

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1	BILL NO.1 PRELIMINARIES AND GENERAL MANIFESTATION. <u>Clearing of site, site office/work shed, Toilet, etc.</u> <u>A provisional cost to be allocated in South African Rands.</u> BILL NO.2 <u>EARTHWORKS (PROVISIONAL)</u> <u>EXCAVATION, FILLING, ETC</u> <u>Excavation in earth not exceeding 2m deep below natural, reduced or made up ground level for</u>				
1	Trenches - strip footings	m ³	77.76		
2	Trenches – pad footing	m ³	2.64		
	<u>Extra over trench and hole excavations in earth for excavation in</u>				
3	Soft rock (provision only)	m ³	21.10		
4	Hard rock (provision only)	m ³	1.8		
5	TLB Hire + Transportation	hours	24		
	<u>Carting away of surplus material</u>				
6	Surplus material from the excavations and/or stock piles on site to a dumping site to be located by the Contractor	m ³	6.95		
7	Truck hire	hours	6		
	<u>Risk of collapse of excavations</u>				
8	Sides of trench and hole excavations not exceeding 1.5m deep	m ²			
9	Sides of trench and hole excavations not exceeding 1.5m deep	m ²	165.77		
	<u>Surface preparation and finishing</u>				
10	Rip and scarify top 150mm layer of ground,with water to optimum moisture content and re-compact to 95% Mod AASHTO density	m ²	745		

	including watering and shaping				
	<u>FILLING ETC</u>				
	Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 95% Mod AASHTO density				
11	Backfilling to trenches, holes, etc	m ³	52.98		
12	Under floors, steps, paving, etc	m ³	499.45		
	Earth filling obtained from the excavations and/or prescribed stock piles on site compacted in 150mm layers to 95% Mod AASHTO density				
13	Behind retaining walls	m ³			
	Soil compactor hire	day	3		
	<u>SOIL POISONING</u>				
	Soil insecticide				
	Approved brand of anti-termite soil poison applied by a Registered Pest Control company and guaranteed against termite infestation for ten years in accordance with SANS 5859				
14	To sides and bottoms of trench excavations	m ²	276.22		
15	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in Furrows and ramming	m ²	320		
	BILL NO.2 EARTHWORKS, EXCAVATION, FILLING, ETC.				
	SUB-TOTAL CARRIED TO SUMMARY				
	<u>BILL NO.3</u>				
	<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	<u>Cost of tests</u>				
	The costs of making, storing and testing of concrete test cubes as required shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for				

	<p>submitting reports on the tests to the principal agent. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the principal agent. (Test cubes are measured separately)</p> <p><u>Formwork</u></p> <p>Formwork to soffits of solid slabs etc shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described</p> <p><u>TEST BLOCKS</u></p>				
16	<p>Making and testing 150 x 150 x 150mm concrete strength test cube as instructed by engineer</p> <p><u>CONCRETE</u></p> <p><u>UNREINFORCED CONCRETE</u></p> <p><u>10 Mpa concrete</u></p>	No			
17	<p>Surface blinding</p>	m ³	9.01		
18	<p>Ramps and beams</p>	m ³	0.5		
19	<p>Stairs and landings</p> <p><u>Reinforced concrete cast in or on formwork</u></p> <p>30 MPa/19mm concrete in</p>	m ³	0.24		
20	<p>Strip footings</p>	m ³	3.5		
21	<p>Pad footing</p>	m ³	0.21		
22	<p>Slabs and beams</p>	m ³	33		
23	<p>Isolated beams</p>	m ³	0,20		
24	<p>Columns</p>	m ³	1.0		
25	<p>Retaining walls (Provisional only)</p> <p><u>CONCRETE SUNDRIES</u></p> <p>Finishing top surfaces of concrete smooth with a wood float</p>	m ³	9.45		
26	<p>Surface Beds, slabs etc. to receive an epoxy, resi or screed finish</p>	m ²	270.56		
27	<p>Treads of steps n.e. 300mm wide</p>	m			

			33		
28	Finishing top surfaces of concrete smooth with a power float to structural engineer's specification as per SANS 1200.				
29	Surface beds, slabs, etc	m ²	112.80		
30	Power float hire				
	<u>Rough formwork to soffits of:</u>				
31	slabs propped exceeding 1.5m and not exceeding 3.5m high	m ²	6.69		
32	slabs propped exceeding 3.5m and not exceeding 5.0m high	m ²			
	<u>Rough formwork to sides and soffits of:</u>				
33	beams propped exceeding 1.5m and not exceeding 3.5m high	m ²	3.38		
34	beams propped exceeding 3.5m and not exceeding 5.0m high	m ²			
	<u>Rough formwork to sides of:</u>				
35	rectangular columns, total bearing height exceeding 3.5m and not exceeding 5.0m	m ²			
	<u>Smooth formwork to sides of:</u>				
36	rectangular columns, total bearing height not exceeding 3.5m.	m ²	5.2		
	<u>Smooth formwork to sides and soffits of:</u>				
37	edges, risers, ends and reveals not exceeding 300mm high or wide	m	22.2		
38	edges, risers, ends and reveals exceeding 300mm high or wide	m ²			
39	sloping and stepped outer edges of stairs 300mm	m	3.6		

	<u>REINFORCEMENT</u>				
	Fabric reinforcement				
40	Type 193 fabric reinforcement in concrete surface beds, slabs, etc	No.	23		
	<u>High tensile steel reinforcement</u>				
41	Reinforcement to structural concrete including foundations, all diameters	ton	8.591		
	BILL NO.3 CONCRETE, FORMWORK AND REINFORCEMENT				
	SUB-TOTAL CARRIED TO SUMMARY				
	BILL NO. 4 MASONRY				
	<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 or cavity walls</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				
	<u>BRICKWORK</u>				
	Foundation brickwork of NFP Clay bricks in class II Mortar				
42	One brick walls	m ²	90.60		
	Superstructure brickwork of NFP clay bricks in class II Mortar				
43	Half brick walls	m ²	48		

44	One brick walls <u>Brickwork reinforcement</u>	m ²	200		
45	75mm wide reinforcement built in horizontally	m			
46	150mm wide reinforcement built in horizontally <u>Prestressed fabricated concrete lintels</u>	m	920		
47	110 x 75mm lintels in lengths not exceeding 3m. Approved facebricks with pointed and square recessed horizontal and vertical joints including cleaning down with an approved solution on completion. Allow Prime Cost R3,000.00 per 1,000 bricks supply only	m	47		
48	Extra over brickwork for face brickwork BILL NO. 4 MASONRY SUB-TOTAL CARRIED TO SUMMARY <u>BILL NO.5</u> <u>WATERPROOFING</u> REFER TO PROJECT SPECIFICATION FOR DETAILS: SCHEDULE TITLE WATERPROOFING SPECIFICATION (Wp) NO. 30059-A-DE-609 <u>SUPPLEMENTARY PREAMBLES</u> Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs <u>DAMPPROOFING OF WALLS AND FLOORS</u> PRE-PRUFE 300R Damp Proof Membrane applied to manufacturer's recommendations	m ²			

49	Under surface beds One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B)	m ²	342		
50	Under external walls BILL NO.5 WATERPROOFING SUB-TOTAL CARRIED TO SUMMARY <u>BILL NO.6</u> <u>ROOFING</u> <u>ALL TIMBER TO BE SA PINE GRADE 6 AND TILES TO BE MARLEY DOUBLE ROMAN</u> <u>ROOF TRUSSES,</u>	m ²	101.56		
51	152mm X 38 X 6.6m	No.	26		
52	114mm X 38 X 6.6m <u>ROOF BEAMS,</u>	No.	28		
53	Beams 152mm X 38 X 6.6m	No.	34		
54	Beams 114mm X 38 X 6.6m <u>PURLING</u>	No.	9		
55	50mm X 76 X 6.6mm <u>WALL PLATE</u>	No.	54		
56	114mm X 38 X 6.6m	No.	15		
57	roofing screws 120mm	No.	36		
57	IBR roof sheeting 6.6m long	No.	100		
59	Flashing <u>RAINWATER DISPOSAL</u> Gutters and Rainwater Pipes	No.	25		

60	Gutters	m	62		
61	Down pipes and fittings	m	28		
62	Roof insulatation Aerolite 135mm thick insulation R-Value 3.38	m ²	206		
63	Ceiling to be Nutec ceiling board	m ²	221		
64	Bishof strips, Rhino Cornice & nails BILL NO.6 ROOFING SUB-TOTAL CARRIED TO SUMMARY <u>BILL NO.7</u> <u>PLASTERING</u> <u>FLOOR HARDENER AND SEALER</u> <u>SCREED</u>				
65	35mm Thick cement screed including steel trowel finish <u>EXTERNAL PLASTER</u> One coat cement plaster to brickwork, minimum 20mm thick	m2	239		
66	On walls	m ²	198		
67	On sides of concrete beams <u>INTERNAL PLASTER</u> One coat cement plaster to brickwork 20mm thick	m ²	10		
68	On walls BILL NO.7PLASTERING SUB-TOTAL CARRIED TO SUMMARY	m ²	162		
69	<u>BILL NO.8</u> <u>A provisional cost to be allocated in South African Rands.</u>				

	<u>PLUMBING AND DRAINAGE</u>				
	In accordance with the plans				
	Toilet seats	No	5		
	Urinals	No	2		
	Face basin Small	No	4		
	ISCA TRI SINK MIXER 1 Tap Hole	No	1		
	Single sink	No	1		
	PVC Soil Pipe 110mm X 6m	No	16		
	PVC Waste pipe 50mm X 2m	No	11		
	<u>provisional cost to be allocated in South African Rands for fittings and other installation accessories.</u>				
	BILL NO.8PLUMBING AND DRAINAGE SUB-TOTAL CARRIED TO SUMMARY				
70	<u>BILL NO.9 PAINTING, TILING AND FINISHES</u>				
	1 coat concrete primer	litters	55		
	2 coats of acrylic PVA	litters	86		
	2 Coats gloss enamel	litters	15		
	30cm X 30cm Ceramic non skid tiles	m ²	211		
	Provisional cost to be allocated in South African Rands for rollers, paint brushes, thinners and other equipment needed for the application of paint to walls timber and steel.				

	BILL NO.9 PAINTING, TILING AND FINISHES SUB-TOTAL CARRIED TO SUMMARY				
71	<u>BILL NO.10</u> <u>ELECTRICAL AND FITTINGS</u>				
	Single switch	No.	10		
	Double Switch	No.	2		
	Triple switch	No.	1		
	switch plug double 4 x 4 (PP)	No.	26		
	wall box PVC • 4 x 2	No.	49		
	Conduit SABS Approved White • 20mm	No.	80		
	House wire 1,5mm x 100m red, black & green	No./ colour	1		
	House wire Red, Black & Green 2,5mm x 100m	No./ colour	1		
	Fluorescent fitting Double 2ft	No.	17		
	halogen enclosed security fitting 150 Watts	No.	6		
	gallery & bowl PVC Ready Light 160mm	No.	10		
	A provisional cost to be allocated in South African Rands for fittings & globe.				
	BILL NO.10 ELECTRICAL AND FITTINGS SUB-TOTAL CARRIED TO SUMMARY				
72	<u>BILL NO.11</u> <u>TRANSPORTATION</u>				
	<u>A provisional cost to be allocated in South African Rands.</u>				
	BILL NO.11 TRANSPORTATION SUB-TOTAL CARRIED TO SUMMARY				

	<p><u>SUMMARY</u></p> <p>BILL NO.1 PRELIMINARIES AND GENERAL</p> <p>BILL NO.2 - EARTHWORKS (PROVISIONAL)</p> <p>BILL NO.3 - CONCRETE, FORMWORK AND REINFORCEMENT</p> <p>BILL NO. 4 - MASONRY</p> <p>BILL NO.5 - WATERPROOFING</p> <p>BILL NO.6 – ROOFING</p> <p>BILL NO.7 - PLASTERING</p> <p>BILL NO.8 - PLUMBING AND DRAINAGE</p> <p>BILL NO.9 - PAINTING, TILING AND FINISHES</p> <p>BILL NO.10 - ELECTRICAL AND FITTINGS</p> <p>BILL NO.11 ALLOWANCE FOR TRANSPORT</p> <p>SUB-TOTAL</p> <p>ESCALATION 10%</p> <p>TOTAL</p> <p>ADD VAT</p> <p>TOTAL CARRIED TO FORM OF TENDER</p>				
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BETHAL SKILLS DEVELOPMENT CENTER

MPUMALANGA

BILL OF QUANTITIES

October 2013

Prepared By



Ngobeng Engineering & Planning (Pty) Ltd.