

### Prototype Covered Assembly 320 Pupils (Galvanised Steel Option)

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Item No		Quantity	Rate	Amount	
	<b><u>BILL NO. 2</u></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	54	66.00	3 564.00
2/2	Holes	m3	8	80.00	640.00
	<b><u>Extra over trench and hole excavations in earth for excavation</u></b>				
2/3	Intermediate Rock (Provisional)	m3	1	275.00	275.00
2/4	Hard rock (Provisional)	m3	1	440.00	440.00
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					R	4 919.00
	<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	62	95.00		5 890.00
	<b><u>Risk of collapse of excavations</u></b>					
2/6	Sides of trench and hole excavations not exceeding 1.5m deep	m2	23	5.00		115.00
	<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	181	15.00		2 715.00
	<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	27	285.00		7 695.00
	<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	2.00	275.00		550.00
	<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	181	12.00		2 172.00
	<b>Carried to Summary</b>				R	24 556.00
	Bill No. 2					
	Earthworks					





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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>All hot rolled steelwork shall be grade 350W, all hollow tube steelwork shall be grade 300W and all cold formed steelwork shall be SANS 10162 Part 1 with a minimum yeild stress of 200Mpa and a minimum tensile stress of 365Mpa unless noted otherwise.</p> <p>All fixing bolts for structural steelwork shall be M20 grade 8.8 unless otherwise noted.</p> <p>All welds shall be 6mm continuous fillet welds unless noted otherwise.</p> <p>When steelwork connects to existing structures, the steelwork contractor shall check all site dimensions and levels before fabrication and erection.</p> <p>No flame cutting or site welding shall be carried out without the written approval of the engineer.</p> <p>Shop drawings shall be submitted in duplicate to the engineer for approval before commencing any fabrication.</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> <p><u>Marking steelwork</u></p> <p>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.</p>		R	
<p><b>Carried Forward</b></p> <p>Bill No. 6 Structural Steel</p>		R	



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<b>Brought Forward</b>				R	
<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>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>					
6/1	200 x 100 x 4.0 Rectangular hollow section	kg	905.00	29.00	26 245.00
6/2	152.4 x 3.0 Circular hollow column	kg	286.16	29.00	8 298.64
<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>					
6/3	150 x 75 x 2.0 x 2.0 Galvanized CFLC purlins	kg	621.18	29.00	18 014.22
6/4	50 x 50 x 4mm Bracings including cleats, bolts, welding etc	kg	68	29.00	1 972.00
<b><u>TRUSSES, GIRDERS, ETC</u></b>					
<b><u>Rafters and beams with flat bearer gusset and connection plates:</u></b>					
6/5	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	1 020	29.00	29 580.00
<b><u>GALVANISED STEEL GUTTERS AND RAINWATER PIPES</u></b>					
6/6	Box gutters 550mm girth, 3 times bent along length including necessary collared and sealed expansion joints fixed with galvanised hangers to steel rafters including end closures and 150mm diameter outlet for downpipe	m	30.00	520.00	15 600.00
<b>Carried Forward</b>				R	99 709.86
Bill No. 6 Structural Steel					

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