

Item No		Quantity	Rate	Amount
	<u>SECTION 1</u>			
	<u>BILL No.1</u>			
	<u>PRELIMINARIES</u>			
	1. The Principal Building Agreement shall be the JBCC Series Edition 4.1, March 2005 as recommended by the Joint Building Contract Committee and as amended by this Tender Enquiry.			
	2. The Preliminaries shall be JBCC Series 2000, May 2005 for use with the Principal Building Agreement as recommended by the Joint Building Contracts Committee and as amended by this Tender Enquiry shall be deemed to be incorporated herein.			
	3. Tenderers are referred to the abovementioned documents for the full intent and meaning of each clause thereof. These clauses are hereinafter referred to by clause number and heading only.			
	4. Where standard clauses or alternatives are not entirely applicable to this contract, such modifications, corrections or additions as are necessary, are given as far as possible under each relevant clause heading. Additional Preliminary clauses are contained in Section C hereof.			
	5. No claim whatsoever shall be entertained in respect of errors or omissions in pricing due to brevity of descriptions of items which are fully described when read in conjunction with the relevant clauses of the said Principal Building Agreement, Preliminaries and Preambles.			
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6. The Tenderers shall allow opposite each of the clauses whatever costs and charges he may consider necessary for the carrying out, complying with and due observance of the provisions, conditions and requirements set out herein. Only priced items will be considered in respect of any adjustment of this Section. Any items left unpriced will be understood to be provided free of charge and no claim for any extras arising out of the Tenderer's omission to price any item will be entertained.

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

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

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

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<u>SECTION 3</u>			
<u>BILL No. 1</u>			
<u>DEMOLITIONS</u>			
<u>MODEL PREAMBLES</u>			
The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>View site</u>			
Before submitting his tender the tenderer shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained			
<u>Explosives</u>			
No explosives whatsoever may be used for demolition purposes unless otherwise stated.			
<u>General</u>			
Water supply pipes and other piping in ground that may be encountered and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings to the satisfaction of the principal agent.			
Unless otherwise described all materials are to become the property of the contractor and are to be removed from the site.			
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Removal of asbestos material

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

The following shall apply in respect of asbestos removal

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

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

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

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

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

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DEMOLISHING AND REMOVING

1	Take up and move precast concrete toilets by uplifting and handing over to the school governing body (making good of pits and slabs elsewhere measured)	No	10
2	Take up and move corrugated iron sheet toilets by uplifting and handing over to the school governing body (making good of pits and slabs elsewhere measured)	No	3
<u>Demolishing and removing buildings with roof, comprising concrete footings, surface beds, external block walls, roof coverings, sanitary fittings, etc. complete including breaking up reinforced concrete pit cover slab, filling up pit with granular material, sealing off and carting away debris</u>			
3	Single storey building approximately 9m2 on plan and not exceeding 3m high complete	No	1
4	Single storey building approximately 6m2 on plan and not exceeding 3m high complete	No	1
5	Cart away rubble from demolitions and dispose off site.		Item
6	Backfill existing hole with G7 fill material in max. 150mm layers and compact to 95% MOD AASHTO density.	m3	3
7	Allow for compaction tests by an approved laboratory to determine density of filling material.	No	3

SUNDRIES

Desludging

8	Clean out pit latrine by desludging including removal of all debris and waste including solid waste as per Health and Safety requirements and make good on completion including disposing of all debris and waste at an authorised municipal waste disposal facility. Contractor to price per seat	No	3
9	Issue of Certificate of Waste Disposal.		Item

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10	Demolish pit latrine slabs 5m x 2m wide and 2,0m deep pit. Demolition is to only commence once the latrine has been completely emptied (elsewhere measured).	No				
11	Cart away rubble from demolitions and dispose off site.		Item			
12	Backfill existing hole with G7 fill material in max. 150mm layers and compact to 95% MOD AASHTO density.	m3				
13	Allow for compaction tests by an approved laboratory to determine density of filling material.	No				
14	Provision of a certificate of safe disposal for asbestos.		Item			
<u>SUNDRIES</u>						
<u>Desludging</u>						
15	Clean out pit latrine by desludging including removal of all debris and waste including solid waste as per Health and Safety requirements and make good on completion including disposing of all debris and waste at an authorised municipal waste disposal facility. Contractor to price per seat	No				
16	Issue of Certificate of Waste Disposal.		Item			
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Dewatering of excavations:

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

Density testing on filling:

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

Imported fill:

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

Classification of excavated material

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

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

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

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EXCAVATION OTHER THAN BULK

EARTHWORKS

SITE CLEARANCE ETC

Site clearance

1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc	m2	298
	A0 : 58 A1 : 90 A6 : 91 AD : 59		
	E : 0 M : 0		

2	Stripping average 150mm thick layer of top soil and stockpiling on site	m2	297
	A0 : 58 A1 : 89 A6 : 91 AD : 59		
	E : 0 M : 0		

Excavation in earth not exceeding 2m deep:

3	Trenches.	m3	75
	A0 : 15 A1 : 9 A6 : 28 AD : 23		
	E : 0 M : 0		

4	Holes.	m3	241
	A0 : 82 A1 : 32 A6 : 59 AD : 68		
	E : 0 M : 0		

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

5	Soft rock.	m3	30
	A0 : 10 A1 : 4 A6 : 9 AD : 8		
	E : 0 M : 0		

6	Hard rock.	m3	15
	A0 : 5 A1 : 1 A6 : 4 AD : 5		
	E : 0 M : 0		

Extra over all excavations for carting away:

7	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor.	m3	302
	A0 : 95 A1 : 39 A6 : 82 AD : 86		
	E : 0 M : 0		

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	<u>Risk of collapse of excavations:</u>				
8	Sides of trench and hole excavations not exceeding 1,5m deep. A0 : 44 A1 : 25 A6 : 80 AD : 67 E : 0 M : 0	m2	216		
9	Ditto, but from ground level to exceeding 1,5m. A0 : 57 A1 : 50 A6 : 51 AD : 52 E : 0 M : 0	m2	210		
	<u>Keeping excavations free of water:</u>				
10	Keeping excavations free from mud and all water including subterranean sources.		Item		
	<u>EARTH FILLING, ETC.</u>				
	<u>Imported G5 filling, selected and supplied by the Contractor, including depositing in layers not exceeding 150mm thick and compacting to 98% modified AASHTO dry density to trenches, holes, etc.</u>				
11	Under floors, steps, pavings, trenches, etc. A0 : 16 A1 : 7 A6 : 17 AD : 16 E : 0 M : 0	m3	56		
	<u>Imported G7 filling, selected and supplied by the Contractor, including depositing in layers not exceeding 150mm thick and compacting to 98% modified AASHTO dry density to holes, trenches etc.</u>				
12	Under floors, steps, pavings, trenches, etc. A0 : 8 A1 : 3 A6 : 8 AD : 8 E : 0 M : 0	m3	27		
13	Backfilling to holes, trenches, etc. A0 : 6 A1 : 3 A6 : 10 AD : 9 E : 0 M : 0	m3	28		
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SOIL POISONING

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

16	Under floors, etc., including forming and poisoning shallow furrows against foundation walls, etc., filling in furrows and ramming.	m2	103
	A0 : 35 A1 : 14 A6 : 25 AD : 29 E : 0 M : 0		
17	To bottoms and sides of trenches, holes, etc.	m2	610
	A0 : 153 A1 : 98 A6 : 187 AD : 172 E : 0 M : 0		

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Formwork:

Descriptions of formwork shall be deemed to include use and waste only (except where described as left in or permanent), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use.

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

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

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

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**UNREINFORCED CONCRETE CAST AGAINST
EXCAVATED SURFACES**

15Mpa/19mm Concrete

1	Surface blinding under footings and bases.	m3	4
	A0 : 1 A1 : 0 A6 : 2 AD : 1 E : 0 M : 0		

**REINFORCED CONCRETE CAST AGAINST
EXCAVATED SURFACES**

30MPa/20mm concrete:

2	Strip footings to walls.	m3	17
	A0 : 3 A1 : 2 A6 : 6 AD : 6 E : 0 M : 0		

REINFORCED CONCRETE

30MPa/20mm concrete:

3	Surface beds on waterproofing.	m3	20
	A0 : 7 A1 : 2 A6 : 5 AD : 6 E : 0 M : 0		
4	Suspended Slabs.	m3	20
	A0 : 6 A1 : 3 A6 : 5 AD : 6 E : 0 M : 0		
5	Ground base slabs.	m3	10
	A0 : 7 A1 : 3 A6 : 0 AD : 0 E : 0 M : 0		

TEST BLOCKS

Test blocks:

6	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	11
	A0 : 3 A1 : 2 A6 : 3 AD : 3 E : 0 M : 0		

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FINISHING TOP SURFACE OF CONCRETE

Finishing top surfaces of concrete smooth with a wood float:

7	Surface beds, suspended slabs, ground slabs, etc.	m2	202		
	A0 : 55 A1 : 39 A6 : 54 AD : 54				
	E : 0 M : 0				

Finishing top surfaces of concrete smooth with a steel float:

8	Surface beds, suspended slabs, etc.	m2	95		
	A0 : 27 A1 : 14 A6 : 25 AD : 29				
	E : 0 M : 0				

Charmfers at corners

9	19 x 19mm triangular fillet at corners formed of unreinforced concrete steel trowelled.	m	87		
	A0 : 22 A1 : 21 A6 : 22 AD : 22				
	E : 0 M : 0				

ROUGH FORMWORK (DEGREE OF ACCURACY III)

Rough Formwork to Sides:

10	Edges, risers, ends and reveals not exceeding 300mm high or wide.	m	89		
	A0 : 24 A1 : 21 A6 : 22 AD : 22				
	E : 0 M : 0				

Permanent Formwork:

11	Soffit of slab over pit.	m2	95		
	A0 : 27 A1 : 14 A6 : 25 AD : 29				
	E : 0 M : 0				

Extra on permanent formwork for boxing or blocking in or boxing out to form:

12	450mm Diameter opening through 255mm thick slab.	No	19		
	A0 : 1 A1 : 4 A6 : 6 AD : 8				
	E : 0 M : 0				

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SMOOTH FORMWORK (DEGREE OF ACCURACY I)

Smooth Formwork to Sides:

14	Edges, risers, ends and reveals not exceeding 300mm high or wide.	m	122		
	A0 : 22 A1 : 46 A6 : 29 AD : 25				
	E : 0 M : 0				

MOVEMENT JOINTS ETC

Expansion joints with bitumen impregnated softboard between vertical concrete or brick surfaces:

15	12mm Joints not exceeding 300mm high (Provisional).	m	118		
	A0 : 24 A1 : 14 A6 : 44 AD : 36				
	E : 0 M : 0				

Saw cut joints:

16	6 x 40mm Saw cut joints in top of concrete (Provisional).	m	177		
	A0 : 36 A1 : 20 A6 : 65 AD : 55				
	E : 0 M : 0				

REINFORCEMENT (PROVISIONAL)

17	High tensile steel reinforcement bars to structural concrete work.	t	1.93		
	A0 : 0.44 A1 : 0.24 A6 : 0.66 AD : 0.59				
	E : 0.00 M : 0.00				

Fabric reinforcement:

18	REF. 888 fabric reinforcement in concrete footings, walls, base slabs etc.	m2	299		
	A0 : 97 A1 : 41 A6 : 76 AD : 85				
	E : 0 M : 0				

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Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats "Brixal" bitumen emulsion waterproofing coating.

Face bricks

Bricks shall be ordered timeously to obtain uniformity in size and colour

Pointing

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

Samples

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

Trade names

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

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Masonry

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**BRICKWORK IN FOUNDATIONS
(PROVISIONAL)**

Brickwork consisting of solid bricks with 10.5 MPa minimum nominal compressive strength in Class I mortar with Coprox masonry waterproofing or equal approved waterproof cement additive. Add 2.5kg Coprox waterproof cement additive for every 50kg of cement used in mortar mix (Cement to be 42.5N all-purpose cement):

1	One brick walls.	m2	91
	A0 : 19 A1 : 10 A6 : 34 AD : 28		
	E : 0 M : 0		

BRICKWORK AND BLOCKWORK SUNDRIES

Galvanized brickwork reinforcement

2	230mm Wide reinforcement built in horizontally.	m	902
	A0 : 139 A1 : 296 A6 : 286 AD : 181		
	E : 0 M : 0		
3	Ditto, but in foundations (Provisional).	m	649
	A0 : 133 A1 : 75 A6 : 241 AD : 200		
	E : 0 M : 0		

SUPERSTRUCTURE

Brickwork of NFP bricks in class II mortar

4	Half brick walls	m2	111
	A0 : 22 A1 : 31 A6 : 19 AD : 39		
	E : 0 M : 0		
5	One brick walls	m2	242
	A0 : 41 A1 : 101 A6 : 55 AD : 45		
	E : 0 M : 0		

BRICKWORK SUNDRIES

Brickwork reinforcement

6	75mm Wide reinforcement built in horizontally	m	324
	A0 : 64 A1 : 92 A6 : 56 AD : 113		
	E : 0 M : 0		

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7	150mm Wide reinforcement built in horizontally A0 : 104 A1 : 297 A6 : 128 AD : 134 E : 0 M : 0 <u>Prestressed fabricated lintels</u>	m	662	
8	110 x 75mm Lintels in lengths not exceeding 3m A0 : 8 A1 : 4 A6 : 8 AD : 5 E : 0 M : 0 <u>Galvanised hoop iron cramps, ties, etc</u>	m	25	
9	30 x 1,6mm Roof tie 1,5m long with one end built into brickwork and other end fixed to timber A0 : 45 A1 : 92 A6 : 59 AD : 49 E : 0 M : 0 <u>Cramps, ties, etc:</u>	No	245	
10	30 x 2mm Galvanized roof tie 1500mm long with one end fixed to timber and other built into brickwork or concrete. A0 : 0 A1 : 0 A6 : 0 AD : 0 E : 36 M : 0 <u>Air bricks etc:</u>	No	36	
11	229 x 152mm terracotta clay vermin proof air brick A0 : 4 A1 : 8 A6 : 4 AD : 4 E : 0 M : 0 <u>Bagging and sealing the outer face of the inner skin of walls with 1:3 cement and sand mixture and seal with two coats "Brixal" bitumen emulsion waterproofing coating:</u>	No	20	
12	To walls (Provisional). A0 : 47 A1 : 101 A6 : 93 AD : 60 E : 0 M : 0 <u>FACE BRICK</u>	m2	300	

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	<u>Face brickwork to be "Corobrik®" Firelight Satin FBX of 20-30MPa nominal compressive strength in Class II mortar with recessed horizontal and recessed vertical joints</u>							
13	Extra over NFP brickwork for face brickwork	m2	91					
	A0 : 19 A1 : 10 A6 : 34 AD : 28 E : 0 M : 0							
14	Half brick wall in beam filling pointed one side including cutting and fitting around roof timbers and bedding roofing solid on top in cement mortar.	m2	53					
	A0 : 11 A1 : 15 A6 : 15 AD : 12 E : 0 M : 0							
15	One brickwall pointed on both sides.	m2	300					
	A0 : 47 A1 : 101 A6 : 93 AD : 60 E : 0 M : 0							
16	Half brickwall pointed on both sides.	m2	111					
	A0 : 22 A1 : 31 A6 : 19 AD : 39 E : 0 M : 0							
	<u>Brick-on-edge header course copings, sills, etc, of "Rustgold FBS/Qunu Travertine" or equal approved face bricks pointed with recessed joints on all exposed faces, 220mm wide sill set sloping and slightly projecting:</u>							
17	220mm Brick on edge sill bedded sloping and jointed in cement mortar and pointed on top, edge and projecting soffit including cutting and fitting between reveals and splay cutting brickwork under.	m	11					
	A0 : 4 A1 : 2 A6 : 4 AD : 2 E : 0 M : 0							
18	220mm Wide header course to top of one brick wall bedded and jointed in cement mortar and pointed on both sides.	m	31					
	A0 : 8 A1 : 7 A6 : 8 AD : 9 E : 0 M : 0							
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<u>SECTION 4</u> <u>BILL No. 4</u> <u>WATERPROOFING</u> <u>Quantity Split:</u> Note that the total quantity per each item is split into the various buildings and appears below each description as follows: A0 - Type A4 - 5 Grade R & 1 Teacher A1 - Type 2B - 4 Boys A6 - Type 2D - 1M, 3F & 2 Teacher AD - Type 8A-F - 8 Girls <u>MODEL PREAMBLES</u> The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates <u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary products in descriptions:</u> Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior approval by the Principal Agent. <u>Waterproofing</u> Complete pit sealing/waterproofing from seepage due to underground water ingress as result of high water table, perched water tables etc			
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Section 2 Bill No. 4 Waterproofing BMG COST CONSULTANTS			

Contractor to provide water proofing product that will be 100% resistant to extreme hydrostatic pressure at depth of 2m, from the positive (water from inside) of substrate. Resistant to aggressive chemicals i.e oil, salt water, sewage, weak acids and aggressive sulphate soils. The product must be able to withstand backfilling without protection and must not be subject to deterioration. The product must be able to ensure that the pit structure is fully sealed (100% free from water ingress from outside and it will not penetrate the pit).

The product and its methodology for application must be approved by Principal Agent before it is used.

It is a mandatory requirement for the Contractor to attend training to be provided by Supplier. Proof of attendance will be required prior to application of the approved waterproofing product.

Contractor must prepare a 1m x 1m sample in the presence of the Principal Agent or Engineer. In this case, the Contractor must give at least 48 hours notice prior to the date when the application of the waterproofing product is intended to be done.

Contractor to provide a Letter of Compliance confirming that waterproofing has been applied as per Manufacturer's instructions and data sheet.

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Waterproofing
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DAMPPROOFING OF WALLS AND FLOORS

One layer of 250 micron 'USB GREEN' waterproof sheeting sealed at laps with 'Gunplas Pressure Sensitive Tape':

1	Under surface beds, bases, etc.	m2	103
	A0 : 35 A1 : 14 A6 : 25 AD : 29		
	E : 0 M : 0		

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

2	Below walls, sills, etc.	m2	4
	A0 : 1 A1 : 1 A6 : 1 AD : 1		
	E : 0 M : 0		

JOINT SEALANTS ETC

Clear Neutral silicone sealant:

3	In joint sealing and pointing all round external window and door frames.	m	169
	A0 : 40 A1 : 35 A6 : 50 AD : 44		
	E : 0 M : 0		

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

4	10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary (Provisional).	m	295
	A0 : 61 A1 : 34 A6 : 110 AD : 91		
	E : 0 M : 0		

WATERPROOFING TO PIT WALLS

Waterproofing product to plastered walls, subject to approval by the Principal Agent prior to application.

5	On plastered wall surfaces including 100mm overlap at the base slab	m2	177
	A0 : 81 A1 : 54 A6 : 21 AD : 21		
	E : 0 M : 0		

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Waterproofing

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Item No	Quantity	Rate	Amount
<u>SECTION 4</u> <u>BILL No. 5</u> <u>ROOF COVERINGS</u> <u>Quantity Split:</u> Note that the total quantity per each item is split into the various buildings and appears below each description as follows: A0 - Type A4 - 5 Grade R & 1 Teacher A1 - Type 2B - 4 Boys A6 - Type 2D - 1M, 3F & 2 Teacher AD - Type 8A-F - 8 Girls <u>MODEL PREAMBLES</u> The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates <u>SUPPLEMENTARY PREAMBLES</u> <u>Flashings</u> Flashings shall be approved by roof sheeting manufacturer and fixed to the sheeting with S10 clips to obviate any direct fixing perforations. Prior to flashings being fixed, all troughs at the apex shall be stop-ended to the full depth of the sheet in order to prevent any penetration of wind driven water. The trough shall be lipped at the eaves end to form a drip. Flashing flanges shall be notched to the sheet profile where necessary. All these operations must be performed with special tools available from the manufacturer. Care shall be taken to ensure that no sheeting or flashing will be cut with abrasive disc on roof surface in order to prevent steel splatter from penetrating colour coated areas. The flashings shall be supplied with a paint finish consisting of a full top coat silicon modified polyester Colour : White to one side			
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Quality Assurance

The manufacturer shall be assessed and certified as complying with ISO 9001: 2008 Quality Management System

Guarantee

Z200 Galvanized Metal or equal approved sheeting shall be laid in strict accordance with manufacturer's specifications by an approved contractor. The employer shall be provided with a ten year written guarantee on materials by the manufacturer.

Safety

The contractor shall exercise special care when handling long length sheeting, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting and incomplete sections must be adequately secured against possible movement by wind and gravity

Handling and Storage

The contractor shall ensure that all materials used on site for cladding, etc are transported, handled and stored in accordance with the manufacturer's recommendations. Material damaged shall be rejected and replaced with undamaged material at the contractor's expense. Repair of damaged material will not generally be permitted. Rates are to include for preventing damage and protecting sheets through all stages of construction

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Inspection Prior to Installation or Erection

Before commencing with installation, the contractor shall verify that the following items have been checked and accepted:

- a. The entire structure or the portion thereof to be sheeted has been correctly aligned, levelled and grouted
- b. Purlins and sheeting rails are at the correct spacing and are within the specified tolerances
- c. The corners of the roof are square and the wall framework is perpendicular or as specified
- d. No protrusions such as bolt heads, splice plates, cleats, etc. appear on the face of the framework
- e. All members to which roofing and cladding are to be fixed in aesthetically sensitive areas are true and square
- f. Paint and any other materials that may be incompatible with the sheeting, have been painted over or so dealt with that direct contact with the sheeting is avoided
- g. The contact faces between the purlins or the girts and the cladding are in the same plane. Should the alignment be inadequate, the contractor shall request instructions from the engineer before proceeding with the fixing of the cladding

Protrusion through Sheeted Surfaces

Protrusions such as pipes, ducts and the like, shall be adequately flashed where they pass through the sheeting surface. Where ribs have to be cut away to permit penetration, additional framing is to be installed as required to support the sheeting. Depending on the position of the penetration through the roof, special attention shall be given to back flashing the sheeting to the ridge or point of water entry. In all cases, all cutting and flashings shall be so arranged that adequate provision is made for the drainage of all troughs and corrugation

Cleaning of Roofs, etc

All debris, etc arising from the fixing of the cladding shall be removed from the sheetin as the fixing progresses. In addition, off-cuts of insulation, surplus fastners and sealants, mandrels from pop rivets, off-cuts of flashings and sheeting, surplus flashing, food packaging, cartons, bottles, cans, etc shall not be left on the roof or in the gutters. Care shall be taken to ensure that no such material enters, blocks or partially impedes the flow of water into the outlets, downpipes, etc

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ROOF COVERINGS

PROFILED METAL SHEETING AND ACCESSORIES

0.58mm Thick Z200 "IBR Profile" galvanised metal roof sheeting, in single sheet lengths, with "Chromadek" finish to external face and standard backing coat to internal face :

1	Roof sheeting laid to a mono-pitch.	m2	233		
	A0 : 40 A1 : 57 A6 : 77 AD : 59				
	E : 0 M : 0				

0.58mm Flashings pre-painted to match roof sheeting and fixed in strict accordance with manufacturer's instructions:

2	Mono pitched ridge capping with 225mm lapping secured onto the roof.	m	78		
	A0 : 16 A1 : 22 A6 : 23 AD : 17				
	E : 0 M : 0				

ROOF AND WALL INSULATION

"Sisalation Grade FR430" or equal approved heavy industrial insulation

3	Insulation laid taut over roof trusses (at approximately 100mm centres) and fixed concurrent with SA Pine purlins at 900mm centres, etc including galvanised steel straining wires	m2	233		
	A0 : 40 A1 : 57 A6 : 77 AD : 59				
	E : 0 M : 0				

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<u>SECTION 4</u> <u>BILL No. 6</u> <u>CARPENTRY & JOINERY</u> <u>Quantity Split:</u> Note that the total quantity per each item is split into the various buildings and appears below each description as follows: A0 - Type A4 - 5 Grade R & 1 Teacher A1 - Type 2B - 4 Boys A6 - Type 2D - 1M, 3F & 2 Teacher AD - Type 8A-F - 8 Girls <u>MODEL PREAMBLES</u> The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates <u>SUPPLEMENTARY PREAMBLES</u> <u>FIXING</u> All nailing of timber roof rafters, purlins, etc shall be done with galvanised nails. In coastal areas, copper, aluminium or stainless steel nails shall be used.			
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ROOFS

**PLATE NAILED TIMBER ROOF TRUSS
CONSTRUCTION ETC**

Sawn softwood:

1	38 x 152mm Wall plate. A0 : 32 A1 : 44 A6 : 45 AD : 34 E : 0 M : 0	m	155		
2	Design, supply and erect the complete double pitch roof structure to new building (approx. 40m ² on flat) including purlins, braces, battens, gangboarding, wall plates, roof ties, gusset plates, bolts, etc (Type 2B) A0 : 1 A1 : 0 A6 : 0 AD : 0 E : 0 M : 0	No	1		
3	Design, supply and erect the complete double pitch roof structure to new building (approx. 29m ² on flat) including purlins, braces, battens, gangboarding, wall plates, roof ties, gusset plates, bolts, etc (Type 2B) A0 : 1 A1 : 0 A6 : 0 AD : 0 E : 0 M : 0	No	1		
4	Design, supply and erect the complete double pitch roof structure to new building (approx. 80m ² on flat) including purlins, braces, battens, gangboarding, wall plates, roof ties, gusset plates, bolts, etc (Type 2D) A0 : 0 A1 : 0 A6 : 1 AD : 0 E : 0 M : 0	No	1		
5	Design, supply and erect the complete double pitch roof structure to new building (approx. 59m ² on flat) including purlins, braces, battens, gangboarding, wall plates, roof ties, gusset plates, bolts, etc (Type 2D) A0 : 0 A1 : 0 A6 : 0 AD : 1 E : 0 M : 0	No	1		
6	Take delivery, temporary store, hoist in position and erect plate nailed timber roof trusses, purlins, gangboarding, temporary and permanent bracing, etc (measured on slope of roof) A0 : 40 A1 : 57 A6 : 80 AD : 59 E : 0 M : 0	m2	236		

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<u>Sundries:</u>					
7	Two coats creosote on wall plate and exposed roof timbers A0 : 40 A1 : 57 A6 : 80 AD : 59 E : 0 M : 0	m2	236		
<u>EAVES, VERGES, ETC</u>					
<u>"Everite Nutec" or equal approved fibre cement</u>					
8	12 x 225mm Fascia board drilled and brass screwed to rafter feet including galvanised steel H-profile jointing strips, etc. A0 : 16 A1 : 22 A6 : 23 AD : 17 E : 0 M : 0	m	78		
9	85 x 275 x 6mm Barge board drilled and brass screwed to purlin ends including galvanised steel H-profile jointing strips, screws, holes, etc. A0 : 20 A1 : 42 A6 : 21 AD : 21 E : 0 M : 0	m	105		
<u>DOORS ETC</u>					
<u>SANS Approved meranti:</u>					
10	44mm Framed, ledged, and battened single door with flush ply panel internally size 813 x 2032mm high comprising 44 x 110mm top rail and stiles, 44 x 220mm bottom rail, 44 x 150mm lock rail and 22 x 70mm vertical "v" jointed boards (D1). A0 : 5 A1 : 6 A6 : 6 AD : 8 E : 0 M : 0	No	25		
11	44mm Framed, ledged, and battened single door with flush ply panel internally size 950 x 2032mm high comprising 44 x 110mm top rail and stiles, 44 x 220mm bottom rail, 44 x 150mm lock rail and 22 x 70mm vertical "v" jointed boards (D2). A0 : 1 A1 : 4 A6 : 2 AD : 0 E : 0 M : 0	No	7		
12	44mm Braced and ledged door size 862 x 1000mm (D3). A0 : 5 A1 : 0 A6 : 0 AD : 0 E : 0 M : 0	No	5		
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FRAMED FRAMES, ETC

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

13	70 x 108mm rebated meranti frame .	m	122
	A0 : 24 A1 : 29 A6 : 29 AD : 39		
	E : 0 M : 0		

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

14	70 x 108mm rebated meranti frame .	m	25
	A0 : 15 A1 : 0 A6 : 10 AD : 0		
	E : 0 M : 0		

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Carpentry and Joinery

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Carpentry and Joinery

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Item No	Quantity	Rate	Amount
<u>SECTION 4</u> <u>BILL No. 7</u> <u>IRONMONGERY</u> <u>Quantity Split:</u> Note that the total quantity per each item is split into the various buildings and appears below each description as follows: A0 - Type A4 - 5 Grade R & 1 Teacher A1 - Type 2B - 4 Boys A6 - Type 2D - 1M, 3F & 2 Teacher AD - Type 8A-F - 8 Girls <u>MODEL PREAMBLES</u> The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates <u>SUPPLEMENTARY PREAMBLES</u> <u>Keys/Locks</u> Each lock is to be distinctly numbered with consecutive numbers and each key is to be stamped with the corresponding number to the lock that it controls. All locks are to have two keys <u>Trade Names</u> Where trade names are specified other ironmongery approved by the Principal Agent may be used <u>Fixing</u> Fixing of ironmongery is deemed to be fixed to timber unless otherwise described			
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Section 2 Bill No. 7 Ironmongery BMG COST CONSULTANTS			

HINGES:

1	75 x 100mm Brass Medium duty ball bearing HMP butt hinges.	Pairs	33.0		
	A0 : 11.0 A1 : 6.0 A6 : 8.0 AD : 8.0				
	E : 0.0 M : 0.0				

LOCKS

2	"UNION 2277-78SS" or equal approved three lever sash mortice lockset.	No	28		
	A0 : 6 A1 : 6 A6 : 8 AD : 8				
	E : 0 M : 0				

3	"UNION w/c indicator bolt satin chrome - Code CZ80941SC	No	5		
	A0 : 5 A1 : 0 A6 : 0 AD : 0				
	E : 0 M : 0				

"Union" or similar"

4	50mm Padlock with two keys	No	10		
	A0 : 2 A1 : 2 A6 : 4 AD : 2				
	E : 0 M : 0				

HANDLES

5	"Dorma DPH301B" or equal approved Stainless Steel Straight Tubular Pull handle flange fixing.	No	28		
	A0 : 6 A1 : 6 A6 : 8 AD : 8				
	E : 0 M : 0				

Sundries:

6	38mm Diameter black rubber door stop plugged and screwed to wall.	No	33		
	A0 : 11 A1 : 6 A6 : 8 AD : 8				
	E : 0 M : 0				

SIGN PLATES:

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

7 Sign plate plugged and screwed to walls with chromium
plated dome headed screws.

No

28

A0 : 6 A1 : 6 A6 : 8 AD : 8
E : 0 M : 0

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SUNDRIES

Halcast or equal approved"

8	Thiefproof toilet roll holder plugged.	No	24		
	A0 : 6 A1 : 4 A6 : 6 AD : 8				
	E : 0 M : 0				

Grade 304 stainless steel ware:

9	32mm outside diameter x 1,6mm thick tubular wall mounted side stainless steel grab rail 1,06m girth with two 45 degree and two 90 degree formed bends and each end fitted with 80mm diameter x 5mm thick flange welded on and four times countersunk holed for and plugged and screwed to wall with stainless steel crews.	No	3		
	A0 : 1 A1 : 0 A6 : 2 AD : 0				
	E : 0 M : 0				

10	32mm outside diameter x 1,6mm thick tubular wall mounted around cistern back stainless steel grab rail 1,23m girth with two 90 degree formed bends and each end fitted with 80mm diameter x 5mm thick flange welded on and four times countersunk holed for and plugged and screwed to wall with stainless steel crews.	No	3		
	A0 : 1 A1 : 0 A6 : 2 AD : 0				
	E : 0 M : 0				

Satin Grey Plastics or equal approved

11	"Satin plastic N-SBIN-12-SA SHE Bin size 463 x 140 x 480mm, floor standing loose.	No	10		
	A0 : 2 A1 : 4 A6 : 2 AD : 2				
	E : 0 M : 0				

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	<u>SECTION 4</u> <u>BILL No. 8</u> <u>METALWORK</u> <u>Quantity Split:</u> Note that the total quantity per each item is split into the various buildings and appears below each description as follows: A0 - Type A4 - 5 Grade R & 1 Teacher A1 - Type 2B - 4 Boys A6 - Type 2D - 1M, 3F & 2 Teacher AD - Type 8A-F - 8 Girls <u>MODEL PREAMBLES</u> The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates <u>SUPPLEMENTARY PREAMBLES</u> The Contractor is to check and verify on site that the item specified in the BoQ matches existing prior to placing orders. Additional costs will not be borne by the client for items that do not match existing and are not approved by the Principal Agent <u>GALVANISED MILD STEEL GATES, SCREENS, ETC.</u> <u>Note: The contractor is to check on site measurements before placing of order.</u> <u>Welded gate and frame</u>			
1	Single gate 900 x 2250mm high of 20mm steel tubing and fitted with a pair of suitable hinges welded to post and with ears for padlock A0 : 2 A1 : 2 A6 : 4 AD : 2 E : 0 M : 0	No	10	
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GALVANISED PRESSED STEEL DOOR FRAMES

1,2mm Rebated frames suitable for one brick walls

2	Frame for door 813 x 2032mm high	No	25		
	A0 : 5 A1 : 6 A6 : 6 AD : 8				
	E : 0 M : 0				
3	Frame for door 950 x 2032mm high	No	3		
	A0 : 1 A1 : 0 A6 : 2 AD : 0				
	E : 0 M : 0				

GALVANISED STEEL WINDOWS, DOORS, ETC

Purpose made steel windows with 8mm burglar bars to opening sashes

4	Window (W01) overall size 889 x 457mm high	No	12		
	A0 : 4 A1 : 2 A6 : 4 AD : 2				
	E : 0 M : 0				

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Section 2
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Metalwork
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Metalwork

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Metalwork

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15mm thick of 1:4 sand cement plaster with Coprox masonry waterproofing or equal approved waterproof cement additive. Add 2.5kg Coprox waterproof cement additive for every 50kg of cement used in plaster mix

3	On walls.	m2	410				
	A0 : 68 A1 : 132 A6 : 112 AD : 98						
	E : 0 M : 0						
4	On walls in pit	m2	372				
	A0 : 69 A1 : 68 A6 : 125 AD : 110						
	E : 0 M : 0						

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Plastering
BMG COST CONSULTANTS

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Plastering

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Plastering

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	<u>SECTION 4</u>			
	<u>BILL No. 10</u>			
	<u>PLUMBING AND DRAINAGE</u>			
	<u>(PROVISIONAL)</u>			
	<u>Quantity Split:</u>			
	Note that the total quantity per each item is split into the various buildings and appears below each description as follows:			
	A0 - Type A4 - 5 Grade R & 1 Teacher			
	A1 - Type 2B - 4 Boys			
	A6 - Type 2D - 1M, 3F & 2 Teacher			
	AD - Type 8A-F - 8 Girls			
	<u>MODEL PREAMBLES</u>			
	The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates			
	<u>RAINWATER GOODS:</u>			
	<u>uPVC gutters and rainwater pipes</u>			
1	110mm Half-round roof gutters	m	78	
	A0 : 16 A1 : 22 A6 : 23 AD : 17			
	E : 0 M : 0			
2	Extra over gutter for stopped end	No	10	
	A0 : 2 A1 : 4 A6 : 2 AD : 2			
	E : 0 M : 0			
3	Extra over gutter for outlet for 110mm pipe	No	10	
	A0 : 2 A1 : 4 A6 : 2 AD : 2			
	E : 0 M : 0			
4	75mm Diameter rainwater pipes	m	14	
	A0 : 4 A1 : 6 A6 : 2 AD : 2			
	E : 0 M : 0			
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	Plumbing and Drainage (Provisional)			
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5	Extra over rainwater pipe for bend A0 : 4 A1 : 8 A6 : 4 AD : 4 E : 0 M : 0	No	20		
6	Extra over rainwater pipe for swan-neck A0 : 1 A1 : 2 A6 : 1 AD : 1 E : 0 M : 0	No	5		
<u>CONCRETE STORMWATER CHANNELS</u>					
7	25Mpa concrete open surface water channel 900m wide x 150mm thick reinforced with Ref 193 mesh reinforcement cast in 2m alternate panels with V-shaped channel 900 x 50mm deep formed in same, including all excavations, trimming and levelling of ground surfaces, compaction, filling, formwork, floating, etc A0 : 14 A1 : 39 A6 : 33 AD : 31 E : 0 M : 0	m	117		
8	Extra over for angles, intersections, ends, dressing into sides of catchpits,etc A0 : 4 A1 : 8 A6 : 4 AD : 4 E : 0 M : 0	No	20		
<u>TAPS, VALVES, ETC</u>					
<u>Solid Cast brass taps, valves, etc:</u>					
9	"Cobra KM2-200"or other approved 15mm chrome plated metered bib tap with non-hold open feature and flow controller. A0 : 12 A1 : 8 A6 : 8 AD : 10 E : 0 M : 0	No	38		
10	15mm Ball-o-stop valve. A0 : 6 A1 : 8 A6 : 6 AD : 5 E : 0 M : 0	No	25		
<u>WASTE UNIONS ETC</u>					
<u>Outlets, traps, etc:</u>					
11	40mm 342/50 CP bottle trap. A0 : 6 A1 : 4 A6 : 2 AD : 5 E : 0 M : 0	No	17		

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Section 2
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Plumbing and Drainage (Provisional)
BMG COST CONSULTANTS

12	40mm Code 316 chrome plated unslopped waste outlet. A0 : 6 A1 : 4 A6 : 4 AD : 5 E : 0 M : 0	No	19
13	40mm Rubber "P" or "S" trap A0 : 6 A1 : 4 A6 : 4 AD : 5 E : 0 M : 0	No	19
<u>SANITARY FITTINGS</u>			
<u>Atlas Plastic or similar approved and installed according to manufactures specification</u>			
14	VIP 200 low level floor mounted WC pedestal (code: 222AP) complete with flap and incorporated seat A0 : 6 A1 : 4 A6 : 0 AD : 0 E : 0 M : 0	No	10
<u>Rust and corrosion resistant, UV-resistant polyethylene pedestals, urinals, basins, etc. Product and colour to Principal Agent's approval:</u>			
15	VIP 450 Pit pedestal complete with integral flap four times plugged to floor with and including 6 x 75mm masonry anchors. A0 : 1 A1 : 4 A6 : 6 AD : 8 E : 0 M : 0	No	19
16	Bambi Longdrop VIP Pit pedestal for children complete with C/W flap. size: 282 x 360 x 300mm. A0 : 5 A1 : 0 A6 : 0 AD : 0 E : 0 M : 0	No	5
<u>Vaal or equal approved:</u>			
17	Lavatera White Vitreous china wall mounted bowl urinal with top inlet [code: 704001] 610x385mm, supplied with 38mm chromium plated domical grating [code: 8787], chromium plated spreader [code: 8543], and two hanger brackets [code: 8127] A0 : 0 A1 : 4 A6 : 2 AD : 0 E : 0 M : 0	No	6

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18	Hibiscus White Vitreous china 510 x 405mm rounded basin [code: 7050] with one tap hole on left hand side, including integrated overflow, bolted to wall with two 8mm bolts [code 8448Z0], to manufacturer's specification.	No	10		
	A0 : 6 A1 : 4 A6 : 0 AD : 0 E : 0 M : 0				
	<u>Franke Model TU101 or equal approved flush valve/cistern flat back wall mounted urinal:</u>				
	<u>SANITARY PLUMBING</u>				
	<u>PVC waste or vent pipes and fittings:</u>				
19	50mm Waste pipe.	m	19		
	A0 : 6 A1 : 4 A6 : 4 AD : 5 E : 0 M : 0				
20	110mm Pipe and laying in ground or filling not exceeding 2m deep including excavation, filling in and ramming.	m	27		
	A0 : 9 A1 : 6 A6 : 3 AD : 9 E : 0 M : 0				
21	110mm Vent pipe fixed to wall with proprietary brackets at not exceeding 500mm centres.	m	96		
	A0 : 24 A1 : 16 A6 : 24 AD : 32 E : 0 M : 0				
	<u>uPVC gulleys</u>				
22	200mm Precast concrete gully dish and uPVC lowback assembly complete with 110mm P trap gulley (code UGB 40) including 190mm diameter head (code UGA 40) and grate (code UGG 40), not exceeding 750mm deep, jointed to 110mm drain pipe, including excavations for and encasing in concrete (15MPa crushing strength after 28 days) worked up to form kerb, finished smooth on top in 1:3 cement mortar.	No	5		
	A0 : 1 A1 : 2 A6 : 1 AD : 1 E : 0 M : 0				
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34	22mm Pipe chased into brick walls. A0 : 19 A1 : 35 A6 : 27 AD : 27 E : 0 M : 0 <u>Extra over polycop pipes for compression fittings:</u>	m	108
35	15mm Fittings. A0 : 18 A1 : 24 A6 : 39 AD : 39 E : 0 M : 0	No	120
36	22mm Fittings. A0 : 10 A1 : 28 A6 : 33 AD : 33 E : 0 M : 0 <u>TESTING</u>	No	104
37	Testing water supply system <u>TANKS, ETC</u> <u>Jo-jo or similar approved</u>	Item	
38	5000 litre Low profile water tank with and including 4mm galvanised wire looped double to top of tank and anchored to top of slab with Y10 rod cast into slab at all four corners, including 15mm standard garden hose to isolate wire and prevent damage to tank or other approved holding down material secured around tank and to concrete pedestal A0 : 1 A1 : 2 A6 : 1 AD : 1 E : 0 M : 0	No	5
39	3mm Thick galvanised plate with and including 23mm hole to be bolted onto edge of concrete slab with 2 x 8mm raw bolts A0 : 1 A1 : 2 A6 : 1 AD : 1 E : 0 M : 0	No	5
40	20mm "Cobra" 541 tank locking tap fitted to a 22mm extension pipe with barrel nipple and galvanised socket A0 : 1 A1 : 2 A6 : 1 AD : 1 E : 0 M : 0	No	5

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Section 2
Bill No. 11
Glazing
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Item No		Quantity	Rate	Amount
	<u>SECTION 4</u> <u>BILL No. 12</u> <u>PAINTWORK</u> <u>Quantity Split:</u> Note that the total quantity per each item is split into the various buildings and appears below each description as follows: A0 - Type A4 - 5 Grade R & 1 Teacher A1 - Type 2B - 4 Boys A6 - Type 2D - 1M, 3F & 2 Teacher AD - Type 8A-F - 8 Girls <u>MODEL PREAMBLES</u> The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates <u>SUPPLEMENTARY PREAMBLES</u> <u>Trade Names</u> Where trade names are specified it will read "or equal approved" <u>Epoxy paint</u> The product and its methodology for application must be approved by Principal Agent before it is used. Contractor must prepare a 1m x 1m sample in the presence of the Principal Agent. In this case, the Contractor must give at least 48 hours notice prior to the date when the application of the epoxy paint is intended to be done. Contractor to provide a Letter of Compliance confirming that epoxy paint has been applied as per Manufacturer's instructions and data sheet. Proof of payment for the epoxy paint must be provided to the Principal Agent once approval has been granted.			
	Carried to Collection Section 2 Bill No. 12 Paintwork BMG COST CONSULTANTS		R	

PAINTWORK ETC TO NEW WORK

ON INTERNAL FLOATED PLASTER SURFACES

One coat PVA undercoat and two coats acrylic eggshell paint

1	On wall	m2	410		
	A0 : 68 A1 : 132 A6 : 112 AD : 98				
	E : 0 M : 0				

2-4mm Polyurethane epoxy floor coating on min 25mm screed to manufacturer's specifications and instruction

2	On floors	m2	411		
	A0 : 81 A1 : 40 A6 : 150 AD : 140				
	E : 0 M : 0				

ON WOOD

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

3	On doors	m2	110		
	A0 : 31 A1 : 21 A6 : 29 AD : 29				
	E : 0 M : 0				

4	On door frames	m2	33		
	A0 : 9 A1 : 7 A6 : 9 AD : 9				
	E : 0 M : 0				

Prepare and apply two coats carbolenium on:

5	On exposed timbers.	m2	111		
	A0 : 20 A1 : 29 A6 : 49 AD : 13				
	E : 0 M : 0				

ON METAL

Spot priming defects in pre primed surfaces with zinc chromate primer and applying one undercoat and two coat high gloss enamel paint on steel

6	On steel door frames	m2	36		
	A0 : 8 A1 : 8 A6 : 10 AD : 11				
	E : 0 M : 0				

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Paintwork

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7	On steel gates (measured flat) A0 : 7 A1 : 8 A6 : 15 AD : 7 E : 0 M : 0 <u>ON FIBRE-CEMENT</u> <u>Prepare and apply two coats pure acrylic roof paint on:</u>	m2	37
8	On fascias and barge boards. A0 : 9 A1 : 15 A6 : 11 AD : 10 E : 0 M : 0 <u>ON PVC VENT PIPE</u> <u>Prepare and apply two coats black PVA paint:</u>	m2	45
9	Vent Pipes A0 : 23 A1 : 15 A6 : 23 AD : 30 E : 0 M : 0	m2	91

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Paintwork
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SECTION SUMMARY - BUILDING WORKS

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Earthworks (Provisional)

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Concrete, Formwork and Reinforcement

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Masonry

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Waterproofing

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Roof Coverings Etc.

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	<u>SECTION No. 5</u>			
	<u>BILL No. 1</u>			
	<u>EXTERNAL WORKS (PROVISIONAL)</u>			
	<u>MODEL PREAMBLES</u>			
	The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates			
	<u>SOAKAWAY</u>			
	<u>NOTE: Base of soakaway to be level throughout</u>			
1	Excavation in earth not exceeding 1m deep for soakaway trenches	m3	42	
2	19mm Crushed stone encasing to pipes	m3	29	
3	Backfilling and compaction to 98% Mod. AASHTO density	m3	13	
4	U14 Bidum geotextile or similar approved filter blanket wrapped around stone encasing with side and end laps including stitching	m2	140	
5	110mm Slotted HDPe pipes laid in stone encas	m	70	
	<u>THE FOLLOWING IN WALKWAYS</u>			
	<u>Excavation not exceeding 2m deep</u>			
6	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	34	
	<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>			
7	Off site to a dumping site to be found by the Contractor.	m3	34	
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	<u>Precast or in situ mass concrete (25 MPa - 19 mm stone) kerbs cast in convenient lengths with exposed faces finished smooth from the mould and all salient angles rounded, jointed and pointed in 1:3 cement mortar, including excavations, formwork, etc.</u>				
14	Figure 8B (300 x 275 x 175mm) semi mountable kerb laid in lengths not exceeding 1000mm on a well rammed earth bottom or base course.	m	150		
	<u>WATER TANKSTANDS</u>				
15	Prepare and provide water tank stand with raft foundation reinforced with Ref 193,150mm G6 layers, concrete to be 20Mpa 20/19aggregate and cememnt mortar all around supporting water tank, including all earth works, all in accordance with Architects specification.	No	4		
	<u>THE FOLLOWING IN SECURITY FENCING, ETC</u>				
	<u>Galvanised mild steel fence with bitumen-aluminium painted (two coats) steel pipe posts, stays, gates, etc including galvanised steel bolts, straining eye bolts, etc, site clearance and preparation of ground</u>				
16	Fencing 1 800mm high of 4 strands of galvanised twisted double strand 1.6mm straining wire tied to posts and eye bolts and covered with 50 x 50 x 2.5mm welded wire mesh tied at 150mm centres to each straining wire including 50mm diameter intermediate posts 1500mm long at not exceeding 3000mm centres	m	50		
17	Continuous razor wire security roll to top of fence flat wrapped in 700mm diameter rings, tied together and to straining wire at 150mm centres	m	50		
18	50mm Diameter inclined stay 1 800mm long, including caps, base plates, concrete base, etc	No	20		
19	100mm Diameter straining or corner post 1800mm long, including caps, base plates, concrete base, etc	No	6		
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20	Gate 1 350mm x 1 800mm high of 50mm diameter framing covered with 50 x 50 x 2.5mm welded wire mesh tied at 150mm centres and steel security spikes screwed to top of gate, including hinges, heavy duty lockable barrel bolt and 63mm brass five-pin tumbler padlock	No	1		
	<u>PADLOCKS</u>				
21	Supply 50 mm "Viro" Padlocks and Keys (or equal approved)	No	1		
	<u>THE FOLLOWING IN WALKWAYS</u>				
	<u>Excavation not exceeding 2m deep</u>				
22	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	30		
	<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>				
23	Off site to a dumping site to be found by the Contractor.	m3	30		
	<u>Filling supplied by the contractor under walkways</u>				
24	G7 Base course material compacted to 98% Mod AASHTO density	m3	36		
25	Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.	m3	120		
	<u>Rip and Re - compact insitu material on site compacted to 93% Mod. AASHTO density:</u>				
26	Under floors,etc.	m2	60		
	<u>Prescribed density tests on filling:</u>				
27	In-situ dry density test.	No	6		
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	<u>Approved brand of anti-termite soil poison applied by a Registered Pest Control Company and guaranteed against termite infestation for ten years:</u>				
28	Treat filling under paving with 'Chlordane Heptachlor Aldrin' or equal approved.	m2	60		
	<u>Concrete Paving Blocks</u>				
	<u>Paving of 50mm thick 200x100mm 25MPa Bevel Bond paver blocks grey in colour in herringbone pattern on and including 20mm thick sand bed with dry filler sand swept and vibrated into joints all laid on subgrade (elsewhere measured) conforming to SABS 1200D degree of accuracy I:</u>				
29	Paving to walkway areas, etc laid to falls.	m2	60		
30	Extra over ordinary paving for 200mm wide block-on-flat header course edging on 100mm thick mortar bed including unreinforced concrete haunching along outside edge.	m	100		
	<u>Kerbing</u>				
	<u>Precast or in situ mass concrete (25 MPa - 19 mm stone) kerbs cast in convenient lengths with exposed faces finished smooth from the mould and all salient angles rounded, jointed and pointed in 1:3 cement mortar, including excavations, formwork, etc.</u>				
31	Figure 8B (300 x 275 x 175mm) semi mountable kerb laid in lengths not exceeding 1000mm on a well rammed earth bottom or base course.	m	100		
	<u>THE FOLLOWING IN STORMWATER DRAINAGE, APRONS ETC.</u>				
	<u>STORMWATER APRONS</u>				
	<u>Excavation not exceeding 2m deep</u>				
32	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	25		
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	<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>				
33	Off site to a dumping site to be found by the Contractor.	m3	25		
	<u>Filling supplied by the contractor under floors, aprons, etc</u>				
34	G7 Base course material compacted to 98% Mod AASHTO density	m3	30		
	<u>Compaction of surfaces:</u>				
35	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density.	m2	50		
	<u>Reinforced 25Mpa/19mm Concrete:</u>				
36	Surface beds cast in panels on waterproofing.	m3	5		
37	Edge thickening	m3	5		
	<u>Finishing top surfaces of concrete smooth with a wood float:</u>				
38	Surface beds, slabs, etc to falls and currents.	m2	50		
	<u>Test blocks:</u>				
39	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	1		
	<u>Expansion joints with bitumen impregnated softboard between vertical concrete or brick surfaces:</u>				
40	12mm Joints not exceeding 300mm high.	m	50		
	<u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u>				
41	10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary.	m	50		
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	<u>Fabric reinforcement:</u>				
42	REF. 395 fabric reinforcement in concrete surface beds, slabs, etc.	m2	50		
	<u>Waterproofing under Surface beds</u>				
43	350 Micron USB orange polyethylene dampproof membrane in accordance with SABS 952 Type C laid on sand bed (elsewhere measured).	m2	50		
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THE FOLLOWING IN HEADWALLS

44	Excavation not exceeding 2m deep.	m3	120
45	Risk of collapse not exceeding 1,5m deep	m2	240
46	Keeping excavations free from water		Item
47	Carting away surplus excavated material	m3	120
48	150mm layer of G7 material compacted to 95% MOD AASHTO under concrete slab.	m3	55
49	150mm layer of G5 material compacted to 95% MOD AASHTO under concrete slab.	m3	55
50	25Mpa/19mm Reinforced concrete in bottom slabs and footings.	m3	35
51	Formwork to edges, risers, ends and reveals not exceeding 300mm wide or high.	m	405
52	Weld Mesh Ref 193 in Concrete bottom slab.	m2	120
53	One brick wall of 14 MPa NFX bricks.	m2	125
54	230mm Wide reinforcement built in horizontally.	m	208
55	Plaster on brick walls.	m2	125
56	Gabion mattress comprising of 20 to 30mm stones wrapped in A3 geotextile with voids filled with 1:3 cement/sand mortar.	m2	125

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**ENSELENI PRIMARY SCHOOL
IDTKZN SANITATION PROGRAM**

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SECTION A: PRINCIPAL BUILDING AGREEMENT

DEFINITIONS

Definitions and interpretation (Clause 1).

1 F: V: T:

Item

OBJECTIVE AND PREPARATION

Offer, acceptance and performance (Clause 2).

2 F: V: T:

Item

Documents (Clause 3).

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

Clause 3.3 is deleted and substituted with:

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

3 F: V: T:

Item

Design responsibility (Clause 4).

4 F: V: T:

Item

Employer's agents (Clause 5).

5 F: V: T:

Item

Site representative (Clause 6).

6 F: V: T:

Item

Compliance with regulations (Clause 7).

7 F: V: T:

Item

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Preliminaries

BMG COST CONSULTANTS

	Works risk (Clause 8)			
8	F: V: T: Indemnities (Clause 9). Clause 9.1.1 is deleted and substituted with: Claims from other parties consequent upon death of bodily injury or illness of any person or physical loss or damage to any property, other than the works, arising out or due to the execution of the works or occupation of the site by the contractor or his sub contractors'.	Item		
9	F: V: T: Works insurances (Clause 10).	Item		
10	F: V: T: Liability insurances (Clause 11).	Item		
11	F: V: T: Effecting insurances (Clause 12).	Item		
12	F: V: T: State Provisions (Clause 13).	Item		
13	F: V: T: Security (Clause 14).	Item		
14	F: V: T: <u>EXECUTION</u> Preparation for and execution of the works (Clause 15).	Item		
15	F: V: T: Access to the works (Clause 16).	Item		
16	F: V: T:	Item		
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	Contract instructions (Clause 17).			
17	F: V: T: Setting out of the works (Clause 18.3). The contractor shall notify the principal agent if any encroachments of adjoining foundations, buildings, structures, pavements, boundaries, etc., exist in order that the necessary arrangements may be made for the rectification of any such encroachments. Should incorrect information be given to the contractor in terms of 18.1 and 18.2, which causes the incorrect setting out of the works, the contractor shall not be liable for such incorrect setting out.	Item		
18	F: V: T: Assignment (Clause 19).	Item		
19	F: V: T: Nominated subcontractors (Clause 20).	Item		
20	F: V: T: Selected subcontractors (Clause 21).	Item		
21	F: V: T: Employer's Direct contractors (Clause 22).	Item		
22	F: V: T: Contractor's Domestic subcontractors (Clause 23).	Item		
23	F: V: T: <u>COMPLETION</u> Practical completion (Clause 24).	Item		
24	F: V: T: Works completion (Clause 25).	Item		
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25	F: V: T: Final completion (Clause 26). Latent defects liability period (Clause 27). Clause 27.0 is amended by the addition of the following clauses: "27.3 Any water leakage into the building, whether in the roof, external wall or other element of the building susceptible to water leakage shall, unless proven to be a design defect, or as a result of obvious storm damage, be classified as a latent defect in terms of clause 1.0 Definitions and Interpretations". "27.4 The Contractor shall attend to defects during the Defects Liability Period on a progressive basis, to the satisfaction of the Principal Agent and will not be permitted to wait until the end of the Defect Liability Period or until the amount of defects accumulates in order to attend to a comprehensive list of defects"	Item		
26	F: V: T: Sectional completion (Clause 28).	Item		
27	F: V: T: Revision of date for practical completion (Clause 29).	Item		
28	F: V: T: Penalty for non-completion (Clause 30).	Item		
29	F: V: T: <u>PAYMENT</u> Interim payment to the contractor (Clause 31). The inclusion of materials and goods stored off site in the amount authorised for payment in terms of clause 31.3 shall be at the sole discretion of the principal agent and such inclusion shall only be considered upon the provision, by the contractor, of an approved guarantee issued by a registered commercial bank.	Item		
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Where prices are submitted by the contractor or nominated/selected sub contractor during the progress of the works in respect of contract instructions or in regard to a claim under the terms of the contract and notwithstanding the fact that such prices may be used in an interim payment certificate, there is to be no presumption of acceptance. Should the principal agent wish to accept any such prices prior to the issue of the final certificate, it will be in writing.

Adjustment to the contract value (Clause 32).

30 F: V: T: Item

Recovery of expense and loss (Clause 33).

31 F: V: T: Item

Final account and final payment (Clause 34).

32 F: V: T: Item

Payment to other parties (Clause 35).

33 F: V: T: Item

CANCELLATION

Cancellation by Employer - Contractor's default (Clause 36).

34 F: V: T: Item

Cancellation by Employer - Loss and damage (Clause 37).

35 F: V: T: Item

Cancellation by Contractor - Employer's default (Clause 38).

36 F: V: T: Item

Cancellation - Cessation of the works (Clause 39).

37 F: V: T: Item

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DISPUTE

Dispute Settlement (Clause 40)

38 F: V: T:

Item

SUBSTITUTE PROVISIONS

State Clauses (Clause 41)

39 F: V: T:

Item

CONTRACT VARIABLES

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

40 F: V: T:

Item

CONTRACTING AND OTHER PARTIES (Clause 42.1)

Employer: The Mvula Trust

Postal Address: 67 Devereux Avenue, Vincent, East
London

Telephone: 043 726 2255

Facsimile: 043 726 5967

Physical address: 67 Devereux Avenue, Vincent, East
London

Principal Agent: The Mvula Trust

Postal Address: 67 Devereux Avenue, Vincent, East
London

Telephone: 043 726 2255

Facsimile: 043 726 5967

Physical address: 67 Devereux Avenue, Vincent, East
London**Carried to Collection**

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CONTRACT DETAILS (Clause 42.2)

Clause 42.2.1

Works Description: Construction of new ablution facilities.

Clause 42.2.2

Site Description: The site is the existing school.

Clause 42.2.3

Work or Installations by Others: NIL

Clause 42.2.4

This Agreement is for a State Contract :- Yes

Payment will be made for materials and goods:- Yes

Dispute resolution :- Mediation (in terms of clause 40) followed by litigation.

Arbitration rules as recommended by the Association of Arbitrators (SA) :- N/A

Clause 42.2.5

Date on which possession of the site is intended to be given on :-

To be advised.

Clause 42.2.6

Period for the commencement of the works after the contractor takes possession of the site :- 5 Working days.

Completion in Sections are required : NO

Clause 42.2.7

Intended date of practical completion and the penalty per calendar day for the works as a whole :-

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To be advised.

Penalty amount will be R2 000,00 / Calendar day

Clause 42.2.8

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

N/A

Clause 42.2.9

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

INSURANCES (Clause 42.3)

Clause 42.3.1

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

With a deductible of : Not exceeding 5% of each and every claim.

Clause 42.3.2

Supplementary insurance is required : Yes

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

Clause 42.3.3

Public liability insurance to be effected by Contractor

For the amount of: R 5 Million

With a deductible of: Not exceeding 5% of each and every claim.

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DOCUMENTS (Clause 42.4)

Clause 42.4.1

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

Clause 42.4.2

Number of construction document copies to be supplied to the Contractor free of charge :- 1

Clause 42.4.3

Bills of Quantities drawn up in accordance with :-

Standard System of Measuring Building Work - Seventh Edition including all amendments

Clause 42.4.4

Number of days for submission of priced documents : 5 working days from the Letter of Appointment.

Clause 42.4.5

JBCC Engineering General Conditions are to be included in the documents :- No

Clause 42.4.6

The contract value is to be adjusted using CPAP:- NO

SECTION B: PRELIMINARIES**DEFINITIONS AND INTERPRETATION (B1)**

Definitions and Interpretation (B1)

41 F: V: T:

Item

DOCUMENTS (B2)

Checking of documents (B2.1)

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	Notwithstanding the issue of the tender drawings, it will remain the responsibility of the Tenderer to study all available drawings at the offices of the Principal Agent during normal working hours in order to acquaint himself with all the cost implications of the design, programming, phasing, etc.			
42	F: V: T: Provisional Bills of Quantities (B2.2) YES Prime Cost Amounts, Budgetary Allowances, Provisional Amounts, etc., contained herein may be omitted or reduced at the Principal Agent's sole discretion and the Contractor shall not be entitled to claim for any loss by way of reduction or omission of any discount, or percentage relating to Prime Cost Amounts, Budgetary Allowances, Provisional Amounts, Provisional Quantities, etc., or loss of profit related thereto.	Item		
43	F: V: T: Availability of construction documentation (B2.3)	Item		
44	F: V: T: Interests of Agents (B2.4)	Item		
45	F: V: T: Priced documents (B2.5)	Item		
46	F: V: T: Tender submission (B2.6) Notwithstanding anything contained in this clause, Tenders shall be valid for a period of 20 (Twenty) weeks from the closing date of tenders.	Item		
47	F: V: T: <u>THE SITE (B3)</u> Defined works area (B3.1)	Item		
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The area of the works to be occupied by the contractor, any restriction on the area and the limit of access or exit will be pointed out to the contractor by the principal agent on handing over of the site.

Workmen employed on the site are to be restricted to the immediate area of the site and access thereto.

The Tenderer shall make all necessary provision in all rates to take into account these requirements as no claims for extras arising from these matters will be subsequently entertained or admitted.

48	F: V: T:	Item		
	Geotechnical investigation (B3.2)			
	A desktop geotechnical report is available upon request.			
49	F: V: T:	Item		
	Inspection of the Site (B3.3)			
50	F: V: T:	Item		
	Existing premises occupied (B3.4)			
51	F: V: T:	Item		
	Previous work - dimensional accuracy (B3.5)			
52	F: V: T:	Item		
	Previous work - defects (B3.6)			
53	F: V: T:	Item		
	Services - known (B3.7)			
54	F: V: T:	Item		
	Services - unknown (B3.8)			
55	F: V: T:	Item		
	Protection of trees (B3.9)			

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56	F: V: T: Articles of value (B3.10)	Item		
57	F: V: T: Inspection of adjoining properties (B3.11)	Item		
58	F: V: T: <u>MANAGEMENT OF CONTRACT (B4)</u> Management of the Works (B4.1)	Item		
59	F: V: T: Programme for the Works (B4.2)	Item		
60	F: V: T: Progress meetings (B4.3)	Item		
61	F: V: T: Technical meetings (B4.4)	Item		
62	F: V: T: <u>SAMPLES AND SHOP DRAWINGS (B5)</u> Samples of materials (B5.1)	Item		
63	F: V: T: Workmanship samples (B5.2)	Item		
64	F: V: T: Shop drawings (B5.3)	Item		
65	F: V: T: <u>TEMPORARY WORKS AND PLANT (B6)</u> Deposits and fees (B6.1)	Item		
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66 F: V: T:

Enclosure of the works (B6.2)

The contractor shall erect, maintain and remove at completion, hoardings, safety screens, barriers, access gates, covered gangways and the like as necessary for the enclosure of the works and elements thereof all for the protection of the public and others.

67 F: V: T:

Advertising (B6.3)

68 F: V: T:

Item

Item

Item

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69	Plant and equipment (B6.4) F: V: T:	Item		
	Main notice board (B6.5) One notice board shall be provided by the Contractor			
70	F: V: T: Subcontractors notice board (B6.6) (N/A)	Item		
71	F: V: T: <u>TEMPORARY SERVICES (B7)</u>	Item		
72	Location (B7.1) F: V: T: Water (B7.2) The contractor shall provide water for the works in accordance with: Alternative A (i.e. to be provided for by the Contractor).	Item		
73	F: V: T: Electricity (B7.3) The contractor shall provide electricity for the works in accordance with: Alternative A (i.e. to be provided for by the Contractor).	Item		
74	F: V: T: Telecommunication equipment (B7.4) The contractor shall provide telephones on site for the works in accordance with: Alternative A (i.e. to be provided for by the Contractor).	Item		
75	F: V: T:	Item		
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Ablution facilities (B7.5)

The contractor shall provide toilet facilities on site for the works in accordance with:

Alternative A (i.e. to be provided for by the Contractor).

76 F: V: T:

Item

PRIME COST AMOUNTS (B8)

Responsibility for prime cost amounts (B8.1)

77 F: V: T:

Item

ATTENDANCE ON N/S SUBCONTRACTORS (B9)

General Attendance (B9.1)

78 F: V: T:

Item

Special Attendance (B9.2)

79 F: V: T:

Item

Commissioning - fuel, water and power (B9.3)

80 F: V: T:

Item

FINANCIAL ASPECTS (B10)

Statutory taxes, duties and levies (B10.1)

Provision is made in the Final Summary of these Bills of Quantities for the inclusion of Value Added Tax (VAT).

81 F: V: T:

Item

Payment of Preliminaries (B10.2)

82 F: V: T:

Item

Adjustment of Preliminaries (B10.3)

83 F: V: T:

Item

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SECTION C: SPECIFIC PRELIMINARIES**Section C: Specific Preliminaries:****C1. Proprietary branded products**

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

94 F: V: T:

Item

C2. Trade Names, etc.

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

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

95 F: V: T:

Item

C3. Contractors responsibility

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

96 F: V: T:

Item

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C4. Overtime

Should overtime be required to be worked for any reason whatsoever, the costs of such overtime are to be borne by the contractor unless the principal agent has specifically authorised in writing, prior to the execution thereof, that costs for such overtime are to be borne by the employer.

97 F: V: T:

Item

C5. As built drawings

The position of construction breaks and the extent of individual concrete pours are to be recorded by the contractor on the structural engineer's drawings and are to be submitted to the principal agent and the structural engineer for their records.

Three full sets of as-built drawings shall be submitted to the Principal Agent no later than fourteen days after practical completion.

98 F: V: T:

Item

C6. Construction Instructions

Contract instructions issued on site are to be recorded in triplicate in a site instruction book which is to be maintained on site by the Contractor. The Contractor shall supply and have available at the site of the works at all times, the following site books:

a) Construction Instruction Book:

Receiving and recording instructions in a suitable A4 size triplicate book kept on site. Instructions issued shall be recorded by the Architect or other Employer's Agents to whom the Architect has delegated authority to in the book.

Only instructions issued in such book shall be recognised.

b) Daily Record Book:

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	The Contractor shall record in triplicate in a suitable A4 size triplicate book kept at the site, a daily record of work done, all site visits by the Principal Agent and other professional personnel and all events affecting the Works, such as progress, issue of plans, breakdown of machinery, etc. The labour, plant and material on site shall be recorded as well as work performed. Entries must be made by the Contractor and must be signed and forwarded to the Principal Agent for his counter-signature on a daily basis. Copies of these records shall be for the Architect, Quantity Surveyor and Contractor.			
99	F: V: T: C7. Labour record At the end of each week the contractor shall provide the principal agent with a written record, in schedule form, reflecting the number and description of tradesmen and labourers employed by him and all subcontractors on the works each day.	Item		
100	F: V: T: C8. Plant record At the end of each week the contractor shall provide the principal agent with a written record, in schedule form, reflecting the number, type and capacity of all plant, excluding hand tools, currently used on the works.	Item		
101	F: V: T: C9. Encroachment During the course of the building operations, the Contractor shall be held entirely responsible for any encroachment onto any adjoining properties, buildings, etc., or servitudes and the cost of any remedial measures as required by the Principal Agent shall be borne by the Contractor.	Item		
102	F: V: T: C10. Method Statement	Item		
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	The Tenderer shall produce, when required to do so by the Principal Agent, a Method Statement outlining the methods of construction and labour and plant resources that he proposes to use in the execution of the Works. Any approval given or observation made by the Principal Agent shall not relieve the Contractor of his sole responsibility to adopt the methods of construction and to provide the labour and plant resources necessary for the due and proper timeous execution of the Works.			
103	F: V: T: C11. Unauthorised Persons/Workmen on Premises The Contractor shall at all times strictly exclude all unauthorised persons from the Works and the site and shall set up notice boards to that effect. No workmen or labourers (except security guards) are to be allowed under any circumstances to sleep or deposit any kit on the premises. The Contractor must provide any necessary independent shelter or shed required for any labour or watchmen on site, to the approval of the Employer.	Item		
104	F: V: T: C12. Mode of Procedure Notwithstanding anything to the contrary contained herein the Principal Agent at all times reserves the right to direct the order in which the various parts of the Contract are to be executed. The Contractor shall give priority to any individual section or portion of the Works that, in the opinion of the Principal Agent, requires to be expedited. Should it appear, in the Principal Agent's opinion, that work in any area is not being executed in accordance with the requirements of the Contract Programme, the Contractor shall provide additional manpower and resources and shall work additional overtime and do everything else required to bring the work back to programme to the satisfaction of the Principal Agent and to the Contractor's cost.	Item		
105	F: V: T:	Item		
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	C13. Location of Temporary Buildings and Temporary Services The Contractor shall provide all necessary temporary works, including temporary roads, tracks, crossings, hardstanding and services, hoardings, dust screens, tunnelling, etc., required for his own and sub-contractors use during the construction and maintenance period. There is no guarantee given or implied that Site conditions will be such that the Contractor will be able to erect such temporary works, roads, hardhats, offices, stores and temporary accommodation within the site boundaries and it shall be the Contractor's responsibility to adopt whatever measures he deems necessary in this regard and to obtain all necessary permission and pay all costs in connection therewith.			
106	F: V: T: <u>C14. Office accommodation</u> The contractor shall provide, maintain and remove on practical completion air conditioned office accommodation with suitable tables and chairs for meetings to be held on the site. Such offices shall be kept clean and fit for use at all times [12.2.18]	Item		
107	F: V: T: <u>C15. Storage Facilities</u>	Item		
108	The Contractor shall provide a Container for storage of materials.	Item		
109	F: V: T: C16. Removal and Making Good of Temporary Works, etc, on Completion The Contractor shall remove (except where specifically stated otherwise) all temporary works, roads, services and the like used for this contract and shall make good to the entire satisfaction of the Principal Agent any damage resulting therefrom.	Item		
110	F: V: T:	Item		
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	<u>SECTION 2</u>			
	<u>BILL No. 1</u>			
	<u>HEALTH AND SAFETY</u>			
	<u>MODEL PREAMBLES</u>			
	The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates.			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	Supplementary preambles and/or specifications are incorporated in these bills of quantities to satisfy the requirements of this project. Such supplementary preambles and/or specifications shall take precedence over the provisions of the General Preambles.			
	The contractor's prices for all items throughout these bills of quantities shall take account of and include where applicable for all of the obligations, requirements and specifications given in the General Preambles and in any supplementary preambles and/or specifications.			
	Prior to pricing the principal contractor must familiarize him/herself with the Occupational Health and Safety Act No. 85 Of 1993, Construction Regulations 2014, other relevant Regulations and Standards as well as project specific Health & Safety specifications.			
	The items in this Bill do not contain quantities hence the Contractor must insert his own quantities based on his individual requirements to comply with the Health and Safety obligations and demands of the Occupational Health and Safety Act No. 85 of 1993, Construction Regulations 2014, other relevant Regulations and Standards as well as project specific Health & Safety Specifications.			
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The costs included herein must incorporate Community Liaison Officer (CLO).

OCCUPATIONAL HEALTH AND SAFETY

General:

1	Preparation of Contractor's site specific Health and Safety Plan.		Item
2	Allow for the necessary Workman's Compensation Fund or FEM contributions for the duration of the project with and including renewals		Item
3	Allow for the necessary Public Liability Cover for the Project		Item
4	Allow for the preparation and approval of project-specific H&S Plan & File [CR 7(1)(a)]		Item
5	Allow for the implementation and maintenance of project-specific H&S Plan & File. [CR 7]	MON	4
6	Allow for the appointment of a Full-Time/ PART TIME (WEEKLY VISTS) Competent Construction Health & Safety Officer registered with SACPCMP to assist in the control of all health and safety related aspects on site as per [CR 8(5)]	MON	4
7	Provide for appointment of responsible and competent person/s to manage and supervise the works and administer and enforce health and safety on site as per [CR 8(1), (7) & 8	MON	4
8	Allow for provision of telecommunication, facilities for the appointed Construction Health & Safety Manager	MON	4
<u>EMERGENCY PREPAREDNESS</u>			
9	Allow for provision of Basic Emergency Preparedness and Response equipment & at least Level 1 First Aider/s	MON	4
10	Allow for the provision of fire extinguishers with servicing and maintenance	YR	2
11	Principal Contractor's initial obligations in respect of the OHS Act and Construction Regulations.		Item

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12	Principal Contractor's time related obligations in respect of the OHS Act and Construction Regulations for the entire construction period.		Item		
13	Provision of full time Health and Safety Officer for the entire construction period.		Item		
14	Induction training of personnel.	No	15		
15	Provision of first aid boxes.	No	3		
16	SANS approved weld mesh type temporary barrier fencing 1,8m high covered with a net fixed to and including 100mm diameter gum poles set securely min 300mm deep in ground at max 3m spacing including excavation, backfilling, etc	m	60		
17	Extra over mesh fence for pedestrian gate size 1.8 x 1,8m high.	No	3		
18	Allow for competent security company for day and night security	MON	4		
<u>Provision for Personal Protective Equipment and Protective Clothing:</u>					
19	Reflective vests.	No	60		
20	Hard Hats with chin straps & including visitors	No	60		
21	Overall/work suit (100% Cotton) Min 2 per staff per employee	No	60		
22	Rain suits	No	60		
23	Safety shoes (Steel-Toe)	No	60		
24	Safety Gumboots (Steel-Toe)	No	60		
25	Safety gloves	No	60		
26	Ear Plugs.	No	120		
27	Dust Masks.	No	120		
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28	Personal Fall arrest and rescue equipment with and including life lines and associated encore equipment	No	12		
	Temporary warning signs and symbols, Signages for the site				
29	SANS approved safety netting (with minimum of 1,2 meters high)	m	85		
30	Provision for the supply and maintenance of Road Traffic Signs as in terms of the South African Road Traffic Signs Manual complete		Item		
31	Allow for Pre-employment medical examinations	No	60		
32	Allow for exit medical examinations	No	60		
<u>HEALTH AND SAFETY EDUCATION</u>					
<u>Costs of Medical Certificates and Medical Surveillance:</u>					
33	Allow for HIV/AIDS awareness and Implementation programmes		Item		
34	Allow for all compulsory health and safety awareness programme (e.g. Inductions, daily task instruction, toolbox Talks, Safety Promotions, Risk Assessment, First Aid, Fire Fighting, Work at heights, H&S related training, Legal Liability/SHE Representative)		Item		
35	Initial (baseline) medical examinations.	No	60		
36	Exit Examinations.	No	60		
<u>ENVIRONMENT & HYGIENE</u>					
37	Provide for adequate handling and storage of materials so as to minimize contamination of ground, air or water.		Item		
38	Provide ventilated and lockable storage for flammables substances		Item		
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IDTKZN SANITATION PROGRAM

39	Provide and maintain Ablution Facilities separate for males and females , ensure servicing and toilet paper maintenance	MON	4		
40	Provide and maintain SHE bins for all site female toilets	MON	4		
41	Provide and maintain change rooms with personal storage facilities separate for males and females		Item		
42	Provide sheltered eating areas with tables and chairs adequate for number of employees on site and all sub-contractors		Item		
43	Provide for adequate dust control measure, including regular watering in all areas with dust		Item		
44	Dewatering ponding as required		Item		
45	Provide for rehabilitation on completion of site areas		Item		
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Removal of asbestos material

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

The following shall apply in respect of asbestos removal

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

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

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

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

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

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DEMOLISHING AND REMOVING

1	Take up and move chemical toilets by uplifting and handing over to the school governing body and making good of current position	No	6		
	<u>Demolishing and removing buildings with roof, comprising concrete footings, surface beds, external block walls, roof coverings, sanitary fittings, etc. complete including breaking up reinforced concrete pit cover slab, filling up pit with granular material, sealing off and carting away debris</u>				
2	Single storey building approximately 39m2 on plan and not exceeding 3m high complete	No	4		
3	Cart away rubble from demolitions and dispose off site.		Item		
4	Backfill existing hole with G7 fill material in max. 150mm layers and compact to 95% MOD AASHTO density.	m3	78		
5	Allow for compaction tests by an approved laboratory to determine density of filling material.	No	3		

SUNDRIES

Desludging

6	Clean out pit latrine by desludging including removal of all debris and waste including solid waste as per Health and Safety requirements and make good on completion including disposing of all debris and waste at an authorised municipal waste disposal facility. Contractor to price per seat	No	1		
7	Issue of Certificate of Waste Disposal.		Item		

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Desludging

- 8 Clean out pit latrine by desludging including removal of all debris and waste including solid waste as per Health and Safety requirements and make good on completion including disposing of all debris and waste at an authorised municipal waste disposal facility. Contractor to price per seat
- 9 Issue of Certificate of Waste Disposal.

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Earthworks (Provisional)
BMG COST CONSULTANTS

Dewatering of excavations:

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

Density testing on filling:

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

Imported fill:

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

Classification of excavated material

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

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

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

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Earthworks (Provisional)
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EXCAVATION OTHER THAN BULK

EARTHWORKS

SITE CLEARANCE ETC

Site clearance

1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc	m2	296		
	A0 : 64 A1 : 56 A6 : 84 AD : 93				
	E : 0 M : 0				
2	Stripping average 150mm thick layer of top soil and stockpiling on site	m2	296		
	A0 : 64 A1 : 56 A6 : 84 AD : 93				
	E : 0 M : 0				
	<u>Excavation in earth not exceeding 2m deep:</u>				
3	Trenches.	m3	59		
	A0 : 15 A1 : 13 A6 : 15 AD : 16				
	E : 0 M : 0				
4	Holes.	m3	227		
	A0 : 53 A1 : 16 A6 : 53 AD : 105				
	E : 0 M : 0				
	<u>Extra over trench and hole excavations in earth for excavation in:</u>				
5	Soft rock.	m3	6		
	A0 : 2 A1 : 1 A6 : 2 AD : 2				
	E : 0 M : 0				
6	Hard rock.	m3	3		
	A0 : 1 A1 : 1 A6 : 1 AD : 1				
	E : 0 M : 0				
	<u>Extra over all excavations for carting away:</u>				
7	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor.	m3	274		
	A0 : 65 A1 : 27 A6 : 64 AD : 118				
	E : 0 M : 0				

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<u>Risk of collapse of excavations:</u>					
8	Sides of trench and hole excavations not exceeding 1,5m deep. A0 : 42 A1 : 38 A6 : 42 AD : 46 E : 0 M : 0	m2	168		
9	Ditto, but from ground level to exceeding 1,5m. A0 : 47 A1 : 25 A6 : 46 AD : 63 E : 0 M : 0	m2	180		
<u>Keeping excavations free of water:</u>					
10	Keeping excavations free from mud and all water including subterranean sources.		Item		
<u>EARTH FILLING, ETC.</u>					
<u>Imported G5 filling, selected and supplied by the Contractor, including depositing in layers not exceeding 150mm thick and compacting to 98% modified AASHTO dry density to trenches, holes, etc.</u>					
11	Under floors, steps, pavings, trenches, etc. A0 : 12 A1 : 6 A6 : 12 AD : 19 E : 0 M : 0	m3	48		
<u>Imported G7 filling, selected and supplied by the Contractor, including depositing in layers not exceeding 150mm thick and compacting to 98% modified AASHTO dry density to holes, trenches etc.</u>					
12	Under floors, steps, pavings, trenches, etc. A0 : 6 A1 : 3 A6 : 6 AD : 9 E : 0 M : 0	m3	24		
13	Backfilling to holes, trenches, etc. A0 : 5 A1 : 5 A6 : 5 AD : 6 E : 0 M : 0	m3	21		
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[illegible]

SOIL POISONING

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

17	Under floors, etc., including forming and poisoning shallow furrows against foundation walls, etc., filling in furrows and ramming.	m2	7
	A0 : 0 A1 : 7 A6 : 0 AD : 0		
	E : 0 M : 0		
18	To bottoms and sides of trenches, holes, etc.	m2	510
	A0 : 127 A1 : 85 A6 : 127 AD : 172		
	E : 0 M : 0		

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Earthworks (Provisional)
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Bill No. 1

Earthworks (Provisional)

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Bill No. 1

Earthworks (Provisional)

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BILL No. 2

Quantity Split:

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

A0 - Type 3A - 4 Grade R & 1 Teacher
A1 - Type 2B - 4 Boys
A6 - Type 2A - 2M, 2F & 1 Teacher
AD - Type 6A - General

MODEL PREAMBLES

The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates

SUPPLEMENTARY PREAMBLES

Proprietary products in descriptions:

Proprietary products shall be used as specified.
Substitute products of similar quality and specification
may only be used with prior approval by the Principal
Agent.

Cost of tests:

The costs of making, storing and testing of concrete test cubes as required under clause 7 'Tests' of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the Architect. The testing shall be undertaken by an independent firm or institution nominated by the Contractor to the approval of the Architect. (Test cubes are measured separately).

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Bill No. 2
Concrete, Formwork and Reinforcement
BMG COST CONSULTANTS

Quantity	Rate	Amount
	R	

Formwork:

Descriptions of formwork shall be deemed to include use and waste only (except where described as left in or permanent), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use.

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

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

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

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**UNREINFORCED CONCRETE CAST AGAINST
EXCAVATED SURFACES**

15Mpa/19mm Concrete

1	Surface blinding under footings and bases.	m3	3
	A0 : 1 A1 : 1 A6 : 1 AD : 1 E : 0 M : 0		

**REINFORCED CONCRETE CAST AGAINST
EXCAVATED SURFACES**

30MPa/20mm concrete:

2	Strip footings to walls.	m3	13
	A0 : 3 A1 : 3 A6 : 3 AD : 4 E : 0 M : 0		

REINFORCED CONCRETE

30MPa/20mm concrete:

3	Surface beds on waterproofing.	m3	115
	A0 : 4 A1 : 3 A6 : 3 AD : 4 E : 100 M : 0		
4	Suspended Slabs.	m3	62
	A0 : 3 A1 : 1 A6 : 4 AD : 4 E : 50 M : 0		

TEST BLOCKS

Test blocks:

5	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	5
	A0 : 0 A1 : 0 A6 : 0 AD : 0 E : 5 M : 0		

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Section 2
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Concrete, Formwork and Reinforcement
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FINISHING TOP SURFACE OF CONCRETE

Finishing top surfaces of concrete smooth with a wood float:

6	Surface beds, suspended slabs, ground slabs, etc.	m2	183		
	A0 : 47 A1 : 19 A6 : 44 AD : 73				
	E : 0 M : 0				

Finishing top surfaces of concrete smooth with a steel float:

7	Surface beds, suspended slabs, etc.	m2	58		
	A0 : 13 A1 : 7 A6 : 19 AD : 20				
	E : 0 M : 0				

Charmfers at corners

8	19 x 19mm triangular fillet at corners formed of unreinforced concrete steel trowelled.	m	65		
	A0 : 17 A1 : 11 A6 : 18 AD : 19				
	E : 0 M : 0				

ROUGH FORMWORK (DEGREE OF ACCURACY III)

Rough Formwork to Sides:

9	Edges, risers, ends and reveals not exceeding 300mm high or wide.	m	77		
	A0 : 20 A1 : 11 A6 : 20 AD : 27				
	E : 0 M : 0				

Permanent Formwork:

10	Soffit of slab over pit.	m2	58		
	A0 : 13 A1 : 7 A6 : 19 AD : 20				
	E : 0 M : 0				

Extra on permanent formwork for boxing or blocking in or boxing out to form:

11	450mm Diameter opening through 255mm thick slab.	No	3		
	A0 : 1 A1 : 2 A6 : 0 AD : 0				
	E : 0 M : 0				

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12	200mm Diameter opening through 255mm thick slab. A0 : 4 A1 : 0 A6 : 4 AD : 6 E : 0 M : 0	No	14
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SMOOTH FORMWORK (DEGREE OF ACCURACY I)

Smooth Formwork to Sides:

13	Edges, risers, ends and reveals not exceeding 300mm high or wide.	m	85		
	A0 : 21 A1 : 18 A6 : 23 AD : 23				
	E : 0 M : 0				

MOVEMENT JOINTS ETC

Expansion joints with bitumen impregnated softboard between vertical concrete or brick surfaces:

14	12mm Joints not exceeding 300mm high (Provisional).	m	92		
	A0 : 23 A1 : 21 A6 : 23 AD : 25				
	E : 0 M : 0				

Saw cut joints:

15	6 x 40mm Saw cut joints in top of concrete (Provisional).	m	139		
	A0 : 35 A1 : 32 A6 : 35 AD : 38				
	E : 0 M : 0				

REINFORCEMENT (PROVISIONAL)

16	High tensile steel reinforcement bars to structural concrete work.	t	5.40		
	A0 : 1.34 A1 : 1.28 A6 : 1.38 AD : 1.41				
	E : 0.00 M : 0.00				

Fabric reinforcement:

17	REF. 888 fabric reinforcement in concrete footings, walls, base slabs etc.	m2	251		
	A0 : 58 A1 : 20 A6 : 63 AD : 109				
	E : 0 M : 0				

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Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats "Brixal" bitumen emulsion waterproofing coating.

Face bricks

Bricks shall be ordered timeously to obtain uniformity in size and colour

Pointing

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

Samples

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

Trade names

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

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BRICKWORK IN FOUNDATIONS
(PROVISIONAL)

Brickwork consisting of solid bricks with 10.5 MPa minimum nominal compressive strength in Class I mortar with Coprox masonry waterproofing or equal approved waterproof cement additive. Add 2.5kg Coprox waterproof cement additive for every 50kg of cement used in mortar mix (Cement to be 42.5N all-purpose cement):

1	One brick walls.	m2	71
	A0 : 18 A1 : 16 A6 : 18 AD : 20		
	E : 0 M : 0		

BRICKWORK AND BLOCKWORK SUNDRIES

Galvanized brickwork reinforcement

2	230mm Wide reinforcement built in horizontally.	m	746
	A0 : 163 A1 : 147 A6 : 269 AD : 167		
	E : 0 M : 0		
3	Ditto, but in foundations (Provisional).	m	508
	A0 : 127 A1 : 116 A6 : 127 AD : 140		
	E : 0 M : 0		

SUPERSTRUCTURE

Brickwork of NFP bricks in class II mortar

4	Half brick walls	m2	77
	A0 : 16 A1 : 17 A6 : 12 AD : 32		
	E : 0 M : 0		
5	One brick walls	m2	213
	A0 : 49 A1 : 50 A6 : 64 AD : 50		
	E : 0 M : 0		

BRICKWORK SUNDRIES

Brickwork reinforcement

6	75mm Wide reinforcement built in horizontally	m	228
	A0 : 48 A1 : 49 A6 : 35 AD : 95		
	E : 0 M : 0		

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7	150mm Wide reinforcement built in horizontally A0 : 126 A1 : 147 A6 : 172 AD : 147 E : 0 M : 0 <u>Prestressed fabricated lintels</u>	m	592
8	110 x 75mm Lintels in lengths not exceeding 3m A0 : 7 A1 : 3 A6 : 7 AD : 4 E : 0 M : 0 <u>Galvanised hoop iron cramps, ties, etc</u>	m	22
9	30 x 1,6mm Roof tie 1,5m long with one end built into brickwork and other end fixed to timber A0 : 5 A1 : 5 A6 : 6 AD : 5 E : 0 M : 0 <u>Air bricks etc:</u>	No	21
10	229 x 152mm terracotta clay vermin proof air brick A0 : 4 A1 : 4 A6 : 4 AD : 4 E : 0 M : 0 <u>Bagging and sealing the outer face of the inner skin of walls with 1:3 cement and sand mixture and seal with two coats "Brixal" bitumen emulsion waterproofing coating:</u>	No	16
11	To walls (Provisional). A0 : 55 A1 : 50 A6 : 89 AD : 56 E : 0 M : 0 <u>FACE BRICK</u> <u>Face brickwork to be "Corobrik®" Firelight Satin FBX of 20-30MPa nominal compressive strength in Class II mortar with recessed horizontal and recessed vertical joints</u>	m2	249
12	Extra over NFP brickwork for face brickwork A0 : 18 A1 : 16 A6 : 18 AD : 20 E : 0 M : 0	m2	71

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13	Half brick wall in beam filling pointed one side including cutting and fitting around roof timbers and bedding roofing solid on top in cement mortar. A0 : 9 A1 : 8 A6 : 8 AD : 9 E : 0 M : 0	m2	33		
14	One brickwall pointed on both sides. A0 : 55 A1 : 50 A6 : 89 AD : 56 E : 0 M : 0	m2	249		
15	Half brickwall pointed on both sides. A0 : 16 A1 : 17 A6 : 12 AD : 32 E : 0 M : 0	m2	77		
<u>Brick-on-edge header course copings, sills, etc. of "Rustgold FBS/Qunu Travertine" or equal approved face bricks pointed with recessed joints on all exposed faces, 220mm wide sill set sloping and slightly projecting:</u>					
16	220mm Brick on edge sill bedded sloping and jointed in cement mortar and pointed on top, edge and projecting soffit including cutting and fitting between reveals and splay cutting brickwork under. A0 : 4 A1 : 2 A6 : 3 AD : 2 E : 0 M : 0	m	10		
17	220mm Wide header course to top of one brick wall bedded and jointed in cement mortar and pointed on both sides. A0 : 7 A1 : 4 A6 : 8 AD : 7 E : 0 M : 0	m	26		

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Masonry

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Contractor to provide water proofing product that will be 100% resistant to extreme hydrostatic pressure at depth of 2m, from the positive (water from inside) of substrate. Resistant to aggressive chemicals i.e oil, salt water, sewage, weak acids and aggressive sulphate soils. The product must be able to withstand backfilling without protection and must not be subject to deterioration. The product must be able to ensure that the pit structure is fully sealed (100% free from water ingress from outside and it will not penetrate the pit).

The product and its methodology for application must be approved by Principal Agent before it is used.

It is a mandatory requirement for the Contractor to attend training to be provided by Supplier. Proof of attendance will be required prior to application of the approved waterproofing product.

Contractor must prepare a 1m x 1m sample in the presence of the Principal Agent or Engineer. In this case, the Contractor must give at least 48 hours notice prior to the date when the application of the waterproofing product is intended to be done.

Contractor to provide a Letter of Compliance confirming that waterproofing has been applied as per Manufacturer's instructions and data sheet.

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Waterproofing
BMG COST CONSULTANTS

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DAMPPROOFING OF WALLS AND FLOORS

One layer of 250 micron 'USB GREEN' waterproof sheeting sealed at laps with 'Gunplas Pressure Sensitive Tape':

1	Under surface beds, bases, etc.	m2	97
	A0 : 23 A1 : 7 A6 : 22 AD : 45		
	E : 0 M : 0		

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

2	Below walls, sills, etc.	m2	4
	A0 : 1 A1 : 1 A6 : 1 AD : 1		
	E : 0 M : 0		

JOINT SEALANTS ETC

Clear Neutral silicone sealant:

3	In joint sealing and pointing all round external window and door frames.	m	137
	A0 : 35 A1 : 20 A6 : 42 AD : 40		
	E : 0 M : 0		

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

4	10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary (Provisional).	m	231
	A0 : 58 A1 : 53 A6 : 58 AD : 64		
	E : 0 M : 0		

WATERPROOFING TO PIT WALLS

Waterproofing product to plastered walls, subject to approval by the Principal Agent prior to application.

5	On plastered wall surfaces including 100mm overlap at the base slab	m2	153
	A0 : 38 A1 : 27 A6 : 37 AD : 51		
	E : 0 M : 0		

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Waterproofing
BMG COST CONSULTANTS

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Waterproofing

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Bill No. 4

Waterproofing

BMG COST CONSULTANTS

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	<u>BILL No. 5</u>			
	<u>ROOF COVERINGS</u>			
	<u>Quantity Split:</u>			
	Note that the total quantity per each item is split into the various buildings and appears below each description as follows:			
	A0 - Type 3A - 4 Grade R & 1 Teacher			
	A1 - Type 2B - 4 Boys			
	A6 - Type 2A - 2M, 2F & 1 Teacher			
	AD - Type 6A - General			
	<u>MODEL PREAMBLES</u>			
	The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Flashings</u>			
	Flashings shall be approved by roof sheeting manufacturer and fixed to the sheeting with S10 clips to obviate any direct fixing perforations. Prior to flashings being fixed, all troughs at the apex shall be stop-ended to the full depth of the sheet in order to prevent any penetration of wind driven water. The trough shall be lipped at the eaves end to form a drip. Flashing flanges shall be notched to the sheet profile where necessary. All these operations must be performed with special tools available from the manufacturer. Care shall be taken to ensure that no sheeting or flashing will be cut with abrasive disc on roof surface in order to prevent steel splatter from penetrating colour coated areas. The flashings shall be supplied with a paint finish consisting of a full top coat silicon modified polyester Colour : White to one side			
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Quality Assurance

The manufacturer shall be assessed and certified as complying with ISO 9001: 2008 Quality Management System

Guarantee

Z200 Galvanized Metal or equal approved sheeting shall be laid in strict accordance with manufacturer's specifications by an approved contractor. The employer shall be provided with a ten year written guarantee on materials by the manufacturer.

Safety

The contractor shall exercise special care when handling long length sheeting, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting and incomplete sections must be adequately secured against possible movement by wind and gravity

Handling and Storage

The contractor shall ensure that all materials used on site for cladding, etc are transported, handled and stored in accordance with the manufacturer's recommendations. Material damaged shall be rejected and replaced with undamaged material at the contractor's expense. Repair of damaged material will not generally be permitted. Rates are to include for preventing damage and protecting sheets through all stages of construction

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Bill No. 5
Roof Coverings Etc.

BMG COST CONSULTANTS

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Inspection Prior to Installation or Erection

Before commencing with installation, the contractor shall verify that the following items have been checked and accepted:

- a. The entire structure or the portion thereof to be sheeted has been correctly aligned, levelled and grouted
- b. Purlins and sheeting rails are at the correct spacing and are within the specified tolerances
- c. The corners of the roof are square and the wall framework is perpendicular or as specified
- d. No protrusions such as bolt heads, splice plates, cleats, etc. appear on the face of the framework
- e. All members to which roofing and cladding are to be fixed in aesthetically sensitive areas are true and square
- f. Paint and any other materials that may be incompatible with the sheeting, have been painted over or so dealt with that direct contact with the sheeting is avoided
- g. The contact faces between the purlins or the girts and the cladding are in the same plane. Should the alignment be inadequate, the contractor shall request instructions from the engineer before proceeding with the fixing of the cladding

Protrusion through Sheeted Surfaces

Protrusions such as pipes, ducts and the like, shall be adequately flashed where they pass through the sheeting surface. Where ribs have to be cut away to permit penetration, additional framing is to be installed as required to support the sheeting. Depending on the position of the penetration through the roof, special attention shall be given to back flashing the sheeting to the ridge or point of water entry. In all cases, all cutting and flashings shall be so arranged that adequate provision is made for the drainage of all troughs and corrugation

Cleaning of Roofs, etc

All debris, etc arising from the fixing of the cladding shall be removed from the sheetin as the fixing progresses. In addition, off-cuts of insulation, surplus fastners and sealants, mandrels from pop rivets, off-cuts of flashings and sheeting, surplus flashing, food packaging, cartons, bottles, cans, etc shall not be left on the roof or in the gutters. Care shall be taken to ensure that no such material enters, blocks or partially impedes the flow of water into the outlets, downpipes, etc

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Bill No. 5
Roof Coverings Etc.

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ROOF COVERINGS

PROFILED METAL SHEETING AND ACCESSORIES

0,58mm Thick Z200 "IBR Profile" galvanised metal roof sheeting, in single sheet lengths, with "Chromadek" finish to external face and standard backing coat to internal face :

1	Roof sheeting laid to a mono-pitch.	m2	149		
	A0 : 37 A1 : 34 A6 : 39 AD : 39				
	E : 0 M : 0				

0,58mm Flashings pre-painted to match roof sheeting and fixed in strict accordance with manufacturer's instructions:

2	Mono pitched ridge capping with 225mm lapping secured onto the roof.	m	49		
	A0 : 13 A1 : 11 A6 : 12 AD : 13				
	E : 0 M : 0				

ROOF AND WALL INSULATION

"Sisalation Grade FR430" or equal approved heavy industrial insulation

3	Insulation laid taut over roof trusses (at approximately 1 100mm centres) and fixed concurrent with SA Pine purlins at 900mm centres, etc including galvanised steel straining wires	m2	124		
	A0 : 31 A1 : 29 A6 : 33 AD : 33				
	E : 0 M : 0				

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Roof Coverings Etc.

BMG COST CONSULTANTS

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ROOFS

**PLATE NAILED TIMBER ROOF TRUSS
CONSTRUCTION ETC**

Sawn softwood:

1	38 x 152mm Wall plate. A0 : 25 A1 : 22 A6 : 25 AD : 26 E : 0 M : 0	m	98		
2	Design, supply and erect the complete double pitch roof structure to new building (approx. 40m ² on flat) including purlins, braces, battens, gangboarding, wall plates, roof ties, gusset plates, bolts, etc (Type 3A) A0 : 1 A1 : 0 A6 : 0 AD : 0 E : 0 M : 0	No	1		
3	Design, supply and erect the complete double pitch roof structure to new building (approx. 29m ² on flat) including purlins, braces, battens, gangboarding, wall plates, roof ties, gusset plates, bolts, etc (Type 2B) A0 : 0 A1 : 1 A6 : 0 AD : 0 E : 0 M : 0	No	1		
4	Design, supply and erect the complete double pitch roof structure to new building (approx. 35m ² on flat) including purlins, braces, battens, gangboarding, wall plates, roof ties, gusset plates, bolts, etc (Type 2A) A0 : 0 A1 : 0 A6 : 1 AD : 0 E : 0 M : 0	No	1		
5	Design, supply and erect the complete double pitch roof structure to new building (approx. 59m ² on flat) including purlins, braces, battens, gangboarding, wall plates, roof ties, gusset plates, bolts, etc (Type 6A) A0 : 0 A1 : 0 A6 : 0 AD : 1 E : 0 M : 0	No	1		
6	Take delivery, temporary store, hoist in position and erect plate nailed timber roof trusses, purlins, gangboarding, temporary and permanent bracing, etc (measured on slope of roof) A0 : 37 A1 : 34 A6 : 39 AD : 39 E : 0 M : 0	m2	149		

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Carpentry and Joinery
BMG COST CONSULTANTS

Sundries:

7	Two coats creosote on wall plate and exposed roof timbers	m2	149		
	A0 : 37 A1 : 34 A6 : 39 AD : 39				
	E : 0 M : 0				

EAVES, VERGES, ETC

"Everite Nutec" or equal approved fibre cement

8	12 x 225mm Fascia board drilled and brass screwed to rafter feet including galvanised steel H-profile jointing strips, etc.	m	49		
	A0 : 13 A1 : 11 A6 : 12 AD : 13				
	E : 0 M : 0				

9	85 x 275 x 6mm Barge board drilled and brass screwed to purlin ends including galvanised steel H-profile jointing strips, screws, holes, etc.	m	84		
	A0 : 21 A1 : 21 A6 : 21 AD : 21				
	E : 0 M : 0				

DOORS ETC

SANS Approved meranti:

10	44mm Framed, ledged, and battened single door with flush ply panel internally size 813 x 2032mm high comprising 44 x 110mm top rail and stiles, 44 x 220mm bottom rail, 44 x 150mm lock rail and 22 x 70mm vertical "v" jointed boards (D1).	No	20		
	A0 : 4 A1 : 3 A6 : 6 AD : 7				
	E : 0 M : 0				

11	44mm Framed, ledged, and battened single door with flush ply panel internally size 950 x 2032mm high comprising 44 x 110mm top rail and stiles, 44 x 220mm bottom rail, 44 x 150mm lock rail and 22 x 70mm vertical "v" jointed boards (D2).	No	2		
	A0 : 1 A1 : 0 A6 : 1 AD : 0				
	E : 0 M : 0				

FRAMED FRAMES, ETC

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

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Carpentry and Joinery

BMG COST CONSULTANTS

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Bill No. 7
Ironmongery
BMG COST CONSULTANTS

HINGES:

1	75 x 100mm Brass Medium duty ball bearing HMP butt hinges.	Pairs	22.0		
	A0 : 5.0 A1 : 3.0 A6 : 7.0 AD : 7.0				
	E : 0.0 M : 0.0				

LOCKS

2	"UNION 2277-78SS" or equal approved three lever sash mortice lockset.	No	22		
	A0 : 5 A1 : 3 A6 : 7 AD : 7				
	E : 0 M : 0				

HANDLES

3	"Dorma DPH301B" or equal approved Stainless Steel Straight Tubular Pull handle flange fixing.	No	22		
	A0 : 5 A1 : 3 A6 : 7 AD : 7				
	E : 0 M : 0				

Sundries:

4	38mm Diameter black rubber door stop plugged and screwed to wall.	No	22		
	A0 : 5 A1 : 3 A6 : 7 AD : 7				
	E : 0 M : 0				

SIGN PLATES:

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

5	Sign plate plugged and screwed to walls with chromium plated dome headed screws.	No	22		
	A0 : 5 A1 : 3 A6 : 7 AD : 7				
	E : 0 M : 0				

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Bill No. 7
Ironmongery
BMG COST CONSULTANTS

SUNDRIES

Halcast or equal approved"

6	Thieproof toilet roll holder plugged.	No	17		
	A0 : 5 A1 : 2 A6 : 4 AD : 6				
	E : 0 M : 0				

Grade 304 stainless steel ware:

7	32mm outside diameter x 1,6mm thick tubular wall mounted side stainless steel grab rail 1,06m girth with two 45 degree and two 90 degree formed bends and each end fitted with 80mm diameter x 5mm thick flange welded on and four times countersunk holed for and plugged and screwed to wall with stainless steel crews.	No	2		
	A0 : 1 A1 : 0 A6 : 1 AD : 0				
	E : 0 M : 0				

8	32mm outside diameter x 1,6mm thick tubular wall mounted around cistern back stainless steel grab rail 1,23m girth with two 90 degree formed bends and each end fitted with 80mm diameter x 5mm thick flange welded on and four times countersunk holed for and plugged and screwed to wall with stainless steel crews.	No	2		
	A0 : 1 A1 : 0 A6 : 1 AD : 0				
	E : 0 M : 0				

Satin Grey Plastics or equal approved

9	"Satin plastic N-SBIN-12-SA SHE Bin size 463 x 140 x 480mm, floor standing loose.	No	8		
	A0 : 2 A1 : 2 A6 : 2 AD : 2				
	E : 0 M : 0				

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Section 2

Bill No. 7

Ironmongery

BMG COST CONSULTANTS

Item No		Quantity	Rate	Amount
	<u>SECTION 2</u> <u>BILL No. 8</u> <u>METALWORK</u> <u>Quantity Split:</u> Note that the total quantity per each item is split into the various buildings and appears below each description as follows: A0 - Type 3A - 4 Grade R & 1 Teacher A1 - Type 2B - 4 Boys A6 - Type 2A - 2M, 2F & 1 Teacher AD - Type 6A - General <u>MODEL PREAMBLES</u> The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates <u>SUPPLEMENTARY PREAMBLES</u> The Contractor is to check and verify on site that the item specified in the BoQ matches existing prior to placing orders. Additional costs will not be borne by the client for items that do not match existing and are not approved by the Principal Agent <u>GALVANISED MILD STEEL GATES, SCREENS, ETC.</u> <u>Note: The contractor is to check on site measurements before placing of order.</u> <u>Welded gate and frame</u>			
1	Single gate 900 x 2250mm high of 20mm steel tubing and fitted with a pair of suitable hinges welded to post and with ears for padlock A0 : 1 A1 : 1 A6 : 3 AD : 1 E : 0 M : 0	No	6	
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GALVANISED PRESSED STEEL DOOR FRAMES

1,2mm Rebated frames suitable for one brick walls

2	Frame for door 813 x 2032mm high	No	20		
	A0 : 4 A1 : 3 A6 : 6 AD : 7				
	E : 0 M : 0				
3	Frame for door 950 x 2032mm high	No	2		
	A0 : 1 A1 : 0 A6 : 1 AD : 0				
	E : 0 M : 0				

GALVANISED STEEL WINDOWS, DOORS, ETC

Purpose made steel windows with 8mm burglar bars to opening sashes

4	Window (W01) overall size 889 x 457mm high	No	11		
	A0 : 4 A1 : 2 A6 : 3 AD : 2				
	E : 0 M : 0				

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Section 2
Bill No. 8
Metalwork
BMG COST CONSULTANTS

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Metalwork

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Section 2

Bill No. 8

Metalwork

BMG COST CONSULTANTS

15mm thick of 1:4 sand cement plaster with Coprox masonry waterproofing or equal approved waterproof cement additive. Add 2.5kg Coprox waterproof cement additive for every 50kg of cement used in plaster mix

3	On walls.	m2	327		
	A0 : 71 A1 : 67 A6 : 101 AD : 88				
	E : 0 M : 0				
4	On walls in pit	m2	231		
	A0 : 62 A1 : 20 A6 : 47 AD : 102				
	E : 0 M : 0				

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Section 2
Bill No. 9
Plastering
BMG COST CONSULTANTS

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Plastering

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Section 2

Bill No. 9

Plastering

BMG COST CONSULTANTS

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	<u>SECTION 2</u>			
	<u>BILL No. 10</u>			
	<u>PLUMBING AND DRAINAGE</u> <u>(PROVISIONAL)</u>			
	<u>Quantity Split:</u>			
	Note that the total quantity per each item is split into the various buildings and appears below each description as follows:			
	A0 - Type 3A - 4 Grade R & 1 Teacher			
	A1 - Type 2B - 4 Boys			
	A6 - Type 2A - 2M, 2F & 1 Teacher			
	AD - Type 6A - General			
	<u>MODEL PREAMBLES</u>			
	The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates			
	<u>RAINWATER GOODS:</u>			
	<u>uPVC gutters and rainwater pipes</u>			
1	110mm Half-round roof gutters	m	49	
	A0 : 13 A1 : 11 A6 : 12 AD : 13			
	E : 0 M : 0			
2	Extra over gutter for stopped end	No	8	
	A0 : 2 A1 : 2 A6 : 2 AD : 2			
	E : 0 M : 0			
3	Extra over gutter for outlet for 110mm pipe	No	8	
	A0 : 2 A1 : 2 A6 : 2 AD : 2			
	E : 0 M : 0			
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	Bill No. 10			
	Plumbing and Drainage (Provisional)			
	BMG COST CONSULTANTS			
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4	75mm Diameter rainwater pipes A0 : 10 A1 : 11 A6 : 10 AD : 11 E : 0 M : 0	m	43
5	Extra over rainwater pipe for bend A0 : 4 A1 : 4 A6 : 4 AD : 4 E : 0 M : 0	No	16
6	Extra over rainwater pipe for swan-neck A0 : 0 A1 : 0 A6 : 0 AD : 0 E : 16 M : 0	No	16
<u>CONCRETE STORMWATER CHANNELS</u>			
7	25Mpa concrete open surface water channel 900m wide x 150mm thick reinforced with Ref 193 mesh reinforcement cast in 2m alternate panels with V-shaped channel 900 x 50mm deep formed in same, including all excavations, trimming and levelling of ground surfaces, compaction, filling, formwork, floating, etc A0 : 0 A1 : 0 A6 : 0 AD : 0 E : 91 M : 0	m	91
8	Extra over for angles, intersections, ends, dressing into sides of catchpits,etc A0 : 0 A1 : 0 A6 : 0 AD : 0 E : 18 M : 0	No	18
<u>TAPS, VALVES, ETC</u>			
<u>Solid Cast brass taps, valves, etc:</u>			
9	"Cobra KM2-200"or other approved 15mm chrome plated metered bib tap with non-hold open feature and flow controller. A0 : 10 A1 : 4 A6 : 6 AD : 8 E : 0 M : 0	No	28
10	15mm Ball-o-stop valve. A0 : 5 A1 : 4 A6 : 4 AD : 4 E : 0 M : 0	No	17
11	22mm Non Return valve. A0 : 0 A1 : 0 A6 : 0 AD : 0 E : 9 M : 0	No	9

WASTE UNIONS ETC

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Bill No. 10
Plumbing and Drainage (Provisional)
BMG COST CONSULTANTS

Outlets, traps, etc:

12	40mm 342/50 CP bottle trap. A0 : 0 A1 : 2 A6 : 1 AD : 0 E : 0 M : 0	No	3		
13	40mm Code 316 chrome plated unslotted waste outlet. A0 : 5 A1 : 2 A6 : 3 AD : 4 E : 0 M : 0	No	14		
14	40mm Rubber "P" or "S" trap A0 : 5 A1 : 2 A6 : 3 AD : 4 E : 0 M : 0	No	14		

SANITARY FITTINGS

Rust and corrosion resistant, UV-resistant polyethylene pedestals, urinals, basins, etc. Product and colour to Principal Agent's approval:

15	VIP 450 Pit pedestal complete with integral flap four times plugged to floor with and including 6 x 75mm masonry anchors. A0 : 1 A1 : 2 A6 : 0 AD : 0 E : 0 M : 0	No	3		
16	Bambi Longdrop VIP Pit pedestal for children complete with C/W flap. size: 282 x 360 x 300mm. A0 : 4 A1 : 0 A6 : 4 AD : 6 E : 0 M : 0	No	14		

Vaal or equal approved:

17	Lavatera White Vitreous china wall mounted bowl urinal with top inlet [code: 704001] 610x385mm, supplied with 38mm chromium plated domical grating [code: 8787], chromium plated spreader [code: 8543], and two hanger brackets [code: 8127] A0 : 0 A1 : 2 A6 : 1 AD : 0 E : 0 M : 0	No	3		
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SANITARY PLUMBING

PVC waste or vent pipes and fittings:

18	50mm Waste pipe. A0 : 10 A1 : 5 A6 : 6 AD : 10 E : 0 M : 0	m	31		
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Section 2
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BMG COST CONSULTANTS

19	110mm Pipe and laying in ground or filling not exceeding 2m deep including excavation, filling in and ramming. A0 : 6 A1 : 6 A6 : 7 AD : 8 E : 0 M : 0	m	27		
20	110mm Vent pipe fixed to wall with proprietary brackets at not exceeding 500mm centres. A0 : 20 A1 : 8 A6 : 16 AD : 24 E : 0 M : 0	m	68		
<u>uPVC gulleys</u>					
21	200mm Precast concrete gully dish and uPVC lowback assembly complete with 110mm P trap gulley (code UGB 40) including 190mm diameter head (code UGA 40) and grate (code UGG 40), not exceeding 750mm deep, jointed to 110mm drain pipe, including excavations for and encasing in concrete (15MPa crushing strength after 28 days) worked up to form kerb, finished smooth on top in 1:3 cement mortar. A0 : 1 A1 : 1 A6 : 1 AD : 1 E : 0 M : 0	No	4		
<u>Extra for:</u>					
22	50mm Bend. A0 : 0 A1 : 0 A6 : 0 AD : 0 E : 9 M : 0	No	9		
23	50mm Access bend. A0 : 0 A1 : 0 A6 : 0 AD : 0 E : 13 M : 0	No	13		
24	Envirosan or equal approved fly screens to top of 110 diameter vent pipe. A0 : 5 A1 : 2 A6 : 4 AD : 6 E : 0 M : 0	No	17		

WATER SUPPLIES

Polycop pipes:

Pipes shall be class 10.

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Section 2
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Plumbing and Drainage (Provisional)
BMG COST CONSULTANTS

Fixing of pipes

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

Polycop pipes chased in walls:

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

Reducing fittings:

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

TAPS, VALVES, ETC

Cobra Watertech or similar approved

25	15mm 111-15 Pillar taps fitted with restriction washer, one tap hole stopper	No	19
	A0 : 0 A1 : 0 A6 : 0 AD : 0		
	E : 19 M : 0		
26	Plumpride or similar approved	m	6
	A0 : 0 A1 : 0 A6 : 0 AD : 0		
	E : 6 M : 0		
27	15mm Plastic bib tap	No	19
	A0 : 0 A1 : 0 A6 : 0 AD : 0		
	E : 19 M : 0		

VENT PIPES, ETC

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<u>SWAN plastics or similar approved black PVC UV stabilized vent pipes</u>					
28	110mm Vent pipe with and including holderbats screwed to walls A0 : 0 A1 : 0 A6 : 0 AD : 0 E : 26 M : 0	m	26		
<u>Extra over black PVC UV stabilized vent pipe for fittings</u>					
29	110mm Sockets to be cut off and used to fix shade cloth over vent pipe (elsewhere measured). A0 : 0 A1 : 0 A6 : 0 AD : 0 E : 10 M : 0	No	10		
<u>WATER SUPPLIES</u>					
<u>Class 2 copper pipes</u>					
30	15mm Pipes A0 : 10 A1 : 12 A6 : 10 AD : 10 E : 0 M : 0	m	42		
31	15mm Pipe chased into brick walls. A0 : 10 A1 : 12 A6 : 10 AD : 10 E : 0 M : 0	m	42		
32	22mm Pipe chased into brick walls. A0 : 20 A1 : 20 A6 : 20 AD : 20 E : 0 M : 0	m	80		
<u>Extra over polycop pipes for compression fittings:</u>					
33	15mm Fittings. A0 : 12 A1 : 12 A6 : 16 AD : 16 E : 0 M : 0	No	56		
34	22mm Fittings. A0 : 14 A1 : 14 A6 : 14 AD : 14 E : 0 M : 0	No	56		
<u>Extra over class 1 copper pipes for capillary fittings</u>					
35	15mm fittings A0 : 0 A1 : 0 A6 : 0 AD : 0 E : 33 M : 0	No	33		
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36	22mm fittings	No	27
	A0 : 0 A1 : 0 A6 : 0 AD : 0		
	E : 27 M : 0		
	<u>TESTING</u>		
37	Testing water supply system		Item
	<u>TANKS, ETC</u>		
	<u>Jo-jo or similar approved</u>		
38	5000 litre Low profile water tank with and including 4mm galvanised wire looped double to top of tank and anchored to top of slab with Y10 rod cast into slab at all four corners, including 15mm standard garden hose to isolate wire and prevent damage to tank or other approved holding down material secured around tank and to concrete pedestal	No	4
	A0 : 4 A1 : 0 A6 : 0 AD : 0		
	E : 0 M : 0		
39	3mm Thick galvanised plate with and including 23mm hole to be bolted onto edge of concrete slab with 2 x 8mm raw bolts	No	4
	A0 : 4 A1 : 0 A6 : 0 AD : 0		
	E : 0 M : 0		
40	20mm "Cobra" 541 tank locking tap fitted to a 22mm extension pipe with barrel nipple and galvanised socket	No	4
	A0 : 4 A1 : 0 A6 : 0 AD : 0		
	E : 0 M : 0		

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Plumbing and Drainage (Provisional)

BMG COST CONSULTANTS

Section 2
Bill No. 12
Paintwork
BMG COST CONSULTANTS

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Contractor to provide a Letter of Compliance confirming that epoxy paint has been applied as per Manufacturer's instructions and data sheet. Proof of payment for the epoxy paint must be provided to the Principal Agent once approval has been granted.

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Section 2
Bill No. 12
Paintwork
BMG COST CONSULTANTS

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PAINTWORK ETC TO NEW WORK

ON INTERNAL FLOATED PLASTER SURFACES

One coat PVA undercoat and two coats acrylic eggshell paint

1	On wall	m2	327		
	A0 : 71 A1 : 67 A6 : 101 AD : 88				
	E : 0 M : 0				

2-4mm Polyurethane epoxy floor coating on min 25mm screed to manufacturer's specifications and instruction

2	On floors	m2	58		
	A0 : 13 A1 : 7 A6 : 19 AD : 20				
	E : 0 M : 0				

ON WOOD

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

3	On doors	m2	79		
	A0 : 18 A1 : 11 A6 : 25 AD : 25				
	E : 0 M : 0				

4	On door frames	m2	25		
	A0 : 6 A1 : 3 A6 : 8 AD : 8				
	E : 0 M : 0				

Prepare and apply two coats carbolenium on:

5	On exposed timbers.	m2	62		
	A0 : 15 A1 : 14 A6 : 16 AD : 16				
	E : 0 M : 0				

ON METAL

Spot priming defects in pre primed surfaces with zinc chromate primer and applying one undercoat and two coat high gloss enamel paint on steel

6	On steel door frames	m2	28		
	A0 : 6 A1 : 4 A6 : 9 AD : 9				
	E : 0 M : 0				

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7	On steel gates (measured flat) A0 : 0 A1 : 0 A6 : 0 AD : 0 E : 23 M : 0 <u>ON FIBRE-CEMENT</u> <u>Prepare and apply two coats pure acrylic roof paint on:</u>	m2	23
8	On fascias and barge boards. A0 : 8 A1 : 8 A6 : 8 AD : 8 E : 0 M : 0 <u>ON PVC VENT PIPE</u> <u>Prepare and apply two coats black PVA paint:</u>	m2	32
9	Vent Pipes A0 : 19 A1 : 8 A6 : 15 AD : 23 E : 0 M : 0	m2	64

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Paintwork
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Section 2

BMG COST CONSULTANTS

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	<u>SECTION No. 4</u>			
	<u>BILL No. 1</u>			
	<u>EXTERNAL WORKS (PROVISIONAL)</u>			
	<u>MODEL PREAMBLES</u>			
	The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates			
	<u>SOAKAWAY</u>			
	<u>NOTE: Base of soakaway to be level throughout</u>			
1	Excavation in earth not exceeding 1m deep for soakaway trenches	m3	42	
2	19mm Crushed stone encasing to pipes	m3	29	
3	Backfilling and compaction to 98% Mod. AASHTO density	m3	13	
4	U14 Bidum geotextile or similar approved filter blanket wrapped around stone encasing with side and end laps including stitching	m2	140	
5	110mm Slotted HDPe pipes laid in stone encas	m	70	
	<u>NOTE: Base of soakaway to be level throughout</u>			
6	Excavation in earth not exceeding 1m deep for soakaway trenches	m3	42	
7	19mm Crushed stone encasing to pipes	m3	29	
8	Backfilling and compaction to 98% Mod. AASHTO density	m3	13	
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	External Works			
	BMG COST CONSULTANTS			

9	U14 Bidum geotextile or similar approved filter blanket wrapped around stone encasing with side and end laps including stitching	m2	140	
10	110mm Slotted HDPe pipes laid in stone encas	m	70	
<u>THE FOLLOWING IN WALKWAYS</u>				
<u>Excavation not exceeding 2m deep</u>				
11	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	34	
<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>				
12	Off site to a dumping site to be found by the Contractor.	m3	34	
<u>Filling supplied by the contractor under walkways</u>				
13	G7 Base course material compacted to 98% Mod AASHTO density	m3	20	
<u>Rip and Re - compact insitu material on site compacted to 93% Mod. AASHTO density:</u>				
14	Under floors,etc.	m2	135	
<u>Prescribed density tests on filling:</u>				
15	In-situ dry density test.	No	3	
<u>Approved brand of anti-termite soil poison applied by a Registered Pest Control Company and guaranteed against termite infestation for ten years:</u>				
16	Treat filling under paving with 'Chlordane Heptachlor Aldrin' or equal approved.	m2	135	
<u>Concrete Paving Blocks</u>				
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	<u>Paving of 50mm thick 200x100mm 25MPa Bevel Bond paver blocks grey in colour in herringbone pattern on and including 20mm thick sand bed with dry filler sand swept and vibrated into joints all laid on subgrade (elsewhere measured) conforming to SABS 1200D degree of accuracy I:</u>				
17	Paving to walkway areas, etc laid to falls.	m2	135		
18	Extra over ordinary paving for 200mm wide block-on-flat header course edging on 100mm thick mortar bed including unreinforced concrete haunching along outside edge.	m	181		
	<u>Kerbing</u>				
	<u>Precast or in situ mass concrete (25 MPa - 19 mm stone) kerbs cast in convenient lengths with exposed faces finished smooth from the mould and all salient angles rounded, jointed and pointed in 1:3 cement mortar, including excavations, formwork, etc.</u>				
19	Figure 8B (300 x 275 x 175mm) semi mountable kerb laid in lengths not exceeding 1000mm on a well rammed earth bottom or base course.	m	150		
	<u>WATER TANKSTANDS</u>				
20	Prepare and provide water tank stand with raft foundation reinforced with Ref 193,150mm G6 layers, concrete to be 20Mpa 20/19aggregate and cememnt mortar all around supporting water tank, including all earth works, all in accordance with Architects specification.	No	4		
	<u>THE FOLLOWING IN WALKWAYS</u>				
	<u>Excavation not exceeding 2m deep</u>				
21	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	30		
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Section 3 Bill No. 1 External Works BMG COST CONSULTANTS					

	<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>				
22	Off site to a dumping site to be found by the Contractor.	m3	30		
	<u>Filling supplied by the contractor under walkways</u>				
23	G7 Base course material compacted to 98% Mod AASHTO density	m3	36		
	<u>Rip and Re - compact insitu material on site compacted to 93% Mod. AASHTO density:</u>				
24	Under floors,etc.	m2	60		
	<u>Prescribed density tests on filling:</u>				
25	In-situ dry density test.	No	6		
	<u>Approved brand of anti-termite soil poison applied by a Registered Pest Control Company and guaranteed against termite infestation for ten years:</u>				
26	Treat filling under paving with 'Chlordane Heptachlor Aldrin' or equal approved.	m2	60		
	<u>Concrete Paving Blocks</u>				
	<u>Paving of 50mm thick 200x100mm 25MPa Bevel Bond paver blocks grey in colour in herringbone pattern on and including 20mm thick sand bed with dry filler sand swept and vibrated into joints all laid on subgrade (elsewhere measured) conforming to SABS 1200D degree of accuracy I:</u>				
27	Paving to walkway areas, etc laid to falls.	m2	60		
28	Extra over ordinary paving for 200mm wide block-on-flat header course edging on 100mm thick mortar bed including unreinforced concrete haunching along outside edge.	m	100		
	<u>Kerbing</u>				
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BMG COST CONSULTANTS					

	<u>Precast or in situ mass concrete (25 MPa - 19 mm stone) kerbs cast in convenient lengths with exposed faces finished smooth from the mould and all salient angles rounded, jointed and pointed in 1:3 cement mortar, including excavations, formwork, etc.</u>			
29	Figure 8B (300 x 275 x 175mm) semi mountable kerb laid in lengths not exceeding 1000mm on a well rammed earth bottom or base course.	m	100	
	<u>THE FOLLOWING IN STORMWATER DRAINAGE, APRONS ETC.</u>			
	<u>STORMWATER APRONS</u>			
	<u>Excavation not exceeding 2m deep</u>			
30	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	25	
	<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>			
31	Off site to a dumping site to be found by the Contractor.	m3	25	
	<u>Filling supplied by the contractor under floors, aprons, etc</u>			
32	G7 Base course material compacted to 98% Mod AASHTO density	m3	30	
	<u>Compaction of surfaces:</u>			
33	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density.	m2	50	
	<u>Reinforced 25Mpa/19mm Concrete:</u>			
34	Surface beds cast in panels on waterproofing.	m3	5	
35	Edge thickening	m3	5	
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	<u>Finishing top surfaces of concrete smooth with a wood float:</u>				
36	Surface beds, slabs, etc to falls and currents.	m2	50		
	<u>Test blocks:</u>				
37	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	1		
	<u>Expansion joints with bitumen impregnated softboard between vertical concrete or brick surfaces:</u>				
38	12mm Joints not exceeding 300mm high.	m	50		
	<u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u>				
39	10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary.	m	50		
	<u>Fabric reinforcement:</u>				
40	REF. 395 fabric reinforcement in concrete surface beds, slabs, etc.	m2	50		
	<u>Waterproofing under Surface beds</u>				
41	350 Micron USB orange polyethylene dampproof membrane in accordance with SABS 952 Type C laid on sand bed (elsewhere measured).	m2	50		
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<u>THE FOLLOWING IN SECURITY FENCING, ETC</u>							
<u>Galvanised mild steel fence with bitumen-aluminium painted (two coats) steel pipe posts, stays, gates, etc including galvanised steel bolts, straining eye bolts, etc, site clearance and preparation of ground</u>							
42	Fencing 1 800mm high of 4 strands of galvanised twisted double strand 1.6mm straining wire tied to posts and eye bolts and covered with 50 x 50 x 2.5mm welded wire mesh tied at 150mm centres to each straining wire including 50mm diameter intermediate posts 1500mm long at not exceeding 3000mm centres	m	60				
43	Continuous razor wire security roll to top of fence flat wrapped in 700mm diameter rings, tied together and to straining wire at 150mm centres	m	60				
44	50mm Diameter inclined stay 1 800mm long, including caps, base plates, concrete base, etc	No	18				
45	100mm Diameter straining or corner post 1800mm long, including caps, base plates, concrete base, etc	No	20				
46	Gate 1 350mm x 1 800mm high of 50mm diameter framing covered with 50 x 50 x 2.5mm welded wire mesh tied at 150mm centres and steel security spikes screwed to top of gate, including hinges, heavy duty lockable barrel bolt and 63mm brass five-pin tumbler padlock	No	1				
<u>PADLOCKS</u>							
47	Supply 50 mm "Viro" Padlocks and Keys (or equal approved)	No	1				
<u>STORMWATER CHANNELS</u>							
<u>Excavation not exceeding 2m deep</u>							
48	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	75				
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	<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>				
49	Off site to a dumping site to be found by the Contractor.	m3	75		
	<u>Filling supplied by the contractor under channels</u>				
50	G7 Base course material compacted to 98% Mod AASHTO density	m3	75		
51	Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.	m3	75		
	<u>Cast in-situ Ref 395 mesh reinforced concrete (25MPa) open stormwater channels having V-shaped waterway formed in top, finished smooth on all exposed surfaces in 3:1 cement plaster trowelled smooth and with angles rounded, cast in suitable lengths not exceeding 2m, including all formwork, moulds, shallow excavation, filling and ramming, laying to falls, bedding and pointing in 3:1 cement mortar. Concrete apron to be tinted, colour to be specified by the Engineer.</u>				
52	700 x 80mm thick V' channel 150mm deep in centre laid in position in ground in 2000mm sections including all formwork, reinforcement, expansion joints, smooth finishing to top of concrete surface etc.	m	101		
53	Extra for 700mm angle	No	9		
54	Extra for forming 200mm thick 700mm wide spreader with 200mm high edges fanning out to 1 960mm width at furthest end with hard burnt bricks pitching cast in ass diffusers including working off concrete to a smooth finish and draining onto natural ground with 150 - 200mm diameter loose stones.	No	12		
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External Works

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ENTEMBISWENI PRIMARY SCHOOL IDTKZN SANITATION PROGRAMME

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Item No	Quantity	Rate	Amount
<u>SECTION 1</u>			
<u>BILL No. 1</u>			
<u>DEMOLITIONS</u>			
<u>MODEL PREAMBLES</u>			
The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>View site</u>			
Before submitting his tender the tenderer shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained			
<u>Explosives</u>			
No explosives whatsoever may be used for demolition purposes unless otherwise stated.			
<u>General</u>			
Water supply pipes and other piping in ground that may be encountered and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings to the satisfaction of the principal agent.			
Unless otherwise described all materials are to become the property of the contractor and are to be removed from the site.			
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Removal of asbestos material

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

The following shall apply in respect of asbestos removal

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

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

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

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

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

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Bill No. 1
Demolitions
BMG COST CONSULTANTS

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<u>DEMOLISHING AND REMOVING</u>					
1	Take up and move precast concrete toilets by uplifting and handing over to the school governing body (making good of pits and slabs elsewhere measured)	No	10		
2	Take up and move corrugated iron sheet toilets by uplifting and handing over to the school governing body (making good of pits and slabs elsewhere measured)	No	3		
<u>Demolishing and removing buildings with roof, comprising concrete footings, surface beds, external block walls, roof coverings, sanitary fittings, etc. complete including breaking up reinforced concrete pit cover slab, filling up pit with granular material, sealing off and carting away debris</u>					
3	Single storey building approximately 30m2 on plan and not exceeding 3m high complete	No	3		
4	Single storey building approximately 6m2 on plan and not exceeding 3m high complete	No	1		
5	Cart away rubble from demolitions and dispose off site.		Item		
6	Backfill existing hole with G7 fill material in max. 150mm layers and compact to 95% MOD AASHTO density.	m3	28		
7	Allow for compaction tests by an approved laboratory to determine density of filling material.	No	3		
<u>SUNDRIES</u>					
<u>Desludging</u>					
8	Clean out pit latrine by desludging including removal of all debris and waste including solid waste as per Health and Safety requirements and make good on completion including disposing of all debris and waste at an authorised municipal waste disposal facility. Contractor to price per seat	No	3		
9	Issue of Certificate of Waste Disposal.		Item		
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Section 1 Bill No. 1 Demolitions BMG COST CONSULTANTS					

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Item No	Quantity	Rate	Amount
<u>SECTION 2</u>			
<u>BILL No. 1</u>			
<u>EARTHWORKS (PROVISIONAL)</u>			
<u>Quantity Split:</u>			
Note that the total quantity per each item is split into the various buildings and appears below each description as follows:			
A1 - Type 2B - 4 Boys			
A6 - Type 2D-S - 1M, 3F & 1 Teacher			
AD - Type 8A - 8 Girls			
<u>MODEL PREAMBLES</u>			
The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Proprietary products in descriptions:</u>			
Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior approval by the Principal Agent.			
<u>Nature of material to be excavated:</u>			
The material to be excavated is assumed to be predominantly of a composition that will allow excavation in "earth" as specified, but including a percentage of excavation in "soft rock" and "hard rock".			
<u>Carting away of excavated material:</u>			
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.			
Carried to Collection			
			R
Section 2 Bill No. 1 Earthworks (Provisional) BMG COST CONSULTANTS			

Dewatering of excavations:

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

Density testing on filling:

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

Imported fill:

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

Classification of excavated material

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

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

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

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BMG COST CONSULTANTS

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EXCAVATION OTHER THAN BULK

EARTHWORKS

SITE CLEARANCE ETC

Site clearance

1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc	m2	195
	A1 : 45 A6 : 92 AD : 59 E : 0		
	M : 0		

2	Stripping average 150mm thick layer of top soil and stockpiling on site	m2	195
	A1 : 45 A6 : 92 AD : 59 E : 0		
	M : 0		

Excavation in earth not exceeding 2m deep:

3	Trenches.	m3	55
	A1 : 4 A6 : 28 AD : 23 E : 0		
	M : 0		

4	Holes.	m3	143
	A1 : 16 A6 : 59 AD : 67 E : 0		
	M : 0		

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

5	Soft rock.	m3	19
	A1 : 2 A6 : 9 AD : 9 E : 0		
	M : 0		

6	Hard rock.	m3	10
	A1 : 1 A6 : 4 AD : 5 E : 0		
	M : 0		

Extra over all excavations for carting away:

7	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor.	m3	187
	A1 : 20 A6 : 82 AD : 86 E : 0		
	M : 0		

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	<u>Risk of collapse of excavations:</u>				
8	Sides of trench and hole excavations not exceeding 1,5m deep. A1 : 12 A6 : 80 AD : 66 E : 0 M : 0	m2	159		
9	Ditto, but from ground level to exceeding 1,5m and not exceeding 3m A1 : 25 A6 : 52 AD : 52 E : 0 M : 0	m2	128		
	<u>Keeping excavations free of water:</u>				
10	Keeping excavations free from mud and all water including subterranean sources.		Item		
	<u>EARTH FILLING, ETC.</u>				
	<u>Imported G5 filling, selected and supplied by the Contractor, including depositing in layers not exceeding 150mm thick and compacting to 98% modified AASHTO dry density to trenches, holes, etc.</u>				
11	Under floors, steps, pavings, trenches, etc. A1 : 3 A6 : 17 AD : 16 E : 0 M : 0	m3	37		
	<u>Imported G7 filling, selected and supplied by the Contractor, including depositing in layers not exceeding 150mm thick and compacting to 98% modified AASHTO dry density to holes, trenches etc.</u>				
12	Under floors, steps, pavings, trenches, etc. A1 : 2 A6 : 8 AD : 8 E : 0 M : 0	m3	18		
13	Backfilling to holes, trenches, etc. A1 : 2 A6 : 10 AD : 8 E : 0 M : 0	m3	20		
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Prescribed density tests on filling:

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SOIL POISONING

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

17	Under floors, etc., including forming and poisoning shallow furrows against foundation walls, etc., filling in furrows and ramming.	m2	61		
	A1 : 7 A6 : 25 AD : 29 E : 0				
	M : 0				
18	To bottoms and sides of trenches, holes, etc.	m2	409		
	A1 : 49 A6 : 188 AD : 172 E : 0				
	M : 0				

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Earthworks (Provisional)

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Item No	Quantity	Rate	Amount
<u>SECTION 2</u>			
<u>BILL No. 2</u>			
<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>			
<u>Quantity Split:</u>			
Note that the total quantity per each item is split into the various buildings and appears below each description as follows:			
A1 - Type 2B - 4 Boys			
A6 - Type 2D-S - 1M, 3F & 1 Teacher			
AD - Type 8A - 8 Girls			
<u>MODEL PREAMBLES</u>			
The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Proprietary products in descriptions:</u>			
Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior approval by the Principal Agent.			
<u>Cost of tests:</u>			
The costs of making, storing and testing of concrete test cubes as required under clause 7 'Tests' of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the Architect. The testing shall be undertaken by an independent firm or institution nominated by the Contractor to the approval of the Architect. (Test cubes are measured separately).			
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Concrete, Formwork and Reinforcement			
BMG COST CONSULTANTS			

Formwork:

Descriptions of formwork shall be deemed to include use and waste only (except where described as left in or permanent), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use.

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

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

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

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Concrete, Formwork and Reinforcement
BMG COST CONSULTANTS

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**UNREINFORCED CONCRETE CAST AGAINST
EXCAVATED SURFACES**

15Mpa/19mm Concrete

1	Surface blinding under footings and bases.	m3	3		
	A1 : 0 A6 : 2 AD : 1 E : 0				
	M : 0				

**REINFORCED CONCRETE CAST AGAINST
EXCAVATED SURFACES**

30MPa/20mm concrete:

2	Strip footings to walls.	m3	62		
	A1 : 1 A6 : 6 AD : 5 E : 50				
	M : 0				

REINFORCED CONCRETE

30MPa/20mm concrete:

3	Surface beds on waterproofing.	m3	62		
	A1 : 1 A6 : 5 AD : 6 E : 50				
	M : 0				
4	Suspended Slabs.	m3	63		
	A1 : 1 A6 : 5 AD : 6 E : 50				
	M : 0				

TEST BLOCKS

Test blocks:

5	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	7		
	A1 : 1 A6 : 3 AD : 3 E : 0				
	M : 0				

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Concrete, Formwork and Reinforcement
BMG COST CONSULTANTS

FINISHING TOP SURFACE OF CONCRETE

Finishing top surfaces of concrete smooth with a wood float:

6	Surface beds, suspended slabs, ground slabs, etc.	m2	127		
	A1 : 19 A6 : 54 AD : 54 E : 0				
	M : 0				

Finishing top surfaces of concrete smooth with a steel float:

7	Surface beds, suspended slabs, etc.	m2	61		
	A1 : 7 A6 : 25 AD : 29 E : 0				
	M : 0				

Charmfers at corners

8	19 x 19mm triangular fillet at corners formed of unreinforced concrete steel trowelled.	m	55		
	A1 : 11 A6 : 22 AD : 22 E : 0				
	M : 0				

ROUGH FORMWORK (DEGREE OF ACCURACY III)

Rough Formwork to Sides:

9	Edges, risers, ends and reveals not exceeding 300mm high or wide.	m	55		
	A1 : 11 A6 : 22 AD : 22 E : 0				
	M : 0				

Permanent Formwork:

10	Soffit of slab over pit.	m2	61		
	A1 : 7 A6 : 25 AD : 29 E : 0				
	M : 0				

Extra on permanent formwork for boxing or blocking in or boxing out to form:

11	450mm Diameter opening through 255mm thick slab.	No	16		
	A1 : 2 A6 : 6 AD : 8 E : 0				
	M : 0				

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BMG COST CONSULTANTS

SMOOTH FORMWORK (DEGREE OF ACCURACY I)

Smooth Formwork to Sides:

12	Edges, risers, ends and reveals not exceeding 300mm high or wide.	m	77		
	A1 : 23 A6 : 29 AD : 25 E : 0				
	M : 0				

MOVEMENT JOINTS ETC

Expansion joints with bitumen impregnated softboard between vertical concrete or brick surfaces:

13	12mm Joints not exceeding 300mm high (Provisional).	m	87		
	A1 : 7 A6 : 44 AD : 36 E : 0				
	M : 0				

Saw cut joints:

14	6 x 40mm Saw cut joints in top of concrete (Provisional).	m	131		
	A1 : 10 A6 : 66 AD : 55 E : 0				
	M : 0				

REINFORCEMENT (PROVISIONAL)

15	High tensile steel reinforcement bars to structural concrete work.	t	1.37		
	A1 : 0.12 A6 : 0.65 AD : 0.59 E : 0.00				
	M : 0.00				

Fabric reinforcement:

16	REF. 888 fabric reinforcement in concrete footings, walls, base slabs etc.	m2	182		
	A1 : 20 A6 : 76 AD : 86 E : 0				
	M : 0				

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<u>BILL No. 3</u>			
<u>MASONRY</u>			
<u>Quantity Split:</u>			
Note that the total quantity per each item is split into the various buildings and appears below each description as follows:			
A1 - Type 2B - 4 Boys			
A6 - Type 2D-S - 1M, 3F & 1 Teacher			
AD - Type 8A - 8 Girls			
<u>MODEL PREAMBLES</u>			
The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates			
All references to SABS shall be deemed to be the relevant SANS specification			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>BRICKWORK</u>			
<u>Sizes in descriptions</u>			
Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick			
<u>Hollow walls etc</u>			
Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole.			
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Section 2 Bill No. 3 Masonry BMG COST CONSULTANTS			

Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats "Brixal" bitumen emulsion waterproofing coating.

Face bricks

Bricks shall be ordered timeously to obtain uniformity in size and colour

Pointing

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

Samples

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

Trade names

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

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Masonry
BMG COST CONSULTANTS

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BRICKWORK IN FOUNDATIONS
(PROVISIONAL)

Brickwork consisting of solid bricks with 10.5 MPa minimum nominal compressive strength in Class I mortar with Coprox masonry waterproofing or equal approved waterproof cement additive. Add 2.5kg Coprox waterproof cement additive for every 50kg of cement used in mortar mix (Cement to be 42.5N all-purpose cement):

1	One brick walls.	m2	67
	A1 : 5 A6 : 34 AD : 28 E : 0		
	M : 0		

BRICKWORK AND BLOCKWORK SUNDRIES

Galvanized brickwork reinforcement

2	230mm Wide reinforcement built in horizontally.	m	615
	A1 : 148 A6 : 286 AD : 181 E : 0		
	M : 0		

3	Ditto, but in foundations (Provisional).	m	479
	A1 : 37 A6 : 241 AD : 200 E : 0		
	M : 0		

SUPERSTRUCTURE

Brickwork of NFP bricks in class II mortar

4	Half brick walls	m2	73
	A1 : 16 A6 : 19 AD : 38 E : 0		
	M : 0		

5	One brick walls	m2	251
	A1 : 50 A6 : 55 AD : 45 E : 100		
	M : 0		

BRICKWORK SUNDRIES

Brickwork reinforcement

6	75mm Wide reinforcement built in horizontally	m	214
	A1 : 46 A6 : 56 AD : 113 E : 0		
	M : 0		

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7	150mm Wide reinforcement built in horizontally A1 : 148 A6 : 128 AD : 133 E : 0 M : 0 <u>Prestressed fabricated lintels</u>	m	410	
8	110 x 75mm Lintels in lengths not exceeding 3m A1 : 2 A6 : 9 AD : 5 E : 0 M : 0 <u>Galvanised hoop iron cramps, ties, etc</u>	m	16	
9	30 x 1,6mm Roof tie 1,5m long with one end built into brickwork and other end fixed to timber A1 : 46 A6 : 59 AD : 49 E : 0 M : 0 <u>Cramps, ties, etc:</u>	No	155	
10	30 x 2mm Galvanized roof tie 1500mm long with one end fixed to timber and other built into brickwork or concrete. A1 : 12 A6 : 15 AD : 12 E : 0 M : 0 <u>Air bricks etc:</u>	No	39	
11	229 x 152mm terracotta clay vermin proof air brick A1 : 4 A6 : 4 AD : 4 E : 0 M : 0 <u>Bagging and sealing the outer face of the inner skin of walls with 1:3 cement and sand mixture and seal with two coats "Brixeal" bitumen emulsion waterproofing coating:</u>	No	12	
12	To walls (Provisional). A1 : 50 A6 : 93 AD : 60 E : 0 M : 0 <u>FACE BRICK</u>	m2	203	

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<u>BILL No. 4</u>			
<u>WATERPROOFING</u>			
<u>Quantity Split:</u>			
Note that the total quantity per each item is split into the various buildings and appears below each description as follows:			
A1 - Type 2B - 4 Boys			
A6 - Type 2D-S - 1M, 3F & 1 Teacher			
AD - Type 8A - 8 Girls			
<u>MODEL PREAMBLES</u>			
The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Proprietary products in descriptions:</u>			
Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior approval by the Principal Agent.			
<u>Waterproofing</u>			
Complete pit sealing/waterproofing from seepage due to underground water ingress as result of high water table, perched water tables etc			
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Section 2 Bill No. 4 Waterproofing BMG COST CONSULTANTS			

Contractor to provide water proofing product that will be 100% resistant to extreme hydrostatic pressure at depth of 2m, from the positive (water from inside) of substrate. Resistant to aggressive chemicals i.e oil, salt water, sewage, weak acids and aggressive sulphate soils. The product must be able to withstand backfilling without protection and must not be subject to deterioration. The product must be able to ensure that the pit structure is fully sealed (100% free from water ingress from outside and it will not penetrate the pit).

The product and its methodology for application must be approved by Principal Agent before it is used.

It is a mandatory requirement for the Contractor to attend training to be provided by Supplier. Proof of attendance will be required prior to application of the approved waterproofing product.

Contractor must prepare a 1m x 1m sample in the presence of the Principal Agent or Engineer. In this case, the Contractor must give at least 48 hours notice prior to the date when the application of the waterproofing product is intended to be done.

Contractor to provide a Letter of Compliance confirming that waterproofing has been applied as per Manufacturer's instructions and data sheet.

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Waterproofing
BMG COST CONSULTANTS

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DAMPPROOFING OF WALLS AND FLOORS

One layer of 250 micron 'USB GREEN' waterproof sheeting sealed at laps with 'Gunplas Pressure Sensitive Tape':

1	Under surface beds, bases, etc.	m2	61		
	A1 : 7 A6 : 25 AD : 29 E : 0				
	M : 0				

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

2	Below walls, sills, etc.	m2	2		
	A1 : 0 A6 : 1 AD : 1 E : 0				
	M : 0				

JOINT SEALANTS ETC

Clear Neutral silicone sealant:

3	In joint sealing and pointing all round external window and door frames.	m	112		
	A1 : 17 A6 : 50 AD : 44 E : 0				
	M : 0				

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

4	10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary (Provisional).	m	218		
	A1 : 17 A6 : 110 AD : 91 E : 0				
	M : 0				

WATERPROOFING TO PIT WALLS

Waterproofing product to plastered walls, subject to approval by the Principal Agent prior to application.

5	On plastered wall surfaces including 100mm overlap at the base slab	m2	69		
	A1 : 27 A6 : 21 AD : 21 E : 0				
	M : 0				

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Waterproofing
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Waterproofing

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Waterproofing

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Item No	Quantity	Rate	Amount
<u>SECTION 2</u>			
<u>BILL No. 5</u>			
<u>ROOF COVERINGS</u>			
<u>Quantity Split:</u>			
Note that the total quantity per each item is split into the various buildings and appears below each description as follows:			
A1 - Type 2B - 4 Boys			
A6 - Type 2D-S - 1M, 3F & 1 Teacher			
AD - Type 8A - 8 Girls			
<u>MODEL PREAMBLES</u>			
The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Flashings</u>			
Flashings shall be approved by roof sheeting manufacturer and fixed to the sheeting with S10 clips to obviate any direct fixing perforations. Prior to flashings being fixed, all troughs at the apex shall be stop-ended to the full depth of the sheet in order to prevent any penetration of wind driven water. The trough shall be lipped at the eaves end to form a drip. Flashing flanges shall be notched to the sheet profile where necessary. All these operations must be performed with special tools available from the manufacturer. Care shall be taken to ensure that no sheeting or flashing will be cut with abrasive disc on roof surface in order to prevent steel splatter from penetrating colour coated areas. The flashings shall be supplied with a paint finish consisting of a full top coat silicon modified polyester Colour : White to one side			
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Section 2 Bill No. 5 Roof Coverings Etc. BMG COST CONSULTANTS			

Quality Assurance

The manufacturer shall be assessed and certified as complying with ISO 9001: 2008 Quality Management System

Guarantee

Z200 Galvanized Metal or equal approved sheeting shall be laid in strict accordance with manufacturer's specifications by an approved contractor. The employer shall be provided with a ten year written guarantee on materials by the manufacturer.

Safety

The contractor shall exercise special care when handling long length sheeting, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting and incomplete sections must be adequately secured against possible movement by wind and gravity

Handling and Storage

The contractor shall ensure that all materials used on site for cladding, etc are transported, handled and stored in accordance with the manufacturer's recommendations. Material damaged shall be rejected and replaced with undamaged material at the contractor's expense. Repair of damaged material will not generally be permitted. Rates are to include for preventing damage and protecting sheets through all stages of construction

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Section 2
Bill No. 5
Roof Coverings Etc.
BMG COST CONSULTANTS

Inspection Prior to Installation or Erection

Before commencing with installation, the contractor shall verify that the following items have been checked and accepted:

- a. The entire structure or the portion thereof to be sheeted has been correctly aligned, levelled and grouted
- b. Purlins and sheeting rails are at the correct spacing and are within the specified tolerances
- c. The corners of the roof are square and the wall framework is perpendicular or as specified
- d. No protrusions such as bolt heads, splice plates, cleats, etc. appear on the face of the framework
- e. All members to which roofing and cladding are to be fixed in aesthetically sensitive areas are true and square
- f. Paint and any other materials that may be incompatible with the sheeting, have been painted over or so dealt with that direct contact with the sheeting is avoided
- g. The contact faces between the purlins or the girts and the cladding are in the same plane. Should the alignment be inadequate, the contractor shall request instructions from the engineer before proceeding with the fixing of the cladding

Protrusion through Sheeted Surfaces

Protrusions such as pipes, ducts and the like, shall be adequately flashed where they pass through the sheeting surface. Where ribs have to be cut away to permit penetration, additional framing is to be installed as required to support the sheeting. Depending on the position of the penetration through the roof, special attention shall be given to back flashing the sheeting to the ridge or point of water entry. In all cases, all cutting and flashings shall be so arranged that adequate provision is made for the drainage of all troughs and corrugation

Cleaning of Roofs, etc

All debris, etc arising from the fixing of the cladding shall be removed from the sheetin as the fixing progresses. In addition, off-cuts of insulation, surplus fastners and sealants, mandrels from pop rivets, off-cuts of flashings and sheeting, surplus flashing, food packaging, cartons, bottles, cans, etc shall not be left on the roof or in the gutters. Care shall be taken to ensure that no such material enters, blocks or partially impedes the flow of water into the outlets, downpipes, etc

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ROOF COVERINGS

PROFILED METAL SHEETING AND ACCESSORIES

0,58mm Thick Z200 "IBR Profile" galvanised metal roof sheeting, in single sheet lengths, with "Chromadek" finish to external face and standard backing coat to internal face :

1	Roof sheeting laid to a mono-pitch.	m2	165		
	A1 : 29 A6 : 77 AD : 59 E : 0				
	M : 0				

0,58mm Flashings pre-painted to match roof sheeting and fixed in strict accordance with manufacturer's instructions:

2	Mono pitched ridge capping with 225mm lapping secured onto the roof.	m	51		
	A1 : 11 A6 : 23 AD : 17 E : 0				
	M : 0				

ROOF AND WALL INSULATION

"Sisalation Grade FR430" or equal approved heavy industrial insulation

3	Insulation laid taut over roof trusses (at approximately 1 100mm centres) and fixed concurrent with SA Pine purlins at 900mm centres, etc including galvanised steel straining wires	m2	165		
	A1 : 29 A6 : 77 AD : 59 E : 0				
	M : 0				

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<u>SECTION 2</u>			
<u>BILL No. 6</u>			
<u>CARPENTRY & JOINERY</u>			
<u>Quantity Split:</u>			
Note that the total quantity per each item is split into the various buildings and appears below each description as follows:			
A1 - Type 2B - 4 Boys			
A6 - Type 2D-S - 1M, 3F & 1 Teacher			
AD - Type 8A - 8 Girls			
<u>MODEL PREAMBLES</u>			
The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>FIXING</u>			
All nailing of timber roof rafters, purlins, etc shall be done with galvanised nails. In coastal areas, copper, aluminium or stainless steel nails shall be used.			
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Section 2 Bill No. 6 Carpentry and Joinery BMG COST CONSULTANTS			

ROOFS

**PLATE NAILED TIMBER ROOF TRUSS
CONSTRUCTION ETC**

Sawn softwood:

1	38 x 152mm Wall plate. A1 : 22 A6 : 45 AD : 34 E : 0 M : 0	m	102		
2	Design, supply and erect the complete double pitch roof structure to new building (approx. 29m ² on flat) including purlins, braces, battens, gangboarding, wall plates, roof ties, gusset plates, bolts, etc (Type 2B) A1 : 1 A6 : 0 AD : 0 E : 0 M : 0	No	1		
3	Design, supply and erect the complete double pitch roof structure to new building (approx. 80m ² on flat) including purlins, braces, battens, gangboarding, wall plates, roof ties, gusset plates, bolts, etc (Type 2D) A1 : 0 A6 : 1 AD : 0 E : 0 M : 0	No	1		
4	Design, supply and erect the complete double pitch roof structure to new building (approx. 59m ² on flat) including purlins, braces, battens, gangboarding, wall plates, roof ties, gusset plates, bolts, etc (Type 2D) A1 : 0 A6 : 0 AD : 1 E : 0 M : 0	No	1		
5	Take delivery, temporary store, hoist in position and erect plate nailed timber roof trusses, purlins, gangboarding, temporary and permanent bracing, etc (measured on slope of roof) A1 : 29 A6 : 80 AD : 59 E : 0 M : 0	m2	168		
6	Two coats creosote on wall plate and exposed roof timbers A1 : 29 A6 : 80 AD : 59 E : 0 M : 0	m2	168		

Sundries:

EAVES, VERGES, ETC

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Carpentry and Joinery
BMG COST CONSULTANTS

<u>"Everite Nutec" or equal approved fibre cement</u>					
7	12 x 225mm Fascia board drilled and brass screwed to rafter feet including galvanised steel H-profile jointing strips, etc. A1 : 11 A6 : 23 AD : 17 E : 0 M : 0	m	51		
8	85 x 275 x 6mm Barge board drilled and brass screwed to purlin ends including galvanised steel H-profile jointing strips, screws, holes, etc. A1 : 21 A6 : 21 AD : 21 E : 0 M : 0	m	64		
<u>DOORS ETC</u>					
<u>SANS Approved meranti:</u>					
9	44mm Framed, ledged, and battened single door with flush ply panel internally size 813 x 2032mm high comprising 44 x 110mm top rail and stiles, 44 x 220mm bottom rail, 44 x 150mm lock rail and 22 x 70mm vertical "v" jointed boards (D1). A1 : 3 A6 : 6 AD : 8 E : 0 M : 0	No	17		
10	44mm Framed, ledged, and battened single door with flush ply panel internally size 950 x 2032mm high comprising 44 x 110mm top rail and stiles, 44 x 220mm bottom rail, 44 x 150mm lock rail and 22 x 70mm vertical "v" jointed boards (D2). A1 : 2 A6 : 2 AD : 0 E : 0 M : 0	No	4		
<u>FRAMED FRAMES, ETC</u>					
<u>Meranti Frames bolted to wall with expanding masonry bolts - four per style including quadrant beads on both sides:</u>					
11	70 x 108mm rebated meranti frame . A1 : 15 A6 : 29 AD : 39 E : 0 M : 0	m	83		
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Section 2 Bill No. 6 Carpentry and Joinery BMG COST CONSULTANTS					

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

12	70 x 108mm rebated meranti frame .	m	10
	A1 : 0 A6 : 10 AD : 0 E : 0		
	M : 0		

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Carpentry and Joinery

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Bill No. 6

Carpentry and Joinery

BMG COST CONSULTANTS

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<u>SECTION 2</u>			
<u>BILL No. 7</u>			
<u>IRONMONGERY</u>			
<u>Quantity Split:</u>			
Note that the total quantity per each item is split into the various buildings and appears below each description as follows:			
A1 - Type 2B - 4 Boys			
A6 - Type 2D-S - 1M, 3F & 1 Teacher			
AD - Type 8A - 8 Girls			
<u>MODEL PREAMBLES</u>			
The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Keys/Locks</u>			
Each lock is to be distinctly numbered with consecutive numbers and each key is to be stamped with the corresponding number to the lock that it controls. All locks are to have two keys			
<u>Trade Names</u>			
Where trade names are specified other ironmongery approved by the Principal Agent may be used			
<u>Fixing</u>			
Fixing of ironmongery is deemed to be fixed to timber unless otherwise described			
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Section 2 Bill No. 7 Ironmongery BMG COST CONSULTANTS			

HINGES:

1	75 x 100mm Brass Medium duty ball bearing HMP butt hinges.	Pairs	19.0		
	A1 : 3.0 A6 : 8.0 AD : 8.0 E : 0.0				
	M : 0.0				

LOCKS

2	"UNION 2277-78SS" or equal approved three lever sash mortice lockset.	No	19		
	A1 : 3 A6 : 8 AD : 8 E : 0				
	M : 0				

"Union" or similar

3	50mm Padlock with two keys	No	7		
	A1 : 1 A6 : 4 AD : 2 E : 0				
	M : 0				

HANDLES

4	"Dorma DPH301B" or equal approved Stainless Steel Straight Tubular Pull handle flange fixing.	No	19		
	A1 : 3 A6 : 8 AD : 8 E : 0				
	M : 0				

Sundries:

5	38mm Diameter black rubber door stop plugged and screwed to wall.	No	19		
	A1 : 3 A6 : 8 AD : 8 E : 0				
	M : 0				

SIGN PLATES:

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

6	Sign plate plugged and screwed to walls with chromium plated dome headed screws.	No	19		
	A1 : 3 A6 : 8 AD : 8 E : 0				
	M : 0				

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Section 2
Bill No. 7
Ironmongery
BMG COST CONSULTANTS

SUNDRIES

Halcast or equal approved"

7	Thiefproof toilet roll holder plugged.	No	16		
	A1 : 2 A6 : 6 AD : 8 E : 0				
	M : 0				

Grade 304 stainless steel ware:

8	32mm outside diameter x 1,6mm thick tubular wall mounted side stainless steel grab rail 1,06m girth with two 45 degree and two 90 degree formed bends and each end fitted with 80mm diameter x 5mm thick flange welded on and four times countersunk holed for and plugged and screwed to wall with stainless steel crews.	No	2		
	A1 : 0 A6 : 2 AD : 0 E : 0				
	M : 0				

9	32mm outside diameter x 1,6mm thick tubular wall mounted around cistern back stainless steel grab rail 1,23m girth with two 90 degree formed bends and each end fitted with 80mm diameter x 5mm thick flange welded on and four times countersunk holed for and plugged and screwed to wall with stainless steel crews.	No	2		
	A1 : 0 A6 : 2 AD : 0 E : 0				
	M : 0				

Satin Grey Plastics or equal approved

10	"Satin plastic N-SBIN-12-SA SHE Bin size 463 x 140 x 480mm, floor standing loose.	No	6		
	A1 : 2 A6 : 2 AD : 2 E : 0				
	M : 0				

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Ironmongery
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Ironmongery

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	<u>BILL No. 8</u>			
	<u>METALWORK</u>			
	<u>Quantity Split:</u>			
	Note that the total quantity per each item is split into the various buildings and appears below each description as follows:			
	A1 - Type 2B - 4 Boys			
	A6 - Type 2D-S - 1M, 3F & 1 Teacher			
	AD - Type 8A - 8 Girls			
	<u>MODEL PREAMBLES</u>			
	The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	The Contractor is to check and verify on site that the item specified in the BoQ matches existing prior to placing orders. Additional costs will not be borne by the client for items that do not match existing and are not approved by the Principal Agent			
	<u>GALVANISED MILD STEEL GATES, SCREENS, ETC.</u>			
	<u>Note: The contractor is to check on site measurements before placing of order.</u>			
	<u>Welded gate and frame</u>			
1	Single gate 900 x 2250mm high of 20mm steel tubing and fitted with a pair of suitable hinges welded to post and with ears for padlock	No	7	
	A1 : 1 A6 : 4 AD : 2 E : 0			
	M : 0			
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	Metalwork			
	BMG COST CONSULTANTS			

GALVANISED PRESSED STEEL DOOR FRAMES

1,2mm Rebated frames suitable for one brick walls

2	Frame for door 813 x 2032mm high A1 : 3 A6 : 6 AD : 8 E : 0 M : 0	No	17		
3	Frame for door 950 x 2032mm high A1 : 0 A6 : 2 AD : 0 E : 0 M : 0	No	2		

GALVANISED STEEL WINDOWS, DOORS, ETC

**Purpose made steel windows with 8mm burglar bars
to opening sashes**

4	Window (W01) overall size 889 x 457mm high A1 : 1 A6 : 4 AD : 2 E : 0 M : 0	No	7		
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Metalwork
BMG COST CONSULTANTS

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Metalwork

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Bill No. 8

Metalwork

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15mm thick of 1:4 sand cement plaster with Coprox masonry waterproofing or equal approved waterproof cement additive. Add 2.5kg Coprox waterproof cement additive for every 50kg of cement used in plaster mix

3	On walls.	m2	276		
	A1 : 66 A6 : 112 AD : 98 E : 0				
	M : 0				
4	On walls in pit	m2	269		
	A1 : 33 A6 : 125 AD : 111 E : 0				
	M : 0				

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Plastering
BMG COST CONSULTANTS

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Plastering

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Plastering

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<u>SECTION 2</u>			
<u>BILL No. 10</u>			
<u>PLUMBING AND DRAINAGE</u>			
<u>(PROVISIONAL)</u>			
<u>Quantity Split:</u>			
Note that the total quantity per each item is split into the various buildings and appears below each description as follows:			
A1 - Type 2B - 4 Boys			
A6 - Type 2D-S - 1M, 3F & 1 Teacher			
AD - Type 8A - 8 Girls			
<u>MODEL PREAMBLES</u>			
The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates			
<u>RAINWATER GOODS:</u>			
<u>uPVC gutters and rainwater pipes</u>			
1	110mm Half-round roof gutters	m	51
	A1 : 11 A6 : 23 AD : 17 E : 0		
	M : 0		
2	Extra over gutter for stopped end	No	6
	A1 : 2 A6 : 2 AD : 2 E : 0		
	M : 0		
3	Extra over gutter for outlet for 110mm pipe	No	6
	A1 : 2 A6 : 2 AD : 2 E : 0		
	M : 0		
4	75mm Diameter rainwater pipes	m	7
	A1 : 3 A6 : 2 AD : 2 E : 0		
	M : 0		
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Plumbing and Drainage (Provisional)			
BMG COST CONSULTANTS			

5	Extra over rainwater pipe for bend A1 : 4 A6 : 4 AD : 4 E : 0 M : 0	No	12
6	Extra over rainwater pipe for swan-neck A1 : 1 A6 : 1 AD : 1 E : 0 M : 0	No	3
<u>CONCRETE STORMWATER CHANNELS</u>			
7	25Mpa concrete open surface water channel 900m wide x 150mm thick reinforced with Ref 193 mesh reinforcement cast in 2m alternate panels with V-shaped channel 900 x 50mm deep formed in same, including all excavations, trimming and levelling of ground surfaces, compaction, filling, formwork, floating, etc A1 : 19 A6 : 33 AD : 31 E : 0 M : 0	m	83
8	Extra over for angles, intersections, ends, dressing into sides of catchpits,etc A1 : 4 A6 : 4 AD : 4 E : 0 M : 0	No	12
<u>TAPS, VALVES, ETC</u>			
<u>Solid Cast brass taps, valves, etc:</u>			
9	"Cobra KM2-200"or other approved 15mm chrome plated metered bib tap with non-hold open feature and flow controller. A1 : 4 A6 : 8 AD : 10 E : 0 M : 0	No	22
10	15mm Ball-o-stop valve. A1 : 4 A6 : 6 AD : 5 E : 0 M : 0	No	15
<u>WASTE UNIONS ETC</u>			
<u>Outlets, traps, etc:</u>			
11	40mm 342/50 CP bottle trap. A1 : 2 A6 : 2 AD : 5 E : 0 M : 0	No	9

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Section 2
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Plumbing and Drainage (Provisional)
BMG COST CONSULTANTS

12	40mm Code 316 chrome plated unslotted waste outlet. A1 : 2 A6 : 4 AD : 5 E : 0 M : 0	No	11
13	40mm Rubber "P" or "S" trap A1 : 2 A6 : 4 AD : 5 E : 0 M : 0	No	11
<u>SANITARY FITTINGS</u>			
<u>Atlas Plastic or similar approved and installed according to manufactures specification</u>			
14	VIP 200 low level floor mounted WC pedestal (code: 222AP) complete with flap and incorporated seat A1 : 2 A6 : 0 AD : 0 E : 0 M : 0	No	2
<u>Rust and corrosion resistant, UV-resistant polyethylene pedestals, urinals, basins, etc. Product and colour to Principal Agent's approval:</u>			
15	VIP 450 Pit pedestal complete with integral flap four times plugged to floor with and including 6 x 75mm masonry anchors. A1 : 2 A6 : 6 AD : 8 E : 0 M : 0	No	16
<u>Vaal or equal approved:</u>			
16	Lavatera White Vitreous china wall mounted bowl urinal with top inlet [code: 704001] 610x385mm, supplied with 38mm chromium plated domical grating [code: 8787], chromium plated spreader [code: 8543], and two hanger brackets [code: 8127] A1 : 2 A6 : 2 AD : 0 E : 0 M : 0	No	4
17	Hibiscus White Vitreous china 510 x 405mm rounded basin [code: 7050] with one tap hole on left hand side, including integrated overflow, bolted to wall with two 8mm bolts [code 8448Z0], to manufacturer's specification. A1 : 2 A6 : 0 AD : 0 E : 0 M : 0	No	2

SANITARY PLUMBING

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Plumbing and Drainage (Provisional)
BMG COST CONSULTANTS

	PVC waste or vent pipes and fittings:			
18	50mm Waste pipe. A1 : 2 A6 : 4 AD : 5 E : 0 M : 0	m	11	
19	110mm Pipe and laying in ground or filling not exceeding 2m deep including excavation, filling in and ramming. A1 : 3 A6 : 3 AD : 9 E : 0 M : 0	m	15	
20	110mm Vent pipe fixed to wall with proprietary brackets at not exceeding 500mm centres. A1 : 8 A6 : 24 AD : 32 E : 0 M : 0	m	64	
	uPVC gulleys			
21	200mm Precast concrete gully dish and uPVC lowback assembly complete with 110mm P trap gulley (code UGB 40) including 190mm diameter head (code UGA 40) and grate (code UGG 40), not exceeding 750mm deep, jointed to 110mm drain pipe, including excavations for and encasing in concrete (15MPa crushing strength after 28 days) worked up to form kerb, finished smooth on top in 1:3 cement mortar. A1 : 1 A6 : 1 AD : 1 E : 0 M : 0	No	3	
	Extra for:			
22	50mm Bend. A1 : 3 A6 : 0 AD : 0 E : 0 M : 0	No	3	
23	50mm Access bend. A1 : 4 A6 : 0 AD : 0 E : 0 M : 0	No	4	
24	Envirosan or equal approved fly screens to top of 110 diameter vent pipe. A1 : 2 A6 : 6 AD : 8 E : 0 M : 0	No	16	
	WATER SUPPLIES			
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Section 2 Bill No. 10 Plumbing and Drainage (Provisional) BMG COST CONSULTANTS				

Polycop pipes:

Pipes shall be class 10.

Fixing of pipes

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

Polycop pipes chased in walls:

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

Reducing fittings:

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

TRAPS, ETC.

TAPS, VALVES, ETC

Cobra Watertech or similar approved

25	15mm 111-15 Pillar taps fitted with restriction washer, one tap hole stopper	No	11
	A1 : 2 A6 : 4 AD : 5 E : 0		
	M : 0		
26	15mm Plastic bib tap	No	11
	A1 : 2 A6 : 4 AD : 5 E : 0		
	M : 0		

VENT PIPES, ETC

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SWAN plastics or similar approved black PVC UV stabilized vent pipes

27	110mm Vent pipe with and including holderbats screwed to walls	m	17		
	A1 : 3 A6 : 6 AD : 8 E : 0				
	M : 0				

Extra over black PVC UV stabilized vent pipe for fittings

28	110mm Sockets to be cut off and used to fix shade cloth over vent pipe (elsewhere measured).	No	2		
	A1 : 2 A6 : 0 AD : 0 E : 0				
	M : 0				

WATER SUPPLIES

Class 2 copper pipes

29	15mm Pipes	m	27		
	A1 : 9 A6 : 14 AD : 4 E : 0				
	M : 0				

30	22mm Pipes	m	9		
	A1 : 0 A6 : 0 AD : 0 E : 9				
	M : 0				

31	15mm Pipe chased into brick walls.	m	27		
	A1 : 9 A6 : 14 AD : 4 E : 0				
	M : 0				

32	22mm Pipe chased into brick walls.	m	72		
	A1 : 17 A6 : 27 AD : 27 E : 0				
	M : 0				

Extra over polycop pipes for compression fittings:

33	15mm Fittings.	No	90		
	A1 : 12 A6 : 39 AD : 39 E : 0				
	M : 0				

34	22mm Fittings.	No	80		
	A1 : 14 A6 : 33 AD : 33 E : 0				
	M : 0				

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TESTING

35 Testing water supply system

Item

TANKS, ETC

Jo-jo or similar approved

36 5000 litre Low profile water tank with and including 4mm galvanised wire looped double to top of tank and anchored to top of slab with Y10 rod cast into slab at all four corners, including 15mm standard garden hose to isolate wire and prevent damage to tank or other approved holding down material secured around tank and to concrete pedestal

No

3

A1 : 1 A6 : 1 AD : 1 E : 0
M : 0

37 3mm Thick galvanised plate with and including 23mm hole to be bolted onto edge of concrete slab with 2 x 8mm raw bolts

No

3

A1 : 1 A6 : 1 AD : 1 E : 0
M : 0

38 20mm "Cobra" 541 tank locking tap fitted to a 22mm extension pipe with barrel nipple and galvanised socket

No

3

A1 : 1 A6 : 1 AD : 1 E : 0
M : 0

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<u>SECTION 2</u>				
<u>BILL NO. 11</u>				
<u>GLAZING</u>				
<u>Quantity Split:</u>				
Note that the total quantity per each item is split into the various buildings and appears below each description as follows:				
A1 - Type 2B - 4 Boys				
A6 - Type 2D-S - 1M, 3F & 1 Teacher				
AD - Type 8A - 8 Girls				
<u>GLAZING TO STEEL WITH PUTTY</u>				
<u>6mm Normal strength clear laminated safety glass</u>				
1	Panes not exceeding 0,1 m2. A1 : 0 A6 : 2 AD : 1 E : 0 M : 0	m2	3	
<u>TOPS, SHELVES, DOORS, MIRRORS, ETC</u>				
<u>6mm Silvered float glass copper backed mirror with polished edges, holed for and fixed with chromium plated dome capped screws with rubber buffers to plugs in brickwork or concrete</u>				
2	Mirror 300 x 600mm high with dome capped screws A1 : 2 A6 : 4 AD : 5 E : 0 M : 0	No	11	
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Section 2				
Bill No. 11				
Glazing				
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Item No		Quantity	Rate	Amount
	<u>SECTION 2</u>			
	<u>BILL No. 12</u>			
	<u>PAINTWORK</u>			
	<u>Quantity Split:</u>			
	Note that the total quantity per each item is split into the various buildings and appears below each description as follows:			
	A1 - Type 2B - 4 Boys			
	A6 - Type 2D-S - 1M, 3F & 1 Teacher			
	AD - Type 8A - 8 Girls			
	<u>MODEL PREAMBLES</u>			
	The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Trade Names</u>			
	Where trade names are specified it will read "or equal approved"			
	<u>Epoxy paint</u>			
	The product and its methodology for application must be approved by Principal Agent before it is used.			
	Contractor must prepare a 1m x 1m sample in the presence of the Principal Agent. In this case, the Contractor must give at least 48 hours notice prior to the date when the application of the epoxy paint is intended to be done.			
	Contractor to provide a Letter of Compliance confirming that epoxy paint has been applied as per Manufacturer's instructions and data sheet. Proof of payment for the epoxy paint must be provided to the Principal Agent once approval has been granted.			
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	Paintwork			
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Paintwork
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PAINTWORK ETC TO NEW WORK

ON INTERNAL FLOATED PLASTER SURFACES

One coat PVA undercoat and two coats acrylic eggshell paint

1	On wall	m2	276		
	A1 : 66 A6 : 112 AD : 98 E : 0				
	M : 0				

2-4mm Polyurethane epoxy floor coating on min 25mm screed to manufacturer's specifications and instruction

2	On floors	m2	310		
	A1 : 20 A6 : 150 AD : 140 E : 0				
	M : 0				

ON WOOD

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

3	On doors	m2	68		
	A1 : 11 A6 : 29 AD : 28 E : 0				
	M : 0				

4	On door frames	m2	21		
	A1 : 3 A6 : 9 AD : 9 E : 0				
	M : 0				

Prepare and apply two coats carbolenium on:

5	On exposed timbers.	m2	76		
	A1 : 14 A6 : 49 AD : 13 E : 0				
	M : 0				

ON METAL

Spot priming defects in pre primed surfaces with zinc chromate primer and applying one undercoat and two coat high gloss enamel paint on steel

6	On steel door frames	m2	24		
	A1 : 4 A6 : 10 AD : 10 E : 0				
	M : 0				

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7	On steel gates (measured flat) A1 : 4 A6 : 15 AD : 7 E : 0 M : 0 <u>ON FIBRE-CEMENT</u> <u>Prepare and apply two coats pure acrylic roof paint on:</u>	m2	26
8	On fascias and barge boards. A1 : 8 A6 : 12 AD : 10 E : 0 M : 0 <u>ON PVC VENT PIPE</u> <u>Prepare and apply two coats black PVA paint:</u>	m2	29
9	Vent Pipes A1 : 8 A6 : 23 AD : 30 E : 0 M : 0	m2	60

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Roof Coverings Etc.

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Carpentry and Joinery

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	<u>SECTION No. 3</u>			
	<u>BILL No. 1</u>			
	<u>EXTERNAL WORKS (PROVISIONAL)</u>			
	<u>MODEL PREAMBLES</u>			
	The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates			
	<u>SOAKAWAY</u>			
	NOTE: Base of soakaway to be level throughout			
1	Excavation in earth not exceeding 1m deep for soakaway trenches	m3	42	
2	19mm Crushed stone encasing to pipes	m3	29	
3	Backfilling and compaction to 98% Mod. AASHTO density	m3	13	
4	U14 Bidum geotextile or similar approved filter blanket wrapped around stone encasing with side and end laps including stitching	m2	140	
5	110mm Slotted HDPe pipes laid in stone encas	m	70	
	<u>THE FOLLOWING IN WALKWAYS</u>			
	<u>Excavation not exceeding 2m deep</u>			
6	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	34	
	<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>			
7	Off site to a dumping site to be found by the Contractor.	m3	34	
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	<u>Filling supplied by the contractor under walkways</u>				
8	G7 Base course material compacted to 98% Mod AASHTO density	m3	20		
	<u>Rip and Re - compact insitu material on site compacted to 93% Mod. AASHTO density:</u>				
9	Under floors,etc.	m2	135		
	<u>Prescribed density tests on filling:</u>				
10	In-situ dry density test.	No	3		
	<u>Approved brand of anti-termite soil poison applied by a Registered Pest Control Company and guaranteed against termite infestation for ten years:</u>				
11	Treat filling under paving with 'Chlordane Heptachlor Aldrin' or equal approved.	m2	135		
	<u>Concrete Paving Blocks</u>				
	<u>Paving of 50mm thick 200x100mm 25MPa Bevel Bond paver blocks grey in colour in herringbone pattern on and including 20mm thick sand bed with dry filler sand swept and vibrated into joints all laid on subgrade (elsewhere measured) conforming to SABS 1200D degree of accuracy I:</u>				
12	Paving to walkway areas, etc laid to falls.	m2	135		
13	Extra over ordinary paving for 200mm wide block-on-flat header course edging on 100mm thick mortar bed including unreinforced concrete haunching along outside edge.	m	181		
	<u>Kerbing</u>				
	<u>Precast or in situ mass concrete (25 MPa - 19 mm stone) kerbs cast in convenient lengths with exposed faces finished smooth from the mould and all salient angles rounded, jointed and pointed in 1:3 cement mortar, including excavations, formwork, etc.</u>				
14	Figure 8B (300 x 275 x 175mm) semi mountable kerb laid in lengths not exceeding 1000mm on a well rammed earth bottom or base course.	m	150		
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SOAKAWAY

NOTE: Base of soakaway to be level throughout

15	Excavation in earth not exceeding 1m deep for soakaway trenches	m3	42
16	19mm Crushed stone encasing to pipes	m3	29
17	Backfilling and compaction to 98% Mod. AASHTO density	m3	13
18	U14 Bidum geotextile or similar approved filter blanket wrapped around stone encasing with side and end laps including stitching	m2	140
19	110mm Slotted HDPe pipes laid in stone encas	m	70

THE FOLLOWING IN WALKWAYS

Excavation not exceeding 2m deep

20	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	34
----	--	----	----

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

21	Off site to a dumping site to be found by the Contractor.	m3	34
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Filling supplied by the contractor under walkways

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

Rip and Re - compact insitu material on site compacted to 93% Mod. AASHTO density:

23	Under floors,etc.	m2	135
----	-------------------	----	-----

Prescribed density tests on filling:

24	In-situ dry density test.	No	3
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	<u>Approved brand of anti-termite soil poison applied by a Registered Pest Control Company and guaranteed against termite infestation for ten years:</u>				
25	Treat filling under paving with 'Chlordane Heptachlor Aldrin' or equal approved.	m2	135		
	<u>Concrete Paving Blocks</u>				
	<u>Paving of 50mm thick 200x100mm 25MPa Bevel Bond paver blocks grey in colour in herringbone pattern on and including 20mm thick sand bed with dry filler sand swept and vibrated into joints all laid on subgrade (elsewhere measured) conforming to SABS 1200D degree of accuracy I:</u>				
26	Paving to walkway areas, etc laid to falls.	m2	135		
27	Extra over ordinary paving for 200mm wide block-on-flat header course edging on 100mm thick mortar bed including unreinforced concrete haunching along outside edge.	m	181		
	<u>Kerbing</u>				
	<u>Precast or in situ mass concrete (25 MPa - 19 mm stone) kerbs cast in convenient lengths with exposed faces finished smooth from the mould and all salient angles rounded, jointed and pointed in 1:3 cement mortar, including excavations, formwork, etc.</u>				
28	Figure 8B (300 x 275 x 175mm) semi mountable kerb laid in lengths not exceeding 1000mm on a well rammed earth bottom or base course.	m	150		
	<u>WATER TANKSTANDS</u>				
29	Prepare and provide water tank stand with raft foundation reinforced with Ref 193,150mm G6 layers, concrete to be 20Mpa 20/19aggregate and cememnt mortar all around supporting water tank, including all earth works, all in accordance with Architects specification.	No	4		
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<u>STORMWATER CHANNELS</u>					
<u>Excavation not exceeding 2m deep</u>					
30	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	205		
<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>					
31	Off site to a dumping site to be found by the Contractor.	m3	205		
<u>Filling supplied by the contractor under channels</u>					
32	G7 Base course material compacted to 98% Mod AASHTO density	m3	205		
33	Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.	m3	205		
<u>Cast in-situ Ref 395 mesh reinforced concrete (25MPa) open stormwater channels having V-shaped waterway formed in top, finished smooth on all exposed surfaces in 3:1 cement plaster trowelled smooth and with angles rounded, cast in suitable lengths not exceeding 2m, including all formwork, moulds, shallow excavation, filling and ramming, laying to falls, bedding and pointing in 3:1 cement mortar. Concrete apron to be tinted, colour to be specified by the Engineer.</u>					
34	700 x 80mm thick V' channel 150mm deep in centre laid in position in ground in 2000mm sections including all formwork, reinforcement, expansion joints, smooth finishing to top of concrete surface etc.	m	210		
35	Extra for 700mm angle	No	19		
36	Extra for forming 200mm thick 700mm wide spreader with 200mm high edges fanning out to 1 960mm width at furthest end with hard burnt bricks pitching cast in ass diffusers including working off concrete to a smooth finish and draining onto natural ground with 150 - 200mm diameter loose stones.	No	30		
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	<u>Sundries:</u>				
37	Create earth berm for stormwater control with in situ material 1,5m wide at base x 500mm high	m	210		
38	Construct shaped earth V-drain 2m wide with grass runners	m	210		
	<u>WATER TANKSTANDS</u>				
39	Prepare and provide water tank stand with raft foundation reinforced with Ref 193,150mm G6 layers, concrete to be 20Mpa 20/19 aggregate and cement mortar all around supporting water tank, including all earth works, all in accordance with Architects specification.	No	3		
	<u>THE FOLLOWING IN SECURITY FENCING, ETC</u>				
	<u>Galvanised mild steel fence with bitumen-aluminium painted (two coats) steel pipe posts, stays, gates, etc including galvanised steel bolts, straining eye bolts, etc, site clearance and preparation of ground</u>				
40	Fencing 1 800mm high of 4 strands of galvanised twisted double strand 1.6mm straining wire tied to posts and eye bolts and covered with 50 x 50 x 2.5mm welded wire mesh tied at 150mm centres to each straining wire including 50mm diameter intermediate posts 1500mm long at not exceeding 3000mm centres	m	40		
41	Continuous razor wire security roll to top of fence flat wrapped in 700mm diameter rings, tied together and to straining wire at 150mm centres	m	40		
42	50mm Diameter inclined stay 1 800mm long, including caps, base plates, concrete base, etc	No	10		
43	100mm Diameter straining or corner post 1800mm long, including caps, base plates, concrete base, etc	No	6		
44	Gate 1 350mm x 1 800mm high of 50mm diameter framing covered with 50 x 50 x 2.5mm welded wire mesh tied at 150mm centres and steel security spikes screwed to top of gate, including hinges, heavy duty lockable barrel bolt and 63mm brass five-pin tumbler padlock	No	1		
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[illegible]

	<u>Paving of 50mm thick 200x100mm 25MPa Bevel Bond paver blocks grey in colour in herringbone pattern on and including 20mm thick sand bed with dry filler sand swept and vibrated into joints all laid on subgrade (elsewhere measured) conforming to SABS 1200D degree of accuracy I:</u>				
52	Paving to walkway areas, etc laid to falls.	m2	60		
53	Extra over ordinary paving for 200mm wide block-on-flat header course edging on 100mm thick mortar bed including unreinforced concrete haunching along outside edge.	m	100		
	<u>Kerbing</u>				
	<u>Precast or in situ mass concrete (25 MPa - 19 mm stone) kerbs cast in convenient lengths with exposed faces finished smooth from the mould and all salient angles rounded, jointed and pointed in 1:3 cement mortar, including excavations, formwork, etc.</u>				
54	Figure 8B (300 x 275 x 175mm) semi mountable kerb laid in lengths not exceeding 1000mm on a well rammed earth bottom or base course.	m	100		
	<u>THE FOLLOWING IN STORMWATER DRAINAGE, APRONS ETC.</u>				
	<u>STORMWATER APRONS</u>				
	<u>Excavation not exceeding 2m deep</u>				
55	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	25		
	<u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>				
56	Off site to a dumping site to be found by the Contractor.	m3	25		
	<u>Filling supplied by the contractor under floors, aprons, etc</u>				
57	G7 Base course material compacted to 98% Mod AASHTO density	m3	30		
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	<u>Compaction of surfaces:</u>				
58	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density.	m2	50		
	<u>Reinforced 25Mpa/19mm Concrete:</u>				
59	Surface beds cast in panels on waterproofing.	m3	5		
60	Edge thickening	m3	5		
	<u>Finishing top surfaces of concrete smooth with a wood float:</u>				
61	Surface beds, slabs, etc to falls and currents.	m2	50		
	<u>Test blocks:</u>				
62	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	1		
	<u>Expansion joints with bitumen impregnated softboard between vertical concrete or brick surfaces:</u>				
63	12mm Joints not exceeding 300mm high.	m	50		
	<u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u>				
64	10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary.	m	50		
	<u>Fabric reinforcement:</u>				
65	REF. 395 fabric reinforcement in concrete surface beds, slabs, etc.	m2	50		
	<u>Waterproofing under Surface beds</u>				
66	350 Micron USB orange polyethylene dampproof membrane in accordance with SABS 952 Type C laid on sand bed (elsewhere measured).	m2	50		
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External Works

BMG COST CONSULTANTS

**KWAMANCANE HIGH SCHOOL
IDTKZN SANITATION PROGRAMME**

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	Allow an amount R1,100,000.00 for Contingencies to be used at the sole discretion of the client and the principal agent	Item	1 100 000,00
	Allow an amount R200,000.00 for EPWP to be used at the sole discretion of the client and the principal agent	Item	200 000,00
	SUB-TOTAL		R
	Add VAT@ 15%		R
	SUB-TOTAL		R
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	BMG COST CONSULTANTS		