

BILL NO. 1**PRELIMINARIES**

The JBCC Series 2000 Principal Building Agreement (March 2005 edition) prepared by the Joint Building Contracts Committee shall be the applicable building agreement, amended as hereinafter described

The JBCC Series 2000 Preliminaries (May 2005 edition) prepared by the Joint Building Contracts Committee for use with the said JBCC Principal Building Agreement shall be deemed to be incorporated in these bills of quantities

Contractors are referred to the above mentioned documents for the full intent and meaning of each clause thereof

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

Where any item is not relevant to this specific contract such item is marked N/A, signifying 'not applicable'

PREAMBLES FOR TRADES

The Model Preambles for Trades (1999 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claim arising from brevity of description of items fully described in the said Model Preambles will be entertained

Supplementary preambles are incorporated in these bills of quantities to satisfy the requirements of this project. Such supplementary preambles shall take precedence over the provisions of the said Model Preambles

The contractor's prices for all items throughout these bills of quantities must take account of and include for all of the obligations, requirements and specifications given in the said Model Preambles and in any supplementary preambles

PRICING OF PRELIMINARIES**SECTION A - PRINCIPAL BUILDING AGREEMENT****Objective and preparation**

- 1 Clause 2.0 - Offer, acceptance and performance
- 2 Clause 3.0 - Documents
- 3 Clause 4.0 - Design responsibility
- 4 Clause 5.0 - Employer's agents
- 5 Clause 6.0 - Site representative

Item

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		Amount	
6	Clause 7.0 - Compliance with regulations	Item	
7	Clause 8.0 - Works risk	Item	
8	Clause 9.0 - Indemnities	Item	
9	Clause 10.0 - Works insurances	Item	
10	Clause 11.0 - Liability insurances	Item	
11	Clause 12.0 - Effecting insurances	Item	
12	Clause 13.0 - No clause	Item	
13	Clause 14.0 - Security	Item	
<u>Execution</u>			
14	Clause 15.0 - Preparation for and execution of the works	Item	
15	Clause 16.0 - Access to the works	Item	
16	Clause 17.0 - Contract instructions	Item	
17	Clause 18.0 - Setting out of the works	Item	
18	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	Item	
19	Clause 19.0 - Assignment	Item	
20	Clause 20.0 - Nominated subcontractors	Item	
21	Clause 21.0 - Selected subcontractors	Item	
22	Clause 22.0 - Employer's direct contractors	Item	
23	Clause 23.0 - Contractor's domestic subcontractors	Item	
<u>Completion</u>			
24	Clause 24.0 - Practical completion	Item	
25	Clause 25.0 - Works completion	Item	
26	Clause 26.0 - Final completion	Item	
27	Clause 27.0 - Latent defects liability period	Item	
28	Clause 28.0 - Sectional completion	Item	
29	Clause 29.0 - Revision of the date for practical completion	Item	
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		Amount
30	The removal and replacement of materials and/or workmanship which 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 value (clause 29.3)	Item
31	Clause 30.0 - Penalty for noncompletion	Item
	<u>Payment</u>	
32	Clause 31.0 - Interim payment to the contractor	Item
33	Clause 32.0 - Adjustment to the contract value	Item
34	All fluctuations in costs, with the exception of fluctuations in the rate of Value Added Tax, shall be for the account of the contractor?	Item
35	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?	Item
36	Clause 33.0 - Recovery of expense and loss	Item
37	Clause 34.0 - Final account and final payment	Item
38	Clause 35.0 - Payment to other parties	Item
	<u>Cancellation</u>	
39	Clause 36.0 - Cancellation by employer - contractor's default	Item
40	Clause 37.0 - Cancellation by employer - loss and damage	Item
41	Clause 38.0 - Cancellation by contractor - employer's default	Item
42	Clause 39.0 - Cancellation - cessation of the works	Item
	<u>Dispute</u>	
43	Clause 40.0 - Dispute settlement	Item
	<u>Contract variables</u>	
44	Clause 42.0 - Pre-tender information	Item
45	Information necessary for the completion of those clauses contained in the schedule which are necessary for tender purposes is given hereunder	Item
46	42.1 CONTRACTING AND OTHER PARTIES	Item
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		Amount	
47	42.1.1 Employer: Postal address:Code: Tel:Fax: E- mail: Tax/VAT registration No: Physical address:	Item	
48	42.1.2 Principal agent: Postal address:Code: Tel:Fax: E- mail:	Item	
49	42.1.3 Agent (1) Agent's service: Postal address:Code: Tel:Fax: E- mail:	Item	
50	42.1.4 Agent (2) Agent's service: Postal address:Code: Tel:Fax: E- mail:	Item	
51	42.1.5 Agent (3) Agent's service: Postal address:Code: Tel:Fax: E- mail:	Item	
52	42.1.6 Agent (4) Agent's service: Postal address:Code: Tel:Fax: E- mail:	Item	
53	42.1.7 Agent (5) Agent's service: Postal address:Code: Tel:Fax: E- mail:	Item	
54	42.1.8 Agent (6) Agent's service: Postal address:Code: Tel:Fax: E- mail:	Item	
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		Amount	
55	42.1.9 Agent (7) Agent's service: Postal address: Code: Tel: Fax: E- mail:	Item	
56	42.2 CONTRACT DETAILS	Item	
57	42.2.1 Works description:	Item	
58	42.2.2 Site description:	Item	
59	42.2.3 Work or installations by direct contractors	Item	
60	42.2.4 Specific options that are applicable to a state organ only Where so: (1) Interest rate legislation: (2) Lateral support insurance to be effected by the contractor ? yes/no ? (3) Payment will be made for materials and goods ? yes/no ? (4) Dispute resolution by litigation ? yes/no ? (5) Extended defects liability period applicable to the following elements:	Item	
61	42.2.5 Possession of the site is intended to be given on (date).....	Item	
62	42.2.6 Period for the commencement of the works after the contractor takes possession of the site (No of working days)	Item	
63	42.2.7 For the works as a whole: The date for practical completion and the penalty per calendar day Date Penalty R.....	Item	
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		Amount	
64	42.2.8 For the works in sections: The date for practical completion and the penalty per calendar day Section 1 Date Penalty R..... Section 2 Date Penalty R..... Section 3 Date Penalty R..... Section 4 Date Penalty R..... Section 5 Date Penalty R Section 6 Date Penalty R	Item	
65	42.2.9 The law applicable to this agreement shall be that of (country)	Item	
66	42.3 INSURANCES	Item	
67	42.3.1 Contract works insurance to be effected by ? employer ? contractor ? For the sum of: R With a deductible of: R	Item	
68	42.3.2 Supplementary insurance is required - ? yes/no ? If 'yes' state requirement	Item	
69	42.3.3 Public liability insurance to be effected by ? employer ? contractor ? For the sum of: R..... With a deductible of: R.....	Item	
70	42.3.4 Support insurance to be effected by employer For the sum of: R..... With a deductible of: R.....	Item	
71	42.4 DOCUMENTS	Item	
72	42.4.1 Waiver of the contractor's lien or right of continuing possession is required - ? yes/no ?	Item	
73	42.4.2 Construction document copies to be supplied to the contractor free of charge (No of)	Item	
74	42.4.3 State measuring system used for drawing up bills of quantities (lump sum document?)	Item	
75	42.4.4 Number of working days for submission of priced documents (No of)	Item	
76	42.4.5 JBCC Engineering General Conditions are to be included in the contract documents - ? yes/no ?	Item	
77	42.4.6 The contract value is to be adjusted using CPAP indices ? yes/no ? Where CPAP is to be used (base month) Alternative indices (if applicable)	Item	
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78 42.4.7 Details of changes made to the provisions of JBCC standard
documentation -
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79 Clause 42.0 - Post-tender information

80 The required post-tender information shall be inserted in the agreement after
consultation with the contractor

SUMMARY OF CATEGORIES

BUILDING AGREEMENT AND PRELIMINARIES

Item

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PRELIMINARIES
COLLECTION

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	Unit	Quantity	Rate	Amount
<u>BILL NO. 2</u> <u>ALTERATIONS</u>				
<p>For preambles see "Model Preambles for trades (2008 Edition)" and applicable Supplementary Preambles as specified in the Trades. The said Model and Supplementary Preambles apply to all work described in this document. Tenderers are therefore referred to these documents for the full meaning and intention of all descriptions and no claims of any kind whatsoever will be entertained in this regard.</p>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>View site</u>				
<p>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</p>				
<u>Old Material</u>				
<p>Old materials from alterations except where described to be reused or handed over, become the property of the Contractor who must allow credit for same in the item rates as described below. Old materials from the removals and alterations except where described to be reused or handed over, as well as old rubbish, etc must regularly be carted from the site and not be allowed to accumulate on or around the site. None of the old materials are to be used for new work except where specifically described as to be handed over by the contractor to the Employer. Such materials or articles shall be properly stored by the contractor until handing over thereof. The contractor shall obtain an official receipt listing the materials or articles and dates of handing over. If the contractor fails to submit the receipt when requested to do so it shall be deemed that the materials or articles are still in his possession</p>				
Carried to Collection			R	

	Unit	Quantity	Rate	Amount
<u>Credit of Old Materials</u>				
<u>Credit for old materials, if so desired, is to be allowed for in the item rates and indicated at the end of each relevant item.</u>				
<u>The Employer reserve the right to keep any or all of the old materials described in the bill of quantities irrespective of such materials having been priced or not at the rates indicated against the respective items.</u>				
<u>General</u>				
The contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the principal agent				
Prices for taking out of doors, windows, etc. shall include for removal of all beads, architraves, ironmongery, etc.				
Making good of finishes shall include making good of the brick and concrete surfaces onto which the new finishes are applied, where necessary				
<u>REMOVAL OF EXISTING WORK</u>				
<u>Breaking up and removing reinforced concrete, including cutting off and removing reinforcement</u>				
1	100mm Thick surface beds	m ²	696	
<u>Taking out and removing ironmongery</u>				
2	Mortice lockset from timber door	No	10	
<u>Taking out and removing doors, windows, etc. from brickwork to be demolished</u>				
3	Timber single door and frame not exceeding 2,5m ²	No	10	
<u>Taking down and removing roofs, floors, panelling, ceilings, partitions, etc.</u>				
4	Pitched roof oftimber trusses and purlins, asbestos sheeting, ceilings and cornices, eaves soffit covering, fascias, barge boards, gutters and rainwater pipes	m ²	430	
<u>Taking up and removing ceramic floor coverings, vinyl floor coverings, carpets, etc. and preparing screeds for new floor coverings</u>				
5	Damaged floor covering	m ²	125	
Carried to Collection			R	

		Unit	Quantity	Rate	Amount
	<u>Taking out/off and removing glass and mirrors</u>				
6	Glass from steel windows, including cleaning out rebates and preparing for new glass	m ²	54		
	<u>Existing Fence</u>				
7	Existing Fence complete	m	723		
	<u>MAKING GOOD OF FINISHES ETC</u>				
	<u>Making good untinted granolithic</u>				
8	30 mm Thick on floors in patches	m ²	150		
	<u>Making good cement screeds</u>				
9	30 mm Thick on floors in patches	m ²	360		
	<u>Making good internal cement plaster</u>				
10	Walls in patches	m ²	54		
	<u>Making good External cement plaster</u>				
11	Walls in patches	m ²	65		
	<u>Demolishing</u>				
	<u>Demolishing of existing buildings complete including roofs trusses, purlins, asbestos sheeting etc. Rate to include for carting away of rubble and preparation of ground.</u>				
12	Building size 20815mm x 8592mm	No	2		
13	Building size 30025mm x 8592mm	No	1		
14	Building size 22235mm x 9815mm	No	1		
15	Building size 10050mm x 6110mm	No	1		
16	Building size 11206mm x 6213mm	No	1		
17	Building size 34354mm x 6871mm	No	1		
18	Building size 45038mm x 7506mm	No	1		
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	Unit	Quantity	Rate	Amount
<u>BILL NO. 3</u> <u>EARTHWORKS</u>				
<p>For preambles see "Model Preambles for trades (2008 Edition)" and applicable Supplementary Preambles as specified in the Trades. The said Model and Supplementary Preambles apply to all work described in this document. Tenderers are therefore referred to these documents for the full meaning and intention of all descriptions and no claims of any kind whatsoever will be entertained in this regard.</p>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Nature of ground</u>				
<p>The nature of the ground is assumed to be loose sandy material, therefore earth, but possibly interspersed with soft rock or hard rock</p>				
<u>Subterranean water</u>				
<p>No subterranean water is expected</p>				
<p>The water table is expected to vary between approximately ?m and ? m below natural ground level . The removal of subterranean water is given separately</p>				
<u>Carting away of excavated material</u>				
<p>Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site</p>				
<u>Filling and layer work materials</u>				
<p>References such as 'G1', 'G2', etc and 'C1', 'C2', etc in descriptions of filling and layer work materials refer to corresponding references in the document 'Guidelines for Road Construction Materials. TRH 14 : 1985' compiled by the Committee of State Road Authorities and the properties set out therein for each kind shall be applicable to the respective materials described hereinafter</p>				
<u>Testing</u>				
<p>Prices for filling are to include for all necessary density and other tests</p>				
<u>SITE CLEARANCE</u>				
<u>Site clearance</u>				
1		Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth	m ²	2 291
Carried to Collection			R	

		Unit	Quantity	Rate	Amount
<u>EXCAVATIONS ETC</u>					
<u>Excavation in earth for surface beds, veranda, walkways etc</u>					
2	Not exceeding 2m deep	m ³	255		
<u>Extra over bulk excavations in earth for excavation in</u>					
3	Soft rock	m ³	26		
4	Hard rock	m ³	13		
<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	m ³	294		
<u>Risk of collapse of excavations</u>					
6	Sides of bulk excavations not exceeding 1,5m deep	m ²	1 112		
<u>Keeping excavations free of water</u>					
7	Keeping excavations free of water other than subterranean water	Item			
<u>FILLING ETC</u>					
<u>G-Related earth filling material supplied by the contractor, compacted to 95% Mod AASHTO density</u>					
8	Under surface beds and veranda's	m ³	291		
<u>Compaction of surfaces</u>					
9	Compaction of natural or excavated ground surface under floors etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density	m ²	1 992		
<u>TESTS</u>					
<u>Prescribed tests to determine degree of compaction or other properties of ground or filling</u>					
10	Modified AASHTO Density test	No	8		
11	Field Density test including Optimum Moisture Content test (four readings per test)	No	8		
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EARTHWORKS
COLLECTION

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	Unit	Quantity	Rate	Amount
<u>BILL NO. 4</u> <u>CONCRETE FORMWORK AND REINFORCEMENT</u>				
<p>For preambles see "Model Preambles for trades (2008 Edition)" and applicable Supplementary Preambles as specified in the Trades. The said Model and Supplementary Preambles apply to all work described in this document. Tenderers are therefore referred to these documents for the full meaning and intention of all descriptions and no claims of any kind whatsoever will be entertained in this regard.</p>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Cost of tests</u>				
<p>The costs of making, storing and testing of concrete test cubes as required under clause 7 Tests of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests for approval . The testing shall be undertaken by an approved independent firm or institution nominated by the contractor (test cubes are measured separately)</p>				
<u>Breeze concrete</u>				
<p>Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter, to one part cement (1:12); the ash graded up to particles which will pass a 16,5mm ring from a minimum which fails to pass a 4,75mm mesh. The finer materials from the screening are to be first mixed with the cement into a mortar and the ash added afterwards and thoroughly incorporated</p>				
<u>Lightweight concrete</u>				
<p>Lightweight concrete shall have a density of 600kg/ m3 for the top 50mm and 400kg/ m3 for the remaining thickness. The minimum thickness at outlets, channels, etc shall be 50mm</p>				
<u>Formwork</u>				
<p>Descriptions of formwork shall be deemed to include use and waste only (except where described as left in or permanent), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-</p>				
Carried to Collection			R	

	Unit	Quantity	Rate	Amount
<p>The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself</p> <p>Formwork to soffits of solid slabs etc shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described</p> <p>Formwork to soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described</p> <p>Formwork to sides of bases, pile caps, ground beams, etc will only be measured where it is prescribed by the engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in Earthworks</p>				
<u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
<u>10MPa/19mm concrete</u>				
1 Footings	m ³	30		
<u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
<u>25MPa/19mm concrete</u>				
2 Footings	m ³	139		
3 Surface beds, Veranda's etc	m ³	299		
<u>TEST CUBES</u>				
<u>Test Cubes</u>				
4 Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	15		
<u>CONCRETE SUNDRIES</u>				
<u>Finishing top surfaces of concrete smooth with a wood float</u>				
5 Surface beds, slabs, etc	m ²	424		
<u>Finishing top surfaces of concrete smooth with a steel trowel</u>				
6 Surface beds, slabs, etc to falls	m ²	1 568		
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BILL NO. 4**CONCRETE FORMWORK AND REINFORCEMENT****COLLECTION**

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	Unit	Quantity	Rate	Amount
<u>BILL NO. 5</u>				
<u>WATERPROOFING</u>				
<u>WATERPROOFING</u>				
For preambles see "Model Preambles for trades (2008 Edition)" and applicable Supplementary Preambles as specified in the Trades. The said Model and Supplementary Preambles apply to all work described in this document. Tenderers are therefore referred to these documents for the full meaning and intention of all descriptions and no claims of any kind whatsoever will be entertained in this regard.				
<u>Waterproofing</u>				
Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs				
<u>DAMPPROOFING OF WALLS AND FLOORS</u>				
<u>One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B)</u>				
1	In walls	m ²	154	
<u>One layer 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape</u>				
2	Under surface beds	m ²	1 992	
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	Unit	Quantity	Rate	Amount
<u>BILL NO. 6</u>				
<u>MASONRY</u>				
<u>MASONRY</u>				
For preambles see "Model Preambles for trades (2008 Edition)" and applicable Supplementary Preambles as specified in the Trades. The said Model and Supplementary Preambles apply to all work described in this document. Tenderers are therefore referred to these documents for the full meaning and intention of all descriptions and no claims of any kind whatsoever will be entertained in this regard.				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Sizes in descriptions</u>				
Where sizes in descriptions are given in brick units, 'one brick' shall represent the length and 'half brick' the width of a brick				
<u>Bagged and sealed walls</u>				
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 bitumen emulsion waterproofing coating				
<u>Face bricks</u>				
Bricks shall be ordered timeously to obtain uniformity in size and colour				
<u>Pointing</u>				
Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc				
<u>BRICKWORK IN FOUNDATIONS (PROVISIONAL)</u>				
<u>Brickwork of NFP bricks in class II mortar</u>				
1	One brick walls	m ²	675	
2	Piers	m ³	5	
3	Half brick walls	m ²	123	
<u>BRICKWORK IN SUPERSTRUCTURE</u>				
<u>Brickwork of NFP bricks in class II mortar</u>				
4	Half brick walls	m ²	221	
5	Half brick walls in patches	m ²	95	
Carried to Collection			R	

		Unit	Quantity	Rate	Amount
6	Half brick walls in beamfilling	m ²	161		
7	One brick walls	m ²	2 058		
8	One brick walls in patches	m ²	85		
9	Piers	m ³	16		
	<u>BRICKWORK SUNDRIES</u>				
	<u>Sundries</u>				
10	Cutting toothings and bonding new brickwork to existing	m ²	123		
	<u>2,5mm Brickwork reinforcement</u>				
11	75mm Wide reinforcement built in horizontally where necessary	m	2 256		
12	150mm Wide reinforcement built in horizontally	m	8 232		
	<u>Prestressed fabricated concrete lintels including necessary temporary supports</u>				
13	75 x 90mm Lintels in lengths not exceeding 3m	m	370		
	<u>Galvanised hoop iron cramps, ties, etc.</u>				
14	30 x 1,6mm Cramp 500mm long with one end fixed to timber and other end built into brickwork	No	852		
	<u>FACE BRICKWORK</u>				
	<u>NFX face bricks pointed with flush horizontal and vertical joints or simillar approved</u>				
15	Extra over brickwork for face brickwork	m ²	2 058		
16	Extra over brickwork for face brickwork in cut brick in header course lintel	m ²	81		
17	Extra over brickwork for face brickwork in sloping cills	m ²	66		
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	Unit	Quantity	Rate	Amount
<u>BILL NO. 7</u> <u>CARPENTRY AND JOINERY</u>				
<p>For preambles see "Model Preambles for trades (2008 Edition)" and applicable Supplementary Preambles as specified in the Trades. The said Model and Supplementary Preambles apply to all work described in this document. Tenderers are therefore referred to these documents for the full meaning and intention of all descriptions and no claims of any kind whatsoever will be entertained in this regard.</p>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Fixing</u>				
<p>References given in descriptions refer to the respective types of trusses detailed on the architect's/engineer's drawings numbered ? annexed to these bills of quantities (accompanying these bills of quantities?) for tender purposes</p>				
<p>Dimensions in descriptions of trusses are nominal and actual measurements are to be obtained from the architect/engineer and/or taken on site before design or fabrication commences.</p>				
<p>Items described as 'nailed' shall be deemed to be fixed with hardened steel nails or pins, or to be shot-pinned, to brickwork or concrete</p>				
<p>Items described as 'plugged' shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 500mm centres, and where described as 'bolted', the bolts have been given elsewhere.</p>				
<u>Joinery</u>				
<p>Descriptions of frames shall be deemed to include frames, transomes, rails, etc.</p>				
<p>Descriptions of hardwood joinery shall be deemed to include sinking and pelleting heads and nuts of bolts</p>				
<p>All timber purlins to be at approximately 700mm centres on SA Pine timber trusses at approximately 1135mm c/c according to engineers detail. The contractor must engage with a truss specialist prior procurement and installation of trusses to ensure TR1 and TR2 certification.</p>				
<p>The contractor will be required to be compliant with regulations and quality standards outlined in the PW371 Construction works specifications, Second edition July 2013.</p>				
Carried to Collection			R	

	Unit	Quantity	Rate	Amount
<u>Joinery Fittings</u>				
General The following cupboard fittings have been measured as complete units,i.e.,the components of the units have not been separately measured. The description, therefore, of such units shall be deemed to include all components, assembling, housing, notching, gluing, blocking, painting on and screwing with the counter screws, edge strips, decorative plastic finish, glass, ironmongery, metalwork, paint or varnish finishes, etc. Forming openings for sanitaryware, etc are included in approximate sizes and actual measurements shall be obtained prior to fabrication all as per architects specifications/design.				
<u>PLATE NAILED TIMBER ROOF TRUSS CONSTRUCTION ETC</u>				
1 Detailed shop drawings indicating truss sizes, truss positions, bracings, etc	No	1		
<u>PRE-FABRICATED TIMBER ROOF TRUSSES</u>				
2 Timber Roof Construction including fixing in position of all necessary girders, trusses, rafters, hips, valleys, bracing, cleats, timber connections, purlins, runners, wire ties, etc.	m ²	2 037		
3 Allow for two coats creosote on swan timbers	m ²	434		
<u>Sawn softwood</u>				
4 38 x 114mm Wall plates	m	478		
<u>EAVES, VERGES, ETC</u>				
<u>Fibre-cement socketless barge boards</u>				
5 250 x 150mm Barge boards, including aluminium H-profile joiners etc.	m	186		
6 250 x 150mm Fascia boards, including aluminium H-profile joiners etc.	m	486		
<u>SKIRTINGS</u>				
<u>Wrought softwood</u>				
7 76 x 19mm Skirtings, plugged	m	1 321		
8 Allow for treatment of timber skirting and quarter round against termites	m	1 321		
<u>DOORS</u>				
NOTE : a sample of internal and external wooden doors is to be submitted to the Principal Agent for approval before ordering doors				
Carried to Collection			R	

		Unit	Quantity	Rate	Amount
	<u>44mm Solid core hardwood panel door with commercial veneer</u>				
9	44mm Door 813 x 2032mm high	No	25		
	<u>Wrought meranti doors</u>				
10	Framed, braced and batten door 818 x 2032mm	No	32		
	<u>NOTICEBOARDS, KEYBOARDS, DUCKBOARDS, ETC</u>				
	<u>Pinning boards in classrooms</u>				
11	Carpet pinning boards 4800 x 1140mm, in aluminium frame with round plastic corners, pen tray and fixing component all fixed according to manufacturer's instruction.	No	26		
Carried to Collection				R	

BILL NO. 7
CARPENTRY AND JOINERY
COLLECTION

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Carried to Summary

R

	Unit	Quantity	Rate	Amount
BILL NO. 8 ROOF COVERINGS				
<p>For preambles see "Model Preambles for trades (2008 Edition)" and applicable Supplementary Preambles as specified in the Trades. The said Model and Supplementary Preambles apply to all work described in this document. Tenderers are therefore referred to these documents for the full meaning and intention of all descriptions and no claims of any kind whatsoever will be entertained in this regard. galvanising is used in inland areas and Z600 spelter galvanising for coastal areas. However galvanised sheeting is generally not used in coastal areas. When the pitch of troughed roof covering is less than 5 degrees or if dustproofing is required then the description of roof coverings 'with side laps sealed' is to be used. Where roof coverings are fixed on top of rigid board insulation to purlins etc. they are to be described as such. Note that besides galvanised steel, sheeting is also available in corten steel, stainless steel, copper and aluminium.</p> <p>Where BS reference to grades, etc and SANS 92 in the following two headings is not applicable, refer to other suitable construction standards or provide full specifications.</p> <p>Where battens for roof coverings form part of the plate nailed timber roof truss design it shall be included under the roof construction in the Carpentry and Joinery trade and not under this trade.</p>				
ROOF COVERINGS, CLADDINGS, ETC				
<u>Klip-loc 700 light industrial pressed steel sheets, powder coated to both sides installed on battens spaced as per manufacturers instructions on damp proofing(elsewhere measured) on and including 38 x 152 rafters, posts, ties and struts.</u>				
1	Roof covering complete with trusses and pitches not exceeding 25 degrees	m ²	2 037	
2	Ridge cappings 460mm girth	m	243	
Carried to Collection			R	

	Unit	Quantity	Rate	Amount
<u>ROOF AND WALL INSULATION (CPAP WORK GROUP NO. 122)</u>				
<u>Multi-layered reinforced double-sided aluminium foil sheeting in accordance with SANS 1381-4 with a mass of not less than 293g/m² and a Class I fire rating in accordance with SANS 0177-3</u>				
3 Polyethylene bubblefold aluminium foil faced one side sheeting	m ²	2 037		
Carried to Collection				R

BILL NO. 8
ROOF COVERINGS
COLLECTION

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Carried to Summary

R

	Unit	Quantity	Rate	Amount
<u>BILL NO. 9</u>				
<u>CEILINGS PARTITIONS AND ACCESS FLOORING</u>				
<p>For preambles see "Model Preambles for trades (2008 Edition)" and applicable Supplementary Preambles as specified in the Trades. The said Model and Supplementary Preambles apply to all work described in this document. Tenderers are therefore referred to these documents for the full meaning and intention of all descriptions and no claims of any kind whatsoever will be entertained in this regard.</p>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Fixing</u>				
Items described as 'nailed' shall be deemed to be fixed with hardened steel nails or pins, or to be shot-pinned, to brickwork or concrete				
Items described as 'plugged' shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 500mm centres, and where described as 'bolted', the bolts have been given elsewhere				
<u>Ceilings</u>				
Unless otherwise described ceilings shall be deemed to be horizontal				
<u>Steel components</u>				
All steel components for ceilings, partitions, etc. are to be galvanised in accordance with SANS 12				
<u>NAILED-UP CEILINGS</u>				
<u>6.4mm Gypsum plasterboard</u>				
1		Ceilings including standard steel branderling at 300mm centres in one direction only, joined with joiner sections and hung with suspension brackets including standard steel perimeter angles fixed to walls etc.	m ²	2 037
2		Extra over ceiling for opening for 600 x 600mm trap door formed of 42 x 42mm wrot softwood rebated framing with on e38 x38mm sawn softwood cross drander covered with ceiling board and fitted flush in opening.	No	28
<u>Gypsum plasterboard cornices</u>				
3		75mm Coved cornices, plugged	m	1 321
Carried to Summary			R	

	Unit	Quantity	Rate	Amount
<u>BILL NO. 10</u> <u>FLOOR COVERINGS</u>				
<p>For preambles see "Model Preambles for trades (2008 Edition)" and applicable Supplementary Preambles as specified in the Trades. The said Model and Supplementary Preambles apply to all work described in this document. Tenderers are therefore referred to these documents for the full meaning and intention of all descriptions and no claims of any kind whatsoever will be entertained in this regard.</p>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Fixing</u>				
<p>Floor coverings, wall linings, etc. shall, where applicable, be fixed with adhesive as recommended by the manufacturers of the flooring, linings, etc.</p>				
<u>FLOOR COVERINGS</u>				
<u>300 x 300 x 2.5mm "Marley Superflex" fully flexible vinyl tiles</u>				
1 On floors	m ²	1 992		
<u>POLISH, SEALERS, ETC</u>				
<u>Polish, Sealers, etc.</u>				
2 Two coats wax polish on vinyl flooring	m ²	1 992		
Carried to Summary			R	

	Unit	Quantity	Rate	Amount
<u>BILL NO. 11</u> <u>IRONMONGERY</u>				
<p>For preambles see "Model Preambles for trades (2008 Edition)" and applicable Supplementary Preambles as specified in the Trades. The said Model and Supplementary Preambles apply to all work described in this document. Tenderers are therefore referred to these documents for the full meaning and intention of all descriptions and no claims of any kind whatsoever will be entertained in this regard.</p>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items</u>				
<p>Where applicable the manufacturers' names or product catalogue titles are given in sub-headings preceding the items. Prices are to be based on the specific products/articles specified. If tenderers wish to offer alternative products/articles for certain items, these items are to be clearly marked and the alternative specification given with supporting brochures etc. clarifying the features of the products/articles offered. On request returnable samples are to be provided to the principal agent for consideration.</p>				
<u>Finishes to Ironmongery</u>				
<p>Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list: BS Satin bronze lacquered CH Chromium plated SC Satin chromium plated SE Silver enamelled GE Grey enamelled AN Anodised natural AS Anodised silver AB Anodised bronze AG Anodised gold ABL Anodised black PB Polished brass PL Polished and lacquered PT Epoxy coated SD Sanded</p>				
<u>HINGES, BOLTS, ETC.</u>				
<u>'Union' or similar approved</u>				
1	100 x 75mm ball bearing stainless steel butt hinges.	No	114	
<u>LOCKS</u>				
<u>Manufactured by Dorma or similar approved</u>				
2	Four-lever lockset with striking plate fixed to metal	No	57	
<u>LETTERS, NAMEPLATES, ETC.</u>				
<u>'Union' or similar approved</u>				
3	Perspex plate with engraved and painted letters or numerals	No	30	
Carried to Collection			R	

PINNING BOARDS, WRITING BOARDS, PROJECTION SCREENS, ETC.

4 Chalkboard, comprising of two 2400 x 1140mm green chalkboards to comply with CKS-36-1880 or equivalent code of practice complete with chalk rail as one unit fixed strictly in accordance to the manufacturers instructions.

SUNDRIES

Manufactured by Dorma or similar approved

5	38mm Diameter door stop, plugged
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Carried to Collection

R

BILL NO. 11**IRONMONGERY****COLLECTION**

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Carried to Summary

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	Unit	Quantity	Rate	Amount
<u>BILL NO. 12</u> <u>METALWORK</u>				
<p>For preambles see "Model Preambles for trades (2008 Edition)" and applicable Supplementary Preambles as specified in the Trades. The said Model and Supplementary Preambles apply to all work described in this document. Tenderers are therefore referred to these documents for the full meaning and intention of all descriptions and no claims of any kind whatsoever will be entertained in this regard.</p>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Descriptions of bolts, anchors, etc</u>				
<p>Descriptions of bolts shall be deemed to include nuts and washers</p>				
<p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete</p>				
<p>Items described as holed for bolt(s) shall be deemed to exclude the bolts unless otherwise described</p>				
<p>Items described as plugged shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres</p>				
<u>Aluminium doors, windows, etc</u>				
<p>Doors and windows shall comply with AAAMSA design criteria</p>				
<p>Glazing shall comply with SAGGA regulations. Glass shall be type ? laminated performance glass as shown on the window schedules/drawings appended to these bills of quantities (as described in the headings to window descriptions?). Glass thickness shall comply with SAGGA regulations irrespective of thicknesses shown on the schedules/drawings</p>				
<p>Doors and windows shall be supplied with protective tape and plastic and shall be removed only once surrounding trades have been completed</p>				
Carried to Collection			R	

	Unit	Quantity	Rate	Amount
For purpose made windows and doors, refer to drawings annexed to (issued separately with?) these bills of quantities				
The following certificates shall be provided prior to commencement of site work:				
1 A copy of the relevant AAAMSA Performance Test Certificate from the manufacturer/contractor supplying the architectural aluminium product				
2 A Certificate of Conformance confirming that anodising or powder coating has been processed in accordance with SANS 999 and SANS 1796 respectively				
3 A powder guarantee of not less than 15 years issued by the powder manufacturer. The				
specific conditions contained in this guarantee shall form part of the powder coating process				
4 A Certificate of Conformance confirming that glazing has been installed in accordance with SANS 0137, ensuring that safety glazing materials have been installed in the mandatory areas and that each individual pane of safety glazing materials has been permanently marked				
5 A warranty from the manufacturer of the				
laminated safety glass and/or hermetically				
sealed glazing units guaranteeing the products against delamination and colour degradation for a period of not less than five years				
Carried to Collection			R	

		Unit	Quantity	Rate	Amount
<u>PRESSED STEEL DOOR FRAMES</u>					
<u>1,6mm Double rebated frames suitable for half brick walls complete with ironmongery, hinges, paint, etc. and fixing to brickwork or concrete</u>					
1	Frame for door 813 x 2032mm high	No	22		
<u>1,6mm Double rebated frames suitable for One brick walls complete with ironmongery, hinges, paint, etc. and fixing to brickwork or concrete</u>					
2	Frame for door 813 x 2032mm high	No	32		
<u>GALVANISED STEEL WINDOWS, DOORS, ETC</u>					
<u>Standard school windows</u>					
3	1250mm x 889mm high	No	132		
4	889mm x 854mm high	No	111		
5	889mm x 457mm high	No	14		
<u>GALVANISED STEEL GATES, SCREENS, ETC</u>					
<u>Pedestrian Gates</u>					
6	1000 x 2100mm high hot dipped galvanzied mild steel, fabricated with 50 x 50 x 5mm thick frame and middle rail and 16mm diameter intermediate bars at 100mm c/c, gate	No	32		
Carried to Collection				R	

BILL NO. 12
METALWORK
COLLECTION

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	Unit	Quantity	Rate	Amount
<u>BILL NO. 13</u>				
<u>PLASTERING</u>				
For preambles see "Model Preambles for trades (2008 Edition)" and applicable Supplementary Preambles as specified in the Trades. The said Model and Supplementary Preambles apply to all work described in this document. Tenderers are therefore referred to these documents for the full meaning and intention of all descriptions and no claims of any kind whatsoever will be entertained in this regard.				
<u>SCREEDS (LIC)</u>				
<u>Screeds wood floated, on concrete</u>				
1 20mm Thick on floors and landings to receive floor sheeting	m ²	1 992		
2 30mm Thick on floors and landings in patches	m ²	287		
<u>INTERNAL PLASTER</u>				
<u>Cement plaster steel trowelled, on brickwork</u>				
3 On walls	m ²	1 584		
4 On walls in patches	m ²	190		
<u>EXTERNAL PLASTER</u>				
<u>Cement plaster wood floated, on brickwork</u>				
5 On walls	m ²	407		
6 On walls in patches	m ²	85		
Carried to Summary			R	

	Unit	Quantity	Rate	Amount
<u>BILL NO. 14</u> <u>PLUMBING AND DRAINAGE</u>				
<p>For preambles see "Model Preambles for trades (2008 Edition)" and applicable Supplementary Preambles as specified in the Trades. The said Model and Supplementary Preambles apply to all work described in this document. Tenderers are therefore referred to these documents for the full meaning and intention of all descriptions and no claims of any kind whatsoever will be entertained in this regard.</p>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Stormwater Channels</u>				
<p>Descriptions of channels shall be deemed to include necessary excavation, surface preparation, compaction, etc., and disposal of surplus material on site</p>				
<u>Sealing of Edges</u>				
<p>Outer edges of sinks, basins, baths, urinals, etc. are to be sealed against adjacent surfaces with approved silicone</p>				
<u>uPVC Pipes and Fittings</u>				
<p>Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings. Soil, waste and vent pipes and fittings shall be solvent weld jointed or sealed with butyl rubber rings.</p>				
<u>uPVC pressure pipes and fittings</u>				
<p>Pipes of 50mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings. Pipes of 63mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints</p>				
<u>High density polyethylene (HDPE) pipes and fittings</u>				
<p>Pipes shall be hard drawn and half-hard Maksal pipes of the class described. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), Class 2 (half-hard) and Class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-siphon pipes, capillary solder fittings and compression fittings shall be Cobra Watertech type. Capillary solder fittings shall comply with ISO 2016</p>				
Carried to Collection			R	

	Unit	Quantity	Rate	Amount
<p><u>Reducing Fittings</u></p> <p>Where fittings have reducing ends or branches they are described as 'reducing' and only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained</p> <p><u>Fixing of Pipes</u></p> <p>Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls, etc., casting in, building in or suspending not exceeding 1m below suspension level</p> <p><u>Disinfection of water pipework</u></p> <p>Water pipework is to be disinfected at completion in accordance with SABS 1200L (provision for disinfection elsewhere)</p> <p><u>Laying, backfilling, bedding, etc. of pipes</u></p> <p>Pipes shall be laid and bedded in accordance with manufacturers' instructions and trenches shall be carefully backfilled</p> <p>Where no manufacturers' instructions exist, pipes shall be laid in accordance with Clauses 5.1 and 5.2 of each of the following: SABS 1200L : Medium-pressure pipelines SABS 1200LD : Sewers SABS 1200LE : Stormwater drainage Pipe trenches, etc. shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200DB : Earthworks (Pipe trenches) Pipes shall be bedded in accordance with Clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200LB : Bedding (Pipes) Unless otherwise described bedding of rigid pipes shall be Class B bedding</p> <p><u>General</u></p> <p>Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc. shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 95% Mod AASHTO density and disposal of surplus material on site</p> <p>Descriptions of service pipes and flexible connecting pipes shall be deemed to include connections to taps, cisterns, etc. and to steel pipes (adaptors for connections to copper pipes, etc. are given separately)</p> <p>Descriptions of WC pans, slop hoppers, etc. shall be deemed to include for joints to soil pipes (pan connectors are separately measured)</p>				
Carried to Collection			R	

		Unit	Quantity	Rate	Amount
<u>As-Built Drawings</u>					
Where required, the contractor shall prepare an updated set of as-built drawings. At completion of the contract the contractor shall hand these drawings to the principal agent for reproducing onto the originals for handing over to the employer (provision for allowance of as-built drawings elsewhere)					
<u>RAINWATER DISPOSAL</u>					
<u>Seamless aluminium prepainted gutters and rainwater pipes</u>					
1	150mm Half-round roof gutters	m	234		
2	110mm Diameter rainwater pipes	m	192		
3	Extra over gutter for stopped end	No	48		
4	Extra over gutter for angle	No	48		
5	Extra over gutter for outlet for 110mm pipe	No	48		
6	Extra over rainwater pipe for bend	No	48		
7	Extra over rainwater pipe for shoe	No	28		
8	Extra over rainwater pipe for swan-neck	No	48		
<u>SANITARY FITTINGS</u>					
<u>Atlas Sanware or simillar approved</u>					
9	382AP, Atlas plastic christy basin with glavanized bracket 570mm, 400mm, 245mm, 2,2kg or simillar approved	No	10		
10	Supply and install Envirosan VIP 200 or simillar approved VIP toilet seat with lid, lockable flange and nylon hinge pin	No	24		
11	320x350x495mm Atlas plastic urinal bowl plugged to walls	No	10		
<u>SANITARY PLUMBING</u>					
<u>uPVC Soil and Vent Pipes</u>					
12	110mm Rigid PVC socketed vent piping (SABS 967)	m	187		
<u>Extra over uPVC soil and vent pipes for fittings</u>					
13	500 x 500mm Gauze fly screen on top of vent pipe and secured with cable ties	No	25		
Carried to Collection				R	

BILL NO. 14

PLUMBING AND DRAINAGE

COLLECTION

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	Unit	Quantity	Rate	Amount
<u>BILL NO. 15</u>				
<u>PAINTWORK</u>				
<u>PREPARATORY WORK TO EXISTING WORK</u>				
<u>Previously painted plastered surfaces</u>				
Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and cracks shall be opened, filled with a suitable filler and finished smooth				
<u>Previously painted metal surfaces</u>				
Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal				
<u>Previously painted wood surfaces</u>				
Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with suitable filler and finished smooth				
<u>ON INTERNAL FLOATED PLASTER SURFACES</u>				
<u>One coat alkali resistant primer and two coats PVA emulsion paint for interior use</u>				
1 Walls	m ²	2 344		
<u>ON EXTERNAL FLOATED PLASTER SURFACES</u>				
<u>One coat alkali resistant primer and two coats superior quality acrylic emulsion paint for interior and exterior use</u>				
2 Walls	m ²	731		
<u>ON INTERNAL GYPSUM PLASTER SURFACES</u>				
<u>One coat primer and two coats superior quality acrylic emulsion paint for interior and exterior use</u>				
3 Ceilings	m ²	1 387		
<u>ON METAL SURFACES</u>				
<u>One coat alkyd based zinc phosphate primer and two coats premium quality polyurethane enamel paint, on steel</u>				
4 Door frames	m ²	87		
5 Windows	m ²	336		
Carried to Collection			R	

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BILL NO. 15
PAINTWORK
COLLECTION

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Carried to Summary

R

		Unit	Quantity	Rate	Amount
<u>BILL NO. 16</u>					
<u>GLAZING</u>					
<u>GLAZING TO STEEL WITH PUTTY</u>					
<u>6,5mm Obscure laminated glass (safety glazing)</u>					
1	Panes exceeding 0,1m ² and not exceeding 0,5m ²	m ²	38		
<u>6mm Clear toughened safety glass</u>					
2	Panes not exceeding 0,1m ²	m ²	298		
Carried to Summary				R	

	Unit	Quantity	Rate	Amount
<u>BILL NO. 17</u>				
<u>EXTERNAL WORKS</u>				
<u>WATER TANK AND STANDS</u>				
For preambles see "Model Preambles for trades (2008 Edition)" and applicable Supplementary Preambles as specified in the Trades. The said Model and Supplementary Preambles apply to all work described in this document. Tenderers are therefore referred to these documents for the full meaning and intention of all descriptions and no claims of any kind whatsoever will be entertained in this regard.				
<u>Horizontal water storage tank with black internal lining with cover and lid, connected to eaves gutter harvesting system</u>				
1	5000 Litre horizontal water storage Jojo tank including and constructing the plinth 2790 x 3283mm with foundations, brickwork and necessary galvanised hoop iron straps for holding down complete.	No	18	
2	15mm Rough brass hose bib tap as 'Cobra Watertech' Ref. No. 108-15 or equal and approved including hose union, wall plate elbow, etc, with couplings for copper	No	18	
<u>CONCRETE STORMWATER CHANNELS</u>				
<u>Stormwater channels</u>				
3	100mm thick x 1200mm wide Channel with segmental channel formed therein and finished smooth on exposed surfaces including necessary excavation and formwork	m	601	
<u>FENCING</u>				
<u>Invincible Clearvu or equally approved</u>				
4	Post shall be 2.7m long Cochrane Taper Locking Post. Post width shall be 85mm - tapering to 45mm with a depth of 85mm. Post shall include 'Locking Recess Mechanism' to secure panel edge. Post shall be sealed with a UV stabilized polymer cap. Post finish shall be galvanized, then Polymetic 6000 coated. Panel:			
Carried to Collection			R	

	Unit	Quantity	Rate	Amount
<p>Panel shall be of 3,305m width and 2.1m in height. Panel aperture size (centers) shall be 76.2mm x 12.7mm. Wire diameter will be 3.5mm. The panel shall be reinforced with 4 x 50mm deep 'V' formation horizontal recessed bands (rigidity) Panel shall have 2 x 70° flanges along sides (internal fixtures- all fixtures shall be on the inside of fence line) Panel shall have 1 x 90° flange along top and 1 x 30° flange along toe (integrated rigid angle). Panel post shall have a flush panel post finish with no climbing aid. Panel shall be affixed to post over 48 line wires using 8 x Double bolt comb clamps and 8 x Single bolt comb clamps using 24 x Anti vandal bolts. Panel and fixtures shall be galvanized, then Polymetic 6000 coated.</p> <p>100mm high toughened steel Shark Tooth spike shall be affixed to panel edge, internally at 150mm intervals using Anti-vandal bolts. Spike finish shall be Galvanized, then Polymetic 6000 coated.</p> <p>Fence Corner Configuration. The fence configuration should not have any sharp corners and all angles at changes of direction should be a minimum of 130 degrees.</p> <p>Provision for necessary support, excavations, concrete foundations, backfilling, etc</p>	m	723		
<u>FENCING</u>				
<u>Clearvu Gates or simillar approved</u>				
5 Vehicular sliding gate of sizes 11000 x 2,100mm high	No	1		
6 Pedestrian gate of sizes 1100 x 2,100mm high	No	2		
<u>ROADS, PAVING ETC</u>				
<u>Excavation in earth not exceeding 2m deep</u>				
7 Reducing levels under assembly area	m ³	58		
<u>Extra over excavation in earth for excavation in</u>				
8 Soft rock	m ³	6		
9 Hard rock	m ³	3		
<u>Extra over all excavations for carting away</u>				
10 Over site to reduce levels and dispose in prescribed stock piles on site	m ³	67		
Carried to Collection			R	

		Unit	Quantity	Rate	Amount
	<u>Compaction of surfaces</u>				
11	Compaction of ground surfaces under pavings etc, including scarifying for a depth of 150 mm, breaking down oversize material, adding suitable material where necessary and compacting to 95 % Mod AASHTO density	m²	385		
	<u>Keeping excavations free of water</u>				
12	Keeping excavations free of water other than subterranean water	Item			
	<u>Pre-cast concrete</u>				
13	Fig 6 Kerb, size 1000 x 180 x 280mm high cast into concrete, with cast in-stu crossfall to road including haunching complete	m	82		
	<u>222 x 106 x 50mm thick pavers to Courtyards and Walkways</u>				
14	Brick on paving laid to bonded pattern to slight falls and cross fall laid on and including a 50mm (finished thickness) clean river sand bed with sand and cement mix swept into joints and hosed down.	m²	770		
Carried to Collection					R

BILL NO. 17
EXTERNAL WORKS
COLLECTION

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Amount

BILL NO. 18**PROVISIONAL SUMS**

For preambles see "Model Preambles for trades (2008 Edition)" and applicable Supplementary Preambles as specified in the Trades. The said Model and Supplementary Preambles apply to all work described in this document. Tenderers are therefore referred to these documents for the full meaning and intention of all descriptions and no claims of any kind whatsoever will be entertained in this regard.

SUPPLEMENTARY PREAMBLES**General**

Work for which budgetary allowances are provided will be measured and valued in accordance with the relevant JBCC building agreement March 2005 contract and deducted in whole or in part if not required without any compensation for loss of profit on the said allowances

Profit

Prime cost amounts and provisional sums are net. Prime cost amounts shall include for delivery to site of all articles concerned. Provisional sums are for material and equipment supplied and installed complete by firms of specialists

Where stated, the contractor may allow for profit if required

Builder's work

Builder's work in connection with specialist services is given elsewhere in these bills of quantities

PROVISIONAL SUMS**ELECTRICAL, ELECTRONIC AND MECHANICAL INSTALLATIONS**

- 1 Provide the sum of R 1 700 000,00 (One Million Seven Hundred Thousand Rands) for Electrical installation

Item 1 700 000 00

- 2 Profit

Item

- 3 Attendance

Item

COMMUNITY LIASON OFFICER (CLO)

- 4 Provide the sum of R100 000.00 (One Hundred Thousand Rands) for the Community Liason Officer

Item 100 000 00

- 5 Profit

Item

- 6 Attendance

Item

TEMPORARY CLASSROOMS

- 7 Provide the sum of R 500 000.00 (Five Hundred and Five Thousand Rands) for the provision of Temporary Classrooms

Item

Carried to Collection

R

8 Profit
9 Attendance

Item
Item

Carried to Collection

R

BILL NO. 18
PROVISIONAL SUMS
COLLECTION

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ADD: CONTINGENCIES

Allow 5% for contingencies, to be used by the Client in terms of Clause 17 of the Principal Building Agreement.

SubTotal excluding Value Added Tax

ADD VAT @ 15%:

Carried to Tender

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