

**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Brought Forward		R
<p><u>As built drawings</u></p> <p>Where required, the contractor shall prepare an updated set of as built drawings. At completion of the contract the contractor shall hand these drawings to the Principal Agent for reproducing onto the originals for handing over to the employer (provision for allowance of as built drawings elsewhere).</p> <p><u>Prices</u></p> <p>Prices of all pipes shall include for short lengths and cuttings, for all joints in the length, including necessary couplings and for all jointing to fittings</p> <p>Prices of all joints between pipes of dissimilar and between taps, valves, etc. and, shall include in all cases for the couplings or adapters. Prices of flanged and bolted joints between pipes of dissimilar and between valves, etc. and pipes, shall include for flanges drilled as required, flange adapters, rubber insertion rings and necessary bolts and nuts</p> <p>Prices for all pipes in ground shall include for laying in ground, including digging trenches in earth, provision for risk of collapse to sides of excavations, except where specifically measured in detail, keeping excavations free from water, bedding as described and for filling in and ramming in 150 mm thick layers to 95% Modified AASHTO. Price of concrete encasement around pipes, bends, etc. and concrete anchor blocks, shall include for all additional excavation and formwork required</p>		
Carried Forward		R
<p>Section No. 5 Bill No. 4 Storm Water Drainage</p>		<p style="font-size: 2em; font-weight: bold;">300</p> <p style="font-size: 1.5em; font-weight: bold;">AJ</p> <p style="font-size: 1.5em; font-weight: bold;">JIM</p> <p style="font-size: 1.5em; font-weight: bold;">Mphahlele</p>

**SOUTH AFRICAN POLICE SERVICES
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	Brought Forward			R
	<u>STORMWATER CHANNELS</u>			
	<u>Precast concrete channels</u>			
1	'Precast concrete stormwater channel size 340mm wide x 280mm high including 340mm Wide galvanised heavy duty grating and frame (LI)	m	55	
	<u>STORM WATER DRAINAGE (PROVISIONAL)</u>			
	Note: Prices for all stormwater drain pipes in ground are to include for Class B bedding, excavations, backfilling, compaction, risk of collapse, keeping excavations free from water and for cart away surplus excavated material from site			
	<u>Class 100D reinforced concrete pipes with ogee joints with approved rubber collars, laid on bedding in accordance with Class 'B' of SABS 1200</u>			
2	Excavate for and lay 450mm diameter concrete pipe in ground exceeding 1m not exceeding 2m deep (LI)	m	121	
3	Excavate for and lay 450mm diameter concrete pipe in ground exceeding 2m not exceeding 3m deep (LI)	m	357	
4	Excavate for and lay 450mm diameter concrete pipe in ground exceeding 3m not exceeding 4m deep (LI)	m	68	
	<u>uPVC pipes Class 34 laid in Class B bedding, including excavations in pickable material, backfilling and compacting to 95% MOD AASHTHO density and all necessary risk of collapse and dewatering of trenches</u>			
5	160mm Pipe laid in ground including excavation not exceeding 1m deep (LI)	m	15	
6	160mm Pipe laid in ground including excavation exceeding 2m and not exceeding 3m deep (LI)	m	19	
7	250mm Pipe laid in ground including excavation not exceeding 1m deep (LI)	m	90	
8	250mm Pipe laid in ground including excavation exceeding 1m and not exceeding 2m deep (LI)	m	156	
9	250mm Pipe laid in ground including excavation exceeding 2m and not exceeding 3m deep (LI)	m	37	
	Carried Forward			R
Section No. 5 Bill No. 4 Storm Water Drainage				

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**SOUTH AFRICAN POLICE SERVICES
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Brought Forward			R
<u>Extra over uPVC Class 34 pipes for fittings</u>			
10	160mm IE Bend (LI)	No	12
11	160mm Reducer (LI)	No	2
12	160mm Junction (LI)	No	8
13	250mm IE Bend (LI)	No	6
14	250mm Reducer (LI)	No	4
15	250mm Junction (LI)	No	4
<u>Brick grid inlets, manholes, etc.</u>			
16	Brick stormwater manhole size 760 x 760mm, not exceeding 1m deep to invert including 450 x 450mm light duty cast iron grid inlet grating and frame (elsewhere measured), excavations, brickwork, benching, concrete bases, etc., complete (Refer to Engineers drawing no. 589/MSI/909 Rev P1 - Type A). (LI)	No	13
17	Brick stormwater manhole size 760 x 760mm, exceeding 1m and not exceeding 1.25m deep to invert including 450 x 450mm light duty cast iron grid inlet grating and frame (elsewhere measured), excavations, brickwork, benching, concrete bases, etc., complete (Refer to Engineers drawing no. 589/MSI/909 Rev P1 - Type A). (LI)	No	3
18	Brick stormwater manhole size 760 x 760mm, exceeding 1.25m and not exceeding 1.5m deep to invert including 450 x 450mm light duty cast iron grid inlet grating and frame (elsewhere measured), excavations, brickwork, benching, concrete bases, etc., complete (Refer to Engineers drawing no. 589/MSI/909 Rev P1 - Type A). (LI)	No	2
19	Brick stormwater manhole size 760 x 760mm, exceeding 1.5m and not exceeding 1.75m deep to invert including 450 x 450mm light duty cast iron grid inlet grating and frame (elsewhere measured), excavations, brickwork, benching, concrete bases, etc., complete (Refer to Engineers drawing no. 589/MSI/909 Rev P1 - Type A). (LI)	No	6
Carried Forward			R
Section No. 5 Bill No. 4 Storm Water Drainage			

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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Brought Forward		R
20	Brick stormwater manhole size 760 x 760mm, exceeding 1.75m and not exceeding 2m deep to invert including 450 x 450mm light duty cast iron grid inlet grating and frame (elsewhere measured), excavations, brickwork, benching, concrete bases, etc., complete (Refer to Engineers drawing no. 589/MSI/909 Rev P1 - Type A). (LI)	No 3
21	Brick stormwater manhole size 760 x 760mm, exceeding 2m and not exceeding 2.25m deep to invert including 450 x 450mm light duty cast iron grid inlet grating and frame (elsewhere measured), excavations, brickwork, benching, concrete bases, etc., complete (Refer to Engineers drawing no. 589/MSI/909 Rev P1 - Type A). (LI)	No 4
22	Brick stormwater manhole size 760 x 760mm, exceeding 2.25m and not exceeding 2.5m deep to invert including 450 x 450mm light duty cast iron grid inlet grating and frame (elsewhere measured), excavations, brickwork, benching, concrete bases, etc., complete (Refer to Engineers drawing no. 589/MSI/909 Rev P1 - Type A). (LI)	No 6
23	Brick stormwater manhole size 760 x 760mm, exceeding 2.5m and not exceeding 2.75m deep to invert including 450 x 450mm light duty cast iron grid inlet grating and frame (elsewhere measured), excavations, brickwork, benching, concrete bases, etc., complete (Refer to Engineers drawing no. 589/MSI/909 Rev P1 - Type A). (LI)	No 4
24	Brick stormwater manhole size 760 x 760mm, exceeding 2.75m and not exceeding 3m deep to invert including 450 x 450mm light duty cast iron grid inlet grating and frame (elsewhere measured), excavations, brickwork, benching, concrete bases, etc., complete (Refer to Engineers drawing no. 589/MSI/909 Rev P1 - Type A). (LI)	No 2
25	Brick stormwater manhole size 450 x 600mm, not exceeding 1m deep to invert including 1220 x 1220mm pre-cast concrete cover and frame (elsewhere measured), excavations, brickwork, benching, concrete bases, etc., complete (Refer to Engineers drawing no. 589/MSI/909 Rev P1 - Type B). (LI)	No 3
Carried Forward		R
Section No. 5 Bill No. 4 Storm Water Drainage		R

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**SOUTH AFRICAN POLICE SERVICES
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Brought Forward		R
26	Brick stormwater manhole size 450 x 600mm, exceeding 1m and not exceeding 1.25m deep to invert including 1220 x 1220mm pre-cast concrete cover and frame (elsewhere measured), excavations, brickwork, benching, concrete bases, etc., complete (Refer to Engineers drawing no. 589/MSI/909 Rev P1 - Type B). (LI)	No 1
27	Brick stormwater manhole size 450 x 600mm, exceeding 1.25m and not exceeding 1.5m deep to invert fitted including 1220 x 1220mm pre-cast concrete cover and frame (elsewhere measured), excavations, brickwork, benching, concrete bases, etc., complete (Refer to Engineers drawing no. 589/MSI/909 Rev P1 - Type B). (LI)	No 1
28	Brick stormwater manhole size 450 x 600mm, exceeding 1.5m and not exceeding 1.75m deep to invert including 1220 x 1220mm pre-cast concrete cover and frame (elsewhere measured), excavations, brickwork, benching, concrete bases, etc., complete (Refer to Engineers drawing no. 589/MSI/909 Rev P1 - Type B). (LI)	No 6
29	Brick stormwater manhole size 450 x 600mm, exceeding 1.75m and not exceeding 2m deep to invert including 1220 x 1220mm pre-cast concrete cover and frame (elsewhere measured), excavations, brickwork, benching, concrete bases, etc., complete (Refer to Engineers drawing no. 589/MSI/909 Rev P1 - Type B). (LI)	No 4
30	Brick stormwater manhole size 450 x 600mm, exceeding 2m and not exceeding 2.25m deep to invert including 1220 x 1220mm pre-cast concrete cover and frame (elsewhere measured), excavations, brickwork, benching, concrete bases, etc., complete (Refer to Engineers drawing no. 589/MSI/909 Rev P1 - Type B). (LI)	No 1
31	Brick stormwater manhole size 450 x 600mm, exceeding 2.25m and not exceeding 2.5m deep to invert including 1220 x 1220mm pre-cast concrete cover and frame (elsewhere measured), excavations, brickwork, benching, concrete bases, etc., complete (Refer to Engineers drawing no. 589/MSI/909 - Type B). (LI)	No 4
Carried Forward		R
Section No. 5 Bill No. 4 Storm Water Drainage		<div style="font-size: 2em; font-weight: bold; margin-bottom: 5px;">304</div> <div style="font-size: 1.5em; margin-bottom: 5px;">R-1</div> <div style="font-size: 1.5em;">J.M</div>

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	Brought Forward		R
32	Brick stormwater manhole size 450 x 600mm, exceeding 2.5m and not exceeding 2.75m deep to invert including 1220 x 1220mm pre-cast concrete cover and frame (elsewhere measured), excavations, brickwork, benching, concrete bases, etc., complete (Refer to Engineers drawing no. 589/MSI/909 Rev P1 - Type B). (LI)	No	3
33	Brick stormwater manhole size 450 x 600mm, exceeding 2.75m and not exceeding 3m deep to invert including 1220 x 1220mm pre-cast concrete cover and frame (elsewhere measured), excavations, brickwork, benching, concrete bases, etc., complete (Refer to Engineers drawing no. 589/MSI/909 Rev P1 - Type B). (LI)	No	2
34	Brick stormwater manhole size 450 x 600mm, exceeding 3m and not exceeding 3.25m deep to invert including 1220 x 1220mm pre-cast concrete cover and frame (elsewhere measured), excavations, brickwork, benching, concrete bases, etc., complete (Refer to Engineers drawing no. 589/MSI/909 Rev P1 - Type B). (LI)	No	1
35	Brick stormwater manhole size 450 x 600mm, exceeding 3.25m and not exceeding 3.5m deep to invert including 1220 x 1220mm pre-cast concrete cover and frame (elsewhere measured), excavations, brickwork, benching, concrete bases, etc., complete (Refer to Engineers drawing no. 589/MSI/909 Rev P1 - Type B). (LI)	No	2
	<u>Covers</u>		
36	470 x 470mm Cast iron grating including 550 x 700mm frame	No	3
37	470 x 620mm Cast iron grating including 550 x 700mm frame	No	40
38	750mm Diameter heavy duty concrete manhole cover and 1220 x 1220mm frame	No	28
	Carried Forward		R
Section No. 5 Bill No. 4 Storm Water Drainage			

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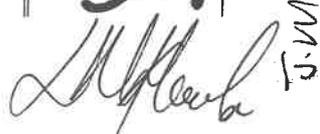
**SOUTH AFRICAN POLICE SERVICES
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	Brought Forward			R
	<u>Headwall</u>			
39	Storm water head wall outlet formed of one brick wall 650 x 1100mm long with two one brick 35 degree splayed wing walls average 300mm high and 1000mm long including 1000 x 200mm thick (25Mpa/19mm) concrete apron slab and the area between the walls filled in with 150mm thick (25Mpa/19mm) concrete surface bed. (Refer to Engineer's drawing No 589/MSI/909 Rev P1) (LI)	No	4	
40	Storm water head wall outlet formed of one brick wall 650 x 1100mm long with two one brick 35 degree splayed wing walls average 300mm high and 1000mm long including 1000 x 200mm thick (25Mpa/19mm) concrete apron slab and the area between the walls filled in with 150mm thick (25Mpa/19mm) concrete surface bed, including Reno mattress size 6000 x 2000 x 300mm high. (Refer to Engineer's drawing No 589/MSI/909 Rev P1) (LI)	No	2	
	<u>Sundries</u>			
41	Extra over excavation in earth for pipe trenches, chambers, etc., for excavation in intermediate material (LI)	m3	64	
42	Extra over excavation in earth for pipe trenches, chambers, etc., for excavation in hard material	m3	32	
43	Unreinforced concrete encasing to 160mm horizontal pipe	m	34	
44	Unreinforced concrete encasing to 250mm horizontal pipe	m	283	
	<u>Testing</u>			
45	Allow for testing the whole of the storm water drainage installation to the satisfaction of the Principal Agent and Local Authorities. All defective work is to be taken out and replaced at the Contractor's expense and the whole re-tested until found satisfactory		Item	
Carried Forward to Summary of Section No. 5				R
Section No. 5				
Bill No. 4				
Storm Water Drainage				

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SOUTH AFRICAN POLICE SERVICES
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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 5</u></p> <p><u>EXTERNAL WORKS</u></p> <p><u>BILL NO. 5</u></p> <p><u>WATER SUPPLIES</u></p> <p><u>(CPAP WORK GROUP NO. 148 UNLESS OTHERWISE STATED) (PROVISIONAL)</u></p> <p>The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2017 Edition).</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>"Polycop" polypropylene pipes</u></p> <p>Polypropylene pipes 54mm diameter and smaller shall be seamless copper coloured Class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or where so described "Polylock" compression fittings</p> <p>Pipes shall be firmly fixed to walls, etc with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions</p> <p><u>uPVC pressure pipes and fittings</u></p> <p>Pipes for water supply shall be of the class stated</p> <p>Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings</p> <p>Pipes of 50mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints</p>			
	Carried Forward		R	
	<p>Section No. 5 Bill No. 5 Water Supplies</p>			<p>307 R.M.  J.M.</p>

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**SOUTH AFRICAN POLICE SERVICES
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Brought Forward

Copper pipes

Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), Class 2 (half-hard) and Class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground

Fixing of pipes

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

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

Laying, backfilling, bedding, etc. of pipes

Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers instructions

Carried Forward

Section No. 5
Bill No. 5
Water Supplies

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**SOUTH AFRICAN POLICE SERVICES
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Brought Forward

Prices of flanged and bolted joints between pipes of dissimilar materials and between valves, etc. and pipes, shall include for flanges drilled as required, flange adaptors, rubber insertion rings and necessary bolts and nuts

Prices for all pipes in ground shall include for laying in ground, including digging trenches in earth, provision for risk of collapse to sides of excavations, except where specifically measured in detail, keeping excavations free from water, bedding as described and for filling in and ramming in 150mm thick layers to 93% Mod AASHTO density unless otherwise stated in the specific descriptions all in accordance with manufacturer's instructions

Where no manufacturer's instructions exist, pipes shall be laid in accordance with Clauses 5.1 and 5.2 of each of the following: SABS 1200L: Medium pressure pipelines, SABS 1200LD: Sewers, SABS 1200LE: Stormwater drainage. Pipe trenches etc. shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200DB

Prices of concrete encasement around pipes, bends, etc. and concrete anchor blocks shall include for all additional excavation and formwork required

Surplus Earth

All surplus earth and other material arising from the Site Services shall be carted to dumping site to be located by the Contractor

As built drawings

Where required, the contractor shall prepare an updated set of as built drawings. At completion of the contract the contractor shall hand these drawings to the Principal Agent for reproducing onto the originals for handing over to the employer

Carried Forward

Section No. 5
Bill No. 5
Water Supplies

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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Brought Forward				R
<u>WATER SUPPLIES (PROVISIONAL)</u>				
<u>Class 16 uPVC pressure pipe laid on Class "B" bedding, including excavations in pickable material, backfilling and compacting to 95% Modified AASHTO density and all necessary risk of collapse and dewatering of trenches</u>				
1	110mm Pipe laid in and including trenches not exceeding 1m deep (LI)	m	228	
<u>HDPE PN 12.5 pipes</u>				
2	75mm Pipe laid in and including trenches not exceeding 1m deep (LI)	m	310	
<u>Extra over HDPE PN 12.5 compression type pressure fittings</u>				
3	75mm Elbow	No	10	
4	75mm Tee	No	9	
5	75mm Adaptor	No	8	
6	75mm Reducer	No	10	
7	75mm End cap	No	10	
8	110mm Elbow	No	10	
<u>Taps, valves, etc</u>				
9	75mm Isolation valve	No	24	
10	75mm Cast iron flanged non return valve	No	2	
11	75mm Cast iron flanged strainer	No	2	
12	110mm Isolation valve	No	12	
13	110mm Cast iron flanged non return valve	No	2	
14	110mm Cast iron flanged strainer	No	2	
Carried Forward				R
Section No. 5 Bill No. 5 Water Supplies				

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**SOUTH AFRICAN POLICE SERVICES
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Brought Forward		R
<u>Valve chambers, etc</u>		
15	Excavate for and build valve chamber set on 1460 x 1460 x 200mm thick concrete base, 230mm NFX extra hardburnt brickwall in english bond plastered internally, size 600 x 600mm internally, fitted with 450 x 450mm Polymer concrete cover and frame set level to ground level. total depth of chamber not to exceed 800mm deep (Refer to Engineers detail on drawing no. 589/MSI/905 Rev P1).	No 24
<u>Sundries</u>		
16	20Mpa/19mm Concrete in thrust blocks size 300 x 200 x 400mm thick around 75mm pipe fittings including all necessary formwork and additional excavation	No 19
17	20Mpa/19mm Concrete in thrust blocks size 350 x 300 x 400mm thick around 50mm pipe fittings including all necessary formwork and additional excavation	No 10
18	20Mpa/19mm Concrete in thrust blocks size 400 x 500 x 400mm thick around 110mm pipe fittings including all necessary formwork and additional excavation	No 9
19	150mm x 150mm x 1200mm high Precast concrete beacon marker, consisting of a 50 x 75mm high recessed lettering section into concrete, painted with two coats of an approved white paint and black lettering, including a 350 x 350 x 500mm deep 15MPa concrete base, all in accordance with the Engineer's Drawing number 589/MSI/905 Rev P1	No 12
20	300mm x 75mm x 500mm high Precast concrete valve marker, consisting of a 50 x 75mm high recessed lettering section into concrete, painted with two coats of an approved white paint and black lettering, all in accordance with the Engineer's Drawing number 589/MSI/905 Rev P1	No 24
<u>Testing</u>		
21	Allow for testing the whole of the water supply installation to the satisfaction of the Principal Agent and Local Authorities. All defective work is to be taken out and replaced at the Contractor's expense and the whole re-tested until found satisfactory	Item
Carried Forward to Summary of Section No. 5		R
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Water Supplies		

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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 5</u>			
	<u>EXTERNAL WORKS</u>			
	<u>BILL NO. 6</u>			
	<u>APRONS, V DRAINS, ETC</u>			
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2017 Edition).			
	<u>EARTHWORKS (PROVISIONAL)</u>			
	<u>(CPAP WORK GROUP NO. 104 UNLESS OTHERWISE STATED)</u>			
	<u>Excavation in earth not exceeding 2m deep</u>			
1	Reduced levels under floors	m3	28	
	<u>EARTH FILLING, ETC</u>			
	Note: All filling whether obtained from the excavations, from stockpiles or by the contractor from an outside source must be selected and approved by the Structural / Civil Engineers			
	<u>Imported G5 filling supplied by the contractor compacted to 98% Mod AASHTO density</u>			
2	Under floors, steps, pavings, etc (LI)	m3	17	
	<u>CARTING AWAY</u>			
	<u>Extra over all excavations for loading, carting and dumping surplus excavated material</u>			
3	Off site to be located by the contractor	m3	28	
	Carried Forward			R
	Section No. 5 Bill No. 6 Aprons, V Drains, Etc			

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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Brought Forward					
<u>CONCRETE SUNDRIES</u>					
<u>Finishing top surfaces of concrete with a wood float finish</u>					
10	Concrete channel to falls (LI)	m2	113		
<u>Test blocks</u>					
11	Prepare a set of six concrete cubes each cube size 150 x 150 x 150mm for strength cubes and deliver to an approved laboratory for testing and pay all charges in connection therewith	Sets	2		
<u>ROUGH FORMWORK (DEGREE OF ACCURACY II)</u>					
<u>(CPAP WORK GROUP NO. 111)</u>					
<u>Rough formwork to sides</u>					
12	V drains, paving and ramps not exceeding 300mm high (LI)	m	234		
<u>MOVEMENT JOINTS, ETC.</u>					
<u>Isolation joints with 10mm softboard between vertical concrete</u>					
13	10mm Joints not exceeding 300mm high (LI)	m	113		
<u>REINFORCEMENT (PROVISIONAL)</u>					
<u>(CPAP WORK GROUP NO. 114)</u>					
<u>Fabric reinforcement</u>					
14	Type 193 fabric reinforcement in concrete surface beds, slabs, etc (LI)	m2	113		
Carried Forward				R	

Section No. 5
Bill No. 6
Aprons, V Drains, Etc

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**SOUTH AFRICAN POLICE SERVICES
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Brought Forward

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WATERPROOFING

(CPAP WORK GROUP NO. 120 UNLESS OTHERWISE STATED)

One layer 250 micron green polyethylene waterproof sheeting (SANS 952 Type C) sealed at laps with PVC self-adhesive tape

15	Under surface beds (LI)	m2	113
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JOINT SEALANTS, ETC

Silicone sealant

16	In 10mm isolation joints not exceeding 300mm high (LI)	m	113
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Carried Forward to Summary of Section No. 5

Section No. 5
Bill No. 6
Aprons, V Drains, Etc

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**SOUTH AFRICAN POLICE SERVICES
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Item No		Quantity	Rate	Amount
	<u>SECTION NO.5</u>			
	<u>EXTERNAL WORKS</u>			
	<u>BILL NO.7</u>			
	<u>OPEN WALKWAYS</u>			
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2017 Edition).			
	<u>EARTHWORKS (PROVISIONAL)</u>			
	<u>(CPAP WORK GROUP NO. 104 UNLESS OTHERWISE STATED)</u>			
	<u>EXCAVATION OTHER THAN BULK</u>			
	<u>Excavation in earth not exceeding 2m deep</u>			
1	Reduce levels under floors	m3	208	
	<u>EARTH FILLING, ETC</u>			
	Note: All filling whether obtained from the excavations, from stockpiles or by the contractor from an outside source must be selected and approved by the Structural / Civil Engineers			
	<u>Imported G2 filling supplied by the contractor compacted to 98% Mod AASHTO density</u>			
2	Under floors, steps, pavings, etc (LI)	m3	82	
	<u>Imported G5 filling supplied by the contractor compacted to 98% Mod AASHTO density</u>			
3	Under floors, steps, pavings, etc (LI)	m3	82	
	<u>Coarse river sand filling supplied by the contractor</u>			
4	Under floors etc. (LI)	m3	13	
	Carried Forward			R
	Section No. 5 Bill No. 7 Open Walkways			

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**SOUTH AFRICAN POLICE SERVICES
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Brought Forward				R
<u>CARTING AWAY</u>				
<u>Extra over all excavations for carting way</u>				
5	Surplus material from excavations and/or stocked piles on site to a dumping site to be located by the contractor	m3	208	
<u>KEEPING EXCAVATIONS FREE OF WATER</u>				
<u>Keeping excavations free of water</u>				
6	Keeping excavations free of all water other than subterranean water		Item	
<u>COMPACTION</u>				
<u>Compaction of surfaces</u>				
7	Compaction of ground surfaces under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod. AASHTO density. (LI)	m2	630	
<u>TESTS</u>				
<u>Prescribed density tests on filling</u>				
8	Modified AASHTO Density test	No	4	
9	"Field Density" test including "Optimum Moisture Content" (four readings per test)	No	4	
<u>SOIL POISONING</u>				
<u>Soil insecticide in accordance to SANS 5859</u>				
10	Under concrete walkways, etc	m2	630	
Carried Forward				R
Section No. 5 Bill No. 7 Open Walkways				

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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Brought Forward

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PRECAST CONCRETE

(CPAP WORK GROUP NO. 112)

PAVING

"Corobrik Graphite" or other equal and approved 220 x 108 x 50mm concrete interlocking paving blocks, laid on 25mm thick river sand bed (elsewhere measured) with dry filler sand swept and vibrated into joints including preparation of ground or filling

11	Paving laid to falls (LI)	m2	630
12	Fair cutting (LI)	m	62
<u>Precast concrete finished smooth on exposed surfaces including bedding, jointing and pointing</u>			
13	Kerb (SABS 927 fig. 7) 180 x 280mm high with 125mm haunching one side including continuous concrete (25MPa/19mm) footing and backing, including excavation, backfilling, etc and cast in situ concrete channel (LI)	m	700
14	Ditto, but circular on plan (LI)	m	64

Carried Forward to Summary of Section No. 5

Section No. 5
Bill No. 7
Open Walkways

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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Item No		Quantity	Rate	Amount
	<u>SECTION NO.5</u>			
	<u>EXTERNAL WORKS</u>			
	<u>BILL NO.8</u>			
	<u>CONCRETE RAMPS, STEPS, ETC.</u>			
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2017 Edition)			
	<u>CONCRETE RAMPS</u>			
	<u>EARTHWORKS</u>			
	<u>(CPAP WORK GROUP NO. 104 UNLESS OTHERWISE STATED)</u>			
	<u>Excavation in earth not exceeding 2m deep</u>			
1	Reduce levels under floors	m3	2	
2	Trenches (LI)	m3	7	
	<u>Extra over all excavations for carting away</u>			
3	Surplus material from excavations and/or stocked piles on site to a dumping site to be located by the contractor	m3	9	
	<u>Risk of collapse of excavations</u>			
4	Sides of trench and hole excavations not exceeding 1,5m deep (LI)	m2	20	
	<u>Keeping excavations free of water</u>			
5	Keeping excavations free of all water other than subterranean water			
	<u>EARTH FILLING, ETC</u>			
	Note: All filling whether obtained from the excavations, from stockpiles or by the contractor from an outside source must be selected and approved by the Structural / Civil Engineers			
	Carried Forward			R
	Section No. 5 Bill No. 8 Concrete Ramps, Steps etc.			



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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Brought Forward		R
<u>Imported G6 filling supplied by the contractor compacted to 92% Mod AASHTO density</u>		
6	Backfilling to trenches, holes (LI) m3	5
<u>Compaction of surfaces</u>		
7	Compaction of ground surfaces under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod. AASHTO density (LI) m2	10
<u>TESTS</u>		
<u>Prescribed density tests on filling</u>		
8	Modified AASHTO Density test No	2
9	"Field Density" test including "Optimum Moisture Content" No	2
<u>SOIL POISONING</u>		
<u>Soil insecticide in accordance to SANS 5859</u>		
10	Under concrete walkways, etc m2	19
<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>		
<u>(CPAP WORK GROUP NO. 110 UNLESS OTHERWISE STATED)</u>		
<u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>		
<u>10MPa/19mm concrete</u>		
11	Surface blinding under footings and bases (LI) m3	1
<u>REINFORCED CONCRETE</u>		
<u>25MPa/19mm Concrete</u>		
12	Surface beds, etc. (LI) m3	2
Carried Forward		R
Section No. 5 Bill No. 8 Concrete Ramps, Steps etc.		

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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Brought Forward			R
13	Strip footings (Provisional) (LI)	m3	2
14	Ramps (LI)	m3	2
	<u>30MPa/19mm concrete</u>		
15	Stairs including landings, beams and inverted beams (LI)	m3	4
	<u>CONCRETE SUNDRIES</u>		
	<u>"Penetron" or other equal and approved admixture with tracing agent 0,8% - 1% per cementitious content of concrete waterproofing additive</u>		
16	Extra over concrete for admixture waterproofing on roof, floor slabs and retaining walls	m3	1
	<u>Finishing top surfaces of concrete with non slip wood float</u>		
17	Surface beds, etc. (LI)	m2	10
18	Ramps (LI)	m2	10
	<u>Test blocks</u>		
19	Prepare a set of six concrete cubes each cube size 150 x 150 x 150mm for strength cubes and deliver to an approved laboratory for testing and pay all charges in connection therewith	No	2
	<u>MOVEMENT JOINTS, ETC.</u>		
	<u>Isolation joints with 10mm polystyrene between vertical concrete and brick surfaces</u>		
20	Not exceeding 300mm high to edges of surface beds (LI)	m	15
	<u>Saw-cut joints</u>		
21	3 x 45mm Saw-cut joints on top of concrete (LI)	m	2
	<u>10mm Slip joints between horizontal concrete and brick surfaces with two layers of tamped masonite</u>		
22	Not exceeding 300mm wide	m	19
	Carried Forward		R
Section No. 5 Bill No. 8 Concrete Ramps, Steps etc.			

**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Brought Forward		R
<u>ROUGH FORMWORK (DEGREE OF ACCURACY II)</u>		
<u>(CPAP WORK GROUP NO. 111 UNLESS OTHERWISE STATED)</u>		
<u>Rough formwork to sides</u>		
23	Beams (LI) m2	1
24	Sloping and stepped outer edges of stairs 340mm high extreme (LI) m	14
25	Edges, risers, ends and reveals, not exceeding 300mm high (LI) m	13
<u>Rough formwork to soffits</u>		
26	Stairs with sloping soffits (LI) m2	7
<u>REINFORCEMENT</u>		
<u>(CPAP WORK GROUP NO. 114 UNLESS OTHERWISE STATED)</u>		
<u>Mild tensile steel reinforcement to structural concrete work</u>		
27	8mm Diameter bars (LI) t	0.42
28	10mm Diameter bars (LI) t	0.42
<u>High tensile steel reinforcement to structural concrete work</u>		
29	10mm Diameter bars (LI) t	0.41
30	12mm Diameter bars (LI) t	0.38
<u>Fabric reinforcement</u>		
31	Type 245 fabric reinforcement in concrete surface beds, ramps, etc (LI) m2	10
Carried Forward		R
Section No. 5 Bill No. 8 Concrete Ramps, Steps etc.		

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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Brought Forward		R
<u>MASONRY</u>		
<u>(CPAP WORK GROUP NO. 116 UNLESS OTHERWISE STATED)</u>		
<u>BRICKWORK IN FOUNDATIONS</u>		
<u>(PROVISIONAL)</u>		
<u>Brickwork of NFX burnt clay imperial bricks in class II mortar</u>		
32	One brick walls (LI) m2	12
<u>BRICKWORK SUNDRIES</u>		
<u>Galvanised brickwork reinforcement</u>		
33	230mm Wide reinforcement built in horizontally (LI) m	185
<u>BRICKWORK IN SUPERSTRUCTURE</u>		
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar</u>		
34	One brick walls (LI) m2	40
<u>BRICKWORK SUNDRIES</u>		
<u>Bagging of 1:3 cement and sand mixture</u>		
35	On outer face of inner skin of brick walls including any additional labour required in raising wall in two separate skins and working around wire ties and / or brick reinforcing fabric (LI) m2	40
<u>Prestressed fabricated concrete lintels including necessary temporary supports</u>		
36	110 x 75mm Lintels in lengths not exceeding 3m (LI) m	3
<u>Joint forming material in movement joints</u>		
37	10mm Polystyrene built in vertically between brick skins (LI) m2	1
Carried Forward		R
Section No. 5 Bill No. 8 Concrete Ramps, Steps etc.		

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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

	Brought Forward			R
	<u>Turning pieces</u>			
38	220mm Wide turning piece to lintels, etc. (LI)	m	1	
	<u>Galvanised brickwork reinforcement</u>			
39	230mm Wide reinforcement built in horizontally (LI)	m	168	
	<u>Concertina ties built into brickwork and 'Hilti' or other equal and approved drive pins shot fired into brick/concrete wall</u>			
40	30 x 1,2mm Galvanised steel strap wall ties (LI)	No	22	
	<u>FACE BRICKWORK</u>			
	<u>"Corobrik Autumn Wheat Travertine" or other equal approved face bricks in stretcher bond with raked joints and perpends internally and externally</u>			
41	Extra over brickwork for face brickwork (LI)	m2	40	
	<u>WATERPROOFING</u>			
	<u>(CPAP WORK GROUP NO. 120 UNLESS OTHERWISE STATED)</u>			
	<u>Joint Sealants, etc</u>			
42	10 x 10mm In isolation joints in floors	m	15	
43	3 x 35mm in saw cut joints in floors	m	2	
44	2mm Thick x 225mm wide in slip joints between horizontal concrete and brick surfaces	m	19	
	Carried Forward			R
	Section No. 5 Bill No. 8 Concrete Ramps, Steps etc.			

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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Brought Forward

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METALWORK

(CPAP WORK GROUP NO. 136 UNLESS OTHERWISE STATED)

**HOT DIPPED GALVANISED STEEL
BALUSTRADES, ETC**

Welded balustrading to ramps and walkways

45 Galvanised mild steel horizontal balustrade 1000mm high formed of 3mm thick x 50mm diameter hollow section steel handrail welded to a 50mm x 50mm x 3mm thick mild steel square tubing vertical posts, fixed to concrete using a 10mm diameter mild steel bar anchored into concrete and epoxy filled with 16mm diameter bright mild steel intermediate bars at 100mm centres rods enclosed in a 50mm x 5mm mild steel flat bar frame with the frame joined to the vertical posts by means of welded 10mm mild steel bars, all to Architects approval

m 12

Handrails, etc

46 Diameter 50mm x 3mm thick galvanised mild steel raking handrail welded to 10mm thick galvanised mild support bracket embedded in brickwork by means of an epoxy fill

m 9

PLASTERING

(CPAP WORK GROUP NO. 142 UNLESS OTHERWISE STATED)

INTERNAL PLASTER

Cement plaster steel trowelled, on brickwork

47 On walls (LI)

m2 40

Carried Forward

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Section No. 5
Bill No. 8
Concrete Ramps, Steps etc.

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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Brought Forward

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PAINTWORK

(CPAP WORK GROUP NO. 152 UNLESS OTHERWISE STATED)

PAINTWORK ETC TO NEW WORK

ON INTERNAL FLOATED PLASTER SURFACES

Prepare and brush surface to remove all loose contaminants and apply one coat professional gypsum and plaster primer and two coats professional superior low sheen paint

48 On walls (LI)

m2

40

Carried Forward to Summary of Section No. 5

Section No. 5
Bill No. 8
Concrete Ramps, Steps etc.

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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 5</u>			
	<u>EXTERNAL WORKS</u>			
	<u>BILL NO. 9</u>			
	<u>GENERATOR PLINTH</u>			
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2017 Edition).			
	<u>EARTHWORKS (PROVISIONAL)</u>			
	<u>(CPAP WORK GROUP NO. 104 UNLESS OTHERWISE STATED)</u>			
	<u>EXCAVATION OTHER THAN BULK</u>			
	<u>Excavation in earth not exceeding 2m deep</u>			
1	Reduce levels under floors	m3	6	
2	Trenches (LI)	m3	1	
	<u>EARTH FILLING, ETC</u>			
	Note: All filling whether obtained from the excavations, from stockpiles or by the contractor from an outside source must be selected and approved by the Structural / Civil Engineers			
	<u>Imported G5 filling supplied by the contractor compacted to 98% Mod AASHTO density</u>			
3	Under floors, steps, pavings, etc. (LI)	m3	6	
	<u>Risk of collapse of excavations</u>			
4	Sides of trench and hole excavations not exceeding 1,5m deep (LI)	m2	5	
	Carried Forward		R	
	Section No. 5 Bill No. 9 Generator Plinth			

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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

	Brought Forward			R
	<u>CARTING AWAY</u>			
	<u>Extra over all excavations for carting way</u>			
5	Surplus material from excavations and/or stocked piles on site to a dumping site to be located by the contractor	m3	7	
	<u>KEEPING EXCAVATIONS FREE OF WATER</u>			
	<u>Keeping excavations free of water</u>			
6	Keeping excavations free of all water other than subterranean water		Item	
	<u>COMPACTION</u>			
	<u>Compaction of surfaces</u>			
7	Compaction of ground surfaces under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod. AASHTO density (L1)	m2	19	
	<u>TESTS</u>			
	<u>Prescribed density tests on filling</u>			
8	Modified AASHTO Density test	No	1	
9	"Field Density" test including "Optimum Moisture Content" (four readings per test)	No	1	
	<u>SOIL POISONING</u>			
	<u>Soil insecticide in accordance to SANS 5859</u>			
10	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m2	19	
	Carried Forward			R
	Section No. 5 Bill No. 9 Generator Plinth			

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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Brought Forward				R
<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>				
<u>(CPAP WORK GROUP NO. 110 UNLESS OTHERWISE STATED)</u>				
<u>REINFORCED CONCRETE CAST ON/IN FORMWORK</u>				
<u>30Mpa/19mm Concrete</u>				
11	Raft foundation including beams, etc (LI)	m3	7	
<u>TEST CUBES</u>				
12	Prepare a set of six concrete cubes each cube size 150 x 150 x 150mm for strength cubes and deliver to an approved laboratory for testing and pay all charges in connection therewith	No	1	
<u>CONCRETE SUNDRIES</u>				
<u>"Penetron" or other equal and approved admixture with tracing agent 0.8% - 1% per cementitious content of concrete waterproofing additive</u>				
13	Extra over concrete for "Penetron" or other equal and approved waterproofing on roof, floor slabs and retaining walls	m3	1	
<u>Finishing top surfaces of concrete with non slip wood float</u>				
14	Surface beds, slabs, etc (LI)	m2	19	
<u>Test blocks</u>				
15	Prepare a set of six concrete cubes each cube size 150 x 150 x 150mm for strength cubes and deliver to an approved laboratory for testing and pay all charges in connection therewith	Sets	1	
Carried Forward				R
Section No. 5 Bill No. 9 Generator Plinth				

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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Brought Forward			R
<u>ROUGH FORMWORK (DEGREE OF ACCURACY II)</u>			
<u>(CPAP WORK GROUP NO. 111 UNLESS OTHERWISE STATED)</u>			
<u>Rough formwork to sides</u>			
16	Edges, risers, ends and reveals exceeding 300mm high or wide (LI)	m2	9
<u>Boxing out rough formwork to form</u>			
17	25 x 25mm Horizontal chamfer. (LI)	m	18
<u>REINFORCEMENT</u>			
<u>(CPAP WORK GROUP NO. 114 UNLESS OTHERWISE STATED)</u>			
<u>High tensile steel reinforcement to structural concrete work</u>			
18	10mm Diameter bars (LI)	t	0.50
19	12mm Diameter bars (LI)	t	0.50
20	16mm Diameter bars (LI)	t	0.40
<u>MASONRY</u>			
<u>(CPAP WORK GROUP NO. 116 UNLESS OTHERWISE STATED)</u>			
<u>BRICKWORK IN SUPERSTRUCTURE</u>			
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar</u>			
21	One brick walls (LI)	m2	14
Carried Forward			R
Section No. 5			
Bill No. 9			
Generator Plinth			

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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Brought Forward		R
<u>BRICKWORK SUNDRIES</u>		
<u>Bagging of 1:3 cement and sand mixture</u>		
22	On outer face of inner skin of brick walls including any additional labour required in raising wall in two separate skins and working around wire ties and / or brick reinforcing fabric (LI)	m2 14
<u>Brickwork reinforcement</u>		
23	150mm Wide reinforcement built in horizontally (LI)	m 160
<u>FACE BRICKWORK</u>		
<u>"Corobrik Maize Travertine" or equal approved face bricks in stretcher bond with ruled joints and perpends internally and externally</u>		
24	Extra over brickwork walls faced on both sides (LI)	m2 14
<u>WATERPROOFING</u>		
<u>(CPAP WORK GROUP NO. 120 UNLESS OTHERWISE STATED)</u>		
<u>One layer 250 micron green polyethylene waterproof sheeting (SANS 952 Type C) sealed at laps with PVC self-adhesive tape</u>		
25	Under surface beds (LI)	m2 19
<u>Silicone sealant</u>		
26	2 x 10mm On slip joints between horizontal concrete and brick surfaces	m 34
<u>Two coats bitumen emulsion waterproof coating</u>		
27	On bagged brick walls (LI)	m2 14
<u>Joint Sealants, etc</u>		
28	2mm Thick x 225mm wide in slip joints between horizontal concrete beam and brick surfaces	m 17
Carried Forward to Summary of Section No. 5		
Section No. 5		
Bill No. 9		
Generator Plinth		

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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 5</u>			
	<u>EXTERNAL WORKS</u>			
	<u>BILL NO. 10</u>			
	<u>POLICE STATION REFUSE AREA</u>			
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2017 Edition).			
	<u>EARTHWORKS (PROVISIONAL)</u>			
	<u>(CPAP WORK GROUP NO. 104 UNLESS OTHERWISE STATED)</u>			
	<u>EXCAVATION OTHER THAN BULK</u>			
	<u>Excavation in earth not exceeding 2m deep</u>			
1	Reduce levels under floors	m3	5	
2	Trenches (L)	m3	11	
	<u>Risk of collapse of excavations</u>			
3	Sides of trench and hole excavations not exceeding 1,5m deep (L)	m2	33	
	<u>CARTING AWAY</u>			
	<u>Extra over all excavations for carting way</u>			
4	Surplus material from excavations and/or stocked piles on site to a dumping site to be located by the contractor	m3	16	
	<u>KEEPING EXCAVATIONS FREE OF WATER</u>			
	<u>Keeping excavations free of water</u>			
5	Keeping excavations free of all water other than subterranean water			
		Item		
	Carried Forward		R	
	Section No. 5 Bill No. 10 Police Station Refuse Area			

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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Brought Forward		R
<u>EARTH FILLING, ETC</u>		
Note: All filling whether obtained from the excavations, from stockpiles or by the contractor from an outside source must be selected and approved by the Structural / Civil Engineers		
<u>Imported G6 filling supplied by the contractor compacted to 92% Mod AASHTO density</u>		
6	Backfilling to trenches, holes (LI) m3	5
<u>COMPACTION</u>		
<u>Compaction of surfaces</u>		
7	Compaction of ground surfaces under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod. AASHTO density (LI) m2	35
<u>TESTS</u>		
<u>Prescribed density tests on filling</u>		
8	Modified AASHTO Density test No	2
9	"Field Density" test including "Optimum Moisture Content" (four readings per test) No	2
<u>SOIL POISONING</u>		
<u>Soil insecticide in accordance to SANS 5859</u>		
10	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming m2	35
11	To bottoms and sides of trenches, etc m2	57
Carried Forward		R
Section No. 5 Bill No. 10 Police Station Refuse Area		

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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Brought Forward			R
<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>			
<u>(CPAP WORK GROUP NO. 110 UNLESS OTHERWISE STATED)</u>			
<u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>			
<u>10MPa/19mm concrete</u>			
12	Surface blinding under footings and bases (LI)	m3	1
<u>REINFORCED CONCRETE CAST ON/IN FORMWORK</u>			
<u>25Mpa/19mm Concrete</u>			
13	Strip footings (LI)	m3	4
14	Surface beds (LI)	m3	3
15	Isolated Beams (LI)	m3	1
<u>CONCRETE SUNDRIES</u>			
<u>"Penetron" or other equal and approved admixture with tracing agent 0.8% - 1% per cementitious content of concrete waterproofing additive</u>			
16	Extra over concrete for "Penetron" or other equal and approved waterproofing on roof, floor slabs and retaining walls	m3	1
<u>Finishing top surfaces of concrete with non slip wood float</u>			
17	Surface beds, slabs, etc (LI)	m2	35
<u>Test blocks</u>			
18	Prepare a set of six concrete cubes each cube size 150 x 150 x 150mm for strength cubes and deliver to an approved laboratory for testing and pay all charges in connection therewith	Sets	2
Carried Forward			R
Section No. 5			
Bill No. 10			
Police Station Refuse Area			

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SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION

Brought Forward			R
<u>ROUGH FORMWORK (DEGREE OF ACCURACY II)</u>			
<u>(CPAP WORK GROUP NO. 111 UNLESS OTHERWISE STATED)</u>			
<u>Rough formwork to sides</u>			
19	Edges, risers, ends and reveals n.e 300mm high (LI)	m	20
<u>MOVEMENT JOINTS, ETC.</u>			
<u>Saw cut joints</u>			
20	3 x 45mm Saw cut joints on top of concrete (LI)	m	10
<u>10mm Slip joints between horizontal concrete and brick surfaces with two layers of tamped masonite</u>			
21	Not exceeding 300mm wide (LI)	m	21
<u>Expansion joints with 10mm softboard between vertical concrete surfaces</u>			
22	10mm Joints not exceeding 300mm high (LI)	m	5
<u>Isolation joints with 10mm polystyrene between vertical concrete and brick surfaces</u>			
23	10mm Joints not exceeding 300mm high (LI)	m	18
<u>REINFORCEMENT</u>			
<u>(CPAP WORK GROUP NO. 114)</u>			
<u>Mild steel reinforcement to structural concrete work</u>			
24	8mm Diameter bars (LI)	t	0.30
25	10mm Diameter bars (LI)	t	0.30
<u>High tensile steel reinforcement to structural concrete work</u>			
26	10mm Diameter bars (LI)	t	0.30
27	12mm Diameter bars (LI)	t	0.30
Carried Forward			R
Section No. 5 Bill No. 10 Police Station Refuse Area			

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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Brought Forward			R
<u>Fabric reinforcement</u>			
28	Type 193 fabric reinforcement in concrete surface bed, slabs, etc. (LI)	m2	24
<u>MASONRY</u>			
<u>(CPAP WORK GROUP NO. 116 UNLESS OTHERWISE STATED)</u>			
<u>BRICKWORK IN FOUNDATIONS (PROVISIONAL)</u>			
<u>Brickwork of NFX (14Mpa nominal compressive strength) in class II mortar</u>			
29	One brick walls (LI)	m2	11
<u>BRICKWORK IN SUPERSTRUCTURE</u>			
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar</u>			
30	Half brick walls in beamfilling	m2	2
31	One brick walls (LI)	m2	68
<u>BRICKWORK SUNDRIES</u>			
<u>Bagging of 1:3 cement and sand mixture</u>			
32	On outer face of inner skin of brick walls including any additional labour required in raising wall in two separate skins and working around wire ties and / or brick reinforcing fabric (LI)	m2	53
<u>Galvanised brickwork reinforcement</u>			
33	75mm Wide reinforcement built in horizontally	m	20
34	150mm Wide reinforcement built in horizontally (LI)	m	210
<u>Prestressed fabricated concrete lintels including necessary temporary supports</u>			
35	110 x 75mm Lintels in lengths not exceeding 3m (LI)	m	3
Carried Forward			R
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Brought Forward		R
<u>Turning pieces</u>		
36	220mm Wide turning piece to lintels, etc. (LI) m	2
<u>FACE BRICKWORK</u>		
<u>"Corobrik Autumn Wheat Travertine" or other equal and approved face bricks in stretcher bond with raked joints and perpends internally and externally</u>		
37	Extra over one brick walls in stretcher bond faced and pointed on both sides (LI) m2	53
38	Extra over brickwork to beamfilling for face brickwork m2	2
<u>"Corobrik Dark Onxy Breeze Brick" or other equal and approved face bricks with raked joints and perpends internally and externally</u>		
39	Extra over brickwork for face brickwork in herringbone pattern (LI) m2	15
<u>Dog toothing header course copings, sills, etc. of "Corobrik Autumn Wheat Travertine" or other equal and approved face bricks pointed with recessed joints on all exposed faces</u>		
40	320mm Coping wide on top of one brick walls including cutting, etc (LI) m	21
<u>WATERPROOFING</u>		
<u>(CPAP WORK GROUP NO. 120 UNLESS OTHERWISE STATED)</u>		
<u>DAMPPROOFING OF WALLS AND FLOORS</u>		
<u>One layer 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape</u>		
41	Under surface beds (LI) m2	35
<u>One layer 375 micron embossed polyethylene damp proof course (SANS 952-1985 type B)</u>		
42	In walls (LI) m2	8
Carried Forward		R

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Brought Forward		R
<u>Two coats bitumen emulsion waterproof coating</u>		
43	On bagged brick walls (LI) m2	53
<u>Joint Sealants, etc</u>		
44	2mm Thick x 225mm wide in slip joints between horizontal concrete beam and brick surfaces m	21
45	13 x 10mm In saw cut joints in floors m	10
46	In 10mm isolation joints not exceeding 300mm high m	18
47	In 10mm expansion joints not exceeding 300mm high m	5
<u>ROOF COVERINGS, ETC.</u>		
<u>(CPAP WORK GROUP NO. 125 UNLESS OTHERWISE STATED)</u>		
<u>PROFILED METAL SHEETING AND ACCESSORIES</u>		
<u>0.53mm Macsteel conceal-fixed roof sheeting with a colour Volcanic Grey finish to one side with a Cool Grey backing coat including accessories and fixed to timber purlins (elsewhere measured) using 80mm x 1.2mm G230 cleats. Installation as per manufacturer's recommendations.</u>		
48	Roof covering with pitch not exceeding 25 degrees (LI) m2	35
<u>ROOF INSULATION</u>		
<u>Non-combustible Aluminium Foil based insulation</u>		
49	135mm Glass mineral insulation laid taut over purlins and fixed concurrent with roof covering including galvanised steel straining wires and 48mm DS tape, installed as per manufacturers guidelines. (LI) m2	35
<u>Flashings, cappings, Etc.</u>		
50	Side wall flashings, 506mm girth two times bent and notched on site to suit roof profile (LI) m	10
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Brought Forward		R
51	Head wall flashings 375mm girth two times bent and notched on site to suit roof profile (LI)	m 5
52	Counter-flashings, 180mm girth with approved sealant by specialist to suit roof profile (LI)	m 15
53	Sondor IBR pattern polyclosures to match sheeting profile (LI)	m 5
<u>CARPENTRY AND JOINERY</u>		
<u>(CPAP WORK GROUP NO. 126 UNLESS OTHERWISE STATED)</u>		
<u>ROOFS, ETC</u>		
<u>Sawn softwood</u>		
54	38 x 110mm Wall plates (LI)	m 11
55	152 x 38mm Rafter (LI)	m 17
56	50 x 75mm Purlins (LI)	m 10
<u>EAVES, VERGES, ETC</u>		
<u>Medium density plain fibre-cement fascias</u>		
57	8 x 225mm Fascia boards including galvanised steel H-profile jointing strips (LI)	m 6
Carried Forward		R
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	Brought Forward			R
	<u>METALWORK</u>			
	<u>(CPAP WORK GROUP NO. 136 UNLESS OTHERWISE STATED)</u>			
	<u>STEEL STRONGROOM DOORS, VENTILATORS, ETC</u>			
	<u>Louvred doors etc suitable for 220mm walls fixed to brickwork</u>			
58	1510 x 2032mm High steel double louvred door, consisting of two equal leaves of size 755 x 2032mm high with minimum 100mm rebated meeting stiles and 50mm frame complete with mechanism, lock and fixing lugs Refer to Architects Drawing - Door schedule S4-500A Rev 5 (Door type: SD-D)	No	1	
	<u>PLASTERING</u>			
	<u>(CPAP WORK GROUP NO. 142 UNLESS OTHERWISE STATED)</u>			
	<u>GRANOLITHIC</u>			
	<u>"Stoncor Euclid Chemical" or other equal and approved fully bonded, untinted granolithic, rapid hardening mortar topping on concrete, including 6mm washed aggregate and sealed with "Euco Diamond hard" or other equal and approved sealer</u>			
59	35mm Thick steel floated finish, laid in accordance to manufacturers recommendations (LI)	m2	24	
60	Skirtings 75mm high (LI)	m	20	
	Carried Forward			R

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Brought Forward			R
<u>IRONMONGERY</u>			
<u>(CPAP WORK GROUP NO. 132 UNLESS OTHERWISE STATED)</u>			
<u>LETTERS, NAMEPLATES, ETC.</u>			
<u>"CISA" or other equal and approved</u>			
61	250 x 500 x 2mm Thick aluminium plate room name sign, with 25mm vinyl text, including fixings to door (Signage: Type 1)	No	2
<u>DRAINAGE</u>			
<u>(CPAP WORK GROUP NO. 146 UNLESS OTHERWISE STATED)</u>			
<u>RAINWATER DISPOSAL</u>			
<u>Pre-coated seamless aluminium gutters including matching rivet fixed mitres and end caps sealed using silicon mastic hung by screw fixed internal aluminium hangers at 600mm centres with accessories installed in accordance with manufacturer's instructions, colour to Architects approval (non-standard colours)</u>			
62	185 x 165mm Modern box gutter with support brackets at 600mm centres	m	6
<u>"Marley Vynadeep" or other equal and approved SABS grade uPVC pipes</u>			
63	70mm Diameter rain water down pipe	m	2
64	Extra over eaves gutter for outlet for 70mm pipe	No	1
65	Extra over eaves gutter for drop box suitable for 70mm diameter gutter	No	1
66	Extra over gutter for angle	No	1
67	Extra over gutter for shoe	No	1
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	Brought Forward				R
	<u>WASTE UNIONS ETC</u>				
	<u>"Geberit" or other equal and approved</u>				
68	Geberit stainless steel Varino 50mm diameter floor drain (code: 338.032.00.1) with and including stainless steel perforated drain cover (code: 388.105.00.1) with tamper proof screws and finished flush with floor finish	No	1		
	<u>PLUMBING</u>				
	<u>(CPAP WORK GROUP NO. 148 UNLESS OTHERWISE STATED)</u>				
	<u>TAPS, VALVES, ETC.</u>				
	<u>"Cobra" or other equal and approved</u>				
69	Chrome plated heavy pattern medical pillar tap (Code: 505-21B/HP)	No	1		
	<u>PAINTWORK</u>				
	<u>(CPAP WORK GROUP NO. 152 UNLESS OTHERWISE STATED)</u>				
	<u>ON FIBRE-CEMENT SURFACES</u>				
	<u>Prepare and apply one coat alkali resistant primer, one undercoat and two coats approved exterior quality acrylic PVA emulsion paint to selected tints on</u>				
70	Fascia boards	m2	3		
	<u>ON METAL SURFACES</u>				
	<u>Prepare and apply one coat epoxy primer and two coats polyurethane paint</u>				
71	Doors and frames	m2	6		
	Carried Forward to Summary of Section No. 5				R
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**SOUTH AFRICAN POLICE SERVICES
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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 5</u>			
	<u>EXTERNAL WORKS</u>			
	<u>BILL NO. 11</u>			
	<u>LIVING QUARTERS REFUSE AREA</u>			
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2017 Edition).			
	<u>EARTHWORKS (PROVISIONAL)</u>			
	<u>(CPAP WORK GROUP NO. 104 UNLESS OTHERWISE STATED)</u>			
	<u>EXCAVATION OTHER THAN BULK</u>			
	<u>Excavation in earth not exceeding 2m deep</u>			
1	Reduce levels under floors	m3	4	
2	Trenches (LI)	m3	26	
	<u>CARTING AWAY</u>			
	<u>Extra over all excavations for carting way</u>			
3	Surplus material from excavations and/or stocked piles on site to a dumping site to be located by the contractor	m3	30	
	<u>Risk of collapse of excavations</u>			
4	Sides of trench and hole excavations not exceeding 1,5m deep (LI)	m2	57	
	<u>KEEPING EXCAVATIONS FREE OF WATER</u>			
	<u>Keeping excavations free of water</u>			
5	Keeping excavations free of all water other than subterranean water	Item		
	Carried Forward		R	
	Section No. 5 Bill No. 11 Living Quarters Refuse Area			



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Brought Forward			R
<u>EARTH FILLING, ETC</u>			
Note: All filling whether obtained from the excavations, from stockpiles or by the contractor from an outside source must be selected and approved by the Structural / Civil Engineers			
<u>Imported G5 filling supplied by the contractor compacted to 98% Mod AASHTO density</u>			
6	Under floors, steps, pavings, etc. (LI)	m3	2
<u>Imported G6 filling supplied by the contractor compacted to 92% Mod AASHTO density</u>			
7	Backfilling to trenches, holes (LI)	m3	17
<u>COMPACTION</u>			
<u>Compaction of surfaces</u>			
8	Compaction of ground surfaces under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod. AASHTO density (LI)	m2	25
<u>TESTS</u>			
<u>Prescribed density tests on filling</u>			
9	Modified AASHTO Density test	No	2
10	"Field Density" test including "Optimum Moisture Content" (four readings per test)	No	2
<u>SOIL POISONING</u>			
<u>Soil insecticide in accordance to SANS 5859</u>			
11	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m2	25
12	To bottoms and sides of trenches, etc	m2	57
Carried Forward			R

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**SOUTH AFRICAN POLICE SERVICES
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Brought Forward		R
<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>		
<u>(CPAP WORK GROUP NO. 110 UNLESS OTHERWISE STATED)</u>		
<u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>		
<u>10MPa/19mm concrete</u>		
13	Surface blinding under footings and bases (LI) m3	1
<u>REINFORCED CONCRETE CAST ON/IN FORMWORK</u>		
<u>25Mpa/19mm Concrete</u>		
14	Strip footings (LI) m3	4
15	Surface beds (LI) m3	2
16	Isolated beams (LI) m3	1
<u>CONCRETE SUNDRIES</u>		
<u>"Penetron" or other equal and approved admixture with tracing agent 0.8% - 1% per cementitious content of concrete waterproofing additive</u>		
17	Extra over concrete for "Penetron" or other equal and approved waterproofing on roof, floor slabs and retaining walls m3	1
<u>Finishing top surfaces of concrete with non slip wood float</u>		
18	Surface beds, slabs, etc (LI) m2	25
<u>Test blocks</u>		
19	Prepare a set of six concrete cubes each cube size 150 x 150 x 150mm for strength cubes and deliver to an approved laboratory for testing and pay all charges in connection therewith Sets	2
Carried Forward		R
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**SOUTH AFRICAN POLICE SERVICES
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Brought Forward		R
<u>ROUGH FORMWORK (DEGREE OF ACCURACY II) (CPAP WORK GROUP NO. 111 UNLESS OTHERWISE STATED)</u>		
<u>Rough formwork to sides</u>		
20	Edges, risers, ends and reveals n.e 300mm high (LI) m	17
<u>SMOOTH FORMWORK (DEGREE OF ACCURACY I)</u>		
<u>Smooth formwork to sides and soffits</u>		
21	Isolated beams propped up not exceeding 3.5m high (LI) m2	8
<u>MOVEMENT JOINTS, ETC.</u>		
<u>Saw cut joints</u>		
22	3 x 45mm Saw cut joints on top of concrete (LI) m	5
<u>10mm Slip joints between horizontal concrete and brick surfaces with two layers of tamped masonite</u>		
23	Not exceeding 300mm wide (LI) m	6
<u>Isolation joints with 10mm polystyrene between vertical concrete and brick surfaces</u>		
24	10mm Joints not exceeding 300mm high (LI) m	17
<u>REINFORCEMENT</u>		
<u>(CPAP WORK GROUP NO. 114 UNLESS OTHERWISE STATED)</u>		
<u>Mild steel reinforcement to structural concrete work</u>		
25	8mm Diameter bars (LI) t	0.30
26	10mm Diameter bars (LI) t	0.30
<u>High tensile steel reinforcement to structural concrete work</u>		
27	10mm Diameter bars (LI) t	0.30
Carried Forward		R

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Brought Forward			R
<u>Galvanised brickwork reinforcement</u>			
37	150mm Wide reinforcement built in horizontally (LI)	m	180
<u>Isolation joints with 10mm polystyrene between vertical concrete and brick surfaces</u>			
38	10mm Joints not exceeding 300mm high (LI)	m	17
<u>Galvanised hoop iron cramps, ties, etc</u>			
39	30 x 1,6mm Roof tie 1500mm long with one end built into brickwork and other end tied around trusses	No	8
40	30 x 1,6mm Roof tie 1500mm long with one end built into concrete beam and other end tied around trusses	No	8
<u>Prestressed fabricated concrete lintels including necessary temporary supports</u>			
41	110 x 75mm Lintels in lengths not exceeding 3m (LI)	m	3
<u>Turning pieces</u>			
42	220mm Wide turning piece to lintels, etc. (LI)	m	2
<u>FACE BRICKWORK</u>			
<u>"Corobrik Autumn Wheat Travertine" or other equal and approved face bricks in stretcher bond with raked joints and perpend internally and externally</u>			
43	Extra over one brick walls in stretcher bond faced and pointed on both sides (LI)	m2	49
44	Extra over brickwork to beamfilling for face brickwork	m2	2
<u>"Corobrik Dark Onxy Breeze Brick" or other equal and approved face bricks with raked joints and perpend internally and externally</u>			
45	Extra over brickwork for face brickwork in herringbone pattern (LI)	m2	17

Carried Forward

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Brought Forward		R
<p><u>Dog toothing header course copings, sills, etc. of "Corobrik Autumn Wheat Travertine" or other equal and approved face bricks pointed with recessed joints on all exposed faces</u></p>		
46	320mm Coping wide on top of one brick walls including cutting, etc (LI) m	18
<p><u>WATERPROOFING</u></p> <p><u>(CPAP WORK GROUP NO. 120 UNLESS OTHERWISE STATED)</u></p> <p><u>DAMPPROOFING OF WALLS AND FLOORS</u></p> <p><u>One layer 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape</u></p>		
47	Under surface beds (LI) m ²	25
<p><u>One layer 375 micron embossed polyethylene damp proof course (SANS 952-1985 type B)</u></p>		
48	In walls (LI) m ²	8
<p><u>Two coats bitumen emulsion waterproof coating</u></p>		
49	On bagged brick walls (LI) m ²	43
<p><u>Joint Sealants, etc</u></p>		
50	13 x 10mm In saw cut joints in floors m	5
51	In 10mm isolation joints not exceeding 300mm high m	17
52	2mm Thick x 225mm wide in slip joints between horizontal concrete beam and brick surfaces m	9
Carried Forward		R
<p>Section No. 5 Bill No. 11 Living Quarters Refuse Area</p>		



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