

	Unit	Qty	Rate	Amount
<b><u>NCORA FLATS REMAINING SANITATION WORKS</u></b>				
<b><u>SECTION No. 1</u></b>				
<b><u>BILL No.1</u></b>				
<b><u>PRELIMINARIES</u></b>				
Fixed Related Items F:..... V:..... T:.....	Item	1,00		
Value Related Items F:..... V:..... T:.....	Item	1,00		
Time Related Items F:..... V:..... T:.....	Item	1,00		
<b>Total Carried Forward To Summary</b>				

	Unit	Qty	Rate	Amount
<b><u>SECTION No. 2</u></b>				
<b><u>BILL No. 01</u></b>				
<b><u>EARTHWORKS (PROVISIONAL)</u></b>				
Note:				
For Preambles see "PW 371 - A Edition 2.1 - Construction Works: Specifications, General Specification" as published by the Department of Public Works (Edition July 2014).				
EARTHWORKS (PROVISIONAL)				
Site clearance				
Clear the areas to be developed of all rubbish, debris, vegetation, shrubs, bush and small trees not exceeding 200mm girth and remove from site.				
1	m <sup>2</sup>	100		
EXCAVATIONS, FILLING, ETC.				
BULK EXCAVATIONS				
Excavate in earth not exceeding 2m deep including trimming sides, levelling and ramming bottoms and deposit in spoil heaps for later re-use or cart away				
2	m <sup>3</sup>	8		
Excavate in earth exceeding 2m deep not exceeding 4m deep including trimming sides, levelling and ramming bottoms and deposit in spoil heaps for later re-use or cart away				
3	m <sup>3</sup>	59		
Excavations in earth of more difficult character				
Extra over excavations in earth for excavation in soft rock.				
4	m <sup>3</sup>	8		
Extra over excavations in earth for excavation in hard rock.				
5	m <sup>3</sup>	1		

		Unit	Qty	Rate	Amount
	Carting away of excavated material				
6	Load surplus or unsuitable material from spoil heaps and cart away to a dumping site to be located by the Contractor.	m <sup>3</sup>	66		
	Risk of collapse of excavations				
7	Allow for risk of collapse to sides of excavations not exceeding 1.5m deep including all necessary timber shoring, etc.	m <sup>2</sup>	18		
8	Allow for risk of collapse to sides of excavations exceeding 1.5m deep including all necessary timber shoring, etc.	m <sup>2</sup>	53		
	<u>Working space</u>				
9	Excavate in earth for working space exceeding 1500mm and not exceeding 3000mm deep, 500mm from the face of blockwork in the pit, for waterproofing purposes including backfilling with G7 imported material compacted in 150mm thick layers to 95% Modified AASHTO dry density.	m <sup>2</sup>	48		
	Keeping excavations free of water				
10	Allow for keeping the excavations free from water.	Item	1		
	Filling				
11	Earth filling from the excavations and/or stockpiles in backfilling to trenches, column bases, etc., compacted to 93% Mod AASHTO dry density.	m <sup>3</sup>	4		
	Foundation courses				
12	Imported G7 filling, selected and supplied by the Contractor, including depositing in layers not exceeding 150mm thick and compacting to 95% modified AASHTO dry density to trenches, bases, etc.	m <sup>3</sup>	13		
13	50mm Thick layer of approved river sand supplied by the Contractor spread and levelled under floors, etc.	m <sup>3</sup>	2		

		Unit	Qty	Rate	Amount
	Compaction of surfaces				
14	Scarify in-situ material to a depth of 150mm and compact to 93% Mod AASHTO density.	m <sup>2</sup>	54		
15	Scarify in-situ material to a depth of 75mm and compact to 93% Mod AASHTO density.	m <sup>2</sup>	4		
	Filter fabric				
16	Grade 3 needle punched non-woven synthetic fibre filter fabric laid vertically against waterproofing membrane as backfilling proceeds.	m <sup>2</sup>	90		
	Weedkillers, insecticides, etc.				
	Soil insecticide in accordance with SANS 5859				
17	Under floors, etc. including forming and poisoning shallow furrows against all foundation walls, filling in furrows and ramming.	m <sup>2</sup>	30		
18	To bottoms and sides of trenches.	m <sup>2</sup>	11		
19	To bottoms and sides of pit excavation.	m <sup>2</sup>	81		
	Tests				
20	Allow for Mod AASHTO density tests on filling.	No	16		
Total Carried Forward To Summary					

	Unit	Qty	Rate	Amount
<b><u>SECTION No. 2</u></b>				
<b><u>BILL No. 02</u></b>				
<b><u>CONCRETE, FORMWORK AND REINFORCEMENT</u></b>				
CONCRETE				
Mass concrete 15MPa (19mm stone) in:				
Blinding beneath bases, strip footings, etc cast				
1 against excavated surfaces.	m <sup>3</sup>	2		
Reinforced concrete 25MPa (19mm stone) in:				
2 Slabs including beams and inverted beams.	m <sup>3</sup>	8		
3 Surface beds	m <sup>3</sup>	4		
4 Aprons cast in panels	m <sup>3</sup>	1		
100 x 100mm Triangular fillets cast on top of pit Base				
5 Slab	m	60		
Surface treatment				
6 Float surface of concrete to a wood float finish.	m <sup>2</sup>	37		
7 Powerfloating of concrete surface bed.	m <sup>2</sup>	16		
Test blocks and testing				
Allow for preparing and curing a set of three test cubes, each size 150mm x 150mm x 150mm and pay all transport and testing costs undertaken by an approved independent laboratory. (Provisional)				
8	No	16		
POLYSTERENE BLOCKS ETC				
Polystrene blocks in composite slabs				
850 x 500mm extreme wide at the bottom, 550mm wide at the top x 110mm high polysterene block laid				
9 end to end rows	No	29		

		Unit	Qty	Rate	Amount
	PREFABRICATED CONCRETE RIB				
	25MPa precast reinforced concrete rib				
10	150 x 40mm high concrete rib with two 10mm high tensile reinforcing bars, in lengths not exceeding 5m.	m	18		
11	150 x 40mm high concrete rib with two 10mm high tensile reinforcing bars, in lengths exceeding 7,5m and not exceeding 10m.	m	12		
	FORMWORK				
	Supporting bearers to prefabricated beams				
12	Bearers propped up exceeding 1,5m high and not exceeding 3.5m high	m	29		
	Permanent formwork				
13	Soffits of slabs not exceeding 250mm thick and exceeding 1.5m and not exceeding 3.5 above bearing level.	m <sup>2</sup>	17		
	Rough formwork (use and waste) to concrete to: Edges, risers, ends and reveals				
14	Edge, riser, etc not exceeding 300mm high.	m	35		
	Openings				
15	Leave or form circular opening not exceeding 1m girth through 60mm thick reinforced concrete slab.	No	12		
16	Leave or form square opening not exceeding 1m girth through 60mm thick reinforced concrete slab.	No	4		
17	Cut or form circular opening not exceeding 1m girth through 110mm thick polystyrene block	No	9		
18	Cut or form square opening not exceeding 1m girth through 110mm thick polystyrene block.	No	5		
19	Cut or form circular opening not exceeding 1m girth through permanent formwork	No	9		

		Unit	Qty	Rate	Amount
20	Cut or form square opening not exceeding 1m girth through permanent formwork	No	5		
	Movement joints				
21	10mm Thick closed cell polyethylene joint forming material with hinged blocking piece, not exceeding 300mm wide, between concrete and concrete or brickwork surfaces.	m	34		
22	Remove 10 x 15mm hinged blocking piece, insert polycord bond breaker and seal with an approved 2 part polysulphide sealer.	m	34		
23	Slip joint not exceeding 300mm wide formed of two layers of 3 Ply malthoid laid on and including a 3:1 cement mortar bedding.	m	34		
	REINFORCEMENT (PROVISIONAL)				
	High tensile rod reinforcement to structural concrete work				
24	16mm Diameter bars.	t	0,452		
25	10mm Diameter bars.	t	1,011		
	High tensile welded steel mesh reinforcement :				
26	Ref: 193 cast into concrete surfaces.	m <sup>2</sup>	37		
27	Ref: 311 cast into concrete surfaces.	m <sup>2</sup>	26		
Total Carried Forward To Summary					

	Unit	Qty	Rate	Amount
<b><u>SECTION No. 2</u></b>				
<b><u>BILL No. 03</u></b>				
<b><u>MASONRY</u></b>				
FOUNDATION BRICKWORK (PROVISIONAL)				
Walls and linings in stock bricks in 5:1 cement mortar :				
1 Half brick wall.	m <sup>2</sup>	15		
2 One brick wall.	m <sup>2</sup>	54		
<u>Reinforcement to brickwork</u>				
Galvanised brick reinforcement 75mm wide built				
3 horizontally into brickwork.	m	60		
Galvanised brick reinforcement 150mm wide built				
4 horizontally into brickwork.	m	216		
EXTERNAL FACE BRICKWORK				
Rustgold FBS clay face brick or equal approved, size 222 x 106 x 73mm, bedded and jointed in Class II mortar and pointed with recessed vertical and recessed horizontal joints, suitable for exposure zones 1-2:				
Extra over ordinary brickwork for facing and pointing				
5 in stretcher bond.	m <sup>2</sup>	7		
SUPERSTRUCTURE BRICKWORK				
Walls and linings in stock bricks in 5:1 cement mortar :				
6 Half brick wall.	m <sup>2</sup>	21		
7 One brick wall.	m <sup>2</sup>	77		
<u>Beamfilling</u>				
8 Half brick wall.	m <sup>2</sup>	9		



		Unit	Qty	Rate	Amount
	BRICKWORK SUNDRIES				
	Brickwork air ventilation, etc.				
9	Extra over brickwork for cutting to form 120 x 85mm ventilation openings in 220mm wall	No	309		
	Reinforcement to brickwork				
10	Galvanised brick reinforcement 75mm wide built horizontally into brickwork.	m	88		
11	Galvanised brick reinforcement 150mm wide built horizontally into brickwork.	m	231		
	<u>Bagging</u>				
12	Bag down outer face of inner skin of brick wall in 4:1 cement slurry.	m <sup>2</sup>	231		
	Precast pre-stressed reinforced concrete lintols				
13	75 x 110mm Lintol not exceeding 3m long, built at both ends into brickwork over opening.	m	25		
14	90 x 140mm Lintol not exceeding 3m long, built at both ends into brickwork over opening.	m	3		
	Hoop iron ties, cramps, etc.				
15	1.6 x 30mm Galvanized hoop iron roof tie 1100mm long with one end wrapped around and spiked to timber the other end built a minimum of six courses deep into brickwork as the work proceeds.	No	53		
16	30 x 1,2mm Galvanised hoop iron strap 800mm long shot pinned to brickwork and bent into brickwork	No	8		
	EXTERNAL FACE BRICKWORK				
	Rustgold FBS clay face brick or equal approved, size 222 x 106 x 73mm, bedded and jointed in Class II mortar and pointed with recessed vertical and recessed horizontal joints, suitable for exposure zones 1-2:				

		Unit	Qty	Rate	Amount
17	Extra over ordinary brickwork for facing and pointing in stretcher bond.	m <sup>2</sup>	83		
	Face brick copings, lintols, cills, etc.				
18	Extra over brickwork for brick-on-edge header course tread including pointing to one face and top.	m	9		
	Brickwork air ventilation, etc.				
19	Extra over brickwork for fair cutting to form 120 x 85mm ventilation openings in facebrick, including facing and pointing	No	309		
Total Carried Forward To Summary					

	Unit	Qty	Rate	Amount
<b><u>SECTION No. 2</u></b>				
<b><u>BILL No. 04</u></b>				
<b><u>WATERPROOFING</u></b>				
<b><u>DAMP-PROOF COURSE</u></b>				
<b><u>SHEET OR MEMBRANE WATERPROOFING</u></b>				
250 Micron "Gunplas USB" green polyethylene sheeting :				
1 Laid flat on prepared sand bed under solid floor.	m <sup>2</sup>	39		
<b>FLASHING STRIPS</b>				
Elastic acrylic and rubberised bitumen compound with "waterproof membrane" applied in strict accordance with the Manufacturer's instructions :				
2 Flashing strips around 110mm diameter PVC vent pipes through steel roof sheeting.	m	2		
<b>LIQUID WATERPROOFING</b>				
Two coats "ABE Brickseal"				
3 Vertically on bagged surface of brickwork.	m <sup>2</sup>	219		
<b>MEMBRANE WATERPROOFING</b>				
Duraflex or equally approved cementitious flexible waterproofing slurry including saturation membrane with 75mm side and 100mm end laps applied in accordance with manufactures specifications				
4 Vertical surfaces of plastered brickwork.	m <sup>2</sup>	130		
<b>PROTECTION</b>				
Abe Cote SF 356 or other equal approved epoxy tar coating on				
5 Vertical surfaces of plastered brickwork.	m <sup>2</sup>	130		



	Unit	Qty	Rate	Amount
<b><u>SECTION No. 2</u></b>				
<b><u>BILL No. 05</u></b>				
<b><u>ROOF COVERINGS, ETC.</u></b>				
PROFILED SHEETING OF METAL, FIBRE CEMENT, PLASTIC, ETC.				
Metal roof sheeting				
0,53mm 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 :				
Roof sheeting laid to a mono-pitch secured to timber purlins at approximately 940mm centres including turning up sheet at ridge and turning down sheet at eaves.				
1	m <sup>2</sup>	105		
Circular cutting				
Circular cutting on roof sheeting for ventilators, vent pipes, etc.				
2	m	4		
Accessories, etc. to match roof sheeting				
3	m	25		
Ridge capping 550mm girth.				
4	m	25		
Broad flute serrated closer including polyclosers.				
5	m	25		
Narrow flute serrated closer including polyclosers.				
6	No	8		
Ridge finial.				
<b>Total Carried Forward To Summary</b>				

	Unit	Qty	Rate	Amount
<b><u>SECTION No. 2</u></b>				
<b><u>BILL No. 06</u></b>				
<b><u>CARPENTRY AND JOINERY</u></b>				
<b><u>CARPENTRY</u></b>				
<b><u>PLATE NAILED TIMBER ROOF CONSTRUCTION</u></b>				
Fixing:				
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.				
Items described as "nailed" shall be deemed to be fixed with hardened steel nails or shot pins to blockwork or concrete.				
Erection certificates				
Contractor is to supply a roof rafters erection certificate for the building stating that the erection and installation of the roof rafters has been inspected and approved by a professional registered structural engineer.				
1	No	4		
Purlins, bracing, etc.				
Sawn softwood :				
38 x 114mm Wall plate wired down (wire ties elsewhere).				
2	m	58		
3	m	129		
50 x 76mm Purlins.				
4	m	34		
76 x 38mm S5 Treated Timber				
5	No	29		
38 x 38 x 152mm Long cleat spiked to rafter foot.				
6	No	40		
50 x 76 x 500mm Long sprocket spiked to timber purlin.				
7				
Laminated S. A. Pine				

8	152 x 38mm S5 Timber Rafters	m	96		
	Sundries:				
9	Hurricane clip fixed to purlin and rafter.	No	125		
	JOINERY				
	Plastic, fibre cement, etc.				
	Pressed fibre-cement:				
10	12 x 225mm Fascia board drilled and brass screwed to rafter feet including galvanised steel H-profile jointing strips, etc.	m	25		
11	80 x 275mm Barge board drilled and brass screwed to timber rafter including galvanised steel H-profile jointing strips, etc.	m	32		
	TIMBER DOORS, WINDOWS ETC.				
	Wrot hardwood :				
12	44mm Thick framed, ledged, braced and battened door, size 762 x 1000mm high, comprising 44 x 180mm stiles and top rail, 22 x 180mm bottom rail and diagonal brace and filled flush on one side between framing with 22mm thick tongued, grooved and V-jointed both sides vertical boarding in narrow matched widths.	No	3		
	Frames and linings				
	Wrot hardwood :				
13	38 x 100mm Meranti jamb lining bolted to brickwork with and including 10 x 140mm masonry anchors at approximately 600mm centres.	m	4		
Total Carried Forward To Summary					

		Unit	Qty	Rate	Amount
<b><u>SECTION No. 2</u></b>					
<b><u>BILL No. 07</u></b>					
<b><u>IRONMONGERY</u></b>					
Hinges					
1	100 x 75mm Heavy duty brass butt hinges.	No	6		
Handles					
2	100mm Chromium plated pull handle.	No	3		
Locksets, etc. provided with two keys and to be masterkeyed					
3	51mm brass padlock with stainless steel shackle.	No	6		
IRONMONGERY FIXED TO CONCRETE, TILING, ETC.					
Push plates, kicking plates, indicator plates, etc.					
4	152 x 152 x 3mm Thick anodised silver aluminium sex indicator plate.	No	5		
5	152 x 152 x 3mm Thick anodised silver aluminium disabled indicator plate.	No	1		
6	3mm Thick x 32mm high clear perspex signs with white painted numerals or letters, countersunk tap screwed to steel door frame				
7	Sign with "MALE STAFF" enscribed.	No	1		
8	Sign with "FEMALE STAFF" enscribed.	No	1		
Door stops					
9	Black rubber door stop plugged to wall.	No	19		
Sundries					
10	50mm Plastic key tag.	No	8		
<b>Total Carried Forward To Summary</b>					



	Unit	Qty	Rate	Amount
<b><u>SECTION No. 2</u></b>				
<b><u>BILL No. 08</u></b>				
<b><u>STRUCTURAL STEEL</u></b>				
Pre-galvanised (Z450) structural steelwork (Grade 350W)				
100 x 50 x 20 x 2mm Cold formed lipped channel including bolting to brickwork at 910mm centres.	m	11		
<b>Total Carried Forward To Summary</b>				

	Unit	Qty	Rate	Amount
<b><u>SECTION No. 2</u></b>				
<b><u>BILL No. 09</u></b>				
<b><u>METALWORK</u></b>				
Hot dipped galvanised mild steel gates				
Single gate, size 900mm wide x 2050mm high, the leaf formed of 25 x 25 x 2mm wall thickness mild steel pipe framing all round and two horizontal intermediate rails with mitred and welded angles, the gate filled in with 12mm diameter mild steel bars welded, at each end, vertically to perimeter and intermediate framing at not exceeding 109mm centres, the leaf fitted with a 150mm long padbolt, the leaf to receive hasp and staple formed of 40 x 6mm mild steel flat bar welded onto frames and including fitting with two 50 x 10mm flat bar tee brackets and 16mm round bar pin hinges, twice bolted to wall with and including M16 x 95mm galvanised coach screws.				
1	No	6		
Hot dipped galvanised mild steel mesh screen				
Mesh screen, size 2230mm wide x 2100mm high, formed of 32 x 32 x 2mm wall thickness square hollow section framing all round and two horizontal rails with mitred and welded angles, the framing covered with 50 x 50 x 4mm weld mesh tack welded on, and including fitting with two 50 x 10mm flat bar tee brackets and 16mm round bar pin hinges, twice bolted to wall with and including M16 x 95mm galvanised coach screws.				
2	No	1		
Hot dipped galvanised steel clad doors and accessories				

3	<p>Door, size 760 x 1680mm high, formed of 19 x 19mm tubular steel perimeter framing and horizontal middle rail welded at angles and intersections, covered on one side with 0,6mm galvanised sheeting, prepainted "Golden Brown", pressed to shape with edges lapped around and rivetted to frame at 300mm centres, with slot for and including barrel bolt, the gate fitted with and including 25mm diameter x 2120mm long pivot pipe support welded on, 150 x 38 x 3mm top bearing bolted to beam with 2 x 6mm diameter bolts, including top cap bearing bush, washers, bottom bearing bush and finishing smooth on all exposed edges, complete with all fixing brackets, bolts etc.</p>	No	15		
4	<p>Pre-galvanised steel chawl doors</p> <p>Single door to suit one brick wall, size 950 x 2030mm high, provided complete with integral frame, ironmongery, etc. finished with red oxide primer to receive paint (elsewhere).</p>	No	1		
Total Carried Forward To Summary					

	Unit	Qty	Rate	Amount
<b><u>SECTION No. 2</u></b>				
<b><u>BILL No. 10</u></b>				
<b><u>PLASTERING</u></b>				
<b><u>SCREEDS</u></b>				
Untinted granolithic screeds, etc. mixed by volume 4 parts granite chips, 1 part sand and 2 parts cement				
1 40mm Thick screed to floors and landings.	m <sup>2</sup>	65		
2 25mm Thick screed to falls	m <sup>2</sup>	19		
Skirtings				
3 75mm High coved skirting.	m	125		
PLASTER				
One coat internal 1:4 cement plaster on :				
4 Brick walls in pit.	m <sup>2</sup>	271		
5 Brick walls (ICP)	m <sup>2</sup>	316		
<b>Total Carried Forward To Summary</b>				

	Unit	Qty	Rate	Amount
<b><u>SECTION No. 2</u></b>				
<b>BILL No. 11</b>				
<b><u>PLUMBING AND DRAINAGE (PROVISIONAL)</u></b>				
Roof gutters, rainwater pipes, etc.				
uPVC gutter including gutter brackets				
1 125mm Half round eaves gutters on gutter brackets at 1000mm centres maximum fixed to fascias.	m	25		
2 Extra over uPVC gutter for forming discharge outlet to suit 100 x 75mm downpipe.	No	4		
3 Extra over gutter for stopped end.	No	8		
4 75mm Rainwater downpipe fixed to wall with and including proprietary holderbats.	m	14		
5 Extra over rainwater downpipe for bend.	No	8		
PIPEWORK, ETC.				
Pipes, pipe fittings, etc.				
WATER SUPPLIES				
Class 6 HDPE waterpipe				
6 22mm Pipe and fixing to walls, floors, in roofs, in concrete, etc. including any necessary proprietary holderbats, fixings, etc.	m	14		
7 Extra over Class 6 HDPE pipe for fittings				
8 22mm Fittings.	No	6		
Class 6 HDPE waterpipe				
9 32mm Pipe and fixing from water tanks to the stand pipe. including any necessary proprietary holderbats, fixings, etc.	m	30		
Extra over Class 6 HDPE pipe for fittings				

10	32mm Fittings.  Class 6 HDPE waterpipe  50mm Overflow Pipe and fixing from water tanks. including any necessary proprietary holderbats, 11 fixings, etc.	No    m	12    35		
	Extra over Class 6 HDPE pipe for fittings				
12	50mm Fittings.  Class 2 copper pipes with straight compression fittings  15mm Pipe and fixing to walls, floors, in roofs, in concrete, etc. including any necessary proprietary 13 holderbats, fixings, etc.	No    m	8    14		
	Extra over copper pipes for brass compression fittings				
14	15mm Fittings.  Extra over copper pipes for capillary fittings with soldered joints	No	14		
15	15mm Fittings.  SOIL DRAINAGE  uPVC Pipes with solvent welded straight joints :	No	6		
16	40mm Pipes.	m	5		
17	50mm Pipes.  White uPVC vent pipe in single lengths :	m	3		
	110mm Diameter vent pipe fixed to wall with proprietary brackets at not exceeding 500mm 18 centres.	m	77		
	Extra over uPVC pipes for solvent welded fittings :				
19	40mm Plain bend.	No	6		
20	50mm Plain bend.	No	6		

21	Black PVC whirlybird vent capping over the 110mm vent pipe.	No	19		
	Inspection chambers, catch pits, etc.				
	Light Composite covers and frames				
	450 x 450mm x 8.6 kg EN124 A15 light composite manhole cover and frame inclusive of two stainless steel screws lock fasten cover with frame and two vented holes designed for the easy lifting and also has the function for draining, including fixing frame on concrete,	No	11		
	SANITARY FITTINGS, TANKS, GEYSERS, ETC.				
	Plastic sanitaryware				
23	Atlas Plastics 237 AP VIP 450 Pit pedestal complete with integral flap four times plugged to floor with and including 6 x 75mm masonry anchors.	No	20		
24	Atlas Plastics 507AP Granite bowl urinal fitted with "496AP" waterless urinal waste fitting hung on wall on and including proprietary brackets.	No	5		
	Atlas Plastics Christy 382AP Basin, size 570 x 400 x 245mm, provided complete with two tapholes and built in soap holder, hung on wall on and including proprietary wall brackets.	No	1		
	Sanitary fitting sundries				
25	Satin chrome thief proof toilet roll holder, PWD Sample 71, plugged to wall.	No	20		
26	Heavy-duty double-flap hinged toilet seat and cover.	No	20		
	Grade 304 stainless steel ware :				
27	Grab rail 1200mm long with two flanges "SR 1" plugged to wall with and including stainless steel screws.	No	1		
28	Dog leg grab rail with three flanges "DL3" plugged to wall with and including stainless steel screws.	No	1		
	Steel Pipes, etc.				

	Galvanised Steel Pipe				
29	22mm galvanised steel pipe	m	4		
	Taps, valves, etc.				
	Solid cast brass taps, valves, etc.				
30	Cobra KM2-200 or other equal approved 15mm chrome plated metered bib tap with non-hold open feature and flow controller.	No	1		
31	15mm Ball-o-stop valve.	No	6		
32	22mm Gate valve	No	4		
33	22mm Non Return valve	No	4		
	Waste unions, traps, etc.				
	Outlets, traps, etc :				
34	50mm Chromium plated PVC urinal bottle trap.	No	5		
35	38mm Chromium plated brass slotted basin waste outlet with plug, chain and chain stay.	No	1		
36	38mm PVC Mini P-trap.	No	1		
Total Carried Forward To Summary					



	Unit	Qty	Rate	Amount
<b><u>SECTION No. 2</u></b>				
<b><u>BILL No. 12</u></b>				
<b><u>PAINTWORK</u></b>				
<b><u>PAINT ON CONCRETE, PLASTER, ETC</u></b>				
Prepare and apply one coat plaster primer, one coat universal undercoat and two coats "Wall & All" or other equal approved washable suede sheen acrylic PVA paint on :				
1 Internal smooth plastered walls.	m <sup>2</sup>	380		
2 Internal smooth plastered wall in narrow widths not exceeding 300mm wide	m <sup>2</sup>	3		
Scrub surface with degreaser, rinse thoroughly with tap water, and apply one coat sealer and two coats epoxy paint on:				
3				
4 Concrete floated or screeded floors	m <sup>2</sup>	65		
5 Granolithic skirting not exceeding 300mm girth.	m	133		
PAINT ON TIMBER				
Prime or oil				
6 Backs of frames or linings not exceeding 300mm girth.	m	7		
7 Doors	m <sup>2</sup>	5		
PAINT ON METALWORK				
Prepare and apply one coat bituminous paint on :				
8 Backs of steel door frames.	m <sup>2</sup>	2		
One coat steel etch primer, one coat universal undercoat and two coats gloss enamel paint on :				
9 Hot dipped galvanised steel gates.	m <sup>2</sup>	12		

10	Hot dipped galvanised steel mesh screens.  One coat red oxide primer, one coat universal undercoat and two coats gloss enamel paint on :	m <sup>2</sup>	5		
11	Pre-galvanised steel doors.	m <sup>2</sup>	2		
12	Pre-galvanised steel door frames.  PAINT ON FIBRE-CEMENT  Prepare and apply one coat plaster primer and two coats quality matt acrylic PVA on :  External fibre cement fascia boarding including priming cover strips	m <sup>2</sup>	2		
13	External fibre cement bargeboard including priming cover strips	m <sup>2</sup>	6		
14	PAINT ON PVC  Prepare and apply two coats black PVA paint on:	m <sup>2</sup>	8		
15	Vent pipes.	m	8		
Total Carried Forward To Summary					

	Unit	Qty	Rate	Amount
<b><u>SECTION No. 3</u></b>				
<b><u>BILL No. 1</u></b>				
<b><u>EXTERNAL WORKS (PROVISIONAL)</u></b>				
Note:				
For Preambles see "PW 371 - A Edition 2.0 - Construction Works: Specifications, General Specification" as published by the Department of Public Works (2nd Edition July 2013).				
DEMOLITIONS				
Brickwork building structures				
Demolish and cart away single storey toilet block complete, size on plan 9000mm long x 3000mm wide x approximately 3000mm high, comprised of corrugated iron roof covering on mono-pitch timber rafters, with concrete block walls including timber doors, ground floor concrete surface bed with granolithic floor covering, sanitary fittings, etc. including grubbing up foundations and backfilling holes with material from the stockpiles on site.				
1	No	1		
Demolish and cart away single storey toilet block complete, size on plan 10000mm long x 3000mm wide x approximately 3000mm high, comprised of corrugated iron roof covering on mono-pitch timber rafters, with concrete block walls including timber doors, ground floor concrete surface bed with granolithic floor covering, sanitary fittings, etc. including grubbing up foundations and backfilling holes with material from the stockpiles on site.				
2	No	1		



	Unit	Qty	Rate	Amount
<b><u>SECTION No. 3</u></b>				
<b><u>BILL NO. 2</u></b>				
<b><u>WALKWAYS, RAMPS, ETC.</u></b>				
<b><u>EARTHWORKS</u></b>				
Site clearance				
Clear the areas to be developed of all rubbish, debris, vegetation, shrubs, bush and small trees not exceeding 200mm girth and remove from site.				
1	m <sup>2</sup>	120		
Excavate in earth not exceeding 2m deep including trimming sides, levelling and ramming bottoms and deposit in spoil heaps for later re-use or cart away				
2	m <sup>3</sup>	24		
Reduced levels under solid floors.				
Carting away of excavated material				
Load surplus or unsuitable material from spoil heaps and cart away to a dumping site to be located by the Contractor.				
3	m <sup>3</sup>	24		
Filling				
150mm G7 Sub-base course, selected and supplied by the Contractor, deposited in layers not exceeding 150mm thick, watered and consolidated to 93% modified AASHTO density under slabs.				
4	m <sup>3</sup>	18		
Prescribed Testing				
Provide and have filling compaction check tested by a Consulting Engineer's Laboratory and deliver the results to the Architect within 24 hours of the tests being completed.				
5	No	2		
Reinforced concrete 25MPa (19mm stone) in:				
6	m <sup>3</sup>	12		
Paving in panels including any necessary formwork.				
7	m <sup>3</sup>	0,4		
Ramps.				



	Unit	Qty	Rate	Amount
<b><u>SECTION No. 3</u></b>				
<b><u>BILL NO. 3</u></b>				
<b><u>STORMWATER CUT OFF DRAIN / EARTH BERM</u></b>				
Excavate in earth not exceeding 2m deep including trimming sides, levelling and ramming bottoms and deposit in spoil heaps for later re-use or cart away				
1 Reduced levels	m <sup>3</sup>	30		
Filling				
Earth filling from the excavations and/or stockpiles in backfilling to trenches, column bases, etc.,				
2 compacted to 93% Mod AASHTO dry density.	m <sup>3</sup>	30		
Compaction of surfaces				
Scarify in-situ material to a depth of 150mm and compact to 93% Mod AASHTO density.				
3	m <sup>2</sup>	60		
Grassing, ground cover, etc.				
Kikuyu turf (sods or rolls) instant lawn 25 to 40mm thick, imported from commercial sources, laid firmly with staggered joints within three days of being				
4 lifted.	m <sup>2</sup>	50		
THE FOLLOWING IN CONCRETE CHANNELS, ETC.				
EARTHWORKS				
5 Holes	m <sup>3</sup>	0,3		
Surface trenches.	m <sup>3</sup>	1		
Carting away of excavated material				
Load surplus or unsuitable material from spoil heaps and cart away to a dumping site to be located by the				
6 Contractor.	m <sup>3</sup>	1		

	Allow for risk of collapse to sides of excavations not exceeding 1.5m deep including all necessary timber shoring, etc.	m <sup>2</sup>	1		
7	Sundries				
8	Rip prepared platform level and recompact to 93% Mod. A.A.S.H.T.O. density.	m <sup>2</sup>	3		
	Prescribed Testing				
9	Provide and have filling compaction check tested by a Consulting Engineer's Laboratory and deliver the results to the Architect within 24 hours of the tests being completed.	No	4		
	FORMWORK				
	Edges, risers, ends and reveals				
10	Edge, riser, etc not exceeding 300mm high.	m	6		
	Grooves, channels, mortices, etc.				
11	700 x 150mm V-Channels in top	m	3		
12	1500 x 750 x 150mm Concrete V-Channel Spreader	No	1		
	REINFORCEMENT (PROVISIONAL)				
	High tensile rod reinforcement to structural concrete work				
13	12mm Diameter bars.	ton	0,007		
	Reinforcement				
14	Ref: 193 High tensile welded steel mesh reinforcement cast into concrete surfaces.	m <sup>2</sup>	3		
Total Carried Forward To Summary					



	Unit	Qty	Rate	Amount
<b><u>SECTION No. 3</u></b>				
<b><u>BILL NO. 4</u></b>				
<b><u>STAND PIPE BIP TAP ETC.</u></b>				
SITE CLEARANCE ETC				
Allow for clearing the area of the site to be built upon of all grass, weeds, shrubs, trees with trunks not exceeding 200mm girth, debris, etc., including grubbing up all roots, scoffling up as required and				
1	cart away all vegetation and debris.	m <sup>2</sup>	9	
Stripping average 300mm thick layer of topsoil and				
2	stockpiling on site.	m <sup>2</sup>	9	
Excavate in pickable material not exceeding 2m deep				
3	below natural or reduced ground level:			
Holes.				
4		m <sup>3</sup>	2	
Carting away.				
Extra over all excavations for carting away surplus excavated material and spreading, levelling and lightly compacting on site where directed not exceeding 100m from the excavations.(measured				
6	nett - no allowance made for bulking)	m <sup>3</sup>	2	
Filling with approved natural gravel material (G5) supplied and carted onto site by the Contractor and compacted to 95% Mod AASHTO density:				
7	Under trenches, holes, surface beds, etc.	m <sup>3</sup>	1	
Compaction of surfaces.				
Compaction of ground surface including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material from excavated material where necessary and compacting to 87% Mod				
8	AASHTO density.	m <sup>2</sup>	5	
Prescribed density tests on filling				
9	Modified AASHTO Density test.	No	2	

	CONCRETE, FORMWORK AND REINFORCEMENT				
	25Mpa/19mm Concrete				
10	1000mm V' shaped concrete slab.	m <sup>3</sup>	1		
11	In 110mm PVC Blue Water Pipe.	m <sup>3</sup>	1		
	Smooth Formwork to Sides:				
12	Edges, risers, ends and reveals not exceeding 300mm high or wide.	m	12		
	Fabric reinforcement:				
13	Type 193 fabric reinforcement in concrete surface beds, slabs, etc	m <sup>2</sup>	5		
	One layer of 350 micron 'USB GREEN' waterproof sheeting sealed at laps with 'Gunplas Pressure Sensitive Tape':				
14	Under surface beds.	m <sup>2</sup>	5		
	WATER SUPPLIES				
	Galvanised steel pipe.				
15	20mm Diameter galvanised pipes fixed to concrete.	m	2		
	Extra over for pipe fittings.				
16	Bend	No	2		
	uPVC Pipes				
17	110mm Blue Water Pipe.	m	2		
	Solid cast brass taps, valves, etc				
18	Bib Tap or Similar approved.	No	4		
19	Aqualoc Flow Restrictors/Valve				
20	Supply and install Aqualoc Monobox or equal approved, with flow restrictors installations	No	2		
21	Supply Aqualoc Service set, complete with all				

	fittings	No	2		
	Sundries:				
22	Galvanized reno mattresses 2.0m X 1.0m X 0.3m deep with 60 x 80 mm mesh filled with 100 - 150mm stones.	m <sup>3</sup>	2		
	Testing:				
23	Testing drainage system.	Item	1		
Total Carried Forward To Summary					

	Unit	Qty	Rate	Amount
<b><u>SECTION No. 3</u></b>				
<b><u>BILL NO. 5</u></b>				
<b><u>RAINWATER TANKS AND STANDS</u></b>				
Earth filling (G7 material) supplied by the contractor compacted to 98% Mod AASHTO density:				
1 Under floors.	m <sup>3</sup>	3		
Compaction of surfaces				
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				
2 AASHTO density.	m <sup>2</sup>	12		
25 MPa/19mm Concrete:				
3 Tank concrete slab.	m <sup>3</sup>	3		
Finishing top surfaces of concrete smooth with a steel trowel including adding additional cement while concrete is still green to attain a smooth, hard surface:				
4 Surface beds, slabs, etc.	m <sup>2</sup>	12		
5 Rough Formwork to Sides:				
6 Edges, risers, ends and reveals not exceeding 300mm high.	m	24		
7 Allens Meshco Square Mesh Fabric reinforcement:				
8 Type 193 fabric reinforcement in concrete slabs.	m <sup>2</sup>	12		
One layer of 350 micron 'USB GREEN' waterproof sheeting sealed at laps with 'Gunplas Pressure Sensitive Tape':				
9 Sensitive Tape:				
10 Under surface beds.	m <sup>2</sup>	12		

PLUMBING AND DRAINAGE				
-----------------------	--	--	--	--

Plastic water tanks etc:				
--------------------------	--	--	--	--

2500 Litre light duty cylindrical tank complete with lid, 15mm brass bibtap with handle suitable for locking and 4 No. galvanised stay wires 2.5m each long connected to tank, with and including 4 No. eye bolts cast into concrete.				
---	--	--	--	--

11				
----	--	--	--	--

	No			
--	----	--	--	--

		4		
--	--	---	--	--

12				
----	--	--	--	--

Hole top of tank for 100mm pipe.				
----------------------------------	--	--	--	--

	No			
--	----	--	--	--

		4		
--	--	---	--	--

Total Carried Forward To Summary				

	Unit	Qty	Rate	Amount
<b><u>SECTION No. 3</u></b>				
<b><u>BILL NO. 6</u></b>				
<b><u>SECURITY FENCING</u></b>				
Site clearance				
Allow for clearing site for the width of 1 000 mm where fencing is to be erected including removing trees, shrubs etc. not exceeding 200 mm girth, grubbing up roots and roughly levelling.				
1	m <sup>2</sup>	90		
Straining wires, fencing and razor wire:				
Four strands of 4 mm galvanised straining wires secured to fencing posts with doubled 2 mm galvanised wire inserted through hole in post and turned a minimum of four turns around straining wire and attached to straining frame at one end with not less than four turns at the other end to straining bolts (elsewhere measured).				
2	m	270		
3 Strands of galvanised barbed wire tied to standards, posts and eye bolts				
3	m	32		
Fencing formed of 100 x 50 x 2.5mm diameter galvanised fencing 1 800mm high and fixed to each straining wire with 8 guage binding wire at 500mm centres (straining wires elsewhere measured).				
4	m	90		
Posts for 1 800mm high security fence:				
60 mm Diameter galvanised steel intermediate fencing post 1800mm long fitted with a pressed steel mushroom cap one end and 150 x 150 x 5 mm baseplate at bottom and embedded in and including 350 x 350 x 600 mm mass concrete (15 MPa) base.				
5	No	30		
100 mm Ditto as corner post, fitted with two 50mm diameter galvanised steel stay set raking and with top end flattened and bolted through post, with post and stay both embedded in mass concrete (15 MPa) bases as last.				
6	No	4		

7	150mm Ditto as gate post 1 800mm long, fitted with two 50mm diameter galvanised steel stay set raking and with top end flattened and bolted through post, with post and stay both embedded in mass concrete (15 MPa) bases as last.	No	2	
8	12 mm Diameter galvanised mild steel straining eye bolt with hook, threaded portion and two nuts and washers.	No	34	
9	Form 12mm diameter hole through fence post.	No	34	
	Gates:			
10	Security fence single gate, size 1 000 mm wide x 1 800 mm high, formed of 50 mm diameter nominal bore x 3,25 mm wall thickness hot dip galvanised mild steel pipe framing all round with mitred and welded angles and cross braces mullion and transome, scribed and welded into angles and at cross intersections, with two 50 mm diameter nominal bore x 3,25 mm wall thickness security posts each 600 mm long with one end welded to top rail of gate and closure plate to other end, the gate covered with 100 x 50 x 2,5 mm weld mesh with four straining wires as before described and with four 2,37 mm four point core diameter single "kampeon" wires with crimped droppers to security posts as before described; including three strands flat wrap razor barbed tape wire fixed as before described, leaf fitted with three 24 mm diameter x 300 mm long eyebolt hinges and stops including all holes, etc., welded or bolted to adjoining galvanised gatepost with and including 500 mm long approved chain spot welded to gate	No	1	
	PADLOCKS			
11	Supply 50 mm "Viro" Padlocks and Keys (or equal approved )	No	1	
Total Carried Forward To Summary				

**Summary: External Works**

DEMOLITIONS

WALKWAYS, RAMPS, STEPS, etc

STORMWATER CUT OFF DRAIN / EARTH BERM

STAND PIPE BIP TAP ETC.

RAINWATER TANKS AND STANDS

SECURITY FENCING

External Works Sub-total



<b><u>FINAL SUMMARY PAGE</u></b>				
Preliminaries				
Earthworks				
Masonry				
Roof Coverings				
Carpentry & Joinery				
Ironmongery				
Structural Steel				
Metalwork				
Plastering				
Plumbing & Drainage				
Paintwork				
External Works				
Sub-total A				
Credit For Materials On Site				-44 605,00
Sub-total B (Total For Cost Of Works <i>Less</i> Materials On Site				
Add 5% Contingency for the unforeseen to be used in part or whole at the discretion of the Client/ Principal Agent				
Sub-total C				
Add 15% VAT				
<b>COST OF REMAINDER OF SANITATION WORKS</b>			<b>R</b>	