> <p>F:..... V:..... T:.....</p> <p>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</p>	Item	
102	<p>Contract instructions</p> <p>F:..... V:..... T:.....</p>	Item	
	Carried Forward		R
	<p>Section No. 1 Bill No. 1 PRELIMINARIES & GENERALS KUTLO CONSULTING ENGINEERS</p>		

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	Brought Forward		R
	Contract instructions issued on site are to be recorded in triplicate in a contract instruction book which is to be supplied and maintained on site by the contractor		
103	Labour record F:..... V:..... T:.....	Item	
	At the end of each week the contractor shall provide the principal agent with a written record, in schedule form, reflecting the number and descriptions of tradesmen and labourers employed by him and all subcontractors on the works each day of that week		
104	Plant record F:..... V:..... T:.....	Item	
	At the end of each week the contractor shall provide the principal agent with a written record, in schedule form, reflecting the number, type and capacity of all plant, excluding hand tools used on the works each day of that week		
105	Guarantees F:..... V:..... T:.....	Item	
	Carried Forward		R
	Section No. 1 Bill No. 1 PRELIMINARIES & GENERALS KUTLO CONSULTING ENGINEERS		

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	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>		

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	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>			

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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			

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	Brought Forward			R
3	Demolish existing pit toilet structures size 4m 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	2	
	Carried to Final Summary			R
	Section No. 2 Bill No. 1 ALTERATIONS AND DEMOLITIONS KUTLO CONSULTING ENGINEERS			

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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			

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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</u>			
<u>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			

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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			

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Item No		Quantity	Rate	Amount
	<u>BILL NO.2</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	5	
2	Ditto, but surface bed in pit	m3	23	
3	Aprons cast in panels	m3	3	
4	Extra over concrete in surface beds for thickening 85mm deep the bottom including all excavation, backfilling etc.	m	33	
5	Thickening down apron on edge 110mm deep x 200mm wide	m	11	
	<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	23	
	Carried Forward			R
	Section No. 3 Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT KUTLO CONSULTING ENGINEERS			

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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		
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Item No	Quantity	Rate	Amount
<p><u>BILL NO.3</u></p> <p><u>BRICKWORK</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>For preambles see "Specifications of materials and methods to be used - PW 371"</p> <p><u>BRICKWORK</u></p> <p>Sizes in descriptions</p> <p>Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick</p> <p>Hollow walls etc</p> <p>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.</p> <p>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.</p> <p>User note: The above preamble generally applies for works in hot and humid coastal areas</p> <p>Face bricks</p> <p>Bricks shall be ordered timeously to obtain uniformity in size and colour</p> <p><u>Pointing</u></p> <p>Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc</p> <p style="text-align: right;">Carried Forward</p> <p>Section No. 3 Bill No. 3 MASONRY KUTLO CONSULTING ENGINEERS</p>			R

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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			

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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			
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Item No		Quantity	Rate	Amount
	<u>BILL NO.4</u>			
	<u>WATERPROOFING</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>DAMP-PROOFING OF WALLS AND FLOORS</u>			
	<u>One layer 375mm micron embossed damp proof course</u>			
1	In walls	m2	5	
	<u>One layer of 250 micron waterproof sheeting and sealed at overlaps with pressure sensitive tape</u>			
2	Under surface beds	m2	25	
	<u>FLOOR AND WALLS SEALERS</u>			
	<u>"Secomastic" non setting mastic sealant applied cold with a hand pressure caulking gun and leave perfectly watertight:</u>			
3	Around steel windows and door frames.	m	12	
	Carried Forward to Summary of Section No. 3			R
	Section No. 3			
	Bill No. 4			
	WATERPROOFING			
	KUTLO CONSULTING ENGINEERS			

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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			R
	Section No. 3			
	Bill No. 5			
	ROOF COVERINGS			
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Item No		Quantity	Rate	Amount
	<u>BILL NO.6</u>			
	<u>CARPENTRY AND JOINERY</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>ROOFS, ETC.</u>			
	<u>Sawn softwood</u>			
1	38 x 114mm Rafters in lengths exceeding 3,9m and not exceeding 6,6m	m	57	
2	76 x 38mm Wall plates	m	15	
3	50 x 76mm Purlins in lengths exceeding 3,9m and not exceeding 6,6m	m	58	
	<u>Sundries</u>			
4	Two coats creosote on sawn timbers	m2	35	
5	6mm Diameter galvanised wire tie 1 500mm girth wrapped around rafter and purlin with ends tied together	No	20	
6	Hurricane clips	No	60	
	<u>EAVES, VERGES, ETC.</u>			
	<u>Pressed fibre-cement</u>			
7	15 x 230mm Fascias and barge boards including galvanised steel H-profile jointing strips	m	27	
	<u>DOORS, ETC.</u>			
	Carried Forward			R
	Section No. 3 Bill No. 6 CARPENTRY AND JOINERY KUTLO CONSULTING ENGINEERS			

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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		
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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			

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	Brought Forward				
	<u>Approved</u>				R
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				
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Item No		Quantity	Rate	Amount
	<u>BILL NO.8</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 2 032mm High	No	1	
2	Purpose made square hallow section mild steel security gate, size 914 x 2 032mm 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 2 032mm high	No	3	
	<u>1,6mm Double rebated frames suitable for one brickwalls</u>			
4	Frame for door 813 x 2 032mm high	No	1	
5	Frame for door 914 x 2 032mm high	No	1	
	<u>STEEL WINDOWS, DOORS, ETC</u>			
6	Window type NE1, 533 x 654mm high including burglar bars	No	7	
7	Window type NE 7,1 022 x 654mm high including burglar bars	No	3	
	Carried Forward to Summary of Section No. 3			R
	Section No. 3			
	Bill No. 8			
	METALWORK			
	KUTLO CONSULTING ENGINEERS			

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Item No		Quantity	Rate	Amount
	<u>BILL NO. 9</u>			
	<u>PLASTERING</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>CEMENT SCREEDS TO CONCRETE</u>			
	<u>Screeds to steel trowelled, on concrete:</u>			
1	30mm thick on floors	m2	25	
	<u>INTERNAL PLASTER</u>			
	<u>Cement plaster on brickwork or blockwork</u>			
2	On pits walls	m2	30	
	<u>FLOOR AND WALLS SEALERS</u>			
	<u>Minimum two coats approved epoxy coat:</u>			
3	On screed	m2	25	
4	On internal textured plaster walls and floors in pit	m2	54	
	Carried Forward to Summary of Section No. 3			R
	Section No. 3			
	Bill No. 9			
	IN SITU FINISHES			
	KUTLO CONSULTING ENGINEERS			

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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			

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		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				

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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			
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Item No		Quantity	Rate	Amount
	<u>BILL NO. 12</u>			
	<u>PAINTWORK</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>ON FIBRE-CEMENT</u>			
	<u>Prepare and brush to remove all loose contaminations, apply one coat primer and two coats PVA emulsion paint</u>			
1	On fascias and barge boards	m2	6	
	<u>ON WOOD</u>			
	<u>Undercoat and minimum 2 coat gloss enamel</u>			
2	On doors (Internal)	m2	16	
3	On doors (External)	m2	4	
	<u>ON METAL</u>			
	<u>Undercoat and minimum 2 coat gloss enamel</u>			
4	On door frames	m2	3	
5	On gates (Measured over the full flat area of both sides)	m2	3	
6	On gutters and down pipes	m	9	
	<u>Spot priming defects in prime surface with zinc chromate primer and apply one universal undercoat and two coats EPWP, golden brown gloss enamel paint on steel</u>			
7	On windows with burglar bars	m2	8	
	Carried Forward to Summary of Section No. 3			R
	Section No. 3			
	Bill No. 12			
	PAINTWORK			
	KUTLO CONSULTING ENGINEERS			

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Bill No	<u>SECTION SUMMARY - BUILDING WORKS - M4</u>	Page No	Amount
1	EARTHWORKS	34	
2	CONCRETE, FORMWORK AND REINFORCEMENT	36	
3	MASONRY	39	
4	WATERPROOFING	40	
5	ROOF COVERINGS	41	
6	CARPENTRY AND JOINERY	43	
7	IRONMONGERY	45	
8	METALWORK	46	
9	IN SITU FINISHES	47	
10	PLUMBING AND DRAINAGE	50	
11	GLAZING	51	
12	PAINTWORK	52	
	Carried to Final Summary		R
	Section No. 3 KUTLO CONSULTING ENGINEERS		

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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			R
	Section No. 4 Bill No. 1 EARTHWORKS KUTLO CONSULTING ENGINEERS			

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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</u>			
<u>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			

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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			R
	Section No. 4 Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT KUTLO CONSULTING ENGINEERS			

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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.	5
	<u>Finishing top surfaces of concrete smooth with a steel trowel</u>	
9	Surface beds, slabs, etc.	33
<u>FORMWORK</u>		
	<u>Rough formwork to sides:</u>	
10	Edges, risers, ends and reveals not exceeding 300mm high or wide	35
	<u>Permanent formwork to soffits:</u>	
11	Slabs propped up not exceeding 1.5m high	14
12	Leave or form 500mm diameter opening in top of floor slab	6
<u>REINFORCEMENT</u>		
	<u>Mesh Reinforcement (measure nett)</u>	
13	Mesh ref. No. 395 fabric reinforcement fixed horizontal in surface beds	33
Carried Forward to Summary of Section No. 4		R
Section No. 4		
Bill No. 2		
CONCRETE, FORMWORK AND REINFORCEMENT		
KUTLO CONSULTING ENGINEERS		

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Item No	Quantity	Rate	Amount
<p><u>BILL NO.4</u></p> <p><u>BRICKWORK</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>For preambles see "Specifications of materials and methods to be used - PW 371"</p> <p><u>BRICKWORK</u></p> <p>Sizes in descriptions</p> <p>Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick</p> <p>Hollow walls etc</p> <p>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.</p> <p>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.</p> <p>User note: The above preamble generally applies for works in hot and humid coastal areas</p> <p>Face bricks</p> <p>Bricks shall be ordered timeously to obtain uniformity in size and colour</p> <p><u>Pointing</u></p> <p>Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc</p> <p style="text-align: right;">Carried Forward</p> <p>Section No. 4 Bill No. 3 MASONRY KUTLO CONSULTING ENGINEERS</p>			R

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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			

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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			

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Item No		Quantity	Rate	Amount
	<u>BILL NO.5</u>			
	<u>WATERPROOFING</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>DAMP-PROOFING OF WALLS AND FLOORS</u>			
	<u>One layer 375mm micron embossed damp proof course</u>			
1	In walls	m2	15	
	<u>One layer of 250 micron waterproof sheeting and sealed at overlaps with pressure sensitive tape</u>			
2	Under surface beds	m2	33	
	<u>FLOOR AND WALLS SEALERS</u>			
	<u>"Secomastic" non setting mastic sealant applied cold with a hand pressure caulking gun and leave perfectly watertight:</u>			
3	Around steel windows and door frames.	m	11	
	Carried Forward to Summary of Section No. 4			R
	Section No. 4			
	Bill No. 4			
	WATERPROOFING			
	KUTLO CONSULTING ENGINEERS			

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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			R
	Section No. 4			
	Bill No. 5			
	ROOF COVERINGS			
	KUTLO CONSULTING ENGINEERS			

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Item No		Quantity	Rate	Amount
	<u>BILL NO.7</u>			
	<u>CARPENTRY AND JOINERY</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>ROOFS, ETC.</u>			
	<u>Sawn softwood</u>			
1	38 x 114mm Rafters in lengths exceeding 3,9m and not exceeding 6,6m	m	45	
2	76 x 38mm Wall plates	m	23	
3	50 x 76mm Purlins in lengths exceeding 3,9m and not exceeding 6,6m	m	64	
	<u>Sundries</u>			
4	Two coats creosote on sawn timbers	m2	40	
5	6mm Diameter galvanised wire tie 1 500mm girth wrapped around rafter and purlin with ends tied together	No	15	
6	Hurricane clips	No	24	
	<u>EAVES, VERGES, ETC.</u>			
	<u>Pressed fibre-cement</u>			
7	15 x 230mm Fascias and barge boards including galvanised steel H-profile jointing strips	m	27	
	<u>DOORS, ETC.</u>			
	Carried Forward			R
	Section No. 4 Bill No. 6 CARPENTRY AND JOINERY KUTLO CONSULTING ENGINEERS			

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	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 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	
	Carried Forward to Summary of Section No. 4			R
	Section No. 4			
	Bill No. 6			
	CARPENTRY AND JOINERY			
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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	1	
	<u>LOCKS</u>			
	<u>Dorma or equal approved</u>			
2	Three lever mortice lockset plugged	No	2	
3	Indicator lockset plugged	No	6	
	<u>DOORSTOPS</u>			
	<u>Approved</u>			
4	38mm Diameter rubber door stop plugged	No	8	
	<u>LETTERS, NAMEPLATES, ETC.</u>			
	<u>"Union" or equal approved</u>			
5	75 x 150mm Natural anodised aluminium plate with male or female symbol	No	2	
	<u>BATHROOM FITTINGS</u>			
	Carried Forward			R
	Section No. 4 Bill No. 7 IRONMONGERY KUTLO CONSULTING ENGINEERS			

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	Brought Forward				
	<u>"Kimberley-Clark" or equal approved</u>				R
6	"Kimberly Clark" SQ2 code 405607B white lockable toilet roll holder	No	6		
Carried Forward to Summary of Section No. 4					R
Section No. 4 Bill No. 7 IRONMONGERY KUTLO CONSULTING ENGINEERS					

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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 hollow section mild steel security gate, size 813 x 2 032mm High	No	2	
	<u>PRESSED STEEL DOOR FRAMES</u>			
	<u>1,2mm Single rebated frames suitable for half brick walls</u>			
2	Frame for door 813 x 2 032mm high	No	6	
	<u>1,6mm Double rebated frames suitable for one brickwalls</u>			
3	Frame for door 813 x 2 032mm high	No	2	
	<u>STEEL WINDOWS, DOORS, ETC</u>			
4	Window type NE1, 533 x 654mm high including burglar bars	No	8	
5	Window type NE 7,1 022 x 654mm high including burglar bars	No	4	
	Carried Forward to Summary of Section No. 4			R
	Section No. 4			
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	METALWORK			
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Item No		Quantity	Rate	Amount
	<u>BILL NO. 10</u>			
	<u>PLASTERING</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>CEMENT SCREEDS TO CONCRETE</u>			
	<u>Screeds to steel trowelled, on concrete:</u>			
1	30mm thick on floors	m2	33	
	<u>INTERNAL PLASTER</u>			
	<u>Cement plaster on brickwork or blockwork</u>			
2	On pits walls	m2	41	
	<u>FLOOR AND WALLS SEALERS</u>			
	<u>Minimum two coats approved epoxy coat:</u>			
3	On screed	m2	33	
4	On internal textured plaster walls and floors in pit	m2	74	
	Carried Forward to Summary of Section No. 4			R
	Section No. 4			
	Bill No. 9			
	IN SITU FINISHES			
	KUTLO CONSULTING ENGINEERS			

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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			

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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 gully 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			

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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			
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Item No		Quantity	Rate	Amount
	<u>BILL NO. 13</u>			
	<u>PAINTWORK</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>ON FIBRE-CEMENT</u>			
	<u>Prepare and brush to remove all loose contaminations, apply one coat primer and two coats PVA emulsion paint</u>			
1	On fascias and barge boards	m2	7	
	<u>ON WOOD</u>			
	<u>Undercoat and minimum 2 coat gloss enamel</u>			
2	On doors (Internal)	m2	20	
3	On doors (External)	m2	3	
	<u>ON METAL</u>			
	<u>Undercoat and minimum 2 coat gloss enamel</u>			
4	On door frames	m2	4	
5	On gates (Measured over the full flat area of both sides)	m2	3	
6	On gutters and down pipes	m	10	
	<u>Spot priming defects in prime surface with zinc chromate primer and apply one universal undercoat and two coats EPWP, golden brown gloss enamel paint on steel</u>			
7	On windows with burglar bars	m2	11	
	Carried Forward to Summary of Section No. 4			R
	Section No. 4			
	Bill No. 12			
	PAINTWORK			
	KUTLO CONSULTING ENGINEERS			

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Bill No	<u>SECTION SUMMARY - BUILDING WORKS - M6</u>	Page No	Amount
1	EARTHWORKS	56	
2	CONCRETE, FORMWORK AND REINFORCEMENT	58	
3	MASONRY	61	
4	WATERPROOFING	62	
5	ROOF COVERINGS	63	
6	CARPENTRY AND JOINERY	65	
7	IRONMONGERY	67	
8	METALWORK	68	
9	IN SITU FINISHES	69	
10	PLUMBING AND DRAINAGE	72	
11	GLAZING	73	
12	PAINTWORK	74	
	Carried to Final Summary		R
	Section No. 4 KUTLO CONSULTING ENGINEERS		

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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. 5 Bill No. 1 EARTHWORKS KUTLO CONSULTING ENGINEERS			

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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</u>		
	<u>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		

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	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. 5				R
Section No. 5				
Bill No. 1				
EARTHWORKS				
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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	7	
2	Ditto, but surface bed in pit	m3	2	
3	2Aprons cast in panels	m3	3	
4	Extra over concrete in surface beds for thickening 85mm deep the bottom including all excavation, backfilling etc.	m	22	
5	Thickening down apron on edge 110mm deep x 200mm wide	m	36	
	<u>REINFORCED CONCRETE, ETC</u>			
	<u>25Mpa/19mm Concrete</u>			
6	Slabs	m3	5	
	<u>CONCRETE SUNDRIES</u>			
	<u>Finishing top surfaces of concrete smooth with a wood float</u>			
7	Aprons and pavings to falls	m2	28	
	Carried Forward			R
	Section No. 5 Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT KUTLO CONSULTING ENGINEERS			

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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.	5
	<u>Finishing top surfaces of concrete smooth with a steel trowel</u>	
9	Surface beds, slabs, etc.	53
<u>FORMWORK</u>		
	<u>Rough formwork to sides:</u>	
10	Edges, risers, ends and reveals not exceeding 300mm high or wide	25
	<u>Permanent formwork to soffits:</u>	
11	Slabs propped up not exceeding 1.5m high	20
12	Leave or form 500mm diameter opening in top of floor slab	10
<u>REINFORCEMENT</u>		
	<u>Mesh Reinforcement (measure nett)</u>	
13	Mesh ref. No. 395 fabric reinforcement fixed horizontal in surface beds	53
Carried Forward to Summary of Section No. 5		R
Section No. 5		
Bill No. 2		
CONCRETE, FORMWORK AND REINFORCEMENT		
KUTLO CONSULTING ENGINEERS		

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Item No	Quantity	Rate	Amount
<p><u>BILL NO.4</u></p> <p><u>BRICKWORK</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>For preambles see "Specifications of materials and methods to be used - PW 371"</p> <p><u>BRICKWORK</u></p> <p>Sizes in descriptions</p> <p>Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick</p> <p>Hollow walls etc</p> <p>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.</p> <p>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.</p> <p>User note: The above preamble generally applies for works in hot and humid coastal areas</p> <p>Face bricks</p> <p>Bricks shall be ordered timeously to obtain uniformity in size and colour</p> <p><u>Pointing</u></p> <p>Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc</p> <p style="text-align: right;">Carried Forward</p> <p>Section No. 5 Bill No. 3 MASONRY KUTLO CONSULTING ENGINEERS</p>			R

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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			

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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		

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Item No		Quantity	Rate	Amount
	<u>BILL NO.5</u>			
	<u>WATERPROOFING</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>DAMP-PROOFING OF WALLS AND FLOORS</u>			
	<u>One layer 375mm micron embossed damp proof course</u>			
1	In walls	m2	6	
	<u>One layer of 250 micron waterproof sheeting and sealed at overlaps with pressure sensitive tape</u>			
2	Under surface beds	m2	53	
	<u>FLOOR AND WALLS SEALERS</u>			
	<u>"Secomastic" non setting mastic sealant applied cold with a hand pressure caulking gun and leave perfectly watertight:</u>			
3	Around steel windows and door frames.	m	41	
	Carried Forward to Summary of Section No. 5			R
	Section No. 5			
	Bill No. 4			
	WATERPROOFING			
	KUTLO CONSULTING ENGINEERS			

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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	60	
	<u>Sundries</u>			
2	12" Thermal resistance sisalation laid on purlins	m2	60	
	<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	10	
4	Extra over for closed ends	No	2	
5	75 x 100 x 0.6mm Thick galvanised rainwater downpipes fixed to wall	m	5	
6	Extra over rainwater pipe for eaves offset	No	2	
7	Ditto ,for shoe	No	2	
	Carried Forward to Summary of Section No. 5			R
	Section No. 5			
	Bill No. 5			
	ROOF COVERINGS			
	KUTLO CONSULTING ENGINEERS			

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Item No		Quantity	Rate	Amount
	<u>BILL NO.7</u>			
	<u>CARPENTRY AND JOINERY</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>ROOFS, ETC.</u>			
	<u>Sawn softwood</u>			
1	38 x 114mm Rafters in lengths exceeding 3,9m and not exceeding 6,6m	m	67	
2	76 x 38mm Wall plates	m	20	
3	50 x 76mm Purlins in lengths exceeding 3,9m and not exceeding 6,6m	m	54	
	<u>Sundries</u>			
4	Two coats creosote on sawn timbers	m2	17	
5	6mm Diameter galvanised wire tie 3000mm girth wrapped around rafter and purlin with ends tied together	No	28	
6	Hurricane clips	No	15	
	<u>EAVES, VERGES, ETC.</u>			
	<u>Pressed fibre-cement</u>			
7	15 x 230mm Fascias and barge boards including galvanised steel H-profile jointing strips	m	30	
	<u>DOORS, ETC.</u>			
	Carried Forward			R
	Section No. 5 Bill No. 6 CARPENTRY AND JOINERY KUTLO CONSULTING ENGINEERS			

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	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				R
Bill No. 6				
CARPENTRY AND JOINERY				
KUTLO CONSULTING ENGINEERS				

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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	10	
	<u>DOORSTOPS</u>			
	<u>Approved</u>			
4	38mm Diameter rubber door stop plugged	No	12	
	<u>LETTERS, NAMEPLATES, ETC.</u>			
	<u>"Union" or equal approved</u>			
5	75 x 150mm Natural anodised aluminium plate with male or female symbol	No	2	
	<u>BATHROOM FITTINGS</u>			
	Carried Forward			R
	Section No. 5 Bill No. 7 IRONMONGERY KUTLO CONSULTING ENGINEERS			

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	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				

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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	2	
	<u>PRESSED STEEL DOOR FRAMES</u>			
	<u>1,2mm Single rebated frames suitable for half brick walls</u>			
2	Frame for door 813 x 2 032mm high	No	10	
	<u>1,6mm Double rebated frames suitable for one brickwalls</u>			
3	Frame for door 813 x 2 032mm high	No	2	
	<u>STEEL WINDOWS, DOORS, ETC</u>			
4	Window type NE1, 533 x 654mm high including burglar bars	No	10	
5	Window type NE 7,1022 x 654mm high including burglar bars	No	4	
	<u>SUNDRIES ETC</u>			
	Carried Forward			R
	Section No. 5 Bill No. 8 METALWORK KUTLO CONSULTING ENGINEERS			

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	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				
Section No. 5				R
Bill No. 8				
METALWORK				
KUTLO CONSULTING ENGINEERS				

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Item No		Quantity	Rate	Amount
	<u>BILL NO. 10</u>			
	<u>PLASTERING</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>CEMENT SCREEDS TO CONCRETE</u>			
	<u>Screeds to steel trowelled, on concrete:</u>			
1	30mm thick on floors	m2	51	
	<u>INTERNAL PLASTER</u>			
	<u>Cement plaster on brickwork or blockwork</u>			
2	On pits walls	m2	122	
	<u>FLOOR AND WALLS SEALERS</u>			
	<u>Minimum two coats approved epoxy coat:</u>			
3	On screed	m2	51	
4	On internal textured plaster walls and floors in pit	m2	142	
	Carried Forward to Summary of Section No. 5			R
	Section No. 5			
	Bill No. 9			
	IN SITU FINISHES			
	KUTLO CONSULTING ENGINEERS			

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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>			
2	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>			
3	32mm "301CP" Basin waste union	No	1	
	<u>TRAPS, ETC</u>			
	<u>"Marley"</u>			
4	32 x 50mm Deep seal "P" or "S" trap	No	6	
	<u>SANITARY PLUMBING</u>			
	Carried Forward			R
	Section No. 5 Bill No. 10 PLUMBING AND DRAINAGE KUTLO CONSULTING ENGINEERS			

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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			

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	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-button 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				
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Item No		Quantity	Rate	Amount
	<u>BILL NO. 13</u>			
	<u>PAINTWORK</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>ON FIBRE-CEMENT</u>			
	<u>Prepare and brush to remove all loose contaminations, apply one coat primer and two coats PVA emulsion paint</u>			
1	On fascias and barge boards	m2	30	
	<u>ON WOOD</u>			
	<u>Undercoat and minimum 2 coat gloss enamel</u>			
2	On doors (Internal)	m2	4	
3	On doors (External)	m2	32	
	<u>ON METAL</u>			
	<u>Undercoat and minimum 2 coat gloss enamel</u>			
4	On door frames	m2	13	
5	On gates (Measured over the full flat area of both sides)	m2	14	
6	On gutters and down pipes	m	25	
	<u>Spot priming defects in prime surface with zinc chromate primer and apply one universal undercoat and two coats EPWP, golden brown gloss enamel paint on steel</u>			
7	On windows with burglar bars	m2	14	
	Carried Forward to Summary of Section No. 5			R
	Section No. 5			
	Bill No. 12			
	PAINTWORK			
	KUTLO CONSULTING ENGINEERS			

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Bill No	<u>SECTION SUMMARY - BUILDING WORKS - F10</u>	Page No	Amount
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		

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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. 6 Bill No. 1 EARTHWORKS KUTLO CONSULTING ENGINEERS			

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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</u>			
<u>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			

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	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				
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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	7	
2	Ditto, but surface bed in pit	m3	2	
3	2Aprons cast in panels	m3	3	
4	Extra over concrete in surface beds for thickening 85mm deep the bottom including all excavation, backfilling etc.	m	22	
5	Thickening down apron on edge 110mm deep x 200mm wide	m	36	
	<u>REINFORCED CONCRETE, ETC</u>			
	<u>25Mpa/19mm Concrete</u>			
6	Slabs	m3	5	
	<u>CONCRETE SUNDRIES</u>			
	<u>Finishing top surfaces of concrete smooth with a wood float</u>			
7	Aprons and pavings to falls	m2	28	
	Carried Forward			R
	Section No. 6 Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT KUTLO CONSULTING ENGINEERS			

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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.	5
	<u>Finishing top surfaces of concrete smooth with a steel trowel</u>	
9	Surface beds, slabs, etc.	53
<u>FORMWORK</u>		
	<u>Rough formwork to sides:</u>	
10	Edges, risers, ends and reveals not exceeding 300mm high or wide	25
	<u>Permanent formwork to soffits:</u>	
11	Slabs propped up not exceeding 1.5m high	20
12	Leave or form 500mm diameter opening in top of floor slab	10
<u>REINFORCEMENT</u>		
	<u>Mesh Reinforcement (measure nett)</u>	
13	Mesh ref. No. 395 fabric reinforcement fixed horizontal in surface beds	53
Carried Forward to Summary of Section No. 6		R
Section No. 6		
Bill No. 2		
CONCRETE, FORMWORK AND REINFORCEMENT		
KUTLO CONSULTING ENGINEERS		

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Item No	Quantity	Rate	Amount
<p><u>BILL NO.4</u></p> <p><u>BRICKWORK</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>For preambles see "Specifications of materials and methods to be used - PW 371"</p> <p><u>BRICKWORK</u></p> <p>Sizes in descriptions</p> <p>Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick</p> <p>Hollow walls etc</p> <p>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.</p> <p>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.</p> <p>User note: The above preamble generally applies for works in hot and humid coastal areas</p> <p>Face bricks</p> <p>Bricks shall be ordered timeously to obtain uniformity in size and colour</p> <p><u>Pointing</u></p> <p>Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc</p> <p style="text-align: right;">Carried Forward</p> <p>Section No. 6 Bill No. 3 MASONRY KUTLO CONSULTING ENGINEERS</p>			R

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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			

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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			
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Item No		Quantity	Rate	Amount
	<u>BILL NO.5</u>			
	<u>WATERPROOFING</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>DAMP-PROOFING OF WALLS AND FLOORS</u>			
	<u>One layer 375mm micron embossed damp proof course</u>			
1	In walls	m2	6	
	<u>One layer of 250 micron waterproof sheeting and sealed at overlaps with pressure sensitive tape</u>			
2	Under surface beds	m2	53	
	<u>FLOOR AND WALLS SEALERS</u>			
	<u>"Secomastic" non setting mastic sealant applied cold with a hand pressure caulking gun and leave perfectly watertight:</u>			
3	Around steel windows and door frames.	m	41	
	Carried Forward to Summary of Section No. 6			R
	Section No. 6			
	Bill No. 4			
	WATERPROOFING			
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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	72	
	<u>Sundries</u>			
2	12" Thermal resistance sisalation laid on purlins	m2	72	
	<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	12	
4	Extra over for closed ends	No	2	
5	75 x 100 x 0.6mm Thick galvanised rainwater downpipes fixed to wall	m	5	
6	Extra over rainwater pipe for eaves offset	No	2	
7	Ditto, for shoe	No	2	
	Carried Forward to Summary of Section No. 6			R
	Section No. 6			
	Bill No. 5			
	ROOF COVERINGS			
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Item No		Quantity	Rate	Amount
	<u>BILL NO.7</u>			
	<u>CARPENTRY AND JOINERY</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>ROOFS, ETC.</u>			
	<u>Sawn softwood</u>			
1	38 x 114mm Rafters in lengths exceeding 3,9m and not exceeding 6,6m	m	76	
2	76 x 38mm Wall plates	m	24	
3	50 x 76mm Purlins in lengths exceeding 3,9m and not exceeding 6,6m	m	86	
	<u>Sundries</u>			
4	Two coats creosote on sawn timbers	m2	40	
5	6mm Diameter galvanised wire tie 1500mm girth wrapped around rafter and purlin with ends tied together	No	28	
6	Hurricane clips	No	60	
	<u>EAVES, VERGES, ETC.</u>			
	<u>Pressed fibre-cement</u>			
7	15 x 230mm Fascias and barge boards including galvanised steel H-profile jointing strips	m	36	
	<u>DOORS, ETC.</u>			
	Carried Forward			R
	Section No. 6 Bill No. 6 CARPENTRY AND JOINERY KUTLO CONSULTING ENGINEERS			

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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 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 9
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. 6		R
Section No. 6		
Bill No. 6		
CARPENTRY AND JOINERY		
KUTLO CONSULTING ENGINEERS		

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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			

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	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					

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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			

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

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Item No		Quantity	Rate	Amount
	<u>BILL NO. 10</u>			
	<u>PLASTERING</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>CEMENT SCREEDS TO CONCRETE</u>			
	<u>Screeds to steel trowelled, on concrete:</u>			
1	30mm thick on floors	m2	51	
	<u>INTERNAL PLASTER</u>			
	<u>Cement plaster on brickwork or blockwork</u>			
2	On pits walls	m2	122	
	<u>FLOOR AND WALLS SEALERS</u>			
	<u>Minimum two coats approved epoxy coat:</u>			
3	On screed	m2	51	
4	On internal textured plaster walls and floors in pit	m2	142	
	Carried Forward to Summary of Section No. 6			R
	Section No. 6			
	Bill No. 9			
	IN SITU FINISHES			
	KUTLO CONSULTING ENGINEERS			

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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			

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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			

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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				

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Item No		Quantity	Rate	Amount
	<u>BILL NO. 13</u>			
	<u>PAINTWORK</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>ON FIBRE-CEMENT</u>			
	<u>Prepare and brush to remove all loose contaminations, apply one coat primer and two coats PVA emulsion paint</u>			
1	On fascias and barge boards	m2	30	
	<u>ON WOOD</u>			
	<u>Undercoat and minimum 2 coat gloss enamel</u>			
2	On doors (Internal)	m2	4	
3	On doors (External)	m2	32	
	<u>ON METAL</u>			
	<u>Undercoat and minimum 2 coat gloss enamel</u>			
4	On door frames	m2	13	
5	On gates (Measured over the full flat area of both sides)	m2	14	
6	On gutters and down pipes	m	25	
	<u>Spot priming defects in prime surface with zinc chromate primer and apply one universal undercoat and two coats EPWP, golden brown gloss enamel paint on steel</u>			
7	On windows with burglar bars	m2	14	
	Carried Forward to Summary of Section No. 6			R
	Section No. 6			
	Bill No. 12			
	PAINTWORK			
	KUTLO CONSULTING ENGINEERS			

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Bill No	<u>SECTION SUMMARY - BUILDING WORKS - FD10</u>	Page No	Amount
1	EARTHWORKS	101	
2	CONCRETE, FORMWORK AND REINFORCEMENT	103	
3	MASONRY	106	
4	WATERPROOFING	107	
5	ROOF COVERINGS	108	
6	CARPENTRY AND JOINERY	110	
7	IRONMONGERY	112	
8	METALWORK	114	
9	IN SITU FINISHES	115	
10	PLUMBING AND DRAINAGE	118	
11	GLAZING	119	
12	PAINTWORK	120	
	Carried to Final Summary		R
	Section No. 6 KUTLO CONSULTING ENGINEERS		

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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			

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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</u>		
	<u>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		

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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	7	
2	Ditto, but surface bed in pit	m3	2	
3	2Aprons cast in panels	m3	3	
4	Extra over concrete in surface beds for thickening 85mm deep the bottom including all excavation, backfilling etc.	m	22	
5	Thickening down apron on edge 110mm deep x 200mm wide	m	36	
	<u>REINFORCED CONCRETE, ETC</u>			
	<u>25Mpa/19mm Concrete</u>			
6	Slabs	m3	5	
	<u>CONCRETE SUNDRIES</u>			
	<u>Finishing top surfaces of concrete smooth with a wood float</u>			
7	Aprons and pavings to falls	m2	28	
	Carried Forward			R
	Section No. 7 Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT KUTLO CONSULTING ENGINEERS			

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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					
Section No. 7					
Bill No. 2					
CONCRETE, FORMWORK AND REINFORCEMENT					
KUTLO CONSULTING ENGINEERS					
R					

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Item No	Quantity	Rate	Amount
<p><u>BILL NO.4</u></p> <p><u>BRICKWORK</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>For preambles see "Specifications of materials and methods to be used - PW 371"</p> <p><u>BRICKWORK</u></p> <p>Sizes in descriptions</p> <p>Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick</p> <p>Hollow walls etc</p> <p>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.</p> <p>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.</p> <p>User note: The above preamble generally applies for works in hot and humid coastal areas</p> <p>Face bricks</p> <p>Bricks shall be ordered timeously to obtain uniformity in size and colour</p> <p><u>Pointing</u></p> <p>Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc</p> <p style="text-align: right;">Carried Forward</p> <p>Section No. 7 Bill No. 3 MASONRY KUTLO CONSULTING ENGINEERS</p>			R

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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			

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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			

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Item No		Quantity	Rate	Amount
	<u>BILL NO.5</u>			
	<u>WATERPROOFING</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>DAMP-PROOFING OF WALLS AND FLOORS</u>			
	<u>One layer 375mm micron embossed damp proof course</u>			
1	In walls	m2	6	
	<u>One layer of 250 micron waterproof sheeting and sealed at overlaps with pressure sensitive tape</u>			
2	Under surface beds	m2	53	
	<u>FLOOR AND WALLS SEALERS</u>			
	<u>"Secomastic" non setting mastic sealant applied cold with a hand pressure caulking gun and leave perfectly watertight:</u>			
3	Around steel windows and door frames.	m	41	
	Carried Forward to Summary of Section No. 7			R
	Section No. 7			
	Bill No. 4			
	WATERPROOFING			
	KUTLO CONSULTING ENGINEERS			

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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	60	
	<u>Sundries</u>			
2	12" Thermal resistance sisalation laid on purlins	m2	60	
	<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	10	
4	Extra over for closed ends	No	2	
5	75 x 100 x 0.6mm Thick galvanised rainwater downpipes fixed to wall	m	5	
6	Extra over rainwater pipe for eaves offset	No	2	
7	Ditto, for shoe	No	2	
	Carried Forward to Summary of Section No. 7			R
	Section No. 7			
	Bill No. 5			
	ROOF COVERINGS			
	KUTLO CONSULTING ENGINEERS			

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Item No		Quantity	Rate	Amount
	<u>BILL NO.7</u>			
	<u>CARPENTRY AND JOINERY</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>ROOFS, ETC.</u>			
	<u>Sawn softwood</u>			
1	38 x 114mm Rafters in lengths exceeding 3,9m and not exceeding 6,6m	m	67	
2	76 x 38mm Wall plates	m	20	
3	50 x 76mm Purlins in lengths exceeding 3,9m and not exceeding 6,6m	m	54	
	<u>Sundries</u>			
4	Two coats creosote on sawn timbers	m2	17	
5	6mm Diameter galvanised wire tie 3000mm girth wrapped around rafter and purlin with ends tied together	No	28	
6	Hurricane clips	No	15	
	<u>EAVES, VERGES, ETC.</u>			
	<u>Pressed fibre-cement</u>			
7	15 x 230mm Fascias and barge boards including galvanised steel H-profile jointing strips	m	30	
	<u>DOORS, ETC.</u>			
	Carried Forward			R
	Section No. 7 Bill No. 6 CARPENTRY AND JOINERY KUTLO CONSULTING ENGINEERS			

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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)	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)	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)	1
Carried Forward to Summary of Section No. 7		R
Section No. 7		
Bill No. 6		
CARPENTRY AND JOINERY		
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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	3	
3	Indicator lockset plugged	No	6	
	<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. 7 Bill No. 7 IRONMONGERY KUTLO CONSULTING ENGINEERS			

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	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				

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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 900 x 2 032mm High	No	2	
	<u>PRESSED STEEL DOOR FRAMES</u>			
	<u>1,2mm Single rebated frames suitable for half brick walls</u>			
2	Frame for door 813 x 2032mm high	No	9	
	<u>1,6mm Double rebated frames suitable for one brickwalls</u>			
3	Frame for door 813 x 2032mm high	No	1	
4	Frame for door 900 x 2032mm high	No	1	
	<u>STEEL WINDOWS, DOORS, ETC</u>			
5	Window type NE1, 533 x 654mm high including burglar bars	No	10	
6	Window type NE 7,1022 x 654mm high including burglar bars	No	4	
	<u>SUNDRIES ETC</u>			
	Carried Forward			R
	Section No. 7 Bill No. 8 METALWORK KUTLO CONSULTING ENGINEERS			

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Item No		Quantity	Rate	Amount
	<u>BILL NO. 10</u>			
	<u>PLASTERING</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>CEMENT SCREEDS TO CONCRETE</u>			
	<u>Screeds to steel trowelled, on concrete:</u>			
1	30mm thick on floors	m2	51	
	<u>INTERNAL PLASTER</u>			
	<u>Cement plaster on brickwork or blockwork</u>			
2	On pits walls	m2	122	
	<u>FLOOR AND WALLS SEALERS</u>			
	<u>Minimum two coats approved epoxy coat:</u>			
3	On screed	m2	51	
4	On internal textured plaster walls and floors in pit	m2	142	
	Carried Forward to Summary of Section No. 7			R
	Section No. 7			
	Bill No. 9			
	IN SITU FINISHES			
	KUTLO CONSULTING ENGINEERS			

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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			

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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			

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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			

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Item No		Quantity	Rate	Amount
	<u>BILL NO. 13</u>			
	<u>PAINTWORK</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>ON FIBRE-CEMENT</u>			
	<u>Prepare and brush to remove all loose contaminations, apply one coat primer and two coats PVA emulsion paint</u>			
1	On fascias and barge boards	m2	30	
	<u>ON WOOD</u>			
	<u>Undercoat and minimum 2 coat gloss enamel</u>			
2	On doors (Internal)	m2	4	
3	On doors (External)	m2	32	
	<u>ON METAL</u>			
	<u>Undercoat and minimum 2 coat gloss enamel</u>			
4	On door frames	m2	13	
5	On gates (Measured over the full flat area of both sides)	m2	14	
6	On gutters and down pipes	m	25	
	<u>Spot priming defects in prime surface with zinc chromate primer and apply one universal undercoat and two coats EPWP, golden brown gloss enamel paint on steel</u>			
7	On windows with burglar bars	m2	14	
	Carried Forward to Summary of Section No. 7			R
	Section No. 7			
	Bill No. 12			
	PAINTWORK			
	KUTLO CONSULTING ENGINEERS			

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Bill No	SECTION SUMMARY - BUILDING WORKS - SMD5 AND SFD5	Page No	Amount
1	EARTHWORKS	124	
2	CONCRETE, FORMWORK AND REINFORCEMENT	126	
3	MASONRY	129	
4	WATERPROOFING	130	
5	ROOF COVERINGS	131	
6	CARPENTRY AND JOINERY	133	
7	IRONMONGERY	135	
8	METALWORK	137	
9	IN SITU FINISHES	138	
10	PLUMBING AND DRAINAGE	141	
11	GLAZING	142	
12	PAINTWORK	143	
	Carried to Final Summary		R
	Section No. 7 KUTLO CONSULTING ENGINEERS		

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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			R
	Section No. 8 Bill No. 1 EARTHWORKS KUTLO CONSULTING ENGINEERS			

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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</u>		
	<u>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		

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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	4	
3	2Aprons cast in panels	m3	6	
4	Ramp	m3	2	
5	Extra over concrete in surface beds for thickening 85mm deep the bottom including all excavation, backfilling etc.	m	54	
6	Thickening down apron on edge 110mm deep x 200mm wide	m	54	
	<u>REINFORCED CONCRETE, ETC</u>			
	<u>25Mpa/19mm Concrete</u>			
7	Slabs	m3	7	
	<u>CONCRETE SUNDRIES</u>			
	Carried Forward			R
	Section No. 8 Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT KUTLO CONSULTING ENGINEERS			

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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			

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Item No	Quantity	Rate	Amount
<p><u>BILL NO.4</u></p> <p><u>BRICKWORK</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>For preambles see "Specifications of materials and methods to be used - PW 371"</p> <p><u>BRICKWORK</u></p> <p>Sizes in descriptions</p> <p>Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick</p> <p>Hollow walls etc</p> <p>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.</p> <p>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.</p> <p>User note: The above preamble generally applies for works in hot and humid coastal areas</p> <p>Face bricks</p> <p>Bricks shall be ordered timeously to obtain uniformity in size and colour</p> <p><u>Pointing</u></p> <p>Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc</p> <p style="text-align: right;">Carried Forward</p> <p>Section No. 8 Bill No. 3 MASONRY KUTLO CONSULTING ENGINEERS</p>			R

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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			

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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			

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Item No		Quantity	Rate	Amount
	<u>BILL NO.5</u>			
	<u>WATERPROOFING</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>DAMP-PROOFING OF WALLS AND FLOORS</u>			
	<u>One layer 375mm micron embossed damp proof course</u>			
1	In walls	m2	12	
	<u>One layer of 250 micron waterproof sheeting and sealed at overlaps with pressure sensitive tape</u>			
2	Under surface beds	m2	71	
	<u>FLOOR AND WALLS SEALERS</u>			
	<u>"Secomastic" non setting mastic sealant applied cold with a hand pressure caulking gun and leave perfectly watertight:</u>			
3	Around steel windows and door frames.	m	48	
	Carried Forward to Summary of Section No. 8			R
	Section No. 8			
	Bill No. 4			
	WATERPROOFING			
	KUTLO CONSULTING ENGINEERS			

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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			R
	Section No. 8			
	Bill No. 5			
	ROOF COVERINGS			
	KUTLO CONSULTING ENGINEERS			

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Item No		Quantity	Rate	Amount
	<u>BILL NO.7</u>			
	<u>CARPENTRY AND JOINERY</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>ROOFS, ETC.</u>			
	<u>Sawn softwood</u>			
1	38 x 114mm Rafters in lengths exceeding 3,9m and not exceeding 6,6m	m	90	
2	76 x 38mm Wall plates	m	21	
3	50 x 76mm Purlins in lengths exceeding 3,9m and not exceeding 6,6m	m	99	
	<u>Sundries</u>			
4	Two coats creosote on sawn timbers	m2	64	
5	6mm Diameter galvanised wire tie 3000mm girth wrapped around rafter and purlin with ends tied together	No	36	
6	Hurricane clips	No	48	
	<u>EAVES, VERGES, ETC.</u>			
	<u>Pressed fibre-cement</u>			
7	15 x 230mm Fascias and barge boards including galvanised steel H-profile jointing strips	m	52	
	<u>DOORS, ETC.</u>			
	Carried Forward			R
	Section No. 8 Bill No. 6 CARPENTRY AND JOINERY KUTLO CONSULTING ENGINEERS			

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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)	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)	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)	1
Carried Forward to Summary of Section No. 8		R
Section No. 8		
Bill No. 6		
CARPENTRY AND JOINERY		
KUTLO CONSULTING ENGINEERS		

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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	3	
	<u>LOCKS</u>			
	<u>Approved</u>			
2	Three lever mortice lockset plugged	No	3	
3	Indicator lockset plugged	No	7	
	<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. 8 Bill No. 7 IRONMONGERY KUTLO CONSULTING ENGINEERS			

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	Brought Forward				
	<u>Approved</u>				R
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				

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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 2 032mm High	No	3	
	<u>PRESSED STEEL DOOR FRAMES</u>			
	<u>1,2mm Single rebated frames suitable for half brick walls</u>			
2	Frame for door 813 x 2032mm high	No	6	
	<u>1,6mm Double rebated frames suitable for one brickwalls</u>			
3	Frame for door 813 x 2 032mm high	No	2	
4	Frame for door 900 x 2 032mm high	No	1	
	<u>STEEL WINDOWS, DOORS, ETC</u>			
5	Window type NE1, 533 x 654mm high including burglar bars	No	9	
6	Window type NE 7,1 022 x 654mm high including burglar bars	No	4	
	Carried Forward to Summary of Section No. 8			R
	Section No. 8			
	Bill No. 8			
	METALWORK			
	KUTLO CONSULTING ENGINEERS			

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Item No		Quantity	Rate	Amount
	<u>BILL NO. 10</u>			
	<u>PLASTERING</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>CEMENT SCREEDS TO CONCRETE</u>			
	<u>Screeds to steel trowelled, on concrete:</u>			
1	30mm thick on floors	m2	76	
	<u>INTERNAL PLASTER</u>			
	<u>Cement plaster on brickwork or blockwork</u>			
2	On pits walls	m2	42	
	<u>FLOOR AND WALLS SEALERS</u>			
	<u>Minimum two coats approved epoxy coat:</u>			
3	On screed	m2	76	
4	On internal textured plaster walls and floors in pit	m2	42	
	Carried Forward to Summary of Section No. 8			R
	Section No. 8			
	Bill No. 9			
	IN SITU FINISHES			
	KUTLO CONSULTING ENGINEERS			

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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			

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		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				
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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			

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Item No		Quantity	Rate	Amount
	<u>BILL NO. 13</u>			
	<u>PAINTWORK</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	For preambles see "Specifications of materials and methods to be used - PW 371"			
	<u>ON FIBRE-CEMENT</u>			
	<u>Prepare and brush to remove all loose contaminations, apply one coat primer and two coats PVA emulsion paint</u>			
1	On fascias and barge boards	m2	12	
	<u>ON WOOD</u>			
	<u>Undercoat and minimum 2 coat gloss enamel</u>			
2	On doors (Internal)	m2	31	
3	On doors (External)	m2	22	
	<u>ON METAL</u>			
	<u>Undercoat and minimum 2 coat gloss enamel</u>			
4	On door frames	m2	28	
5	On gates (Measured over the full flat area of both sides)	m2	22	
6	On gutters and down pipes	m	34	
	<u>Spot priming defects in prime surface with zinc chromate primer and apply one universal undercoat and two coats EPWP, golden brown gloss enamel paint on steel</u>			
7	On windows with burglar bars	m2	14	
	Carried Forward to Summary of Section No. 8			R
	Section No. 8			
	Bill No. 12			
	PAINTWORK			
	KUTLO CONSULTING ENGINEERS			

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Bill No	<u>SECTION SUMMARY - BUILDING WORKS - SMD6 AND SFD6</u>	Page No	Amount
1	EARTHWORKS	147	
2	CONCRETE, FORMWORK AND REINFORCEMENT	149	
3	MASONRY	152	
4	WATERPROOFING	153	
5	ROOF COVERINGS	154	
6	CARPENTRY AND JOINERY	156	
7	IRONMONGERY	158	
8	METALWORK	159	
9	IN SITU FINISHES	160	
10	PLUMBING AND DRAINAGE	163	
11	GLAZING	164	
12	PAINTWORK	165	
	Carried to Final Summary		R
	Section No. 8 KUTLO CONSULTING ENGINEERS		

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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			

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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			

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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 10</u>			
	<u>BILL NO 2</u>			
	<u>PAVED WALKWAYS</u>			
	<u>EARTHWORKS</u>			
	<u>Site clearance</u>			
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc	m2	446	
2	Stripping average 100mm thick layer of lop soil and stockpiling on site	m2	446	
	<u>Earthworks</u>			
	<u>Open face excavation in earth over sloping site</u>			
3	Open face excavation to form platforms under parking areas, roads, etc and dispose in prescribed stock piles on site	m3	134	
	<u>Extra over trench and hole excavations in earth for excavation:</u>			
4	Soft rock	m3	10	
5	Hard rock	m3	9	
	<u>Extra over all excavations for carting away</u>			
6	Surplus material from stock piles on site to a dumping site to be located by the Contractor	m3	134	
	Carried Forward			R
	Section No. 9 Bill No. 2 PAVED WALKWAY KUTLO CONSULTING ENGINEERS			

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Brought Forward				R
	<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				R
Section No. 9				
Bill No. 2				
PAVED WALKWAY				
KUTLO CONSULTING ENGINEERS				

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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 6</u>			
	<u>BILL NO. 3</u>			
	<u>EQUIPPING OF EXISTING BOREHOLE</u>			
	<u>Upgrading of existing borehole</u>			
1	Check, inspect, upgrading, servicing of existing borehole and leave in good working order.	Item		
	<u>Equipping of borehole</u>			
2	Sitting of Borehole	Item		
3	Water Quality Sampling and Analysis	Item		
4	Borehole Equipping and all electrical components and auto switch	Item		
5	Reporting	Item		
6	Pump Testing of New Borehole 24 hours	Item		
	<u>Drilling of New Borehole</u>			
	<u>Mobilisation, plant set-up, inter-borehole moves and de-mobilisation</u>			
7	Site Establishment	No		
8	Mobilisation and set up of plant to/at first borehole	No		
	<u>Drilling: unconsolidated and consolidated sediments and igneous and metamorphic rocks</u>			
	Carried Forward		R	
	Section No. 9 Bill No. 3 EQUIPPING OF BOREHOLE KUTLO CONSULTING ENGINEERS			

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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		

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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			

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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			

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Brought Forward		R
47	Connector strip 5 Amp	No 1
48	Connector strip 30 Amp	No 1
	<u>Reverse Osmosis System</u>	
49	Allow R350 000.00 (Three hundred and fifty thousand rands) for reverse osmosis system including shelter, testing, etc by specialist	Item 350 000.00
50	Allow for profit on above	Item
51	Allow for attendance on the above	Item
	<u>Testing and commissioning</u>	
52	Testing, commissioning and issue COC	Item
Carried Forward to Summary of Section No. 9		R
Section No. 9		
Bill No. 3		
EQUIPPING OF BOREHOLE		
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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 10</u>			
	<u>WATER SUPPLIES</u>			
	<u>BILL NO. 3</u>			
	<u>Class 10 HDPE type IV pipes</u>			
1	40mm Pipes laid in and including trenches not exceeding 1m deep	m	155	
2	50mm Pipes laid in and including trenches not exceeding 1m deep	m	330	
	<u>Extra over Class 10 HDPE type IV pipes for fittings</u>			
3	40mm Fittings	No	20	
4	50mm Fittings	No	25	
5	40mm Reducer	No	6	
6	50mm Reducer	No	6	
7	40mm Bend	No	12	
8	50mm Bend	No	12	
9	50mm Threaded adaptor	No	5	
	<u>Galvanised medium steel pipes with screwed and socketed joints</u>			
10	50mm Pipes	m	48	
	<u>Extra over galvanised medium steel pipes with screwed and socketed joints for steel fittings</u>			
11	50mm Fittings	No	8	
	Carried Forward			R
	Section No. 9 Bill No. 4 WATER SUPPLY KUTLO CONSULTING ENGINEERS			

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		Brought Forward			
12	50mm Bush	No	8		R
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					

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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 10</u>			
	<u>BILL NO. 4</u>			
	<u>RAIN WATER TANKS</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	87	
	<u>EXCAVATION, FILLING, ETC</u>			
	<u>Excavation in earth not exceeding 2m deep</u>			
2	Trenches	m3	28	
	<u>Extra over trench and hole excavations in earth for excavation in</u>			
3	Soft rock	m3	7	
4	Hard rock	m3	3	
	<u>Extra over all excavations for carting away</u>			
5	Surplus material from excavations on site to a dumping site to be located by the contractor	m3	14	
	<u>Risk of collapse of excavations</u>			
6	Sides of trench and hole excavations not exceeding 1,5m deep	m2	33	
	Carried Forward			R
	Section No. 9 Bill No. 5 RAINWATER WATER TANKS KUTLO CONSULTING ENGINEERS			

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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			

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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		

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Brought Forward			R
	<u>One layer of 375 micron Consol Plastic Brikgrip DPC" embossed damp proof course</u>		
19	In walls	m2	8
	<u>One layer of 250 micron "Consol Plastic USB Green" waterproof sheeting sealed at laps with "Gunplas 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			
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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 10</u>			
	<u>BILL NO. 5</u>			
	<u>WATER TANKS AND TANKS STANDS</u>			
	<u>Excavation in earth not exceeding 2m deep</u>			
1	Holes	m3	16	
	<u>Extra over trench and hole excavations in earth for excavation in</u>			
2	Soft rock	m3	6	
3	Hard rock	m3	4	
	<u>Extra over all excavations for carting away</u>			
4	Surplus material from excavations and/stock piles on site to the dumping site to be located by the Contractor.	m3	12	
	<u>Risk of collapse of excavations</u>			
5	Sides of trench and hole excavation not exceeding 1,5m deep.	m2	40	
	<u>Keeping excavations free of water.</u>			
6	Keeping excavations free of water.		Item	
	<u>Earth filling obtained from the excavations and / or prescribed stock piles on site compacted to 93 % Mod AASHTO density</u>			
7	Backfilling to trenches, holes, etc.	m3	8	
	<u>Soil insecticide</u>			
8	To bottoms and sides of trenches, etc.	m2	40	
	Carried Forward			R
	Section No. 9			
	Bill No. 6			
	WATER TANK STANDS			
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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 10</u>			
	<u>BILL NO. 6</u>			
	<u>WATER FOUNTAINS</u>			
	<u>Earthworks</u>			
	<u>Excavation in compacted building platform not exceeding 2m deep</u>			
1	Trenches	m3	4	
	<u>Extra over all excavations for carting away</u>			
2	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	4	
	<u>Compaction of surfaces</u>			
3	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	4	
	<u>FILLING</u>			
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93 % Mod AASHTO density</u>			
4	Backfilling to trenches, holes, etc	m3	2	
	<u>Concrete, etc</u>			
	<u>25Mpa/19mm reinforced concrete</u>			
5	Wall	m3	2	
6	Slabs	m3	2	
	Carried Forward			R
	Section No. 9			
	Bill No. 7			
	STAND PIPES			
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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			
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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			

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	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				
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FENCING				
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9	EXTERNAL WORKS	190	
	SUB TOTAL (A)		R
	Provide 10% (TEN PERCENT) on Sub-total (A) as contingency to be deducted in whole or in part if not required		R
	SUB TOTAL (B)		R
	Add Value Added Tax @ 15%		R
	Carried to Form of Tender		R
	KUTLO CONSULTING ENGINEERS		