

Item No		Unit	Quantity	Rate	Amount
	<u>SECTION NUMBER 2</u>				
	<u>BILL NUMBER 1</u>				
	<u>EARTHWORKS (Provisional)</u>				
	JBCC Work Group No. 104				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	For Preambles see "PW371 - Specification of Materials and Methods to be used"				

	<u>Carting away of excavated material</u>				
	Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site.				

	<u>EXCAVATION, ETC.</u>				
	<u>Excavation in earth not exceeding 2,00m deep</u>				
1	Reduce levels under floors	m3	3 601		
2	Trenches	m3	1 536		
3	Holes	m3	82		
	<u>Extra over all excavations for carting away</u>				
4	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	1 828		
	<u>Risk of collapse of excavations</u>				
5	Sides of excavations not exceeding 1,50m deep	m2	5 422		
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	<u>Keeping excavations free of water</u>				
6	Keeping excavations free of water		Item		
	<u>FILLING, ETC.</u>				
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 95% Modified AASHTO density</u>				
7	Backfilling to trenches, holes, etc.	m3	511		
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site, stabilised with 2% lime and compacted to 98% Modified AASHTO density</u>				
8	Under floors, steps, pavings, etc.	m3	2 570		
	<u>Gravel filling (G5) supplied by the contractor compacted to 95% Mod AASHTO density</u>				
9	Under floors, steps, pavings, etc.	m3	386		
	<u>Gravel filling (G7) supplied by the contractor compacted to 93% Mod AASHTO density</u>				
10	Under floors, steps, pavings, etc.	m3	386		
	<u>Compaction of surfaces</u>				
11	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 93% Mod AASHTO density	m2	2 675		
	<u>SOIL POISONING</u>				
	Note: Termite ground poisoning certificate to be provided				
	<u>Soil insecticide</u>				
12	Under floors, etc., including forming and poisoning shallow furrows against foundation walls, etc., filling in furrows and ramming	m2	2 600		
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13	To bottoms and sides of trenches, etc.	m2	1 765	
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<u>SECTION NUMBER 2</u>				
<u>BILL NUMBER 2</u>				
<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>				
<u>SUPPLEMENTARY PREAMBLES</u>				
For Preambles see "PW371 - Specification of Materials and Methods to be used"				

<u>CONCRETE</u>				
JBCC Work Group No. 110				
<u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
<u>15MPa/19mm concrete</u>				
1	m3	86		
Surface blinding under footings and bases				
<u>REINFORCED CONCRETE</u>				
<u>25 Mpa/19mm Concrete poured around reinforcement:</u>				
2	m3	534		
Strip footings and foundation Beams				
3	m3	278		
Surface beds				
4	m3	4		
Ramp				
5	m3	4		
Steps				
6	m3	28		
Bases				
7	m3	2		
Stub Columns				
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	<u>30MPa/19mm concrete poured around reinforcement:</u>		
8	Slab	m3	36
9	Beams	m3	1
	<u>TEST BLOCKS</u>		
10	Making and testing set of three of 150 x 150 x 150mm concrete strength test cubes (Provisional)	Sets	18
	<u>CONCRETE SUNDRIES</u>		
	<u>SMOOTH FORMWORK (DEGREE OF ACCURACY I)</u>		
	<u>Finishing surfaces of concrete smooth with a wood float</u>		
11	Surface beds, slabs, etc.	m2	219
	<u>Finishing surfaces of concrete smooth with a power float</u>		
12	Surface beds, slabs, etc.	m2	2 572
	<u>MOVEMENT JOINTS, ETC.</u>		
	<u>Concrete movement joint with 10mm polystyrene between vertical brick and concrete surfaces</u>		
13	Concrete movement joint	m	514
	<u>Isolation Joints</u>		
14	300mm isolation joint consisting of two part 30mm polysulphide sealer, two part 70mm closed cell expanded polyethylene foam joint filler and approved bond breaker according to Engineer's specification	m	1 819
	<u>Saw cut joints</u>		
15	6 x 40mm Saw cut joints in top of surface bed, including 12mm wide x 12mm deep reamed depth. Joint sealed with SIKA Flex Pro 3 Sealant or similar approved	m	619
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No

FORMWORK

GENERAL FORMWORK

General formwork

m

ROUGH FORMWORK (DEGREE OF ACCURACY III)

Rough formwork to soffits

m2

SMOOTH FORMWORK (DEGREE OF ACCURACY I)

Smooth formwork to sides and soffits of

m2

REINFORCEMENT (Provisional)

Fabric reinforcement

m2

High tensile steel reinforcement

t

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MASONRY

SUPPLEMENTARY PREAMBLES

For Preambles see "PW371 - Specification of Materials and Methods to be used"

FOUNDATION BRICKWORK (Provisional)

Brickwork of NFX bricks in 3 :1 cement mortar:

1	One brick walls	m2	667
2	230mm cavity brick walls	m2	540

SUPERSTRUCTURE BRICKWORK

Brickwork of hard burnt NFX bricks in (6:1) cement mortar

3	Square and Rectangular shaped Brick Piers	m3	6
4	One brick wall	m2	3 463
5	Half brick wall	m2	929
6	Half brick wall in beam filling	m2	147

MORTAR TESTING

7	Allow for all necessary mortar test cubes size 150 x 150 x 150mm cast from batches of mortar required for the entire contract as specified, made, stored, cured and tested in accordance with Table C-1 of SABS code of practice 0164 - Part 1	Item
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QUANTITY SURVEYORS

FACE BRICKWORK**Corobrik Satin Titanium FBX (or other approved) pointed with recessed or flush plastered horizontal and vertical joints**

8	Extra over brickwork for face brickwork	m2	2 841
9	Brick-on-edge header course coping to top of one brick wall, built fair and pointed on top and both edges	m	266
10	roller course coping set slightly projecting to top of one brick wall, built fair and pointed on top and both edges	m	182
11	Face brick stairs of Risers: 170mm and Threads: 240mm	m	25

Corobrik Satin Roan FBX (or other approved) in sailor bond with 6mm deep recessed joints

12	Extra over brickwork for face brickwork	m2	227
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BRICKWORK SUNDRIES**Joint forming material in movement joints**

13	12mm Bitumen impregnated fibre board built in vertically between brick skins (Provisional)	m2	202
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Brickwork reinforcement

14	75mm Wide reinforcement built in horizontally	m	5 938
15	150mm Wide reinforcement built in horizontally	m	12 855

Prestressed lintels

16	100 x 70mm Lintels in lengths not exceeding 3m	m	634
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Turning pieces

17	220mm Wide turning piece to lintels, etc	m	209
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Galvanised hoop iron cramps, ties, etc

18	32 x 1,6mm Roof tie 1600mm long with one end fixed to timber and other end built into brickwork	No	679
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QUANTITY SURVEYORS

SILLS, ETC**Fibre cement sills including galvanised lugs and fixing to brickwork to match existing**

19	Internal sill set flat and slightly projecting	m	177
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Brick-on-edge sill set sloping and slightly projecting including galvanised lugs and fixing to brickwork to match existing

20	External sill set sloping	m	177
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DECORATIVE SCREEN WALLS AND GRILLES**Screen walls of 150 x 160mm Tivoli Briti grille blocks in class II mortar pointed with flush joints**

21	150mm Walls in panels pointed on both sides	m2	43
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DAMP PROOFING OF WALLS AND FLOORS**One layer of 375 micron embossed polyethylene damp proof course**

1	In walls, below sills, etc.	m2	779
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One layer of 250 micron polyethylene waterproof membrane sealed at laps with pressure sensitive tape

2	Under surface beds	m2	2 600
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SHEET STEEL FLASHINGS, LININGS, COPINGS, ETC**0,8mm Z275 galvanised steel with "Chromadek" finish one side and standard backing coat****FLASHINGS**

3	"Sealoflex G2" cover flashing or other approved, sealed to wall and over roofing, etc., in strict accordance with the manufacturer's instructions, or other approved	m2	118
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WATERPROOFING TO ROOFS**Derbigum roofing to low-slope (flat) screeded concrete roofs or other approved**

4	Two layer SP4 waterproofing membrane, with 75mm side and 100mm end laps, sealed to bitumen primed surface to falls and cross falls by 'torchfusion' finished with two coats bitumenous aluminum paint. (Waterproofing to be installed by an Approved Contractor under a ten year guarantee)	m2	191
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Item No		Unit	Quantity	Rate	Amount
	<u>SECTION NUMBER 2</u>				
	<u>BILL NUMBER 5</u>				
	<u>ROOF COVERINGS, ETC.</u>				
	JBCC Work Group No. 122				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	For Preambles see "PW371 - Specification of Materials and Methods to be used" -----				
	<u>PROFIED METAL SHEETING AND ACCESSORIES</u>				
	<u>0.58 Novatexi AZ150 Colourplus "Slate", roof sheeting on timber trusses and purlins by specialist and Str. Eng, approval, at 26 pitch, or as indicated on drawing. Flashing, ridges etc. in 0.8mm sheeting, with finish to match roof sheet. all in accordance with the manufacturer's specifications.</u>				
1	Roof covering with pitch not exceeding 25 degrees	m2	291		
2	Roof covering with pitch exceeding 25 degrees	m2	3 419		
3	Ridge capping	m	237		
4	Eave flashing	m	260		
5	Head wall flashing 375mm girth	m	109		
6	Cover flashing	m	191		
7	Hip capping	m	104		
8	Side wall flashing 460mm girth	m	120		
9	Valley gutter lining, three times bent and dressed into valleys and over battens (elsewhere) with minimum 300mm end laps.	m	15		
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ROOF INSULATION

Glasswool insulation with aluminium foil underside installed under roof sheeting as per architect specification

10	135mm "Isover factorylite" (R-value 3.46) Insulation laid taut over purlins (at maximum 1000mm centres) and fixed concurrent with roof covering, including galvanised steel straining wires "LI"	m2	5 385
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 Roofcovering
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GENERAL**TRUSS LOADING**

The trusses have to be designed for a live load of 0,50kN/m²

The dead load of the trusses shall be to accommodate concrete roof tiles on 38 mm x 38 mm SA Pine battens, a gypsum and / or fibre cement board ceiling nailed on 38 x 38 mm brandering at 450 mm centres in both directions and 75 mm insulation wool

TRUSS DESIGN

All trusses shall be designed by a Registered Professional Engineer (in accordance with the SABS Code of Practices for the Design of Timber Structures)

TRUSS PITCH

The truss pitch shall be as described in the Bills of Quantities for each respective truss type

PREFABRICATED TIMBER ROOF TRUSSES (PROVISIONAL)

The following in plate nailed timber roof trusses with a pitch not exceeding 27,5°, from an approved supplier, delivered to site, hoisted into position, fixed and braced on timber wall plates.

- 1 Provide the PC amount of Six Hundred Thousand Rand (R600'000.00) for supply and installation of Roof trusses complete

Item

600 000.00

- 2 Allow for profit and attendance

Item

ROOF CONSTRUCTION**Sawn South African Softwood**

- 3 38 x 114mm Wall plates

m

878

- 4 50 x 50mm Purlins

m

6 462

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Carpentry and Joinery

RUBIQUANT**QUANTITY SURVEYORS**

5	50 x 75mm Purlins	m	3 231
	<u>Sundries</u>		
6	Teco two way hurricane clips	No	625
7	Two coats ABE Carbolineum on roof timbers	m2	680
	<u>EAVES, VERGES, ETC.</u>		
	<u>Pressed fibre cement</u>		
8	15 x 225mm Nutec fibre cement fascia board screwed to splayed purlin and soffit purlin with galvanized grabber screws at 600mm centres	m	565
9	15 x 225mm Angle section barge boards including aluminium H-profile jointing strips.	m	260
	<u>SKIRTINGS</u>		
	<u>Wrought hardwood</u>		
10	21 x 95mm Moulded meranti skirting with quarter round	m	112
	<u>DOORS</u>		
	<u>Demountable Supawood door with four concealed edges, laminated by manufacturer</u>		
11	16mm Thick Cupboard door overall size 1010 x 1982mm high	No	11
	<u>"Swartland" solid core door with four concealed edges, Pre-coated with high pressure laminate by manufacturer both sides or other approved as specified by architect</u>		
12	40mm Thick door size 813 x 2032mm high	No	57
13	40mm Thick door size 900 x 2130mm high	No	31
14	40mm Thick door size 1350 x 2032mm high	No	6
15	40mm Thick door size 1400 x 2032mm high	No	4

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	<u>"Bitcon Industries" fire doors with commercial veneer suitable for painting</u>				
16	"Rubidor" Class B fire door size 813 x 2032mm high (FD07) overall including pressed steel frame for one brick wall and preparing frame for door closer and lock installed complete all as per Architects specification	No	2		
17	"Rubidor" Class B fire door size 813 x 2032mm high (FD10) overall including pressed steel frame for one brick wall and preparing frame for door closer and lock installed complete all as per Architects specification	No	1		
18	"Rubidor" Class B uneven double fire door size 1400 x 2032mm high (FD05A) overall in two leaves with flush meeting stiles with one leaf fitted with 50 x 50 x 3mm stainless steel T-section rebate edge trim fitted to the edge of the door leaf for the full length and holed to receive cylinder lock bolt including pressed steel frame for one brick wall and preparing frame for door closer installed complete all as per Architects specification	No	3		
19	"Rubidor" Class B double fire door size 1600 x 2032mm high (FD03) overall in two leaves with flush meeting stiles with one leaf fitted with 50 x 50 x 3mm stainless steel T-section rebate edge trim fitted to the edge of the door leaf for the full length and holed to receive cylinder lock bolt including pressed steel frame for one brick wall and preparing frame for door closer installed complete all as per Architects specification	No	1		
	<u>JOINERY FITTINGS</u>				
	<u>THE FOLLOWING IN WORKTOPS, ETC.</u>				
	<u>Worktop of 20mm thick EEZE Quartz worktops. Colour: Galaxy or other approved</u>				
20	Worktop 600mm wide with bevelled edges, fixed to wall with suitably sized brackets with matching fascia to detail (See detail J_7006_02 at the back of Bill of Quantities).	m	1		
21	Worktop 600mm wide with bevelled edges, fixed to wall with suitably sized brackets with matching fascia to detail (See detail J_7006_03 at the back of Bill of Quantities).	m	1		
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22	Worktop 600mm wide with bevelled edges, fixed to wall with suitably sized brackets with matching fascia to detail (See detail J_7006_03 at the back of Bill of Quantities).	m	3		
23	Worktop 700mm wide with bevelled edges, fixed to wall with suitably sized brackets with matching fascia to detail (See detail J_7010_01 at the back of Bill of Quantities).	m	2		
24	Kitchen worktop 600mm wide with bevelled edges, fixed to wall with suitably sized brackets with matching fascia to detail (See detail SH-K/CPB-01 at the back of Bill of Quantities).	m	26		
25	Kitchen worktop 800mm wide with bevelled edges, fixed to wall and supported by 75mm SS adjustable leg with suitably sized brackets with matching fascia to detail (See detail SH-K/CPB-01 at the back of Bill of Quantities).	m	12		
	<u>Worktop of 32mm thick high pressure laminate (HPL) on 438 type HGS bonded to a particleboard substrate with brown melamine backer on one side, constructed in accordance with shop drawings. Colour: Stone Arctica (3173) or similar approved</u>				
26	Worktop 600mm wide with straight edges, fixed to wall with suitably sized brackets with matching fascia to detail (See detail J_7006_01 at the back of Bill of Quantities).	m	2		
27	Worktop 600mm wide with straight edges, fixed to wall with suitably sized brackets with matching fascia to detail (See detail J_7006_02 at the back of Bill of Quantities).	m	1		
28	Worktop 600mm wide with straight edges, fixed to wall with suitably sized brackets with matching fascia to detail (See detail J_7006_03 at the back of Bill of Quantities).	m	1		
29	Worktop 600mm wide with straight edges, fixed to wall with suitably sized brackets with matching fascia to detail (See detail J_7006_04 at the back of Bill of Quantities).	m	2		
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30	Worktop 758mm wide with bevelled edges, fixed to wall with suitably sized brackets with matching fascia to detail (See detail J_7007_01 at the back of Bill of Quantities).	m	3	
31	Worktop 758mm wide with bevelled edges, fixed to wall with suitably sized brackets with matching fascia to detail (See detail J_7007_02 at the back of Bill of Quantities).	m	2	
32	Worktop 700mm wide with bevelled edges, fixed to wall with suitably sized brackets with matching fascia to detail (See detail J_7010_02 at the back of Bill of Quantities).	m	3	
<u>THE FOLLOWING IN COUNTER, WORKSTATION, ETC.</u>				
<u>Prefabricated Factory Finished Cupboards as per the Architect's specifications</u>				
The following cupboard fittings have been measured as complete units, i.e. the components of the units have not been separately measured. The descriptions, therefore, of such units shall be deemed to include all components, assembling, housing, notching, gluing, blocking, planting on and screwing with countersunk screws, edge strips, decorative plastic laminate of approved colour and pattern, glass, ironmongery, metalwork, etc				
<u>Notes:</u>				
All cupboards are to be from a reputable manufacturer of melamine cupboard units.				
Cupboard doors to have laminated finish, with shelving and interior colour to architects specification.				
Doors to be hung on adjustable concealed hinges.				
Work tops to be of approved tops, sealed at edges and joints				
FU = Floor mounted unit WU = Wall mounted unit				
33	Floor unit FU size 1000 x 536 x 868mm high with two cupboards and Two shelves (See cupboard detail J_7006_01 at the back of Bill of Quantities)	No	1	
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34	Floor unit FU size 1468 x 536 x 900mm high with two cupboards doors, three shelves and four drawers (See cupboard detail J_7006_02 at the back of Bill of Quantities)	No	1		
35	Floor unit FU size 1468 x 536 x 900mm high with two cupboards doors, three shelves and four drawers (See cupboard detail J_7006_03 at the back of Bill of Quantities)	No	1		
36	Floor unit FU size 1468 x 536 x 900mm high with two cupboards doors, three shelves and four drawers (See cupboard detail J_7006_04 at the back of Bill of Quantities)	No	1		
37	Floor unit FU size 1000 x 536 x 900mm high with two cupboards and three shelves (See cupboard detail J_7006_04 at the back of Bill of Quantities)	No	1		
38	Floor unit FU size 3035 x 758 x 850mm high Reception unit with two cupboards, two drawers and two filing cabinets (See cupboard detail J_7007_01 under Drawings 695-03-442 at the back of Bill of Quantities)	No	1		
39	Floor unit FU size 1800 x 758 x 850mm high with one cupboard, one drawer and one filing cabinet (See cupboard detail J_7007_02 at the back of Bill of Quantities)	No	1		
40	Floor unit FU size 1168 x 700 x 750mm high Reception Desk with one cupboard and one drawer (See cupboard detail J_7010_01 at the back of Bill of Quantities)	No	2		
41	Floor unit FU size 1090 x 700 x 750mm high Security Desks with one cupboard and one drawer (See cupboard detail J_7010_02 at the back of Bill of Quantities)	No	3		
42	Floor unit FU Utility cupboard size 1168 x 600 x 2050mm high with two doors (See cupboard detail J_700_01 at the back of Bill of Quantities)	No	1		
43	Floor unit FU Grocery cupboard size 900 x 600 x 2600mm high with four doors (See cupboard detail SH-G/BCPB-01 at the back of Bill of Quantities)	No	1		
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44	Floor unit FU Kitchen size 450 x 550 x 900mm high with four drawers (See cupboard detail under Drawings SH-K/CPB-01)	No	6		
45	Floor unit FU 150mm Kitchen tray unit (See cupboard detail SH-K/CPB-01 under Drawings)	No	6		
46	Floor unit FU Kitchen size 1200 x 536 x 900mm high with three cupboards (See cupboard detail SH-K/CPB-01 at the back of Bill of Quantities)	No	6		
47	Floor unit FU Kitchen corner size 900 x 900 x 900mm high with two cupboard doors (See cupboard detail SH-K/CPB-01 at the back of Bill of Quantities)	No	6		
48	Floor unit FU bedroom cupboard size 2268 x 600 x 2500mm high overall (See cupboard detail SH-W/RCPB-01 at the back of Bill of Quantities)	No	6		
49	Wall cupboard WU 694mm wide x 300mm and 770mm high, with two cupboard doors (See cupboard detail J_7007_02 at the back of Bill of Quantities)	No	1		
50	Wall cupboard WU 710mm wide x 280mm x 770mm high Drug CBD unit, with two cupboard doors (See cupboard detail J_7011_01 at the back of Bill of Quantities)	No	1		
51	Wall cupboard WU 400mm wide x 500mm x 500mm high Urine cupboard unit, with two cupboard doors (See cupboard detail UC-CPB-01 at the back of Bill of Quantities)	No	2		
52	Wall cupboard WU Kitchen 900mm wide x 750mm and 1300mm high, with two flap unit cupboards (See cupboard detail SH-K/CPB-01 under Drawings)	No	12		
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THE FOLLOWING IN STORAGE SHELVES**Mobile storage units**

53	Standard epoxy coated mobile shelving 954mm wide x 400mm deep x 2150mm high shelving units consisting of 914mm modules which can be adjusted at 320mm centres as per approval of Architect (Layout at back of Bill of Quantities)	No	1
54	Standard epoxy coated mobile shelving 1868mm wide x 400mm deep x 2150mm high shelving units consisting of 874mm modules which can be adjusted at 320mm centres as per approval of Architect (Layout at back of Bill of Quantities)	No	1
55	Standard epoxy coated mobile shelving 2788mm wide x 400mm deep x 2150mm high shelving units consisting of 876mm modules which can be adjusted at 320mm centres as per approval of Architect (Layout at back of Bill of Quantities)	No	1
56	Standard epoxy coated mobile shelving 3704mm wide x 400mm deep x 2150mm high shelving units consisting of 876mm modules which can be adjusted at 320mm centres as per approval of Architect (Layout at back of Bill of Quantities)	No	1
57	Standard epoxy coated mobile shelving 1868mm wide x 400mm deep x 2150mm high shelving units consisting of 874mm modules which can be adjusted at 320mm centres and two wire mesh adjustable baskets on upper shelf (Colour: White) as per approval of Architect (Layout at back of Bill of Quantities)	No	1
58	Standard epoxy coated mobile shelving 4458mm wide x 400mm deep x 2150mm high shelving units consisting of 844mm modules which can be adjusted at 320mm centres and five wire mesh adjustable baskets on upper shelf (Colour: White) as per approval of Architect (Layout at back of Bill of Quantities)	No	1
59	Shutter board shelving, sanded and finished with waterproof varnish fixed to 40 x 40 x 3mm Angle frame, finished with red oxide undercoat and 2 x gloss enamel colour in accordance to Architect specification (See detail 810-Joinery Schedule_02)	No	1

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Carpentry and Joinery

RUBIQUANT**QUANTITY SURVEYORS**

No

1

61	1170 x 457 x 457mm high Typical bench made of GMS rectangular frame of hollow sections (Painted black) and Timber slats on top (See detail J_700_01 at the back of Bill of Quantities)
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Bill No. 6

Carpentry and Joinery

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Bill No. 6

Carpentry and Joinery

**RUBIQUANT
QUANTITY SURVEYORS**

Bulkheads

Bulkheads are defined as those portions of ceilings which are stepped down from the general ceiling level in a particular room or area and which generally occur along the perimeter. Their purpose is either to conceal services or to create architectural features

Bulkheads have only been described as such where they conform to the above definition and where the horizontal or vertical dimensions do not exceed 900mm. Where these dimensions are more than 900mm such portions of ceilings have been included in the appropriate general items of ceilings

Unless otherwise described bulkheads shall be deemed to be horizontal along the length

Steel components

All steel components for ceilings, partitions, etc. are to be galvanised in accordance with SANS 121

NAILED UP CEILINGS

12mm Thick tapered edge plasterboard fixed at right angles to 35mm JUMBO (or similar approved) galvanised steel main and cross tees at 400mm centres, using 25mm drywall screws at 150mm centres. All joints to be tapered and plastered to manufacturer's instructions

1	Ceilings including 50 x 50mm sawn softwood brandering at 400mm centres	m2	229
2	Extra over ceiling for forming trap door size 600 x 600 mm (Provisional)	No	3
3	Siniat Skimming plaster or other approved	m2	229

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Ceilings, Partitions & Access Flooring

RUBIQUANT

QUANTITY SURVEYORS

R

Pelican JUMBO, or similar approved, coved cornice

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SUSPENDED CEILINGS**Proprietary suspended ceilings**

Electrical light fittings, diffusers, panels, etc generally are "lay in" units of the same dimensions as the suspension grid described and allowance must be made accordingly for their support inclusive of any flexibility in setting out that may be required (ceiling panels have not been deducted for light fittings and pricing is to take cognisance thereof)

Note:

All ceiling tiles are to be fitted in ceiling grid with storm clips

600 mm Wide x 1200 mm long x 6mm thick A1 fire rated Pelican Econocal vinyl clad calcium silicate panels laid on Pelican Econogrid pre-painted exposed T15 tee suspension system including galvanised main tees, cross tees, hold down clips, wedges, reinforcement splines, etc all suspended with galvanised hangers at centres not exceeding 1200mm.

- 9 To ceilings suspended exceeding 0,5m and not exceeding 2m below timber purlins, Suspended ceiling exceeding 3m above ground ant not exceeding 9m above ground "LI"

m2

250

600 mm Wide x 1200 mm long x 15 mm thick Vinyl faced Pelican AMF star ceiling tiles suspended ceiling panels, or similar approved laid on fire rated OWAconstruct S3 exposed demountable T24 suspension system, comprising galvanised main tees amd cross tees with main tees suspended by means of galvanised hangers at centres not exceeding 1200mm complete, installed strictly to manufacturer's specifications. Colour and finish to Architect's approval

- 10 To ceilings suspended exceeding 0,5m and not exceeding 2m below timber purlins, Suspended ceiling exceeding 3m above ground ant not exceeding 9m above ground "LI"

m2

859

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Ceilings, Partitions & Access Flooring

RUBIQUANT**QUANTITY SURVEYORS**

Owa prepainted No 56/20 - SM25 Shadowline cornices plugged

- | | | | |
|----|---|---|-------|
| 11 | "OWAconstruct" or other approved Shadowline W-trim cornice with colour and finish to Architect's approval | m | 1 173 |
|----|---|---|-------|

CEILING INSULATION

Resin bonded glass fibre insulation in blanket form

- | | | | |
|----|---------------------------------------|----|-------|
| 12 | 135mm Insulation laid over brandering | m2 | 2 122 |
|----|---------------------------------------|----|-------|

SMOKE BARRIER INSIDE ROOF SPACE

- | | | | |
|----|--|----|-------|
| 13 | 15mm "Rhino" fire-stop gypsum plasterboard inside roof space with patent H-type pressed steel jointing strips, including 50 x 50mm sawn softwood battens at 450mm centres in one direction nailed to roof truss members, including cross brandering at ends and along walls, roof tiles, etc | m2 | 2 692 |
| 14 | Sealing top of gypsum fire barrier against roof tiles with 'Pryrocote' fire retardent agent | m | 281 |

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Ceilings, Partitions & Access Flooring

**RUBIQUANT
QUANTITY SURVEYORS**

4	12mm High M-Trim mill finish dividing strip in concrete thresh hold (Code: AFTIR120) or other approved
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m

654

Matco

- | | |
|---|--|
| 5 | "Matco Super Contract Full PVC" mat (Code: 4410) or similar approved, with Aluminium edging, all in accordance with the manufacturer's recommendations or other approved |
|---|--|

No

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Floor Coverings
RUBIQUANT
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Floor Coverings

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Floor Coverings

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SUPPLEMENTARY PREAMBLES

LOCKS, CLOSERS, CATCHES, ETC.

**All ironmongery as codes by IRONMONGERY
WAREHOUSE or other approved**

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Ironmongery
RUBIQUANT
QUANTITY SURVEYORS

HINGES, BOLTS, ETC.

9	Butt Hinge EN1935:2002 Class 13. 100 x 75 x 2.7mm Ball Bearing Hinge to EN1935:2002.	No	308
10	IW4123SS Ironware 150mm Flush Lever Bolt with and including IW4060SS Ironware Dust Excluding Socket	No	6

HANDLES**"Geze" or similar approved**

11	Daytona Lever handle on 160 x 160 x 1.6mm plate with cylinder cut out (Code: EDE101C69)	Pairs	57.0
12	350 x 150mm Straight tubular pull handle BTB (BTB fixing sets included) (Code: 075/350/B))	Pairs	50
13	330 x 305 x 25mm D-shaped offset tubular pull handle BTB (BTB fixing sets included) (Code: JD213/305/BT)	Pairs	5
14	"Gelmar", or similar approved, 192mm Brushed Satin Nickel Strip Handles	Pairs	11

DOOR STOPS**"GEZE" or other approved**

15	Floor door stop	No	112
16	Hat & Coat hook with buffer	No	12
17	Guide Rail (Code: TS5000)	No	43
18	Tool peg as per Joinery schedule (See detail GS-TO-01)	No	2

DOOR PROTECTION PLATES & LOUVRES**"GEZE" or other approved**

19	150 x 350 x 1.2mm Thick grade 304 stainless steel plate. Stainless steel plate to have six no. countersunk holes for screw fixing (code DPP-304-BL 150 X 300)	No	32
20	450 x 1000mm high kick plate fixed with counter sunk screws	No	10

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 Ironmongery
RUBIQUANT
QUANTITY SURVEYORS

21	850 x 1000mm kick plate fix with counter sunk screws	No	87
22	Aluminium Door Louvre 600mm (H) X 600mm (W) ALU fix with counter sunk screws	No	36
<u>DOOR SIGNAGE</u>			
<u>Aluminium plates</u>			
<u>50 x 50 Aluminium Engraved door number plate</u>			
23	Sign with three letter or numeral	No	98
24	Ditto, but with four letter or numeral	No	23
<u>BLINDS & CURTAIN TRACKS</u>			
<u>90mm Block out vertical blinds (colour to be confirmed), in 90mm slat widths, fitted into window reveals, with white powder-coated aluminium head-rials, fixed with top clip, as supplied. Also provide polypropylene ballast weights, polyacetal stabilising chain, plastic control chains and cord weight/holder, also in white.</u>			
<u>Control sides will be determined by window location and orientation on site.</u>			
25	Window size 2000 x 1245mm high (W_D22)	No	33
26	Window size 1022 x 949mm high (W_C7)	No	18
27	Window size 533 x 949mm high (W_C1)	No	2
28	Window size 1022 x 1245mm high (W_D2)	No	81
29	Window size 1511 x 1245mm high (W_D4)	No	23
30	Window size 533 x 618mm high (W_E1)	No	23
31	Window size 1511 x 618mm high (W_E4)	No	4
32	Window size 1022 x 618mm high (W_E7)	No	26

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Ceiling mounted bed curtain rail tract

33	2800mm impregnated with 100% antimicrobial finish & water repellent finish, Polyester fabric, with netted section starting from 2370mm affl (to align with underside of divider top aluminium section). Ceiling mounted tract to overlap in front with the front track at 5000mm off the back wall and the internal one, 100mm behind. 3. Track to be 100mm inside of the dividing screens on the sides, so as to line up with the edge of the HVAC drywall box. All installed in strict accordance to manufacturer specifications.	No	9
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GRAB RAILS**"Stainless Steel Design"**

34	"Franke" (Code: CNTXBR) or similar approved Stainless Steel Cistern Back Rail. Size 32mm Diameter, 750 x 260mm	No	5
35	"Franke" (Code: CNTX PAR) or similar approved Stainless Steel Paraplegic Grab Rail. Size 32mm Diameter, 300mm (H) x 640mm (L) x 96mm (D)	No	5

CORNER PROTECTORS

36	1200 mm High x 5mm thick stainless steel corner protector fix with approved epoxy	No	12
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BATHROOM FITTINGS**"Franke" or other approved**

37	"Franke Stratos Strx" (Code - 359721) or similar approved 3 roll Vandal Proof Toilet roll holder, sliver 1mm M/S. Size: 360 x 130 x 130mm, plugged and screwed to wall. All in accordance with manufacturers installation specifications	No	21
38	"Franke Stratos Strx" (Code - 359740) Satin stainless steel sanitary towel disposal bins or similar approved with 1,2/ 1,5mm thick grade 304 18/10, size 304 x 205 x 134mm deep with capacity of 6 litres, plugged and screwed to the wall with stainless steel screws	No	38

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39	"Franke Stratos Strx" or similar and approved STRX600E 1,2/1,5mm thick satin finished stainless steel recessed paper towel dispenser (Code: 359701), size 327 x 147 x 632mm high, capacity of 300-400 towels, cylinder lock with standard Franke key, plugged and screwed to the wall with stainless steel screws	No	65		
40	"Simply Human", or similar approved, with 1,2/ 1,5mm thick grade 304 18/10 Stainless Steel, size 340 x 320 x 650mm high with capacity of 30 litres, floor standing bin	No	27		
41	"HUBISCRUB" (Code - 341-00-00C) Soap dispenser or similar approved 618, 1.2/1.5mm Thick Grade 304 Stainless Steel with electro polish finish with replaceable and refillable 1 x Litre container	No	65		
42	"Dominus", or similar approved, Stainless Steel single towel rail. Size 792 x 90 x 42mm, (Code: LIN-STR7) including end brackets.	No	7		
43	"BABYMINDER" by Hygiene Systems South Africa, horizontal infant nappy changing table. Dimensions: 900 x 560 x 120mm, wall mounted as per Manufacturer's specifications	No	3		
44	"VOLKEN" Femcare 12 litre Pedal bin (Code: SATI03)	No	6		
<u>PINNING BOARDS, WRITING BOARDS, PROJECTION SCREENS, ETC</u>					
<u>Vitrex System 2000 or similar approved vitreous enamelled pinning boards and fixing to manufacturers' instructions or other approved</u>					
45	Pinning board size 1 200 x 900mm high and fixing to walls	No	15		
<u>"Parrot" white board magnetic concealed mounting, slide-in aluminium pentray, size 450 x 35mm, and an aluminium frame with a 10mm wide H-bar divider, to be supplied with all necessary fixing components or other approved</u>					
46	Wall mounted notice board size 1 500 x 1 200mm high	No	8		
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Radio Therapy display screen and fixing to manufacturers' instructions or other approved

47 Radio Therapy display screen size approx. 1 800 x 900mm high and fixing to walls

No

1

KEY CABINETS ETC.

BBL Key Cabinet KC100-L or similar approved

48 "BBL" or similar approved key cabinet to be plugged to walls in accordance to manufacturer's specifications

No

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Ironmongery

**RUBIQUANT
QUANTITY SURVEYORS**

GALVANISED WELDED SCREENS, GATES, ETC

Note: All opening gates are to be provided with one heavy duty padlock and two keys

Galvanised mild steel security gates

1	Double gate 2490 x 2000mm hot dipped GMS of 50 mm x 40 mm x 2.5 mm hollow section mitred frames, bolted to wall with 10mm rawl bolts filled in with 18 mm solid round bars vertical at 120 mm centres maximum and 2 x 32 mm x 10 mm flat section cross braces drilled to receive square bars and fitted with one and a half pair of 100 mm x 125 mm steel projection hinges and painted square tubing installed complete all as per Architects specification (Type: G2)	No	4
2	Double gate 1590 x 2145mm hot dipped GMS of 50 mm x 40 mm x 2.5 mm hollow section mitred frames, bolted to wall with 10mm rawl bolts, filled in with 18 mm solid round bars vertical at 120 mm centres maximum and 2 x 32 mm x 10 mm flat section cross braces drilled to receive square bars and fitted with one and a half pair of 100 mm x 125 mm steel projection hinges and painted square tubing installed complete all as per Architects specification (Type: G3)	No	3
3	Single gate 990 x 2145mm hot dipped GMS of 50 mm x 40 mm x 2.5 mm hollow section mitred frames, bolted to wall with 10mm rawl bolts, filled in with 18 mm solid round bars vertical at 120 mm centres maximum and 2 x 32 mm x 10 mm flat section cross braces drilled to receive square bars and fitted with one and a half pair of 100 mm x 125 mm steel projection hinges and painted square tubing installed complete all as per Architects specification (Type: G4)	No	4
4	Single gate 980 x 1910mm hot dipped GMS of 50 mm x 40 mm x 2.5 mm hollow section mitred frames, bolted to wall with 10mm rawl bolts, filled in with 18 mm solid round bars vertical at 120 mm centres maximum and 2 x 32 mm x 10 mm flat section cross braces drilled to receive square bars and fitted with one and a half pair of 100 mm x 125 mm steel projection hinges and painted square tubing installed complete all as per Architects specification (Type: G5)	No	6

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RUBIQUANT
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5	Double gate 1940 x 2145mm hot dipped GMS of 50 mm x 40 mm x 2.5 mm hollow section mitred frames, bolted to wall with 10mm rawl bolts, filled in with 18 mm solid round bars vertical at 120 mm centres maximum and 2 x 32 mm x 10 mm flat section cross braces drilled to receive square bars and fitted with one and a half pair of 100 mm x 125 mm steel projection hinges and painted square tubing installed complete all as per Architects specification (Type: G6)	No	8	
6	Double gate 1940 x 2145mm hot dipped GMS of 50 mm x 40 mm x 2.5 mm hollow section mitred frames, bolted to wall with 10mm rawl bolts, filled in with 18 mm solid round bars vertical at 120 mm centres maximum and 2 x 32 mm x 10 mm flat section cross braces drilled to receive square bars and fitted with one and a half pair of 100 mm x 125 mm steel projection hinges and painted square tubing installed complete all as per Architects specification (Type: G7)	No	1	
<u>STAINLESS STEEL</u>				
<u>75mm Stainless Steel adjustable table leg</u>				
7	Table legs at kitchen counter	No	6	
<u>PRESSED STEEL DOOR FRAMES</u>				
<u>1,6mm Double rebated frames suitable for half brick walls</u>				
8	Frame for door 813 x 2 032mm high	No	54	
9	Frame for door 900 x 2032mm high	No	8	
10	Frame for door overall size 1350 x 2032mm high	No	1	
11	Frame for door overall size 1400 x 2032mm high	No	1	
<u>1,6mm Double rebated frames suitable for one brick walls</u>				
12	Frame for door 813 x 2 032mm high	No	15	
13	Frame for door 900 x 2032mm high	No	11	
14	Frame for door overall size 1350 x 2032mm high	No	5	
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<u>Galvanized steel pistol safe with power coated epoxy finish</u>					
26	Pistol safe size 330 x 305 x 300mm high (mass 16kg) including seven lever security un-pickable lock, fixing to wall with four 10mm diameter expansion bolts, etc.	No	5		
<u>Galvanized steel lockers with power coated epoxy finish</u>					
27	Locker size 300 x 450 x 1800mm high consisting of 0,6mm thick bottom, sides, back, shelf, top and door, including shelf, hanging rail, two vent openings to door, fixing to wall with four 10mm diameter expansion bolts	No	23		
<u>Galvanised Mild Steel transformer room door</u>					
28	Transformer room door size 1830 x 2438mm high, including vermin mesh on the inner side and primed and painted (measured elsewhere). All in accordance to specialist manufacturer's specifications. Type: DV	No	1		
<u>ALUMINIUM WINDOWS, DOORS, ETC</u>					
<u>Note:</u> Tenderers are referred to architect's drawing attached to these bills of quantities for tender purposes					
<u>Windows and doors</u>					
Doors and windows to be of the types described, and manufactured by and in accordance with the standard specification of "Aluminium City", or other approved hereinafter referred to as the Manufacturer.					
After manufacture, the Manufacturer shall be responsible for the delivery to site, unloading, placing in temporary storage, setting up and fixing in position, the supply of glass and glazing complete, sealant pointing, application and removal of protection tape and cleaning and servicing on completion of all aluminium doors and windows. Cleaning of glass before handing over shall be the responsibility of the Contractor as all glass is to be glazed clean by the manufacturer.					
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Glazing

Doors and windows are to be glazed with glass as described. Glazing may be either factory or site glazed and shall be executed by the Manufacturer who must ensure that glass is clean and free from any defects on completion of glazing

Fixing

All doors and windows are to be fixed in position by the Manufacturer. All must be perfectly plumb and shall be strutted and braced as necessary to prevent distortion

Pointing etc.

All doors and windows shall be waterproofed with "Sondor" or other approved wax impregnated sealing strip between the aluminium frame and the structure, and in addition shall be pointed all round on the external face with "Expandite Thioflex 600" or other approved two part polysulphide liquid polymer sealing compound, applied at the junction of the frame with the structure. Pointing, etc. of doors and windows shall be executed by the manufacturer, or his approved specialist waterproofing sub-contractor

Protection

The protection of aluminium doors and windows during and after fixing shall be the responsibility of the Contractor, they must be kept free from mortar droppings, etc. any units damaged are to be replaced. Aluminium doors and windows shall be protected with suitable adhesive protection tape applied to all exposed surfaces by the Manufacturer at the factory prior to delivery to site. Protection tape is to be of a different colour from the anodising

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Metalwork

RUBIQUANT

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30	Shopfront 1-way viewing Window panels 1200 x 900mm high (SFI_02) including protective steel mesh	No	2	
	<u>Natural anodised shopfronts complete with subframes, ironmongery, glass, sealing, etc and fixing to brickwork or concrete, refer to architects drawing number S264-401 REV 0</u>			
31	Door size 1400 x 2050mm high (SFD02)	No	8	
32	Door size 1600 x 2050mm high (SFD04)	No	3	
33	Door size 1600 x 2050mm high (SFD05)	No	3	
34	Door size 1350 x 2050mm high (SFD06)	No	1	
35	Door size 1400 x 2050mm high (SFD07)	No	7	
36	Door size 1350 x 2050mm high (SFD11)	No	1	
	<u>Epoxy powder coated charcoal shopfronts complete with subframes, ironmongery, glass, sealing, etc and fixing to brickwork or concrete , refer to architects drawing number KZN.icp 520C, refer to architects drawing number KZN.icp 520C</u>			
37	Aluminium shopfront Type LV-E15, overall size 1200 x 600mm high overall installed complete all as per Architects specification	No	6	
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Metalwork

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	<u>BILL NUMBER 11</u>				
	<u>STRUCTURAL STEELWORK (PROVISIONAL)</u>				
	SUPPLEMENTARY PREAMBLES				
	Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or other approved may be used with prior approval from the architect.				
	Where there is a reference to SABS code, it means the new SANS code definition.				
	<u>NOTES</u>				
	1. All steel must be grade 300 W to SABS 1431. Commercial Grade cold rolled sections to have a minimum yield stress of 225 MPa (Contractor to get confirmation from supplier in this regard).				
	2. All bolts and nuts to be grade 8.8 unless otherwise specified. Bolts shall be hot dip galvanised to BS763 and it must be possible to screw mate parts together by hand.				
	3. All fasteners must be supplied by the Contractor.				
	4. All welds shall be full penetration 6mm welds to SABS 044 and SABS 455, all round where possible, unless otherwise stated.				
	5. All construction and workshop details must be approved by the Engineer before fabrication is started.				
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6. Structural steelwork must be carried out according to SABS 1200H.
7. All bolts and nuts must have washers.
8. The contractor must ensure adequate structural stability of the structure for the full duration of erection. The contractor shall supply all temporary bracing and fixing mechanisms to achieve the above.
9. No holes to be formed or widened with the use of a cutting torch. The contractor must confirm all dimensions on site. Discrepancies to be reported to the engineer.
10. Prices for all structural steelwork are to include for the following:
- (a) preparation and submission of two complete sets of shop drawings to the Structural Engineers for approval,
 - (b) fabrication,
 - (c) cleaning down and sandblasting to SA 2,5 (SIS 05 5900 - 1967) with profile of between 40 and 70 micron,
 - (d) prime (within 3 hours of sandblasting) with "Plascon zinc phosphate primer (UC. 170) to dry film thickness of between 50 and 100 micron,
 - (e) delivery to site,
 - (f) storage, if necessary,
 - (g) hoisting and erection complete, including all holing, galvanised mild steel bolts, washers, packing pieces, bolting, welding, etc

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 Structural Steelwork
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11. Painting of structural steelwork after erection is elsewhere measured

SUNDRY GALVANISED STEELWORK

Galvanised steel posts as per Engineer's specification

Welded beams & columns in single lengths with flat section base, top, bearer and connection plates bolted to steel and/or concrete

1	50 x 50 x 3.0mm x 4.476kg/m Hollow section square column	kg	32
2	75 x 75 x 5.0mm x 11.098kg/m Hollow section square column	kg	1 474
3	125 x 50 x 20 x 2.5mm X 4.480kg/m Thick cold-formed lipped channel	kg	1 157
4	200 x 75 x 20 x 2.5mm X 7.290kg/m Thick cold-formed lipped channel	kg	541
5	150 x 150 x 4mm Thick cold-formed Square hollow section	kg	340

SUNDRY STEELWORK

Welded mild steel posts as per Engineer's specification

6	50 x 50 x 4mm Thick Angle	kg	405
7	200 x 75mm cold-formed Parallel flange Channels	kg	6 703

Cleats, brackets, etc

8	U-shape 6mm Thick plate as connection plate, with four (4No) 14mm holes	kg	26
9	10mm Baseplate, with four (4No) 18mm holes	kg	220
10	5mm Mild steel connection plate at roof truss welded	No	168

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Structural Steelwork
**RUBIQUANT
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11	8mm Mild steel connection plate	No	24
12	16mm Mild steel connection plate at base plate welded	No	24
<u>Bolts, etc</u>			
13	M12 Bolt and nut	No	320
14	M16 x 100mm anchor bolts	No	224
15	M20 Holding down bolt and nut, 350mm long	No	96

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Structural Steelwork

**RUBIQUANT
QUANTITY SURVEYORS**

GRANOLITHIC AND EPOXY**Epoxy floor and wall covering**

4	"Flowcrete" or other approved epoxy coating to architect specification and colour	m2	77
5	150mm High Epoxy coated Skirting	m	225

INTERNAL PLASTER**5:1 ratio 2-coat Cement plaster on brickwork with and including skimmed second coat to architect specifications**

6	On walls	m2	5 709
7	On narrow widths	m2	235

Cement plaster on concrete finished with a steel trowel

8	On ceilings "LI"	m2	191
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Plastering

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	<u>300 x 300mm Douglas Jones Cut Piece Mosaic Mural supplied by Itatile (Allow PC sum of R700 per m²) and flush pointed with TAL Industrial Fine epoxy tile grout. Applied in strict accordance with Manufacturer's specifications.</u>		
5	On walls in isolated panels, splashbacks, etc	m2	14
	<u>FLOOR TILING</u>		
	<u>600 x 300 x 8.6mm Full Body Non-slip Porcelain floor tiles (Allow a PC sum of R750 per m²) fixed with adhesive to screed (screed elsewhere) and flush pointed with antibacterial epoxy tile grout</u>		
6	On floors	m2	189
7	Skirting 100mm high with and including 8-9mm compressible (poly sulphide) joints concealed under tile skirting	m	240
	<u>600 x 600 x 8.6mm Full Body Non-slip Porcelain floor tiles (Allow a PC sum of R950 per m²) fixed with adhesive to screed (screed elsewhere) and flush pointed with antibacterial epoxy tile grout</u>		
8	On floors	m2	552
9	Skirting 100mm high with and including 8-9mm compressible (poly sulphide) joints concealed under tile skirting	m	571
	<u>600 x 600 x 8.6mm Full bodied porcelain non-slip floor tiles (Allow a PC sum of R950 per m²) fixed with adhesive to screed (screed elsewhere) and flush pointed with antibacterial epoxy tile grout</u>		
10	On floors	m2	346
11	Skirting 100mm high with and including 8-9mm compressible (poly sulphide) joints concealed under tile skirting	m	475

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Section No. 1

Bill No. 13

Tiling

RUBIQUANT**QUANTITY SURVEYORS**

SUNDRIES**Forming recess in wall to allow for soap dishes, toilet paper holders etc.**

12	Built-in Ceramic soap dish to match wall tiling, as per Architects specification	No	7
13	Wall mounted ceramic toilet paper holder, to match wall tiling, as per Architect specification	No	5

Strips between tiles and on tile edges

14	12mm Aluminium Straight Edge Trim (ASE100 or ASE120)	m	1 386
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Internal or external corner strips

15	12mm Aluminium Straight Edge Trim (ASE120)	m	255
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Bill No. 13

Tiling

RUBIQUANT**QUANTITY SURVEYORS**

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Tiling

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Bill No. 13

Tiling

**RUBIQUANT
QUANTITY SURVEYORS**

	<u>Cast iron rainwater inlet/outlet drains.</u>				
10	80mm Diameter and 90 degree bend full bore inlet with domical inlet grating and outlet to 80mm downpipe. With and including 150x150x150mm high purpose made stainless steel grated box over for keeping debris and stone pitching out of the full bores, complete including fixing to roof slabs	No	2		
	<u>SANITARY FITTINGS</u>				
	<u>The following in WASH HAND BASINS fixed complete in position and connected to services</u>				
11	Betta Verdi Medical vitreous china wash hand basin, size 590 x 490 or similar approved, wall hung with one tap hole and 62mm diameter flange and internal plug, including integrated overflow, bolted to wall with 2No. 10mm bolts (Code: VWC108AV) and sealed with silicon sealant against wall	No	19		
12	Consul Wash hand basin. Wall hung and installed at 820mm from FFL to rim of basin combined height with pedestal. 575mm side x 490mm. 1 x pre-punched tap hole in the centre of the basin, including integrated overflow, expansion bolts and 62mm diameter flange and internal plug Installation manual included. (Code: WC0408A PED-UNIVERSAL_WHI)	No	22		
13	Consul Wash hand basin. Wall hung and installed at 820mm from FFL to rim of basin. 1 x pre-punched tap hole in the centre of the basin, including integrated overflow, expansion bolts and 62mm diameter flange and internal plug and installation manual as per manufacturer. (Code: WC0408A)	No	6		
14	COBRA angle regulating valves – COBRA 832/350F. Including 350mm braided flexi hose.	No	92		
15	COBRA 309-32 “anti-theft” chrome-plate plug Includes: 72mm spindle and spindle-locking tab, and 39mm diameter plug.	No	46		
16	15 mm Castle -or other approved- ballstop	No	92		
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The following in PARAPLEGIC WHB complete

- 17 Consul Wash hand basin. Wall hung and installed at 820mm from FFL to rim of basin. 1 x pre-punched tap hole in the centre of the basin, including integrated overflow, expansion bolts and 62mm diameter flange and internal plug and installation manual as per manufacturer. (Code: WC0408A)

No

5

- 18 Cobra Medical pillar type tap - elbow action pillar tap with high waist and blue indice. (Code: FEAPILEA-4FT01)

No

5

The following in WC suite complete

- 19 "Betta" Consul white vitreous china, close coupled toilet suite with washdown pan 90° outlet back inlet box rim wall hung pan, with quality thermoset soft-close seat. Can be used with a concealed flush valve. Flush volume 6/3 litres ,subject to the pan being installed with a cistern providing an effective 6/3 litre flush volume. Complete with lid fitments and flush pipe elbow or other approved, ball valves to be of brass and SABS 752 to size, plastic ball floats for ball valves to SABS 1006, specifications having closed fronts of size and shape required to fit the pan, each attached to pan with non-ferrous metal fixing bolts, fixing and installation procedures as per Manufacturer's specifications, securely screw fixed by means of suitable approved wall plugs. (Code: XTCOF08A)

No

16

- 20 15 mm Copper (1.2 mm thick) service pipe average 350 mm girth, bent as necessary, including one straight copper to iron fitting (tap)

No

21

- 21 15 mm Chromium plated ballstop

No

21

The following in PARAPLEGIC WC Suite complete

- 22 Atlas Lecico white vitreous chine, PARAPLEGIC Close-couple set with Grab rails, excluding seat with side flush at raised height. (Code: PARSETCCB0RAIBE)

No

5

- 23 MDF heavy duty white toilet seat fitted to WC suite complete (Code: CHISEASTD0MDFUC)

No

5

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24	15 mm Copper (1.2 mm thick) service pipe average 350 mm girth, bent as necessary, including one straight copper to iron fitting (tap)	No	5		
25	15 mm Chromium plated ballostop	No	5		
	<u>The following in URINAL complete</u>				
26	"Betta" Louis Urinal (Code: ULFS08A1), 300mm wide x 460mm high white vitreous china Top-Entry spreader with wall brackets.	No	4		
27	"Tivoli" (Code: AC1510/CH) Chrome single bowl Flush master valve & connector, Junior Econoflush front access box, including palm press button, trail pipe, ballostop, stainless steel faceplate & chassis and galvanised steel underwall box. SANS 1240. 258mm x 235mm x 135mm (Code DF8-112)	No	4		
	<u>The following in SHOWER complete</u>				
28	"Libra" Cola 90 Shower tray, or similar approved, bedded and mounted onto tiled, waterproofed brickwork surround. Size 900 x 900 x 75mm. All in accordance to Manufacturer's specification. (Code: CON-01-FP-TM002-NNNL)	No	6		
29	"Cobra" Zambesi CP concealed bath/shower mixer. Includes: 2 x G1/2 female inlet, G1/2 female outlet. (Code: ZM-961)	No	6		
30	"Cobra" Zambesi shower wall outlet (Code: FSACOEGRN-0GT0150)	No	6		
31	"GROHE" Tempesta 100 Shower rail set 3 sprays, or similar approved. Consisting of: hand shower (28 419) shower rail, 600 mm (27 523) Relexaflex shower hose 1750 mm 1/2 x 1/2 (28 154), GROHE EcoJoy 9.5 l/min flow limiter, GROHE DreamSpray perfect spray pattern, GROHE StarLight chrome finish, SpeedClean anti-lime system Inner WaterGuide for a longer life, ShockProof silicone ring prevents damages caused by shower falling suitable for instantaneous heater min. recommended pressure 1.0 bar. (Code: G-27644001)	No	6		
32	110 x 110mm Lola square shower waste with removable stainless steel grating	No	6		
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33	900 x 900 x 1850mm High Chrome with glass infill, corner entry shower frame	No	6		
34	1850mm High Chrome with glass infill, pivot shower door	No	1		
<u>STAINLESS STEEL (340 (18/10)) WASH HAND BASINS, WC SUITES, ETC</u>					
<u>The following in BATH/SHOWER complete</u>					
35	"Franke" BS Stainless Steel Shower Tray (Code: Mode BS401), size 900 x 900 x 75mm deep. Manufactured from Grade 304 (18/10) Stainless Steel, 1.2mm gauge. Unit with radiused corners and a patterned base, with 40mm apron all round and 38mm BSP integrated waste outlet.	No	1		
36	"Cobra" Vandal Proof, Single function, shower head in CP finish. Includes: 1/2" BSP male inlet, minimum flow pressure 50kPa (Code: KP2-6/N)	No	1		
37	"Cobra" Zambesi CP concealed bath/shower mixer. Includes: 2 x G1/2 female inlet, G1/2 female outlet. (Code: ZM-961)	No	1		
<u>Sinks, wash troughs, etc.</u>					
38	"Franke" Quiline QLX 621-120" Grade 304 (18/10) 1,2mm thick stainless steel model Oval A wash hand basin size 520 x 420mm with pressed bowl, with two tapholes, 90mm basket strainer kitchen sink waste fittings, (WB 001) excluding waste. Fixed to wall with "Franke" Eagle brackets 480 x 319mm to be manufactured from galvanised mild steel with two 6mm holes to secure the unit to the wall (Pair). (Code: 2120008)	No	19		
39	"Franke" Quiline (Code: QLX 611) Grade 304 (18/10) 1,2mm thick stainless steel mode single end bowl drop in sink, size 900 x 500mm with pressed bowl, with one taphole	No	10		
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40	"Franke" Mini Surgeon Scrub-up Unit (Code: SMS SURGEON 2630049) Single bowl, Grade 304 (18/10) 1,6mm thick stainless steel model, size 525 x 425 x 258mm deep, with integral splash back 300mm high, with one taphole, 90mm waste outlet for a basket strainer kitchen sink waste fittings, (Code 357456) excluding waste four times bolted to wall with M6 expansion bolts.	No	6	
41	Franke- citimetal model "BR6" bedpan and bottle rack - comprising of 18/10 grade 304 stainless steel, fixed to wall surface with stainless steel bar braces with removable drip tray including 19mm drain outlet - size 915mm long (6x bedpan and bottle size)	No	1	
42	"Franke" S2 Catering Stainless Steel Sink Double bowl, Grade 304, 1.2mm thick with a 150mm high integral splash back to the rear and 50 x 10mm turndown with a beaded edge on the remaining sides. Sink with pressed 500 x 500 x 230mm deep bowl with a 40mm waste outlet. The underside sprayed with vermin proof bitumastic sound deadening and supported with a 30x30x3mm framework and galvanised mild steel backing sheet. Unit fixed 900mm high from the top of the front apron to the finish floor level with anchor bolts (bolts specified elsewhere) and fixing legs	No	2	
43	Cobra Watertech 40mm Chrome plated slotted basin waste union (no chain or stay) (Code: 303). Includes: 62mm diameter flange, 80mm long shank, and 1 1/2" BSP male outlet connection.	No	29	
44	COBRA 309-32 "anti-theft" chrome-plate plug Includes: 72mm spindle and spindle-locking tab, and 39mm diameter plug.	No	29	
45	COBRA 365/50 bottle trap, 50mm, pvc outlet Includes: a high specification polymer-blend body component, 75mm deep re-seal and adjustable telescopic pipe, and 1 1/2" female inlet x Ø 50mm outlet for PVC tube.	No	35	
46	COBRA angle regulating valves – COBRA 832/350F. Including 350mm braided flexi hose.	No	50	
47	50 mm Deep seal "P" or "S" trap	No	44	
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Slop Hopper, etc.

48	Franke Model CH' slop hopper suite with grid size 540 x 545mm with 100mm integral splashback to back and both sides, bowl with integral flushing rim, 110mm diameter waste outlet, hinged bucket grid and set on and including a pair of 40mm square stainless steel gallows brackets bolted to tiled walls	No	2
49	"Basterfield" B22340 Wall mounted drip sink, Grade 304 (18/8) 1,2mm thick stainless steel with 150mm splash back, mounted on gallows brackets or legs	No	2
50	Cobra FJ2.210 Flushmaster Junior flushvalve set	No	2

TAPS, VALVES, ETC

Note:

All taps and mixers are to be fitted with water saving nuts as supplied by the manufactures of the taps

"Cobra Watertech"

51	"Cobra" 15mm Chromium plated elbow action medical mixer (Code - 515/055-21) mounted to brick walls. 'Cobra 206' and joint to brass connector (elsewhere measured)	No	44
52	"Cobra" Metering chrome plated basin pillar tap, self-closing. 1/2 BSP male iron connection end (Code: FPT2A1M2-0GT01)	No	2
53	"Cobra" (Code: CP171/041) chrome plated basin pillar tap, with tapered flow-straightened. Includes: hot and cold indices, over-arm swivel spout, CP297 pillar mixer with retractable hand spray, 15mm bedpan spray nozzle and 15mm bottle spray nozzle. 1/2" BSP male inlet, flanged backnut, and streamline outlet for flow aesthetics.	No	1
54	"Cobra" Watertech 15mm chrome plated single outlet sink tap (Code: XE-215/044), including overarm swivel outlet, mounting kit and angle valves, manufactured in accordance with SANS 226:2009 Type 2 (BS 5412).	No	10
55	"Cobra" 108 brass hose union bib tap (Code: CON-209/1-15X3/4/N)	No	24

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56	"Cobra" Watertech Stella 15mm chrome Chrome plated extended bibtap (3306ST/EXT-15). Includes: hot and cold indices, 1/2" BSP male inlet, sliding wall flange, and flow straightener for flow aesthetics.	No	14		
57	"Cobra" FM 1.00 Flushmaster Junior flushvalve set	No	1		
	<u>"Tivoli"</u>				
58	"Tivoli Teramo DZR"15mm Chromium plated basin mixer (Code - TVDRTA5840/CH) mounted to basin	No	22		
	<u>TRAPS, ETC</u>				
	Note: All traps are to include for connectors and fitting to waste outlet at one end and to waste pipe at other end				
	<u>uPVC</u>				
59	110mm uPVC trap	No	6		
60	110mm uPVC to stainless steel adaptor	No	6		
	<u>"Flexi Traps"</u>				
61	40 x 50mm Butyl rubber 'P' or 'S' trap jointed to waste outlet fitting and UPVC pipe including clamps	No	12		
	<u>"Cobra Watertech"</u>				
62	COBRA chromium plated 345/50 bottle trap, 50mm pvc outlet. Includes: 75mm deep re-seal, adjustable telescopic pipe, and 1 1/4" female inlet x Ø 50mm outlet for PVC tube. (Code: TVAC9020/CH)	No	52		
63	38mm Brass deep seal shower trap as 'Cobra 373' with chromium plated grating as 'Cobra 323' connected to shower tray and set in position in concrete floor and joint to 50mm UPVC pipe including adaptor	No	1		
64	32 x 50mm Chromium plated bottle trap as 'Cobra 340/50' and joint to waste outlet fitting and to 50mm UPVC pipe including adaptor	No	1		
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WASTE UNIONS. ETC.**"Cobra Watertech"**

- 65 Cobra 301' chromium plated basin waste, slotted flanged backnut and washer, 62mm flange and 80mm long shank

No 1

"Tivoli"

- 66 Anti-vandal basin waste to medical basins (Code - TVAC1033/CH)

No 19

- 67 Pop up basin waste (Code - TVAC1034/CH)

No 27

FLOOR DRAINS**"Rofo" Wet Floor drains or other approved**

- 68 Supply deliver and install full flow floor trap with flowrate of 0.8ltr/s and load capacity of 400kg, No 4 ROFO series, RO 125V NW 50 or other approved. The floor trap shall be manufactured from high-grade austenitic stainless steel in grade AISI 304, chemically de-scaled (acid pickled) in order to enhance the natural corrosion resistance and provide a uniform matt silver finish. All surfaces shall be polished and have a smooth finish for easy cleaning, minimum dirt collection and high flow rates. The floor trap shall; have a single water seal to ensure odour-free operation; be easy to dismantle for cleaning with the discharge pipe fully accessible once the drain has been dismantled. The outlet shall be a vertical outlet.

No 4

PRECAST CONCRETE WASH TROUGHS**Precast Concrete wash troughs cast from minimum 30MPa concrete. Installed on 2 x standard concrete leg supports, top of trough to be at 900mm AFFL**

- 69 1000mm x 600mm x 320mm Deep double bowl pre-cast concrete wash trough, including 2 x waste, 40mm or sized to suit trough, with plug and stay

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TAPS, VALVES, ETC.**Brass**

70	15mm Stopcock	No	3
71	22mm Stopcock	No	1

ECLECTIC WATER HEATERS**"Approved"**

72	"FRANKE" or other approved stainless steel 10 litre Hydro boil complete	No	3
73	50 Litre horizontal high pressure electric water heater	No	17
74	Drip tray to suit 50 litre horizontal geyser with 100mm high upstand with top edge bent over all round including 50mm diameter overflow pipe 3000mm long approximately 3m above ground level	No	8
75	150 Litre horizontal high pressure electric water heater	No	2
76	Drip tray to suit 150 litre horizontal geyser with 100mm high upstand with top edge bent over all round including 50mm diameter overflow pipe 3000mm long approximately 3m above ground level	No	2

SANITARY PLUMBING**PIPES, ETC.****uPVC pipes**

77	50mm Pipes	m	285
78	110mm Pipes	m	21

Extra over uPVC pipes for fittings

79	50mm Bend	No	190
80	110mm Bend	No	21
81	50mm Junction	No	95

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82	110mm Pan connector	No	21
83	50mm Access bend	No	95
84	50mm Access junction	No	95
85	110mm "GI Two-way" vent valve	No	21
86	110mm Gulley P-trap	No	65

WATER SUPPLIES**Copper pipes (class 460/2) with soldered joints**

87	15mm Pipes	m	152
88	22mm Pipes	m	241
89	28mm Pipes	m	162
90	35mm Pipes	m	51

Extra over copper pipes (class 460/2) for capillary fittings

91	15mm Fittings	No	68
92	22mm Fittings	No	85
93	28mm Fittings	No	114
94	35mm Fittings	No	27

Extra over copper pipes for capillary soldered fittings

95	15 mm Fittings	No	67
96	22 mm Fittings	No	83
97	28mm Fittings	No	51
98	35mm Fittings	No	27

LAGGING**Carried to Collection**

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	<u>BILL NUMBER 15</u>				
	<u>GLAZING</u>				
	JBCC Work Group No. 150				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	For Preambles see "PW371 - Specification of Materials and Methods to be used"				

	<u>Proprietary items or materials</u>				
	Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent				
	<u>Float glass</u>				
	The term 'float glass' is used for monolithic annealed glass				
	<u>Laminated glass</u>				
	Laminated glass to have polyvinyl butyral (PVB) interlayer(s)				
	<u>TOPS, SHELVES, DOORS, MIRRORS, ETC.</u>				
	<u>4mm Thick silvered float glass copper backed mirrors with bevelled and polished edges, holed for and fixed with chromium plated dome capped mirror screws with rubber buffers to plugs in brickwork or concrete</u>				
1	Mirror size 400 x 300mm high with four screws	No	22		
2	Mirror size 600 x 500mm high with four screws	No	5		
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	Glazing				
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Prepare and apply one undercoat of Dulux Trade Alkali-resistant plaster primer and two coats Dulux WallGuard. (Colour: Cream Chic 56YY 85/109). All in strict accordance with Manufacturer's specifications

Prepare and apply one undercoat of Dulux Trade Alkali-resistant plaster primer and two coats Dulux Bathroom+. (Colour: Cream Chic 56YY 85/109). All in strict accordance with Manufacturer's specifications

Prepare for and apply one alkali Burn resistant primer as type PP950 and one coat universal undercoat and two coats oil-based low-gloss eggshell enamel paint to architects colour, with and including Flowcrete Flowseal EPW AF (see specification of flowcrete - system 2 complete).

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QUANTITY SURVEYORS

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ON FIBRE CEMENT**One coat universal plaster primer and two coats PVA acrylic paint**

8	On ceilings	m2	784
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9	On fascias and barge boards	m2	538
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One undercoat detergent and paint one coat "Eggshell" paint or other approved

10	On window cills not exceeding 300mm wide	m	177
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PAINT ON METAL**One coat Glatex 8 metal primer (PL3) and apply two coats Glatex 8 finishing coats or other approved, on:**

11	Door frames	m2	129
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12	On gates, grilles, burglar screens, balustrades, etc. (both sides measured over the full flat area)	m2	173
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13	On steel columns, beams, base plates, etc	m2	544
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One coat Glatex 8 metal primer (PL3) and apply two coats Dulux Pearlqflo Enamel finishing coats or other approved, on:

14	Doors	m2	4
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15	Door frames	m2	2
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Degrease, one coat 'Galvogrip' primer, one undercoat and two coats high gloss enamel paint on steel:

16	On galvanised steel window frames.	m2	393
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Paintwork

RUBIQUANT**QUANTITY SURVEYORS**

ON WOOD

One coat "Spick & Span Oil Based Wood Primer (UC2)" under coat and two coats "Plascon Velvagio Polyurethane Velvet Enamel (VLO)" paint or other approved

17	On doors	m2	372
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Three coats polyurethane clear varnish

18	Skirtings and mouldings not exceeding 300mm girth	m	112
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7	Ceilings, Partitions & Access Flooring	35	
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9	Ironmongery	45	
10	Metalwork	54	
11	Structural Steelwork	59	
12	Plastering	62	
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15	Glazing	80	
16	Paintwork	85	
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	<u>SECTION NUMBER 3</u>				
	<u>BILL NUMBER 1</u>				
	<u>SITE WORKS AND PAVING (PROVISIONAL)</u>				
	<u>GENERAL EARTH WORKS (PROVISIONAL)</u>				
	JBCC Work Group No 104.				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	For Preambles see "PW371 - Specification of Materials and Methods to be used"				

	<u>SITE CLEARANCE, REMOVAL OF TREES, ETC.</u>				
	<u>Site Clearance :</u>				
1	Clear area of site of all rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200 mm girth, bush, etc., including re-clearing of any subsequent vegetation growth during the contract period as considered necessary by the Representative and removing all material from site, As item 1 page 124	m2	17 462		
	<u>Taking out and removing, grubbing up roots and filling in holes</u>				
2	Indigenous tree exceeding 200mm and not exceeding 500mm girth	No	15		
3	Indigenous tree exceeding 500mm and not exceeding 1000mm girth	No	9		
4	Indigenous tree exceeding 1000mm and not exceeding 1500mm girth	No	2		
	<u>BULK EXCAVATION, FILLING, ETC.</u>				
5	Excavate over site 150mm deep to remove topsoil, wheel not exceeding 50m and spread and level in banks and terraces.	m2	17 467		
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<u>Open face excavation in earth over sloping site:</u>					
6	In bulk excavations to reduce levels and cut and form platforms, including setting aside for later re-use or removal.	m3	6 974		
<u>Extra over bulk excavation in earth for excavation in:</u>					
7	Soft rock.	m3	349		
8	Hard rock.	m3	349		
<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 95% or 100% in the case of sand:</u>					
9	Over site to form platforms, etc.	m3	3 339		
<u>Extra over all excavations for carting away</u>					
10	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	3 635		
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ROADS, PAVINGS, ETC.,**EXCAVATION, FILLING, ETC****Excavation under paving not exceeding 300mm deep**

11	Under floors	m3	991
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Earth filling supplied by the contractor compacted to 95% Mod AASHTO density

12	150mm layers of G5 Material and compacted to 95% Mod, The G5 should be the form of a sugar dolerite, decomposed granite or decomposed sandstone	m3	143
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Base course constructed of filling supplied by the Contractor:

13	Base course under paving areas of C4 material (G5 chemically stabilised with 4% cement) Sub-base layer in accordance with SABS 1200 DM compacted to 95% modified AASHTO density.	m3	848
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Compaction of surfaces:

14	Compaction of ground surface under pavings, roads, etc. including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density and 100% Mod AASHTO for sand.	m2	2 827
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RUBIQUANT**QUANTITY SURVEYORS**

	<u>Coarse river sand filling supplied by the Contractor</u>		
15	Under paving	m3	189
	<u>PRECAST CONCRETE PAVING BLOCKS</u>		
	<u>WEED KILLER</u>		
	<u>Approved weed killer in strict accordance with manufacturers instructions</u>		
16	Under paving, etc	m2	3 304
	<u>PAVING</u>		
	Paving to be laid in accordance with SABS 1200 MJ, SABS 1058 and the Concrete Masonry Association's specifications		
	<u>Paving of 60 mm interlocking clay paving bricks of approved colour with butt joints on 20 mm thick river sand bed (elsewhere measured)</u>		
17	Paving in herringbone bond pattern to falls	m2	477
18	Extra over for straight edge blocks	m	813
	<u>Paving of 80 mm interlocking concrete paving bricks of approved colour with butt joints on 20 mm thick river sand bed (elsewhere measured)</u>		
19	Paving in stretcher bond to falls	m2	2 827
	<u>PRECAST KERBS</u>		
	<u>Precast concrete finished smooth on exposed surfaces including bedding, cutting and pointing:</u>		
20	Kerb (SABS927 fig 3) with 45 x 125mm unreinforced concrete footing, 250 x 250mm triangular concrete haunching at back of each joint and 300 x 150mm concrete infill in front with cement grouted joints, including excavation, backfilling, etc.	m	587
21	Ditto, Kerb (SABS 927 fig 3) but circular on plan not exceeding 4m radius formed with short lengths of straight kerb.	m	53
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22	Cast In-Situ concrete edge beams of Class 20/19 with cement grouted joints, including excavation, backfilling, waterproofing etc.	m3	40
<u>ROAD MARKING</u>			
23	100mm Wide white or Yellow lines with an approved road marking paint.	m	142
24	900mm High white or yellow lettering or numerals with an approved road marking paint.	No	4
<u>CONCRETE APRONS</u>			
<u>The following in aprons</u>			
25	Level and compact earth under apron slab.	m2	354
26	Unreinforced concrete (20MPa) in apron slab	m3	35
27	Type 193 fabric reinforcement in concrete surface beds, slabs, etc.	m2	354
28	Wood float finish to top of concrete surface bed.	m2	354
29	Half rounded angle on edge of concrete aprons.	m	590
30	Rough formwork to edge of concrete not exceeding 300mm high.	m	295
31	10mm Expansion joints of 10mm Jointex filler board between vertical concrete surfaces not exceeding 300mm high.	m	59
32	Ditto, between vertical concrete surfaces and brickwork surfaces not exceeding 300mm high	m	295
33	Rake out soft board 25mm deep and seal expansion joints " Thioflex 600" polysulphide sealing compound including backing cord, bond breaker, primer, etc, in aprons.	m	354

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RETRO-REFLECTIVE ROAD SIGNS, ETC.

Road signs and road markings shall conform to the requirements given in the South African Road Traffic Manual and relevant SABS specifications.

The rate tendered for road signs shall cover the cost of supplying and erecting the completed signboard supports, face, frame and fixing brackets and shall include the cost for providing retro-reflective backgrounds, symbols, characters, legends and borders of the type specified in the South African Road Traffic Manual. The tendered rate shall include for excavations, backfilling and concreting of sign supports.

34	900mm Diameter regulation "DISABLED PARKING SYMBOL" sign (R323) in accordance with S.A.B.S. standard fitted and fixed on creosoted pole, 2 700mm high bedded in 450 x 450 x 600mm deep concrete footing, included all necessary excavation, etc.	No	2
35	900mm Diameter regulation "STOP" sign in accordance with S.A.B.S. standard fitted and fixed on creosoted pole, 4500mm high bedded in 450 x 450 x 600mm deep concrete footing, included all necessary excavation, etc.	No	1

STORMWATER DRAINAGE**Class 100D concrete pipes:**

36	300mm Pipes laid in and including trenches not exceeding 1m deep.	m	11
37	300mm Pipes laid and including trenches exceeding 1m and not exceeding 2m deep.	m	172
38	300mm Pipes laid in and including trenches exceeding 2m and not exceeding 3m deep.	m	32
39	450mm Pipes laid and including trenches exceeding 1m and not exceeding 2m deep.	m	147
40	450mm Pipes laid in and including trenches exceeding 2m and not exceeding 3m deep.	m	37
41	600mm Pipes laid in and including trenches exceeding 2m and not exceeding 3m deep.	m	35

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42	750mm Pipes laid in and including trenches exceeding 2m and not exceeding 3m deep.	m	24
	<u>Sundries:</u>		
43	Extra over excavation in earth for pipe trenches, chambers, etc. for excavation in soft rock.	m3	27
44	Extra over excavation in earth for pipe trenches, chambers, etc. for excavation in hard rock.	m3	27
	<u>The following in headwall:</u>		
45	Excavate not exceeding 2m deep.	m3	32
46	Cart away surplus material to a suitable dumping site located by the Contractor.	m3	19
47	Reinforced concrete (20MPa) in bases.	m3	1
48	Set of three concrete baffle ribs to top of base size 50 x 25mm high and average 900mm long.	No	2
49	Rough formwork to edge not exceeding 300mm high.	m	13
50	Type 193 fabric reinforcement to bases.	m2	6
51	One brick walls.	m2	6
52	Plaster on brick walls.	m2	12
53	Plaster on narrow widths.	m2	2
	<u>INSPECTION CHAMBERS, MANHOLES, ETC.</u>		
	<u>Precast concrete circular inspection chambers (covers elsewhere):</u>		
54	Inspection chamber 1000mm diameter and exceeding 1250mm and not exceeding 1500mm deep internally.	No	1
55	Inspection chamber 1000mm diameter and exceeding 2250mm and not exceeding 2500mm deep internally.	No	2
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Sumps, catchpits, inspection chambers, etc (gratings and covers elsewhere):

The following in catchpits, manholes, etc. of 100mm thick 25Mpa/20mm concrete base, one brick walls in NFX hard burnt clay bricks rendered internally, and including 3:1 cement benching, excavations, part return and compact and carting away, etc.

56	Catchpit 600 x 600mm and exceeding 1000mm and not exceeding 1250mm deep internally.	No	9
57	Catchpit 600 x 600mm and exceeding 1250mm and not exceeding 1500mm deep internally.	No	5
58	Catchpit 600 x 600mm and exceeding 1500mm and not exceeding 1750mm deep internally.	No	3
59	Catchpit 600 x 600mm and exceeding 2500mm and not exceeding 2750mm deep internally.	No	2
60	Catchpit 600 x 600mm and exceeding 2750mm and not exceeding 3000mm deep internally.	No	2
61	Kerb inlet Catchpit 3600 x 1200mm and exceeding 1000mm and not exceeding 1250mm deep internally.	No	2
<u>Gratings, covers, etc:</u>			
62	40mm Thick precast manhole lid.	No	3
63	600 x 600 x 60kg Dished cast iron grating set in mortar	No	21
64	Cut-off Drain with RS40 banded mentis grating with and including 40x5.5 bearer bars, complete with all angle support, lugs etc. (surface bed and masonry elsewhere) see engineers drawing 3855 at the back of the bill of quantities	m	45
<u>The following in soakaways, french drains, etc:</u>			
65	Selected 200-300mm "Hand Stone" filling.	m3	17
66	2.5mm thick Galvanised and PVC coated wire mesh laid over soak away for reno mattress and Gabion Baskets.	m2	88

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67	Risk of collapse to sides of soakaway excavations not exceeding 1,5m deep.	m2	18		
68	Extra over soakaway excavations for carting away surplus material from excavations to a dumping site to be located by the contractor.	m3	24		
69	Earth filling obtained from excavations or stock piles on site compacted to 93% backfilled to soakways.	m3	3		
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LOFFELSTEIN RETAINING WALLS**Loffelstein TB300 Type blocks in Retaining walls**

70	For block retaining walls - Design, supply and construct concrete block walls @ minimum 80 degrees (approved by the engineer in writing with slider panel to close the top row of blocks) varying in height from 1m to not more than 5m high, complete including foundations, blocks, all required geotextiles, wick drains or similar drainage behind wall, concrete canal on top of wall, backfill behind wall with material available on site and all other appurtenances. Allow 5% cement stabilized backfill (1m wide, full depth) in cut areas. Contractor shall provide a certified design for approval before commencing with any of the block walls.	m2	560
71	Earth filling obtained from excavations or stock piles on site compacted to 93% backfilled to retaining walls.	m3	336

Sub-soil drains.

72	110mm uPVC slotted drainage pipe laid in and including trench exceeding 2.00m and not exceeding 3m deep with 500 x 500mm washed 25mm stone casing and wrapped in u24 non-woven, spun-bonded, punched continuous polyester fabric, including part return, ram, carting away, etc.	m	280
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ALUMINIUM FLAGPOLE

The following in a 8,85m high Standard Government type Aluminium Flagpole as "Aluweld" or other approved and erected on 600 x 600 x 800mm deep Class C concrete base, incl. excavations, carting away, etc.

73	8,85mm High flagpole comprising 130mm and 60mm outside diameter aluminium tubing tapered by way of an aluminium cone casting, welded and complete with spherical top cap, two pulleys, two cleats, two halyards (ropes), four flagrope clamps, swivel type base with four M20 x 550mm long anchor bolts for fixing flagpole baseplate including concrete base (Base size 1500 x 1500 x 550mm deep)	No	1
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LANDSCAPING**Ground preparation**

74	Cultivation, fine grading and preparation of areas to be planted	m2	9 998
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Topsoil, compost, lime and fertilizer

75	Topsoil supplied by the contractor in plant beds, grassed areas and holes for trees, shrubs, etc	m3	1 500
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76	"Kikuyu" sods approximately 80mm thick	m2	9 998
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SOFT LANDSCAPING**Maintenance**

77	Allow for maintaining grassing, trees, flowering etc. for a period of 3months, including watering, weeding, cutting, replacing dead plants, etc.		Item
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Protection of existing services

The contractor must make allowance against the relevant items for the following:

- (a) Necessary care to be taken when excavating near existing services in or across the path of excavations.
- (b) Protection and maintaining such service in operation by means of temporary support or shoring as necessary.
- (c) Delays and disruption of the progress of the work due to the existence of the service.
- (d) Repairs necessitated by damage caused by the Contractor.

SABS specifications references

Where reference is made to SABS 1200 specifications (all sections) it will be deemed to exclude clause 8 "Measurements and Payment".

Nature of ground

The tenderer must acquaint himself with the material to be excavated in and are requested to study the Geotechnical Survey Report attached to Part C4: Site Information of the procurement document

Carting away of excavated material

Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or alternatively, from stock piles situated on the building site.

Prescribed tests

All prescribed tests are to be executed by an approved, accredited laboratory

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Concrete pipes

Pipes shall be jointed with ogee joints with rubber collars or socket and spigot joints with rubber rings

Polypropylene pipes

Polypropylene pipes 42 mm diameter and under shall be seamless copper coloured class 16 pipes jointed with brass compression fittings as designed for use with copper pipes as stated.

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.

All pipe diameters are to match sizes as utilised for copper pipes.

Polyethylene pipes

Polyethylene pipes 75 mm diameter and under up to 42 mm shall be seamless copper coloured class 16 Type IV HDPE pipes jointed with polymer compression fittings.

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.

All pipe diameters are to match sizes as utilised for copper pipes.

C.O.D. Fibre Cement Pressure Pipes

Pipes shall be jointed with "Triplex" couplings. A lubricant (soft soap) is to be used in connecting the couplings to the pipe or fittings. The couplings are to be unsupported on the bedding when pipes are laid.

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uPVC pipes and fittings

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings.

Soil, waste and vent pipes and fittings shall be solvent weld jointed.

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.

Reducing fittings

Where fittings have reducing ends or branches they are described as "reducing". In case of pipes with diameters not exceeding 60 mm 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 case of pipes with diameters exceeding 60 mm all sizes are given and no claim for extra bushes, reducers, etc., will be entertained.

Exposed concrete surfaces

Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gulley tops, cleaning eye tops, catchpits, inspection chambers, etc. shall be finished smooth with plaster.

Excavations

No claim for rock excavation will be entertained unless the contractor has timeously notified the Quantity Surveyor/Engineer thereof prior to backfilling.

"Soft rock" and "hard rock" shall be as defined in "Earthworks".

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Saddles

Saddles to be the Magnum uPVC type with stainless steel bolts and screw pieces complete with Talbot lockable clamp and compression external screw-thread adaptor.

uPVC pressure pipes and fittings

Pipes for water supply shall be of the class stated.

Pipes of 40 mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings

Pipes of 50 mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all outer fittings shall be cast iron, all with similar push-in type joints

Exposed concrete surfaces

Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gulley tops, cleaning eye tops, catchpits, inspection chambers, etc. shall be finished smooth with plaster

Excavations

No claim for rock excavation will be entertained unless the contractor has timeously notified the quantity surveyor thereof prior to backfilling

"Soft rock" and "hard rock" shall be as defined in "Earthworks"

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Laying, backfilling, bedding, etc. of pipes

Pipes shall be laid and bedded and trenches shall be carefully backfilled 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 each of the following:

SABS 1200 L: Medium-pressure pipelines

LD: Sewers

LE: Stormwater drainage

Pipe trenches etc. shall be backfilled in accordance with clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200

DB: Earthworks (Pipe trenches)

Pipes shall be bedded in accordance with clauses 3.1 to 3.4.1., 5.1 to 5.3 and 7 of SABS 1200

LB: Bedding (Pipes)

Unless otherwise described bedding of rigid pipes shall be class B bedding

Steel pipes, fittings and specials**Pipes of Nominal Bore up to 150 mm:**

Substitute "screwed" in L3.4.2 with "flanged".

Pipes of Nominal Bore over 150 mm:

Add the following:

"All mild steel pipes must be manufactured from Grade B steel with minimum plate thickness of 6,0 mm except where specified otherwise."

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Corrosion protection**Cast Iron Pipes and Fittings:**

Substitute L3.9.1 with the following:

"All internal surfaces shall be grit blasted to SA 2½ standard and then coated with Copon EP 2300 epoxy paint to a minimum thickness of 350 micron."

Joints, Bolts, Nuts and Washers:

Substitute L3.9.5 with the following:

"All joints, bolts, nuts and washers shall be cadmium-plated or stainless steel."

Rates

Rates for pipe items are to be all inclusive prices and rates (except where allowed for elsewhere) are for the completed work as described in the respective items and shall include all labour, pipes, **bedding and filling complete in layers not exceeding 300 mm (unless otherwise specified) and compacted** all sundry work, equipment cost, guards, lighting, profit and maintenance.

Under paved areas and buildings the sand bedding and filling must be stabilised with 4 % cement.

Rates for inspection chambers, etc., are to be all inclusive prices and rates (except where allowed for elsewhere) for the completed work as described in the respective items and shall include all labour, pipes, concrete-floors and slabs, brickwork, plastering, compacting, all sundry work, equipment cost, guards, lighting, profit and maintenance.

The Contractor is referred to Drawing no's 208640VSO/15 to 17 annexed to these Bill of Quantities.

Pipework, fittings, etc.

All underground steel pipes and fittings, after installation, shall be protected against corrosion according to PSL 1.2

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Maintenance period

The maintenance period for the following work shall be 12 calendar months.

High density polyethylene class 16 piping complying with SABS 533 Part III

1	32 mm Pipes laid in and including trenches not exceeding 1000 mm deep	m	78
2	63 mm Pipes laid in and including trenches not exceeding 1000 mm deep	m	146
3	75 mm Pipes laid in and including trenches not exceeding 1000 mm deep	m	252
4	110 mm Pipes laid in and including trenches not exceeding 1000 mm deep	m	405

The following in HDPE compression (16 Bar) fittings

5	32 x 20 Reducer	No	17
6	32 x 90° Elbow	No	22
7	32 x 32 Equal Tee	No	6
8	32 un-Equal Tee	No	2
9	63 x 90° Elbow	No	9
10	63 x 32 Reducer	No	7
11	63 x 22 Reducer	No	3
12	63 x 63 Equal Tee	No	3
13	75 x 75 Equal Tee	No	1
14	75 x 90° Elbow	No	12
15	75 x 63 Reducer	No	1
16	110 x 110 Equal Tee	No	6

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17	110 un-Equal Tee	No	6
18	110 x 90° Elbow	No	19
19	110 x 75 Reducer	No	1
<u>The following in valves, etc</u>			
20	32mm Stainless steel sluice/gate valve with teflon seat	No	14
21	63mm Isolating valve	No	3
22	63mm In-line strainer	No	1
23	63mm Non-return valve	No	2
24	63mm adjustable pressure reducing valve set to 4.0BAR	No	2
25	63mm Stainless steel sluice/gate valve with teflon seat	No	3
26	63mm Water meter	No	1
27	75mm Non-return valve	No	1
28	75mm In-line strainer	No	1
29	75mm Isolating valve	No	2
30	75mm adjustable pressure reducing valve set to 4.0BAR	No	1
31	110mm Isolating valve	No	2
<u>The following in Valve Chamber</u>			
32	Standard valve chamber size 337 x 337 x 390mm high comprising of Class 25/19 concrete footing and collar, with 200mm diameter Class B COD fibre cement pipe vertically into ground and covered with Besaans-du Plessis size 115mm diameter x 102 Type 7 stopcock box cast into concrete collar	No	24
<u>Sundries</u>			
33	Cut into existing HDPE pipe in ground and connect new 63mm HDPE water pipe	No	1.00
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TESTING :

- 34 Allow for testing the whole of the water reticulation system and for any re-testing necessary after taking out and replacing any defective work to the satisfaction of the Representative.

Item

EMERGENCY WATER TANK

- 35 Galvanised steel tank 328 kl (7x7x4 Panels high) on concrete base with beams (elsewhere measured) complete in accordance with Engineer specifications Including all galvanised pipes, valves, fittings etc. to connect to pumps in pump house and incoming mains.

Item

- 36 Galvanised steel tank "ABECO" or other approved 38.8 kl (4x3x2 Panels high) on 10m high galvanised steel stand (elsewhere measured) complete in accordance with Engineer specifications Including all galvanised pipes, valves, fittings etc. to connect to pumps in pump house and incoming mains.

Item

- 37 Supply, deliver to site and erect 10 m high galvanised steel tank stand for the above mentioned tank, complete with Platform, side ladder, bearers, excavations, backfill, formwork all in strict accordance with the necessary safety acts, etc.

Item

- 38 200mm Diameter galvanised steel pipe (class medium) fixed to steel frame

m

22

- 39 75mm Diameter galvanised steel pipe (class medium) fixed to steel frame

m

88

- 40 63mm Diameter galvanised steel pipe (class medium) fixed to steel frame

m

15

- 41 50mm Diameter galvanised steel pipe (class medium) fixed to steel frame

m

11

- 42 Extra over galvanised steel pipe for 200mm galvanised fittings

No

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- 43 Extra over galvanised steel pipe for 75mm galvanised fittings

No

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44	Extra over galvanised steel pipe for 63mm galvanised fittings	No	3
45	Extra over galvanised steel pipe for 50mm galvanised fittings	No	5
<u>EXCAVATION, FILLING, ETC</u>			
<u>Excavation in earth not exceeding 2.00m deep</u>			
46	Holes	m3	221
<u>Extra over all excavations for carting away</u>			
47	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	74
<u>Earth filling supplied by the contractor compacted to 95% Mod AASHTO density</u>			
48	1200mm Thick excavated Material and re-compacted with 2% lime to 98% Mod AASHTO	m3	148
49	150mm layers of G5 Material and compacted to 95% Mod, The G5 should be the form of a sugar dolerite, decomposed granite or decomposed sandstone	m3	19
<u>Compaction of surfaces</u>			
50	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 93% Mod AASHTO density	m2	124
<u>REINFORCED CONCRETE</u>			
51	Concrete base, stub columns and beams for water tank	m3	69
<u>GENERAL FORMWORK</u>			
<u>Smooth formwork to sides and soffits of</u>			
52	Vertical formwork to sides of columns and beams Not exceeding 2000mm high "LI"	m2	195
53	70mm horizontal chamfered edge "LI"	m	163

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54	8mm-25mm Diameter rods
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55	8mm-25mm Diameter rods
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	<u>SECTION NUMBER 3</u>				
	<u>BILL NUMBER 3</u>				
	<u>SOIL DRAINAGE (PROVISIONAL)</u>				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or other approved may be used with prior approval from the architect				
	JBCC Work Group No. 146				
	<u>EXISTING MANHOLE</u>				
1	Break into existing manhole, build in pipe as necessary, bench out in connection to the existing soil drainage system with and including all excavations, material and labour to the approval of the Representative.	No	1.00		
	<u>SEWER INFRASTRUCTURE</u>				
	<u>Sewer pipe, all pipe and fittings to be checked with Engineer before installing</u>				
	<u>Free Flow uPVC drain pipes including bedding, backfilling and compacting of pipe trenches</u>				
2	110mm Pipe and excavations not exceeding 1m deep	m	32		
3	110mm Pipe and excavations exceeding 1m and not exceeding 2m deep	m	361		
4	110mm Pipe and excavations exceeding 2m and not exceeding 3m deep	m	62		
5	160mm Pipe and excavations not exceeding 1m deep	m	48		
6	160mm Pipe and excavations exceeding 1m and not exceeding 2m deep	m	45		
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7	160mm Pipe and excavations exceeding 2m and not exceeding 3m deep	m	8	
	<u>Extra over Free Flow uPVC pipe for fittings</u>			
8	110mm Bend	No	61	
9	110mm Access bend	No	35	
10	110mm Access junction	No	25	
11	110mm Rodding eye complete as per drawing (Cast Iron cover casted in concrete block - Cover size 225x225)	No	6	
12	160mm Bend	No	2	
13	160mm Access bend	No	1	
14	160mm Access junction	No	1	
15	160mm Rodding eye	No	1	
	<u>Gulleys</u>			
16	110mm Gully not exceeding 1m deep to invert, comprising 100mm diameter vitrified clay gully trap and head, fitted with 190mm diameter cast iron grating, including excavating for, bedding on and encasing in 20MPa/19mm mass concrete and fitted with and including precast gully top bedded in cement mortar	No	61	
	<u>Sundries</u>			
17	15MPa/19mm Mass concrete encasing around 160mm horizontal drain pipe including all necessary formwork	m	115	
	<u>Sundries</u>			
18	Extra over excavations to trenches, holes, etc., for excavations in soft rock	m3	17	
19	Ditto, but hard rock.	m3	17	
20	Imported sand in bedding and surround to pipework well compacted in layers, including any additional excavation, risk of collapse, etc	m3	22	
	Carried to Collection			R
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	Soil Drainage (Provisional)			
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	QUANTITY SURVEYORS			

21	Keeping excavations free of water		Item		
	<u>Precast concrete circular manholes</u>				
22	Standard precast manhole, 1 050 mm internal diameter exceeding 1 000 mm and not exceeding 1 250 mm deep internally complete with precast concrete rings, cover slab, double seal cast iron manhole cover and frame (SABS 558 Type 2A heavy duty in roads and Type 8A medium duty elsewhere), unreinforced concrete footing and benching in bottom, dished down to channels and finished smooth with plaster.	No	6		
23	Standard precast manhole, 1 050 mm internal diameter exceeding 1 250 mm and not exceeding 1 500 mm deep internally complete with precast concrete rings, cover slab, double seal cast iron manhole cover and frame (SABS 558 Type 2A heavy duty in roads and Type 8A medium duty elsewhere), unreinforced concrete footing and benching in bottom, dished down to channels and finished smooth with plaster.	No	3		
24	Standard precast manhole, 1 050 mm internal diameter exceeding 1 500 mm and not exceeding 1 750 mm deep internally complete with precast concrete rings, cover slab, double seal cast iron manhole cover and frame (SABS 558 Type 2A heavy duty in roads and Type 8A medium duty elsewhere), unreinforced concrete footing and benching in bottom, dished down to channels and finished smooth with plaster.	No	3		
25	Standard precast manhole, 1 050 mm internal diameter exceeding 1 750 mm and not exceeding 2 000 mm deep internally complete with precast concrete rings, cover slab, double seal cast iron manhole cover and frame (SABS 558 Type 2A heavy duty in roads and Type 8A medium duty elsewhere), unreinforced concrete footing and benching in bottom, dished down to channels and finished smooth with plaster.	No	1		
26	Standard precast manhole, 1 050 mm internal diameter exceeding 2 000 mm and not exceeding 2 250 mm deep internally complete with precast concrete rings, cover slab, double seal cast iron manhole cover and frame (SABS 558 Type 2A heavy duty in roads and Type 8A medium duty elsewhere), unreinforced concrete footing and benching in bottom, dished down to channels and finished smooth with plaster.	No	1		
Carried to Collection					R
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- 27 Standard precast manhole, 1 050 mm internal diameter exceeding 2 250 mm and not exceeding 2 500 mm deep internally complete with precast concrete rings, cover slab, double seal cast iron manhole cover and frame (SABS 558 Type 2A heavy duty in roads and Type 8A medium duty elsewhere), unreinforced concrete footing and benching in bottom, dished down to channels and finished smooth with plaster.

No

1

TESTING :

- 28 Allow for testing the whole of the soil drainage system and for any re-testing necessary after taking out and replacing any defective work to the satisfaction of the Representative.

Item

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Soil Drainage (Provisional)

**RUBIQUANT
QUANTITY SURVEYORS**

Item No		Unit	Quantity	Rate	Amount
	<u>SECTION NUMBER 3</u>				
	<u>BILL NUMBER 4</u>				
	<u>FENCING AND GATES (PROVISIONAL)</u>				
	Fencing prices are to include for site clearance and grading to even lines 1 m each side of fence line unless otherwise described, all necessary excavations in earth, risk of collapse and disposal of surplus excavated material				
	<u>SITE CLEARANCE</u>				
	-WORK GROUP 104-				
1	Allow for digging up and removal of all grass, shrubs, rubbish and vegetable soil for a width of 500mm on either side of new fence line including forming 50mm high free space between underside of fence and ground surface by reducing or making up levels as required	m	579		
	<u>METALWORK</u>				
	-WORK GROUP 136-				
	<u>SECURITY FENCING</u>				
	<u>Powder coated steel security fencing as per COCHRANE PRODUCTS 358 HIGH SECURITY FENCING MESH. All details and specifications to be verified with manufacturer</u>				
	<u>"ClearVu" or other approved</u>				
2	2100mm high "Cochrane ClearVu" fence or similar approved, complete with bases, excavations, post, barrier kerbs etc. according to manufacturers detail, see details at the back of the bills of quantities	m	549		
3	1800mm high "Cochrane ClearVu" fence or similar approved, complete with bases, excavations, post, barrier kerbs etc. according to manufacturers detail, see details at the back of the bills of quantities	m	81		
	Carried to Collection			R	
	Section No. 2				
	Bill No. 4				
	Fencing, etc (Provisional)				
	RUBIQUANT				
	QUANTITY SURVEYORS				

4	850 x 1800mm High "Cochrane ClearVu" or similar approved Single gate complete as per details at the back of Bill of Quantities.	No	2		
5	2170 x 1800mm High "Cochrane ClearVu" or similar approved Double gate complete as per details at the back of Bill of Quantities.	No	1		
6	1778 x 2100mm High "Cochrane ClearVu" or similar approved Double gate complete as per details at the back of Bill of Quantities.	No	1		
7	6500 x 2100mm High "Cochrane ClearVu" or similar approved sliding motor gate complete on and including guide rollers and gate motor, see details at the back of these bill of quantities.	No	2		
8	6500 x 2100mm High "Cochrane ClearVu" or similar approved Double gate complete on and including guide rollers locks etc., see details at the back of these bill of quantities.	No	1		
Carried to Collection					
Section No. 2					
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Fencing, etc (Provisional)					
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Section No. 2

Bill No. 4

Fencing, etc (Provisional)

COLLECTION

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Bill No. 4

Fencing, etc (Provisional)

**RUBIQUANT
QUANTITY SURVEYORS**

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Bill No	SECTION SUMMARY - External Works (Provisional)	Page No	Amount
1	Site works and Paving (Provisional)	98	
2	Water supplies (Provisional)	111	
3	Soil Drainage (Provisional)	116	
4	Fencing, etc (Provisional)	119	
CARRIED TO FINAL SUMMARY			
Section No. 2 RUBIQUANT QUANTITY SURVEYORS			

SIGNAGE

CARRIED TO FINAL SUMMARY

Section No. 3
Bill No. 1
Provisional Amounts
RUBIQUANT
QUANTITY SURVEYORS

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