

## Prototype Covered Assembly 960 Pupils (Painted Steel Option)

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Item No		Quantity	Rate	Amount	
<b>BILL NO. 2</b>					
<b><u>EARTHWORKS</u></b>					
Tenderers are advised to refer to the Model Preambles for trades before pricing these provisional Bill of Quantities.					
<b><u>SUPPLEMENTARY PREAMBLES</u></b>					
<b><u>Nature of ground</u></b>					
Descriptions of excavations shall be deemed to include all ground conditions classifiable as "Earth/ Soft Material" and where conditions of a more difficult character are encountered these will be measured separately					
<b><u>Removal of excavated material</u></b>					
Descriptions for removal of surplus excavated material shall be deemed to be spread and level where directed on site directly from the excavations or, alternatively, from stock piles situated on the building site					
<b><u>Filling</u></b>					
Notwithstanding the reference to prescribed multiple handling in clause 1 page 6 of the Standard System of Measuring Building Work, prices for filling and backfilling shall include for all selection and any necessary multiple handling of material.					
<b><u>EXCAVATION, FILLING, ETC. OTHER THAN BULK</u></b>					
<b><u>EXCAVATION, ETC.:</u></b>					
<b><u>Excavation in earth not exceeding 2m deep below natural, reduced or made up ground level</u></b>					
2/1	Reduced levels under floors	m3	162	66.00	10 692.00
2/2	Holes	m3	24	80.00	1 920.00
<b><u>Extra over trench and hole excavations in earth for excavation</u></b>					
2/3	Intermediate Rock (Provisional)	m3	3	275.00	825.00
2/4	Hard rock (Provisional)	m3	3	440.00	1 320.00
<b>Carried Forward</b>				R	14 757.00
Bill No. 2 Earthworks					

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					R	14 757.00
	<b>Brought Forward</b>					
	<b><u>Extra over excavations for removing surplus material</u></b>					
2/5	Surplus material from excavations and/or stock piles to an area where directed on site or adjacent site, spread and levelled	m3	186	95.00		17 670.00
	<b><u>Risk of collapse of excavations</u></b>					
2/6	Sides of trench and hole excavations not exceeding 1.5m deep	m2	69	5.00		345.00
	<b><u>Keeping excavations free of water</u></b>					
2/7	Allow for keeping excavations free of water other than subterranean water		Item			500.00
	<b><u>Compaction of surfaces</u></b>					
2/8	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 98% Mod. ASSTO density	m2	543	15.00		8 145.00
	<b><u>FILLING, ETC.:</u></b>					
	<b><u>Imported G5 material obtained from commercial sources supplied by the contactor compacted to 95% Mod AASHTO density</u></b>					
2/9	Under floors	m3	81	285.00		23 085.00
	<b><u>TESTS</u></b>					
	<b><u>Prescribed density tests on filling</u></b>					
2/10	Allow for the execution of all the prescribed density tests on filling, etc., as pointed out by the Engineer on site to the approval of the Project Manager.	No	6.00	275.00		1 650.00
	<b><u>SOIL POISONING</u></b>					
	<b><u>Approved brand of anti-termite soil poison applied by a registered pest control company and guaranteed against termite infestation for ten years</u></b>					
2/11	Under floors etc., including forming and poisoning shallow furrows against foundation walls etc., filling in furrows and ramming	m2	543	12.00		6 516.00
	<b>Carried to Summary</b>				R	72 668.00
	Bill No. 2					
	Earthworks					



Item No		Quantity	Rate	Amount
	<b><u>BILL NO 4</u></b>			
	<b><u>PRECAST CONCRETE</u></b>			
	Tenderers are advised to refer to the Model Preambles for trades before pricing these provisional Bill of Quantities.			
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
	<b><u>PRECAST AND BRICK PAVING</u></b>			
	Paving to be laid in accordance to the Concrete Masonry Associations Specifications			
	<b><u>Standard grey interlocking roadstone paving on and including 25mm thick layer of river sand</u></b>			
4/1	60mm Paving laid to falls	m2	760	245.00
				186 200.00
	<b><u>PRECAST KERBS</u></b>			
	<b><u>Precast Concrete finished smooth on exposed surfaces including bedding, cutting and pointing</u></b>			
4/2	Kerb (SABS 927 Fig 4) 45 x 125mm unreinforced concrete footing, 250 x 250mm triangular concrete haunching at back of each joint and 300 x 150mm concrete infill in front with cement grouted joints, including excavation, backfilling etc.	m	168	130.00
				21 840.00
	<b><u>SURFACE WATER CHANNELS</u></b>			
	<b><u>"LG Green" or other approved stormwater channels, wet pressed on and including 20Mpa concrete and all necessary excavations, formwork, etc</u></b>			
4/3	Type SW4 Stormwater channel	m	62	577.50
				35 805.00
	<b>Carried to Summary</b>		R	243 845.00
	Bill No. 4			
	Precast Concrete			

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Item No	Quantity	Rate	Amount
<b><u>BILL NO. 6</u></b>			
<b><u>STRUCTURAL STEELWORK</u></b>			
<b><u>PREAMBLES</u></b>			
Tenderers are advised to refer to the Model Preambles for trades before pricing these provisional Bill of Quantities.			
<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
Descriptions of bolts shall be deemed to include nuts and washers.			
Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include dending, threading, nuts and washers and embedding in concrete.			
Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.			
Structural steelwork shall comply with the requirements of SABS 1200H and the relevant project specifications.			
<u>Steekwork</u>			
All steelwork			
a) All structural steelwork shall be fabricated and erected in accordance with SABS 1200H			
b) Welds shall conform to SABS 0167 - 1984 and 044 specifications			
c) All Dimensions shall be checked on site before shop drawings commence. All Engineers drawings to be read in conjunction with Architects drawings. Any discrepancies shall be bought to the attention of the Engineer.			
d) A complete set of shop drawings shall be submitted to the Engineer for approval before fabrication commences.			
e) All structural steelwork shall be grade S355JR			
f) All structural bolts shall be Grade 4.8 unless otherwise stated.			
g) Where temporary bracing or propping is necessary, the contractor shall be responsible for the design, erection, maintenance and removal (where necessary) of such supports.			
<b>Carried Forward</b>		R	
Bill No. 6			
Structural Steel			

<p style="text-align: right;"><b>Brought Forward</b></p> <p>If splices in trusses are required because of transport, proposal of this shall be submitted to the Engineer at an early stage for written approval.</p> <p><u>Corrosion Protection</u></p> <p>Corrosion Protection shall consist of:</p> <p>a) Remove all slag from welded joints to expose the steelwork.</p> <p>b) Brush steelwork with a rotary wire brush to S.I.S 3.5 standard.</p> <p>c) Apply one coat (30 Micron) red lead primer in accordance with SABS 681.</p> <p>d) Apply one coat (30 Micron minimum) multi purpose undercoat in accordance with SABS 681. Use type II if paint is applied within 16 hours of application of red lead primer, otherwise use type I.</p> <p>e) Apply one coat of Alkyd base enamel (30 Micron) to Architects colour specification. Damaged areas of paint shall be made good on site in accordance with SABS 0120.</p> <p>f) Where applicable, grout shall be provided under base plates before any primary loads applied to the structure</p> <p>g) The angle iron supporting the brick walls must be painted as follows:</p> <p>Remove all slag from welded joints to expose the steelwork.</p> <p>Brush steelwork with a rotary wire brush to S.I.S 3.5</p> <p>Apply one coat PA 10 etch primer, one coat Alkyd undercoat and one coat Alkyd topcoat.</p> <p><u>Traceability of steel</u></p> <p>All steel to be marked with manufacturer's test certificate number to ensure full traceability and to facilitate re-use of the steel members.</p>		R	
<p><b>Carried Forward</b></p> <p>Bill No. 6 Structural Steel</p>		R	



Brought Forward			R	
<u>Marking steelwork</u>				
Completed components shall be marked with a durable and distinguishing erection mark, section size, steel grade and manufacturer`s test certificate number in such a way as not to damage the component. Marking shall be in a discrete location. Hardstamping may be used unless noted otherwise.				
<u>Testing of welds</u>				
10% of all fillet welds and 100% of butt welds to be subjected to non destructive testing.				
Fabricate, supply, deliver and erect including shop and site painting as described.				
<b><u>GALVANISED STEEL COLUMNS AND BEAMS</u></b>				
<b><u>Welded columns in single lengths with flat base, cap, bearer and connection plates cast into concrete base with and including fishtail lugs etc</u></b>				
200 x 100 x 4.0 Rectangular hollow section	kg	2 715.00	27.00	73 305.00
152.4 x 3.0 Circular hollow column	kg	858.48	27.00	23 178.96
<b><u>PURLINS, GIRTHS, BRACING, ETC</u></b>				
<b><u>Cold formed lipped channel with connection plates welded to rafters. (Steel rafters elsewhere measured)</u></b>				
150 x 75 x 2.0 x 2.0 Galvanized CFLC purlins	kg	1 863.54	27.00	50 315.58
50 x 50 x 4mm Bracings including cleats, bolts, welding etc	kg	204	27.00	5 508.00
<b><u>TRUSSES, GIRDERS, ETC</u></b>				
<b><u>Rafters and beams with flat bearer gusset and connection plates:</u></b>				
Girder formed of 90 x 90 x 8mm thick top chord, 80 x 80 x 8mm thick bottom chord, 50 x 50 x 4mm thick diagonal, vertical and general bracing, 80 x 80 x 8mm thick vertical bracing as detailed on drawing no. AFR 171C-PD-003 Rev.C annexured to these Bills of Quantities	kg	3 060	27.00	82 620.00
Carried Forward			R	234 927.54
Bill No. 6 Structural Steel				

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