

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
	SECTION A - RULE OF THUMB												
1	Infrastructure Investigation Pre Drilling	Roads & Bridges	Civil	Foundation & Excavation	Site Investigation	days/no	5.000	4.000	3.000	no/hr	0.025	0.031	0.042
2	Ground Excavation, Hydraulic Backhoe	Building	Civil	Foundation & Excavation	Excavation	m3/day	-	50.000	-	m3/hr	-	6.250	-
3	Bored Piling, 25-70m deep	Building	Civil	Foundation & Excavation	Bored Piling	days/no	10.000	8.000	6.000	no/hr	0.013	0.016	0.021
4	Formwork Fixing	Building	Civil	Concrete Works	Formwork	m2/day	-	12.000	-	m2/hr	-	1.500	-
5	Reinforcement Fixing	Building	Civil	Concrete Works	Reinforcement	Tonnes/day	-	0.700	-	kg/hr	-	87.500	-
6	Concrete Placement	Building	Civil	Concrete Works	Concrete Placement	m3/day	-	16.000	-	m3/hr	-	2.000	-
7	Scaffold Erection, Steel Falsework	Building	Civil	Structural Steelwork	Structural Steel	m3/day	-	140.000	-	m3/hr	-	17.500	-
8	Blockwork Laying	Building	Civil	Finishes	Blockwork	m2/day	7.000	12.000	17.500	m2/hr	0.875	1.500	2.188
9	Plastering and Rendering	Building	Civil	Finishes	Plastering	m2/day	-	12.000	-	m2/hr	-	1.500	-
11	Stonework Cladding	Building	Civil	Finishes	Stonework	m2/day	-	5.100	-	m2/hr	-	0.638	-
12	Window Glazing	Building	Civil	Finishes	Glazing	m2/hr	-	1.500	-	m2/hr	-	1.500	-
13	Granolithic Flooring	Building	Civil	Finishes	Flooring	m2/hr	-	4.500	-	m2/hr	-	4.500	-
14	Floor Screeding	Building	Civil	Finishes	Screeding	m2/hr	-	4.500	-	m2/hr	-	4.500	-
15	Floor Tiling	Building	Civil	Finishes	Flooring	m2/day	-	6.000	-	m2/hr	-	7.500	-
16	Ceramic Wall Tiling	Building	Civil	Finishes	Wall Tiling	m2/hr	-	1.500	-	m2/hr	-	1.500	-
	SECTION B - Infrastructure WORK												
	B1 Infrastructure exploration generally												
	Foundation & Excavation - Ground Monitoring												
217	Drill and setup Instruments	Roads & Bridges	Civil	Foundation & Excavation	Ground Monitoring	days/no	-	3.000	-	no/hr	-	0.042	-
191	Concrete Testing, Sonic Logging Test	Roads & Bridges	Civil	Foundation & Excavation	Ground Monitoring	days/no	-	0.700	-	no/hr	-	0.179	-
	Foundation & Excavation - Steel Strutting												
205	Horizontal heavy duty strutting	Roads & Bridges	Civil	Foundation & Excavation	Steel Strutting	days/no	-	2.000	-	no/hr	-	0.063	-
206	Diagonal heavy duty strutting	Roads & Bridges	Civil	Foundation & Excavation	Steel Strutting	days/no	-	6.000	-	no/hr	-	0.021	-
	Foundation & Excavation - Removable Anchors												
210	Drill 30m shaft	Roads & Bridges	Civil	Foundation & Excavation	Removable Anchors	hrs	-	7.000	-	hrs	-	7.000	-
211	Install strands/setup anchor	Roads & Bridges	Civil	Foundation & Excavation	Removable Anchors	hrs	-	6.000	-	hrs	-	7.000	-
212	Grout in strands	Roads & Bridges	Civil	Foundation & Excavation	Removable Anchors	hrs	-	2.000	-	hrs	-	7.000	-
	Foundation & Excavation - Bell Ground Anchors												
207	Uncased Anchors, 10m long	Roads & Bridges	Civil	Foundation & Excavation	Bell Ground Anchors	no/day	-	2.000	-	no/hr	-	0.250	-
208	Top Cased Anchors, 15m long	Roads & Bridges	Civil	Foundation & Excavation	Bell Ground Anchors	no/day	-	1.000	-	no/hr	-	0.125	-
209	Anchors stressing	Roads & Bridges	Civil	Foundation & Excavation	Bell Ground Anchors	no/day	-	2.200	-	no/hr	-	0.275	-
	Foundation & Excavation - Grouting												
218	Grout curtain installation	Roads & Bridges	Civil	Foundation & Excavation	Grouting	hrs/m run	-	6.200	-	m run/hrs	-	0.161	-
	Foundation & Excavation - Diaphragm Walls												
174	Guide Walls, construction	Roads & Bridges	Civil	Foundation & Excavation	Diaphragm Walls Work	m/hr	0.300	0.500	0.800	m/hr	0.300	0.500	0.800
175	Guide Walls, demolition	Roads & Bridges	Civil	Foundation & Excavation	Diaphragm Walls Work	m/hr	0.100	0.300	0.600	m/hr	0.100	0.300	0.600
176	Rule of Thumb, overall rate by Mill	Roads & Bridges	Civil	Foundation & Excavation	Diaphragm Walls Work	m/hr	0.800	1.200	1.900	m/hr	0.800	1.200	1.900
177	Rule of Thumb, overall rate by grab	Roads & Bridges	Civil	Foundation & Excavation	Diaphragm Walls Work	m/hr	0.200	0.500	1.100	m/hr	0.200	0.500	1.100
178	Excavation by grab, sand fill	Roads & Bridges	Civil	Foundation & Excavation	Diaphragm Walls Work	m2/hr	4.200	6.000	5.500	m2/hr	4.200	6.000	5.500
179	Excavation by grab, minor obstructions	Roads & Bridges	Civil	Foundation & Excavation	Diaphragm Walls Work	m2/hr	0.500	2.000	3.500	m2/hr	0.500	2.000	3.500
180	Excavation by grab/Mill, CDG < 50	Roads & Bridges	Civil	Foundation & Excavation	Diaphragm Walls Work	m2/hr	5.800	6.000	7.000	m2/hr	5.800	6.000	7.000
181	Excavation by Mill, CDG 50-100	Roads & Bridges	Civil	Foundation & Excavation	Diaphragm Walls Work	m2/hr	6.000	6.500	8.000	m2/hr	6.000	6.500	8.000
182	Excavation by Mill, CDG 100-200	Roads & Bridges	Civil	Foundation & Excavation	Diaphragm Walls Work	m2/hr	5.500	6.000	6.500	m2/hr	5.500	6.000	6.500
183	Excavation by Mill, CDG > 200	Roads & Bridges	Civil	Foundation & Excavation	Diaphragm Walls Work	m2/hr	5.500	6.000	6.500	m2/hr	5.500	6.000	6.500
184	Excavation by Mill, CDG > 200/Rock	Roads & Bridges	Civil	Foundation & Excavation	Diaphragm Walls Work	m2/hr	4.500	6.000	6.200	m2/hr	4.500	6.000	6.200
185	Toe In by grab	Roads & Bridges	Civil	Foundation & Excavation	Diaphragm Walls Work	m2/hr	0.100	0.300	0.500	m2/hr	0.100	0.300	0.500
186	Wall Scraping	Roads & Bridges	Civil	Foundation & Excavation	Diaphragm Walls Work	m2/hr	0.100	0.300	0.500	m2/hr	0.100	0.300	0.500

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
	SECTION A - RULE OF THUMB												
187	Fabricate reinforcement cages	Roads & Bridges	Civil	Foundation & Excavation	Diaphragm Walls Work	hrs/cage	-	4.000	-	cage/hrs	-	0.250	-
188	Concreting wall panels	Roads & Bridges	Civil	Foundation & Excavation	Diaphragm Walls Work	m3/hr	40.000	50.000	55.000	m3/hr	40.000	50.000	55.000
189	Trimming top of wall panels	Roads & Bridges	Civil	Foundation & Excavation	Diaphragm Walls Work	days/no	-	2.900	-	no/hr	-	0.043	-
190	Concrete Testing, Coring Test	Roads & Bridges	Civil	Foundation & Excavation	Diaphragm Walls Work	days/no	4.000	3.500	2.000	no/hr	0.031	0.036	0.063
	Foundation & Excavation - Soil Mix Walls												
204	Three Auger Drill, cement and cure	Roads & Bridges	Civil	Foundation & Excavation	Soil Mix Walls	m/day	3.800	4.500	6.400	m/hr	0.475	0.563	0.800
	Foundation & Excavation - Hand Dug Caissons												
172	Caisson Wall, 800mm dia, 26m deep	Roads & Bridges	Civil	Foundation & Excavation	Hand Dug Caissons	days/no	55.000	33.000	25.000	no/hr	0.002	0.004	0.005
	Foundation & Excavation - Dewatering												
213	Setup small 2 hole system	Roads & Bridges	Civil	Foundation & Excavation	Dewatering	days	10.000	8.000	6.000	hr	80.000	64.000	48.000
214	Setup large 15 hole system	Roads & Bridges	Civil	Foundation & Excavation	Dewatering	days	-	21.000	-	hr	-	168.000	-
215	Calculate system times per pump	Roads & Bridges	Civil	Foundation & Excavation	Dewatering	days/pump	-	2.500	-	pump/hr	-	0.050	-
216	Setup Recharge System	Roads & Bridges	Civil	Foundation & Excavation	Dewatering	days/pump	-	3.500	-	pump/hr	-	0.036	-
	B2 Boreholes (including pumping test wells)												
	Foundation & Excavation - Infrastructure Investigation												
125	Pre Drilling, Percussive or Rotary, soft deposits	Roads & Bridges	Civil	Foundation & Excavation	Infrastructure Investigation	m/hr	8.000	10.000	14.000	m/hr	8.000	10.000	14.000
126	Pre Drilling, Wash Boring, grade V/IV rock	Roads & Bridges	Civil	Foundation & Excavation	Infrastructure Investigation	m/hr	2.500	3.200	3.900	m/hr	2.500	3.200	3.900
127	Pre Drilling, Triple Tube Sampling, grade V/IV rock	Roads & Bridges	Civil	Foundation & Excavation	Infrastructure Investigation	m/hr	0.400	0.800	0.900	m/hr	0.400	0.800	0.900
128	Pre Drilling, Rotary, grade III/II rock	Roads & Bridges	Civil	Foundation & Excavation	Infrastructure Investigation	m/hr	0.200	0.500	0.700	m/hr	0.200	0.500	0.700
129	Pre Drilling, Triple Tube Sampling, grade III/II rock	Roads & Bridges	Civil	Foundation & Excavation	Infrastructure Investigation	m/hr	0.100	0.400	0.700	m/hr	0.100	0.400	0.700
	B3 Infrastructure preparation												
	Demolition and Breaking Out - Infrastructure Clearance												
19	Shrubs and Bushes, dig up and removal	Roads & Bridges	Civil	Demolition and Breaking Out	Infrastructure Clearance	m2/hr	-	25.000	38.000	m2/hr	-	25.000	38.000
20	Turf, lifting and removal	Roads & Bridges	Civil	Demolition and Breaking Out	Infrastructure Clearance	m2/hr	-	2.900	-	m2/hr	-	2.900	-
21	Trees, small sizes and shrubs	Roads & Bridges	Civil	Demolition and Breaking Out	Infrastructure Clearance	m2/hr	-	14.000	-	m2/hr	-	14.000	-
22	Trees and Shrubs, 500mm - 900mm girth	Roads & Bridges	Civil	Demolition and Breaking Out	Infrastructure Clearance	hrs/no	-	18.000	-	no/hrs	-	0.056	-
23	Trees and Shrubs, 900mm - 1200mm girth	Roads & Bridges	Civil	Demolition and Breaking Out	Infrastructure Clearance	hrs/no	-	22.000	-	no/hrs	-	0.045	-
24	Trees and Shrubs, 1200mm - 1500mm girth	Roads & Bridges	Civil	Demolition and Breaking Out	Infrastructure Clearance	hrs/no	-	26.000	-	no/hrs	-	0.038	-
25	Hedges and Roots, 0.5-1.0m high	Roads & Bridges	Civil	Demolition and Breaking Out	Infrastructure Clearance	m/hr	-	0.900	-	m/hr	-	0.900	-
26	Hedges and Roots, 1.0-1.5m high	Roads & Bridges	Civil	Demolition and Breaking Out	Infrastructure Clearance	m/hr	-	0.800	-	m/hr	-	0.800	-
27	Hedges and Roots, 1.5-2.0m high	Roads & Bridges	Civil	Demolition and Breaking Out	Infrastructure Clearance	m/hr	-	0.600	-	m/hr	-	0.600	-
	Foundation & Excavation - Ground Compaction												
130	Deep Vibroflot, 3m centres	Roads & Bridges	Civil	Foundation & Excavation	Ground Compaction	m3/hr	330.000	380.000	465.000	m3/hr	330.000	380.000	465.000
131	Vibro-Roller, Sand	Roads & Bridges	Civil	Foundation & Excavation	Ground Compaction	m2/hr	28.500	31.200	45.200	m2/hr	28.500	31.200	45.200
132	Vibro-Roller, Soil	Roads & Bridges	Civil	Foundation & Excavation	Ground Compaction	m2/hr	-	58.800	-	m2/hr	-	58.800	-
133	Vibro-Roller, Clay	Roads & Bridges	Civil	Foundation & Excavation	Ground Compaction	m2/hr	-	55.600	-	m2/hr	-	55.600	-
134	Vibro-Roller, Hardcore	Roads & Bridges	Civil	Foundation & Excavation	Ground Compaction	m2/hr	-	38.400	-	m2/hr	-	38.400	-
135	Vibro-Roller, Ash	Roads & Bridges	Civil	Foundation & Excavation	Ground Compaction	m2/hr	-	57.800	-	m2/hr	-	57.800	-
	B4 Demolitions and alterations												
	Demolition and Breaking Out - Cutting Back												
71	Concrete Pile Caps, 50-300mm deep and 0.6m dia	Building	Civil	Demolition and Breaking Out	Cutting Back	hrs/no	0.600	-	0.300	no/hrs	1.667	-	3.333
72	Concrete Pile Caps, 300-750mm deep and 0.6m dia	Building	Civil	Demolition and Breaking Out	Cutting Back	hrs/no	1.500	-	0.400	no/hrs	0.667	-	2.500
73	Concrete Pile Caps, > 750mm deep and 0.6m dia	Building	Civil	Demolition and Breaking Out	Cutting Back	hrs/no	1.800	-	0.800	no/hrs	0.556	-	1.250

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
	SECTION A - RULE OF THUMB												
74	Concrete Pile Caps, 50-300mm deep and 1.1m dia	Building	Civil	Demolition and Breaking Out	Cutting Back	hrs/no	1.900	-	0.800	no/hrs	0.526	-	1.250
75	Concrete Pile Caps, 300-750mm deep and 1.1m dia	Building	Civil	Demolition and Breaking Out	Cutting Back	hrs/no	2.500	-	1.100	no/hrs	0.400	-	0.909
76	Concrete Pile Caps, > 750mm deep and 1.1m dia	Building	Civil	Demolition and Breaking Out	Cutting Back	hrs/no	4.200	-	2.300	no/hrs	0.238	-	0.435
77	Concrete Pile Caps, 50-300mm deep and 2.5m dia	Building	Civil	Demolition and Breaking Out	Cutting Back	hrs/no	9.200	-	8.200	no/hrs	0.109	-	0.122
78	Concrete Pile Caps, 300-750mm deep and 2.5m dia	Building	Civil	Demolition and Breaking Out	Cutting Back	hrs/no	10.100	-	9.500	no/hrs	0.099	-	0.105
79	Concrete Pile Caps, > 750mm deep and 2.5m dia	Building	Civil	Demolition and Breaking Out	Cutting Back	hrs/no	11.500	-	10.200	no/hrs	0.087	-	0.098
80	Concrete, Cutting Slabs, 5-25m deep	Building	Civil	Demolition and Breaking Out	Cutting Back	m/hr	-	15.200	-	m/hr	-	15.200	-
81	Concrete, Cutting Slabs, 25-50m deep	Building	Civil	Demolition and Breaking Out	Cutting Back	m/hr	-	11.500	-	m/hr	-	11.500	-
82	Concrete, Cutting Slabs, 50-75m deep	Building	Civil	Demolition and Breaking Out	Cutting Back	m/hr	-	6.700	-	m/hr	-	6.700	-
83	Concrete, Cutting Holes, coring machine	Building	Civil	Demolition and Breaking Out	Cutting Back	m3/hr	-	0.200	-	m3/hr	-	0.200	-
84	Concrete, Cutting Back to expose couplers 0.7m slab	Building	Civil	Demolition and Breaking Out	Cutting Back	m/day	-	2.500	-	m/hr	-	0.313	-
	Demolition and Breaking Out - Breaking Out												
55	Concrete Slabs, unreinforced 50-150mm	Building	Civil	Demolition and Breaking Out	Breaking Out	hrs/m3	3.200	-	1.900	m3/hrs	0.313	-	0.526
56	Concrete Slabs, unreinforced 150-300mm	Building	Civil	Demolition and Breaking Out	Breaking Out	hrs/m3	5.500	4.100	3.700	m3/hrs	0.182	0.244	0.270
57	Concrete Slabs, reinforced 50-150mm	Building	Civil	Demolition and Breaking Out	Breaking Out	hrs/m3	5.200	-	3.900	m3/hrs	0.192	-	0.256
58	Concrete Slabs, reinforced 150-300mm	Building	Civil	Demolition and Breaking Out	Breaking Out	hrs/m3	9.100	6.200	4.700	m3/hrs	0.110	0.161	0.213
59	Concrete Walls, unreinforced	Building	Civil	Demolition and Breaking Out	Breaking Out	hrs/m3	4.700	3.900	3.100	m3/hrs	0.213	0.256	0.323
60	Concrete Walls, reinforced	Building	Civil	Demolition and Breaking Out	Breaking Out	hrs/m3	5.600	4.700	3.900	m3/hrs	0.179	0.213	0.256
61	Concrete Foundations, unreinforced	Building	Civil	Demolition and Breaking Out	Breaking Out	hrs/m3	3.600	3.300	3.000	m3/hrs	0.278	0.303	0.333
62	Concrete Foundations, reinforced	Building	Civil	Demolition and Breaking Out	Breaking Out	hrs/m3	5.400	5.100	4.800	m3/hrs	0.185	0.196	0.208
63	Concrete Beams	Building	Civil	Demolition and Breaking Out	Breaking Out	hrs/m3	7.500	6.500	5.600	m3/hrs	0.133	0.154	0.179
64	Concrete Columns	Building	Civil	Demolition and Breaking Out	Breaking Out	hrs/m3	9.200	8.200	7.300	m3/hrs	0.109	0.122	0.137
65	Tarmac paving 20-50mm thick	Building	Civil	Demolition and Breaking Out	Breaking Out	hrs/m3	1.900	1.700	1.500	m3/hrs	0.526	0.588	0.667
66	Tarmac paving 50-100mm thick	Building	Civil	Demolition and Breaking Out	Breaking Out	hrs/m3	2.100	-	1.600	m3/hrs	0.476	-	0.625
67	Tarmac paving 100-150mm thick	Building	Civil	Demolition and Breaking Out	Breaking Out	hrs/m3	2.100	-	1.700	m3/hrs	0.476	-	0.588
68	Tarmac roadway 150mm thick	Building	Civil	Demolition and Breaking Out	Breaking Out	hrs/m3	-	3.600	-	m3/hrs	-	0.278	-
69	Brickwork, walls and columns	Building	Civil	Demolition and Breaking Out	Breaking Out	hrs/m3	2.400	1.800	1.300	m3/hrs	0.417	0.556	0.769
70	Brickwork, foundations	Building	Civil	Demolition and Breaking Out	Breaking Out	hrs/m3	2.700	2.100	1.500	m3/hrs	0.370	0.476	0.667
	Demolition and Breaking Out - Cutting Switchboxes												
117	Cutting in Concrete, small box	Building	Civil	Demolition and Breaking Out	Cutting Switchboxes	no/hr	7.100	12.500	9.500	no/hr	7.100	12.500	9.500
118	Cutting in Concrete, large box	Building	Civil	Demolition and Breaking Out	Cutting Switchboxes	no/hr	3.600	5.600	4.500	no/hr	3.600	5.600	4.500
119	Cutting in Brickwork, small box	Building	Civil	Demolition and Breaking Out	Cutting Switchboxes	no/hr	6.600	12.500	9.500	no/hr	6.600	12.500	9.500
120	Cutting in Brickwork, large box	Building	Civil	Demolition and Breaking Out	Cutting Switchboxes	no/hr	4.200	6.300	5.300	no/hr	4.200	6.300	5.300
121	Cutting in Lightweight Blockwork, small box	Building	Civil	Demolition and Breaking Out	Cutting Switchboxes	no/hr	20.000	25.000	23.000	no/hr	20.000	25.000	23.000
122	Cutting in Lightweight Blockwork, large box	Building	Civil	Demolition and Breaking Out	Cutting Switchboxes	no/hr	10.000	14.300	12.500	no/hr	10.000	14.300	12.500
123	Cutting in Heavyweight Blockwork, small box	Building	Civil	Demolition and Breaking Out	Cutting Switchboxes	no/hr	7.700	12.500	10.000	no/hr	7.700	12.500	10.000
124	Cutting in Heavyweight Blockwork, large box	Building	Civil	Demolition and Breaking Out	Cutting Switchboxes	no/hr	3.800	5.900	4.800	no/hr	3.800	5.900	4.800
	Demolition and Breaking Out - Cutting Chases												
85	Concrete, cutting by hand, < 25mm wide	Building	Civil	Demolition and Breaking Out	Cutting Chases	m/hr	1.500	2.100	3.100	m/hr	1.500	2.100	3.100
86	Concrete, cutting by hand, 25-50mm wide	Building	Civil	Demolition and Breaking Out	Cutting Chases	m/hr	1.200	1.600	2.500	m/hr	1.200	1.600	2.500
87	Concrete, cutting by hand, 50-75mm wide	Building	Civil	Demolition and Breaking Out	Cutting Chases	m/hr	1.000	1.400	2.100	m/hr	1.000	1.400	2.100
88	Concrete, cutting by hand, 75-100mm wide	Building	Civil	Demolition and Breaking Out	Cutting Chases	m/hr	0.900	1.200	1.800	m/hr	0.900	1.200	1.800
89	Concrete, cutting by machine, < 25mm wide	Building	Civil	Demolition and Breaking Out	Cutting Chases	m/hr	3.100	4.000	5.800	m/hr	3.100	4.000	5.800
90	Concrete, cutting by machine, 25-50mm wide	Building	Civil	Demolition and Breaking Out	Cutting Chases	m/hr	2.500	3.300	5.000	m/hr	2.500	3.300	5.000
91	Concrete, cutting by machine, 50-75mm wide	Building	Civil	Demolition and Breaking Out	Cutting Chases	m/hr	2.100	2.900	4.200	m/hr	2.100	2.900	4.200
92	Concrete, cutting by machine, 75-100mm wide	Building	Civil	Demolition and Breaking Out	Cutting Chases	m/hr	1.800	2.400	3.700	m/hr	1.800	2.400	3.700
93	Brickwork, cutting by hand, < 25mm wide	Building	Civil	Demolition and Breaking Out	Cutting Chases	m/hr	2.100	2.700	4.100	m/hr	2.100	2.700	4.100
94	Brickwork, cutting by hand, 25-50mm wide	Building	Civil	Demolition and Breaking Out	Cutting Chases	m/hr	1.600	2.300	3.500	m/hr	1.600	2.300	3.500
95	Brickwork, cutting by hand, 50-75mm wide	Building	Civil	Demolition and Breaking Out	Cutting Chases	m/hr	1.400	1.900	2.800	m/hr	1.400	1.900	2.800
96	Brickwork, cutting by hand, 75-100mm wide	Building	Civil	Demolition and Breaking Out	Cutting Chases	m/hr	1.200	1.600	2.500	m/hr	1.200	1.600	2.500
97	Brickwork, cutting by machine, < 25mm wide	Building	Civil	Demolition and Breaking Out	Cutting Chases	m/hr	4.200	5.500	11.100	m/hr	4.200	5.500	11.100
98	Brickwork, cutting by machine, 25-50mm wide	Building	Civil	Demolition and Breaking Out	Cutting Chases	m/hr	3.300	4.500	6.700	m/hr	3.300	4.500	6.700
99	Brickwork, cutting by machine, 50-75mm wide	Building	Civil	Demolition and Breaking Out	Cutting Chases	m/hr	3.300	4.500	6.700	m/hr	3.300	4.500	6.700
100	Brickwork, cutting by machine, 75-100mm wide	Building	Civil	Demolition and Breaking Out	Cutting Chases	m/hr	2.500	3.300	5.000	m/hr	2.500	3.300	5.000
101	Light Blockwork, cutting by hand, < 25mm wide	Building	Civil	Demolition and Breaking Out	Cutting Chases	m/hr	3.800	5.000	7.700	m/hr	3.800	5.000	7.700
102	Light Blockwork, cutting by hand, 25-50mm wide	Building	Civil	Demolition and Breaking Out	Cutting Chases	m/hr	3.200	4.200	6.300	m/hr	3.200	4.200	6.300

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
	SECTION A - RULE OF THUMB												
324	Hydraulic Excavator, 0.3m3 bucket, Sand/Soil	Building	Civil	Foundation & Excavation	Excavation	m3/hr	6.700	8.400	9.900	m3/hr	6.700	8.400	9.900
325	Hydraulic Excavator, 0.3m3 bucket, Gravel Beds	Building	Civil	Foundation & Excavation	Excavation	m3/hr	3.200	4.500	5.000	m3/hr	3.200	4.500	5.000
326	Hydraulic Excavator, 0.3m3 bucket, Clay/Chalk	Building	Civil	Foundation & Excavation	Excavation	m3/hr	3.300	4.100	5.200	m3/hr	3.300	4.100	5.200
327	Hydraulic Excavator, 0.3m3 bucket, Hard Ground	Building	Civil	Foundation & Excavation	Excavation	m3/hr	3.300	4.100	5.200	m3/hr	3.300	4.100	5.200
328	Hydraulic Excavator, 0.4m3 bucket, Sand/Soil	Building	Civil	Foundation & Excavation	Excavation	m3/hr	8.200	10.000	11.700	m3/hr	8.200	10.000	11.700
329	Hydraulic Excavator, 0.4m3 bucket, Gravel Beds	Building	Civil	Foundation & Excavation	Excavation	m3/hr	7.100	8.700	10.200	m3/hr	7.100	8.700	10.200
330	Hydraulic Excavator, 0.4m3 bucket, Clay/Chalk	Building	Civil	Foundation & Excavation	Excavation	m3/hr	6.500	8.300	9.400	m3/hr	6.500	8.300	9.400
331	Hydraulic Excavator, 0.4m3 bucket, Hard Ground	Building	Civil	Foundation & Excavation	Excavation	m3/hr	6.300	7.700	9.100	m3/hr	6.300	7.700	9.100
332	Hydraulic Excavator, 0.5m3 bucket, Sand/Soil	Building	Civil	Foundation & Excavation	Excavation	m3/hr	12.200	13.300	15.400	m3/hr	12.200	13.300	15.400
333	Hydraulic Excavator, 0.5m3 bucket, Gravel Beds	Building	Civil	Foundation & Excavation	Excavation	m3/hr	10.200	11.100	12.900	m3/hr	10.200	11.100	12.900
334	Hydraulic Excavator, 0.5m3 bucket, Clay/Chalk	Building	Civil	Foundation & Excavation	Excavation	m3/hr	9.700	10.500	12.100	m3/hr	9.700	10.500	12.100
335	Hydraulic Excavator, 0.5m3 bucket, Hard Ground	Building	Civil	Foundation & Excavation	Excavation	m3/hr	6.100	6.700	7.700	m3/hr	6.100	6.700	7.700
	Foundation & Excavation - Trench Excavation												
306	Hydraulic Excavator, 0.3m3 bucket, Sand/Soil	Building	Civil	Foundation & Excavation	Trench Excavation	m3/hr	5.600	7.100	8.200	m3/hr	5.600	7.100	8.200
307	Hydraulic Excavator, 0.3m3 bucket, Gravel Beds	Building	Civil	Foundation & Excavation	Trench Excavation	m3/hr	4.800	6.100	7.300	m3/hr	4.800	6.100	7.300
308	Hydraulic Excavator, 0.3m3 bucket, Clay/Chalk	Building	Civil	Foundation & Excavation	Trench Excavation	m3/hr	4.800	6.100	7.100	m3/hr	4.800	6.100	7.100
309	Hydraulic Excavator, 0.3m3 bucket, Hard Ground	Building	Civil	Foundation & Excavation	Trench Excavation	m3/hr	9.700	5.400	6.400	m3/hr	9.700	5.400	6.400
310	Hydraulic Excavator, 0.4m3 bucket, Sand/Soil	Building	Civil	Foundation & Excavation	Trench Excavation	m3/hr	20.500	25.000	29.200	m3/hr	20.500	25.000	29.200
311	Hydraulic Excavator, 0.4m3 bucket, Gravel Beds	Building	Civil	Foundation & Excavation	Trench Excavation	m3/hr	18.200	22.200	26.000	m3/hr	18.200	22.200	26.000
312	Hydraulic Excavator, 0.4m3 bucket, Clay/Chalk	Building	Civil	Foundation & Excavation	Trench Excavation	m3/hr	18.200	22.200	26.000	m3/hr	18.200	22.200	26.000
313	Hydraulic Excavator, 0.4m3 bucket, Hard Ground	Building	Civil	Foundation & Excavation	Trench Excavation	m3/hr	17.000	20.000	23.400	m3/hr	17.000	20.000	23.400
314	Hydraulic Excavator, 0.5m3 bucket, Sand/Soil	Building	Civil	Foundation & Excavation	Trench Excavation	m3/hr	26.000	28.600	33.100	m3/hr	26.000	28.600	33.100
315	Hydraulic Excavator, 0.5m3 bucket, Gravel Beds	Building	Civil	Foundation & Excavation	Trench Excavation	m3/hr	26.300	28.600	33.200	m3/hr	26.300	28.600	33.200
316	Hydraulic Excavator, 0.5m3 bucket, Clay/Chalk	Building	Civil	Foundation & Excavation	Trench Excavation	m3/hr	26.300	28.600	33.200	m3/hr	26.300	28.600	33.200
317	Hydraulic Excavator, 0.5m3 bucket, Hard Ground	Building	Civil	Foundation & Excavation	Trench Excavation	m3/hr	22.700	25.000	28.800	m3/hr	22.700	25.000	28.800
318	Excavate and Board Trench, 0.5-1.5m deep, < 2.0m wide	Building	Civil	Foundation & Excavation	Trench Excavation	m2/hr	3.300	4.500	6.800	m2/hr	3.300	4.500	6.800
319	Excavate and Board Trench, 1.5-3.0m deep, < 2.0m wide	Building	Civil	Foundation & Excavation	Trench Excavation	m2/hr	3.000	4.200	6.500	m2/hr	3.000	4.200	6.500
320	Excavate and Board Trench, 3.0-4.5m deep, < 2.0m wide	Building	Civil	Foundation & Excavation	Trench Excavation	m2/hr	2.700	4.000	6.000	m2/hr	2.700	4.000	6.000
321	Excavate and Board Trench, 0.5-1.5m deep, > 2.0m wide	Building	Civil	Foundation & Excavation	Trench Excavation	m2/hr	6.600	7.100	8.800	m2/hr	6.600	7.100	8.800
322	Excavate and Board Trench, 1.5-3.0m deep, > 2.0m wide	Building	Civil	Foundation & Excavation	Trench Excavation	m2/hr	6.200	6.700	9.200	m2/hr	6.200	6.700	9.200
323	Excavate and Board Trench, 3.0-4.5m deep, > 2.0m wide	Building	Civil	Foundation & Excavation	Trench Excavation	m2/hr	5.800	6.200	10.500	m2/hr	5.800	6.200	10.500
	Foundation & Excavation - Basement Excavation												
294	Hydraulic Excavator, 0.3m3 bucket, Sand/Soil - Basement Work	Building	Civil	Foundation & Excavation	Basement Excavation	m3/hr	6.400	8.000	9.400	m3/hr	6.400	8.000	9.400
295	Hydraulic Excavator, 0.3m3 bucket, Gravel Beds - Basement Work	Building	Civil	Foundation & Excavation	Basement Excavation	m3/hr	5.500	6.900	8.100	m3/hr	5.500	6.900	8.100
296	Hydraulic Excavator, 0.3m3 bucket, Clay/Chalk - Basement Work	Building	Civil	Foundation & Excavation	Basement Excavation	m3/hr	5.200	6.500	7.900	m3/hr	5.200	6.500	7.900
297	Hydraulic Excavator, 0.3m3 bucket, Hard Ground - Basement Work	Building	Civil	Foundation & Excavation	Basement Excavation	m3/hr	4.700	5.900	8.200	m3/hr	4.700	5.900	8.200
298	Hydraulic Excavator, 0.4m3 bucket, Sand/Soil - Basement Work	Building	Civil	Foundation & Excavation	Basement Excavation	m3/hr	12.600	15.400	18.900	m3/hr	12.600	15.400	18.900
299	Hydraulic Excavator, 0.4m3 bucket, Gravel Beds - Basement Work	Building	Civil	Foundation & Excavation	Basement Excavation	m3/hr	11.700	14.300	16.700	m3/hr	11.700	14.300	16.700
300	Hydraulic Excavator, 0.4m3 bucket, Clay/Chalk - Basement Work	Building	Civil	Foundation & Excavation	Basement Excavation	m3/hr	10.900	13.300	15.600	m3/hr	10.900	13.300	15.600
301	Hydraulic Excavator, 0.4m3 bucket, Hard Ground - Basement Work	Building	Civil	Foundation & Excavation	Basement Excavation	m3/hr	9.700	11.800	14.000	m3/hr	9.700	11.800	14.000
302	Hydraulic Excavator, 0.5m3 bucket, Sand/Soil - Basement Work	Building	Civil	Foundation & Excavation	Basement Excavation	m3/hr	18.200	20.000	23.000	m3/hr	18.200	20.000	23.000
303	Hydraulic Excavator, 0.5m3 bucket, Gravel Beds - Basement Work	Building	Civil	Foundation & Excavation	Basement Excavation	m3/hr	16.500	18.100	20.000	m3/hr	16.500	18.100	20.000
304	Hydraulic Excavator, 0.5m3 bucket, Clay/Chalk - Basement Work	Building	Civil	Foundation & Excavation	Basement Excavation	m3/hr	15.400	16.700	19.300	m3/hr	15.400	16.700	19.300
305	Hydraulic Excavator, 0.5m3 bucket, Hard Ground - Basement Work	Building	Civil	Foundation & Excavation	Basement Excavation	m3/hr	13.300	15.400	17.700	m3/hr	13.300	15.400	17.700
	Foundation & Excavation - Bulk Excavation												
270	Excavation Bulking Factor, Sand/Soil	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	%	-	15.000	20.000	%	-	15.000	20.000
271	Excavation Bulking Factor, Gravel	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	%	-	33.000	-	%	-	33.000	-
272	Excavation Bulking Factor, Clay/Chalk	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	%	-	40.000	-	%	-	40.000	-
273	Excavation Bulking Factor, Boulder Clay	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	%	-	45.000	-	%	-	45.000	-
274	Excavation Bulking Factor, Rock	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	%	-	60.000	-	%	-	60.000	-
275	Spoil Weight, Rock	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	Tonnes/m3	-	2.500	-	Tonnes/m	-	2.500	-
276	Spoil Weight, Concrete	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	Tonnes/m3	-	2.400	-	Tonnes/m	-	2.400	-
277	Spoil Weight, Landfill/CDG	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	Tonnes/m3	-	1.900	-	Tonnes/m	-	1.900	-
278	Spoil Weight, Sand	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	Tonnes/m3	-	1.800	-	Tonnes/m	-	1.800	-
279	Rail Mounted Grab, 2.0m3 bucket 2.4min lift cycle	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	m3/hr	30.000	48.000	59.000	m3/hr	30.000	48.000	59.000
280	Crane Mounted Clamshell Grab, 2.0m3 bucket 2.9min lift cycle	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	m3/hr	25.000	33.000	41.000	m3/hr	25.000	33.000	41.000

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
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281	Crane Mounted Clamshell Grab, 2.5m3 bucket 2.9min lift cycle	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	m3/hr	34.000	42.000	52.000	m3/hr	34.000	42.000	52.000
282	Hydraulic Excavator, 0.3m3 bucket, Sand/Soil	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	m3/hr	6.900	8.700	10.200	m3/hr	6.900	8.700	10.200
283	Hydraulic Excavator, 0.4m3 bucket, Sand/Soil	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	m3/hr	23.400	28.600	33.400	m3/hr	23.400	28.600	33.400
284	Hydraulic Excavator, 0.5m3 bucket, Sand/Soil	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	m3/hr	45.500	50.000	58.000	m3/hr	45.500	50.000	58.000
285	Hydraulic Excavator, 0.3m3 bucket, Gravel Beds	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	m3/hr	5.600	7.100	8.200	m3/hr	5.600	7.100	8.200
286	Hydraulic Excavator, 0.4m3 bucket, Gravel Beds	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	m3/hr	20.500	25.000	29.000	m3/hr	20.500	25.000	29.000
287	Hydraulic Excavator, 0.5m3 bucket, Gravel Beds	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	m3/hr	36.800	40.000	46.000	m3/hr	36.800	40.000	46.000
288	Hydraulic Excavator, 0.3m3 bucket, Clay/Chalk	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	m3/hr	5.600	7.100	8.300	m3/hr	5.600	7.100	8.300
289	Hydraulic Excavator, 0.4m3 bucket, Clay/Chalk	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	m3/hr	20.500	25.000	28.700	m3/hr	20.500	25.000	28.700
290	Hydraulic Excavator, 0.5m3 bucket, Clay/Chalk	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	m3/hr	37.000	40.000	46.000	m3/hr	37.000	40.000	46.000
291	Hydraulic Excavator, 0.3m3 bucket, Hard Ground	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	m3/hr	4.500	6.100	7.200	m3/hr	4.500	6.100	7.200
292	Hydraulic Excavator, 0.4m3 bucket, Hard Ground	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	m3/hr	17.900	22.200	25.000	m3/hr	17.900	22.200	25.000
293	Hydraulic Excavator, 0.5m3 bucket, Hard Ground	Roads & Bridges	Civil	Foundation & Excavation	Bulk Excavation	m3/hr	25.700	28.600	32.900	m3/hr	25.700	28.600	32.900
	B7 Disposal												
	Foundation & Excavation - Excavate and Remove												
258	Excavate Spoil Heaps to Transport, 0.6m3 bucket, Sand/Soil	Roads & Bridges	Civil	Foundation & Excavation	Excavate and Remove	m3/hr	14.500	20.000	25.600	m3/hr	14.500	20.000	25.600
259	Excavate Spoil Heaps to Transport, 0.6m3 bucket, Gravel Beds	Roads & Bridges	Civil	Foundation & Excavation	Excavate and Remove	m3/hr	15.200	20.400	25.600	m3/hr	15.200	20.400	25.600
260	Excavate Spoil Heaps to Transport, 0.6m3 bucket, Clay/Chalk	Roads & Bridges	Civil	Foundation & Excavation	Excavate and Remove	m3/hr	12.300	18.500	23.200	m3/hr	12.300	18.500	23.200
261	Excavate Spoil Heaps to Transport, 0.6m3 bucket, Boulder Clay	Roads & Bridges	Civil	Foundation & Excavation	Excavate and Remove	m3/hr	11.200	16.900	21.300	m3/hr	11.200	16.900	21.300
262	Excavate Spoil Heaps to Transport, 1.1m3 bucket, Sand/Soil	Roads & Bridges	Civil	Foundation & Excavation	Excavate and Remove	m3/hr	25.400	30.300	35.700	m3/hr	25.400	30.300	35.700
263	Excavate Spoil Heaps to Transport, 1.1m3 bucket, Gravel Beds	Roads & Bridges	Civil	Foundation & Excavation	Excavate and Remove	m3/hr	25.600	31.300	37.000	m3/hr	25.600	31.300	37.000
264	Excavate Spoil Heaps to Transport, 1.1m3 bucket, Clay/Chalk	Roads & Bridges	Civil	Foundation & Excavation	Excavate and Remove	m3/hr	22.500	27.800	33.300	m3/hr	22.500	27.800	33.300
265	Excavate Spoil Heaps to Transport, 1.1m3 bucket, Boulder Clay	Roads & Bridges	Civil	Foundation & Excavation	Excavate and Remove	m3/hr	18.900	24.400	30.300	m3/hr	18.900	24.400	30.300
266	Load Spoil to Barge, capacity 2,000m3	Roads & Bridges	Civil	Foundation & Excavation	Excavate and Remove	hrs	-	8.000	-	hrs	-	8.000	-
267	Load Spoil to Barge, capacity 1,500m3	Roads & Bridges	Civil	Foundation & Excavation	Excavate and Remove	hrs	-	6.500	-	hrs	-	6.500	-
268	Load Spoil to Barge, capacity 1,000m3	Roads & Bridges	Civil	Foundation & Excavation	Excavate and Remove	hrs	-	5.500	-	hrs	-	5.500	-
269	Spoil conveyor, 600mm belt, 150m/min	Roads & Bridges	Civil	Foundation & Excavation	Excavate and Remove	m3/hr	-	260.000	-	m3/hr	-	260.000	-
	B8 Filling												
	Foundation & Excavation - Spread and Level												
226	Crawler Shovel, 0.8m3 bucket, Sand/Soil, pushed 5-50m to stock	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	13.900	20.400	25.000	m3/hr	13.900	20.400	25.000
227	Crawler Shovel, 0.8m3 bucket, Sand/Soil, pushed 50-120m to stock	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	7.600	9.500	12.600	m3/hr	7.600	9.500	12.600
228	Crawler Shovel, 0.8m3 bucket, Gravel, pushed 5-50m to stock	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	14.200	20.400	25.600	m3/hr	14.200	20.400	25.600
229	Crawler Shovel, 0.8m3 bucket, Gravel, pushed 50-120m to stock	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	7.600	10.200	12.800	m3/hr	7.600	10.200	12.800
230	Crawler Shovel, 0.8m3 bucket, Clay/Chalk, pushed 5-50m to stock	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	12.700	18.400	23.200	m3/hr	12.700	18.400	23.200
231	Crawler Shovel, 0.8m3 bucket, Clay/Chalk, pushed 50-120m to stock	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	6.900	8.900	11.600	m3/hr	6.900	8.900	11.600
232	Crawler Shovel, 0.8m3 bucket, Boulder Clay, pushed 5-50m to stock	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	11.600	16.900	21.300	m3/hr	11.600	16.900	21.300
233	Crawler Shovel, 0.8m3 bucket, Boulder Clay, pushed 50-120m to stock	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	6.300	8.200	10.400	m3/hr	6.300	8.200	10.400
234	Crawler Shovel, 1.2m3 bucket, Sand/Soil, pushed 5-50m to stock	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	23.800	28.500	35.700	m3/hr	23.800	28.500	35.700
235	Crawler Shovel, 1.2m3 bucket, Sand/Soil, pushed 50-120m to stock	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	16.700	18.500	20.400	m3/hr	16.700	18.500	20.400
236	Crawler Shovel, 1.2m3 bucket, Gravel, pushed 5-50m to stock	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	25.000	32.000	37.000	m3/hr	25.000	32.000	37.000
237	Crawler Shovel, 1.2m3 bucket, Gravel, pushed 50-120m to stock	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	17.200	19.300	21.200	m3/hr	17.200	19.300	21.200
238	Crawler Shovel, 1.2m3 bucket, Clay/Chalk, pushed 5-50m to stock	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	21.700	27.500	33.300	m3/hr	21.700	27.500	33.300
239	Crawler Shovel, 1.2m3 bucket, Clay/Chalk, pushed 50-120m to stock	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	15.100	16.900	18.800	m3/hr	15.100	16.900	18.800
240	Crawler Shovel, 1.2m3 bucket, Boulder Clay, pushed 5-50m to stock	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	19.600	24.500	30.300	m3/hr	19.600	24.500	30.300
241	Crawler Shovel, 1.2m3 bucket, Boulder Clay, pushed 50-120m to stock	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	13.700	15.900	17.500	m3/hr	13.700	15.900	17.500
242	Crawler Shovel, 0.6m3 bucket, 50-200m2, Sand/Soil	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	18.600	28.500	38.500	m3/hr	18.600	28.500	38.500
243	Crawler Shovel, 0.6m3 bucket, over 200m2, Sand/Soil	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	24.400	37.200	50.000	m3/hr	24.400	37.200	50.000
244	Crawler Shovel, 0.6m3 bucket, 50-200m2, Gravel	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	18.900	28.600	38.400	m3/hr	18.900	28.600	38.400
245	Crawler Shovel, 0.6m3 bucket, over 200m2, Gravel	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	24.200	37.200	50.000	m3/hr	24.200	37.200	50.000
246	Crawler Shovel, 0.6m3 bucket, 50-200m2, Hardcore	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	15.800	23.500	31.200	m3/hr	15.800	23.500	31.200
247	Crawler Shovel, 0.6m3 bucket, over 200m2, Hardcore	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	19.200	29.600	40.000	m3/hr	19.200	29.600	40.000
248	Crawler Shovel, 0.6m3 bucket, 50-200m2, Boulder Clay	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	17.200	26.400	35.700	m3/hr	17.200	26.400	35.700
249	Crawler Shovel, 0.6m3 bucket, over 200m2, Boulder Clay	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	22.200	33.800	45.400	m3/hr	22.200	33.800	45.400
250	Crawler Shovel, 1.2m3 bucket, 50-200m2, Sand/Soil	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	43.500	48.000	52.600	m3/hr	43.500	48.000	52.600
251	Crawler Shovel, 1.2m3 bucket, over 200m2, Sand/Soil	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	55.500	61.100	66.700	m3/hr	55.500	61.100	66.700

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
	SECTION A - RULE OF THUMB												
252	Crawler Shovel, 1.2m3 bucket, 50-200m2, Gravel	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	43.800	48.300	52.900	m3/hr	43.800	48.300	52.900
253	Crawler Shovel, 1.2m3 bucket, over 200m2, Gravel	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	55.500	61.100	66.700	m3/hr	55.500	61.100	66.700
254	Crawler Shovel, 1.2m3 bucket, 50-200m2, Hardcore	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	37.100	40.300	43.500	m3/hr	37.100	40.300	43.500
255	Crawler Shovel, 1.2m3 bucket, over 200m2, Hardcore	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	47.600	51.600	55.600	m3/hr	47.600	51.600	55.600
256	Crawler Shovel, 1.2m3 bucket, 50-200m2, Boulder Clay	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	43.800	45.700	47.600	m3/hr	43.800	45.700	47.600
257	Crawler Shovel, 1.2m3 bucket, over 200m2, Boulder Clay	Roads & Bridges	Civil	Foundation & Excavation	Spread and Level	m3/hr	55.600	59.100	62.500	m3/hr	55.600	59.100	62.500
	B9 Piling generally												
	Foundation & Excavation - Secant Piling												
170	Construct 30m dia cofferdam, 255 piles/concrete base	Building	Civil	Foundation & Excavation	Secant Piling	wks	-	12.000	-	wks	-	12.000	-
	Foundation & Excavation - Mini Piles												
173	Mini Piles, driven with concrete cap, 235mm dia, 35m deep	Building	Civil	Foundation & Excavation	Mini Piles	m/hr	0.500	0.800	0.900	m/hr	0.500	0.800	0.900
	Foundation & Excavation - Barrette Piles												
192	Rule of Thumb, overall rate by Mill	Building	Civil	Foundation & Excavation	Barrette Piles	hrs/no	0.500	1.100	1.200	no/hrs	2.000	0.909	0.833
193	Fabricate reinforcement cages	Building	Civil	Foundation & Excavation	Barrette Piles	hrs/cage	-	4.000	-	cage/hrs	-	0.250	-
194	Concreting barrette panels	Building	Civil	Foundation & Excavation	Barrette Piles	m3/hr	40.000	50.000	55.000	m3/hr	40.000	50.000	55.000
195	Trimming top of barrette panels	Building	Civil	Foundation & Excavation	Barrette Piles	days/no	-	2.400	-	no/hrs	-	0.052	-
196	Concrete Testing, Coring Test	Building	Civil	Foundation & Excavation	Barrette Piles	days/no	4.000	3.500	2.000	no/hrs	0.031	0.036	0.063
197	Concrete Testing, Sonic Logging Test	Building	Civil	Foundation & Excavation	Barrette Piles	days/no	-	0.700	-	no/hrs	-	0.179	-
	B10 Driven piling												
	Foundation & Excavation - Driven Piles												
198	West Piling, pre-cast concrete shells	Building	Civil	Foundation & Excavation	Driven Piles	m/day	75.000	100.000	120.000	m/hr	9.375	12.500	15.000
199	Balken Piling, pre-cast concrete piles	Building	Civil	Foundation & Excavation	Driven Piles	m/day	80.000	120.000	135.000	m/hr	10.000	15.000	16.875
200	H Piles, driven steel H-beams	Building	Civil	Foundation & Excavation	Driven Piles	m/day	200.000	350.000	500.000	m/hr	25.000	43.750	62.500
	B11 Bored piling												
	Foundation & Excavation - Bored Piling												
136	Cycle Time, 5-20m deep	Building	Civil	Foundation & Excavation	Bored Piling	days/no	8.000	4.000	4.000	no/hr	0.016	0.031	0.031
137	Cycle Time, 20-40m deep	Building	Civil	Foundation & Excavation	Bored Piling	days/no	10.000	8.000	-	no/hr	0.013	0.016	-
138	Cycle Time, 40-70m deep	Building	Civil	Foundation & Excavation	Bored Piling	days/no	25.000	10.000	-	no/hr	0.005	0.013	-
139	Cycle Time, 70-90m deep	Building	Civil	Foundation & Excavation	Bored Piling	days/no	45.000	25.000	-	no/hr	0.003	0.005	-
140	Cycle Time, 90-135m deep	Building	Civil	Foundation & Excavation	Bored Piling	hrs	60.000	45.000	-	hrs	0.002	0.003	-
141	Move piling setup to next location	Building	Civil	Foundation & Excavation	Bored Piling	m/hr	-	2.000	-	m/hr	-	2.000	-
142	Excave shaft by grab, general fill/upper levels	Building	Civil	Foundation & Excavation	Bored Piling	m/hr	-	3.500	-	m/hr	-	3.500	-
143	Excave shaft by grab, sand/minor rubble	Building	Civil	Foundation & Excavation	Bored Piling	m/hr	-	2.100	-	m/hr	-	2.100	-
144	Excave shaft by grab, marine/aluvium	Building	Civil	Foundation & Excavation	Bored Piling	m/hr	-	2.500	-	m/hr	-	2.500	-
145	Excave shaft by grab/RCD, CDT	Building	Civil	Foundation & Excavation	Bored Piling	m/hr	-	0.500	-	m/hr	-	0.500	-
146	Excave shaft by grab/RCD, CDG <150	Building	Civil	Foundation & Excavation	Bored Piling	m/hr	-	1.500	-	m/hr	-	1.500	-
147	Excave shaft by RCD, CDG 150-200	Building	Civil	Foundation & Excavation	Bored Piling	m/hr	-	1.000	-	m/hr	-	1.000	-
148	Excave shaft by RCD, CDG >200/gravel	Building	Civil	Foundation & Excavation	Bored Piling	m/hr	-	0.500	-	m/hr	-	0.500	-
149	Excave shaft by RCD/Chisel, corestones	Building	Civil	Foundation & Excavation	Bored Piling	m/hr	-	0.500	-	m/hr	-	0.500	-
150	Excave Rock Socket by RCD, grade IV/V rock	Building	Civil	Foundation & Excavation	Bored Piling	m/hr	-	0.200	0.300	m/hr	-	0.200	0.300
151	Excave Rock Socket by RCD, grade II/III rock	Building	Civil	Foundation & Excavation	Bored Piling	m/hr	-	0.100	0.200	m/hr	-	0.100	0.200
152	Excave Rock Socket by RCD, tendering rate	Building	Civil	Foundation & Excavation	Bored Piling	hrs	-	0.100	-	hrs	-	0.100	-
153	Add/remove RCD plant	Building	Civil	Foundation & Excavation	Bored Piling	hrs	-	2.000	-	hrs	-	2.000	-
154	Add/remove RCD drill string/drill bit	Building	Civil	Foundation & Excavation	Bored Piling	m/hr	-	5.000	-	m/hr	-	5.000	-
155	Remove Obstruction, above water hand hammers	Building	Civil	Foundation & Excavation	Bored Piling	m/hr	-	0.800	-	m/hr	-	0.800	-
156	Remove Obstruction, below water heavy chisel	Building	Civil	Foundation & Excavation	Bored Piling	hrs	-	0.500	-	hrs	-	0.500	-
157	Concrete Plug, RCD off/tremmie/concrete/cure/RCD on	Building	Civil	Foundation & Excavation	Bored Piling	hrs	60.000	53.000	50.000	hrs	60.000	53.000	50.000

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
	SECTION A - RULE OF THUMB												
158	Install air lift tremmie tube	Building	Civil	Foundation & Excavation	Bored Piling	hrs/cage	-	5.000	-	cage/hrs	-	5.000	-
159	Fabricate reinforcement cages	Building	Civil	Foundation & Excavation	Bored Piling	hrs/no	-	2.500	-	no/hrs	-	0.400	-
160	Install reinforcement cages	Building	Civil	Foundation & Excavation	Bored Piling	hrs	-	2.000	-	hrs	-	2.000	-
161	Shaft cleaning, air lifting after excavation	Building	Civil	Foundation & Excavation	Bored Piling	hrs	-	8.000	-	hrs	-	8.000	-
162	Shaft cleaning, air lifting after cage installed	Building	Civil	Foundation & Excavation	Bored Piling	hrs	-	2.000	-	hrs	-	2.000	-
163	Shaft concreting/extract casing 5-70m deep	Building	Civil	Foundation & Excavation	Bored Piling	hrs	-	12.000	-	hrs	-	12.000	-
164	Shaft concreting/extract casing 70-95m deep	Building	Civil	Foundation & Excavation	Bored Piling	hrs	-	14.000	-	hrs	-	14.000	-
165	Shaft concreting/extract casing 95-135m deep	Building	Civil	Foundation & Excavation	Bored Piling	hrs	-	48.000	-	hrs	-	48.000	-
166	Concrete curing prior to remove telescopic casing	Building	Civil	Foundation & Excavation	Bored Piling	m/hr	-	72.000	-	m/hr	-	72.000	-
167	Concrete Testing, Coring Test	Building	Civil	Foundation & Excavation	Bored Piling	hrs/no	-	3.200	2.200	no/hrs	-	0.313	0.455
168	Concrete Testing, Sonic Logging Test	Building	Civil	Foundation & Excavation	Bored Piling	hrs/no	-	2.500	-	no/hrs	-	0.400	-
169	Concrete Testing, Vibration Test	Building	Civil	Foundation & Excavation	Bored Piling	hrs/no	-	6.500	-	hrs/no	-	0.154	-
	Foundation & Excavation - Contiguous Piling												
171	Extra Over time for bored pile build times	Building	Civil	Foundation & Excavation	Contiguous Piling	%	-	20.000	-	%	-	20.000	-
	B12 Sheet piling												
	Foundation & Excavation - Sheet Piling												
Ref	Task / Description												
201	Vibro/Drop Hammer, 10m deep Sand	Building	Civil	Foundation & Excavation	Sheet piling	m/day	-	55.000	60.000	m/hr	-	6.875	7.500
202	Vibro/Drop Hammer, 35m deep Sand	Building	Civil	Foundation & Excavation	Sheet piling	m/day	3.500	32.000	10.500	m/hr	0.438	4.000	1.313
	Foundation & Excavation - Slurry Mix Walls												
203	Crane grab, cement/bentonite and sheet piles	Building	Civil	Foundation & Excavation	Slurry Mix Walls	m/day	1.800	2.500	3.400	m/hr	0.225	0.313	0.425
	B13 Underground drainage												
	Roads & External Works - Drainage												
1053	PVC Drainage, 1m pipes, 100-150mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	5.700	-	m/hr	-	5.700	-
1054	PVC Drainage, 1m pipes, 100-150mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	8.100	-	m/hr	-	8.100	-
1055	PVC Drainage, 1m pipes, 100-150mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	9.500	-	m/hr	-	9.500	-
1056	PVC Drainage, 3m pipes, 100-150mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	12.200	-	m/hr	-	12.200	-
1057	PVC Drainage, 3m pipes, 100-150mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	15.200	-	m/hr	-	15.200	-
1058	PVC Drainage, 3m pipes, 100-150mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	18.200	-	m/hr	-	18.200	-
1059	PVC Drainage, 6m pipes, 100-150mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	22.200	-	m/hr	-	22.200	-
1060	PVC Drainage, 6m pipes, 100-150mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	27.700	-	m/hr	-	27.700	-
1061	PVC Drainage, 6m pipes, 100-150mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	33.300	-	m/hr	-	33.300	-
1062	PVC Drainage, 3m pipes, 150-200mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	10.600	-	m/hr	-	10.600	-
1063	PVC Drainage, 3m pipes, 150-200mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	12.800	-	m/hr	-	12.800	-
1064	PVC Drainage, 6m pipes, 150-200mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	21.200	-	m/hr	-	21.200	-
1065	PVC Drainage, 6m pipes, 150-200mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	25.600	-	m/hr	-	25.600	-
1066	Stoneware Drainage, Cement/Sand Joints, 75mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	4.700	-	m/hr	-	4.700	-
1067	Stoneware Drainage, Cement/Sand Joints, 75mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	5.500	-	m/hr	-	5.500	-
1068	Stoneware Drainage, Cement/Sand Joints, 75mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	6.600	-	m/hr	-	6.600	-
1069	Stoneware Drainage, Cement/Sand Joints, 100mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	4.400	-	m/hr	-	4.400	-
1070	Stoneware Drainage, Cement/Sand Joints, 100mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	5.000	-	m/hr	-	5.000	-
1071	Stoneware Drainage, Cement/Sand Joints, 100mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	6.200	-	m/hr	-	6.200	-
1072	Stoneware Drainage, Cement/Sand Joints, 150mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	3.200	-	m/hr	-	3.200	-
1073	Stoneware Drainage, Cement/Sand Joints, 150mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	3.800	-	m/hr	-	3.800	-
1074	Stoneware Drainage, Cement/Sand Joints, 150mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	4.500	-	m/hr	-	4.500	-
1075	Stoneware Drainage, Cement/Sand Joints, 225mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.100	-	m/hr	-	2.100	-
1076	Stoneware Drainage, Cement/Sand Joints, 225mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.600	-	m/hr	-	2.600	-
1077	Stoneware Drainage, Cement/Sand Joints, 225mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	3.100	-	m/hr	-	3.100	-
1078	Stoneware Drainage, Cement/Sand Joints, 300mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	1.400	-	m/hr	-	1.400	-
1079	Stoneware Drainage, Cement/Sand Joints, 300mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	1.700	-	m/hr	-	1.700	-
1080	Stoneware Drainage, Cement/Sand Joints, 300mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.400	-	m/hr	-	2.400	-
1081	Stoneware Drainage, Cement/Sand Joints, over 375mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	1.100	-	m/hr	-	1.100	-

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
	SECTION A - RULE OF THUMB												
1082	Stoneware Drainage, Cement/Sand Joints, over 375mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	1.300	-	m/hr	-	1.300	-
1083	Stoneware Drainage, Cement/Sand Joints, over 375mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	1.600	-	m/hr	-	1.600	-
1084	Stoneware Drainage, Flexible Joints, 75mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	8.300	-	m/hr	-	8.300	-
1085	Stoneware Drainage, Flexible Joints, 75mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	10.000	-	m/hr	-	10.000	-
1086	Stoneware Drainage, Flexible Joints, 75mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	12.500	-	m/hr	-	12.500	-
1087	Stoneware Drainage, Flexible Joints, 100mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	7.700	-	m/hr	-	7.700	-
1088	Stoneware Drainage, Flexible Joints, 100mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	9.100	-	m/hr	-	9.100	-
1089	Stoneware Drainage, Flexible Joints, 100mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	10.000	-	m/hr	-	10.000	-
1090	Stoneware Drainage, Flexible Joints, 150mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	5.200	-	m/hr	-	5.200	-
1091	Stoneware Drainage, Flexible Joints, 150mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	6.200	-	m/hr	-	6.200	-
1092	Stoneware Drainage, Flexible Joints, 150mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	7.700	-	m/hr	-	7.700	-
1093	Stoneware Drainage, Flexible Joints, 225mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.700	-	m/hr	-	2.700	-
1094	Stoneware Drainage, Flexible Joints, 225mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	3.300	-	m/hr	-	3.300	-
1095	Stoneware Drainage, Flexible Joints, 225mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	4.000	-	m/hr	-	4.000	-
1096	Stoneware Drainage, Flexible Joints, 300mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	1.700	-	m/hr	-	1.700	-
1097	Stoneware Drainage, Flexible Joints, 300mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.100	-	m/hr	-	2.100	-
1098	Stoneware Drainage, Flexible Joints, 300mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.500	-	m/hr	-	2.500	-
1099	Stoneware Drainage, Flexible Joints, over 375mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	1.400	-	m/hr	-	1.400	-
1100	Stoneware Drainage, Flexible Joints, over 375mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	1.600	-	m/hr	-	1.600	-
1101	Stoneware Drainage, Flexible Joints, over 375mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.100	-	m/hr	-	2.100	-
1102	PVC, Stoneware, Pitch Fibre & Concrete Joints	Roads & Bridges	Civil	Roads & External Works	Drainage	mins/no	-	2.400	-	no/hr	-	25.000	-
1103	Pitch Fibre Pipes, 75mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	9.100	-	m/hr	-	9.100	-
1104	Pitch Fibre Pipes, 75mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	16.600	-	m/hr	-	16.600	-
1105	Pitch Fibre Pipes, 75mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	20.000	-	m/hr	-	20.000	-
1106	Pitch Fibre Pipes, 100mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	9.100	-	m/hr	-	9.100	-
1107	Pitch Fibre Pipes, 100mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	16.600	-	m/hr	-	16.600	-
1108	Pitch Fibre Pipes, 100mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	20.000	-	m/hr	-	20.000	-
1109	Pitch Fibre Pipes, 150mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	6.600	-	m/hr	-	6.600	-
1110	Pitch Fibre Pipes, 150mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	12.500	-	m/hr	-	12.500	-
1111	Pitch Fibre Pipes, 150mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	14.300	-	m/hr	-	14.300	-
1112	Pitch Fibre Pipes, 200mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	6.200	-	m/hr	-	6.200	-
1113	Pitch Fibre Pipes, 200mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	11.100	-	m/hr	-	11.100	-
1114	Pitch Fibre Pipes, 200mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	12.500	-	m/hr	-	12.500	-
1115	Pitch Fibre Pipes, 225mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	5.800	-	m/hr	-	5.800	-
1116	Pitch Fibre Pipes, 225mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	10.000	-	m/hr	-	10.000	-
1117	Pitch Fibre Pipes, 225mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	12.100	-	m/hr	-	12.100	-
1118	Hepsleve Rubber Joint System, 75mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	12.500	-	m/hr	-	12.500	-
1119	Hepsleve Rubber Joint System, 75mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	14.300	-	m/hr	-	14.300	-
1120	Hepsleve Rubber Joint System, 75mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	11.200	16.600	30.100	m/hr	11.200	16.600	30.100
1121	Hepsleve Rubber Joint System, 100mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	10.000	-	m/hr	-	10.000	-
1122	Hepsleve Rubber Joint System, 100mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	12.500	-	m/hr	-	12.500	-
1123	Hepsleve Rubber Joint System, 100mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	14.300	-	m/hr	-	14.300	-
1124	Hepsleve Rubber Joint System, 150mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	7.100	-	m/hr	-	7.100	-
1125	Hepsleve Rubber Joint System, 150mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	9.100	-	m/hr	-	9.100	-
1126	Hepsleve Rubber Joint System, 150mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	8.300	10.000	13.800	m/hr	8.300	10.000	13.800
1127	Hepsleve Rubber Joint System, 225mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	6.800	-	m/hr	-	6.800	-
1128	Hepsleve Rubber Joint System, 225mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	4.500	-	m/hr	-	4.500	-
1129	Hepsleve Rubber Joint System, 225mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	5.500	-	m/hr	-	5.500	-
1130	Hepsleve Rubber Joint System, 300mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.500	-	m/hr	-	2.500	-
1131	Hepsleve Rubber Joint System, 300mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.900	-	m/hr	-	2.900	-
1132	Hepsleve Rubber Joint System, 300mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	3.700	-	m/hr	-	3.700	-
1133	Hepsleve Rubber Joint System, over 375mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	1.900	-	m/hr	-	1.900	-
1134	Hepsleve Rubber Joint System, over 375mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.300	-	m/hr	-	2.300	-
1135	Hepsleve Rubber Joint System, over 375mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.700	-	m/hr	-	2.700	-
1136	Concrete Pipes, 1.5m pipes, 375mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.800	-	m/hr	-	2.800	-
1137	Concrete Pipes, 1.5m pipes, 375mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	3.400	-	m/hr	-	3.400	-
1138	Concrete Pipes, 1.5m pipes, 375mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	3.800	-	m/hr	-	3.800	-
1139	Concrete Pipes, 1.5m pipes, 450mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.700	-	m/hr	-	2.700	-
1140	Concrete Pipes, 1.5m pipes, 450mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	3.200	-	m/hr	-	3.200	-
1141	Concrete Pipes, 1.5m pipes, 450mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	3.600	-	m/hr	-	3.600	-
1142	Concrete Pipes, 1.5m pipes, 525mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.500	-	m/hr	-	2.500	-
1143	Concrete Pipes, 1.5m pipes, 525mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.900	-	m/hr	-	2.900	-

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
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1144	Concrete Pipes, 1.5m pipes, 525mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	3.400	-	m/hr	-	3.400	-
1145	Concrete Pipes, 1.5m pipes, 600mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.400	-	m/hr	-	2.400	-
1146	Concrete Pipes, 1.5m pipes, 600mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.700	-	m/hr	-	2.700	-
1147	Concrete Pipes, 1.5m pipes, 600mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	3.300	-	m/hr	-	3.300	-
1148	Concrete Pipes, 1.5m pipes, 675mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.200	-	m/hr	-	2.200	-
1149	Concrete Pipes, 1.5m pipes, 675mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.600	-	m/hr	-	2.600	-
1150	Concrete Pipes, 1.5m pipes, 675mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.900	-	m/hr	-	2.900	-
1151	Concrete Pipes, 1.5m pipes, 750mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	1.100	-	m/hr	-	1.100	-
1152	Concrete Pipes, 1.5m pipes, 750mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.400	-	m/hr	-	2.400	-
1153	Concrete Pipes, 1.5m pipes, 750mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.500	-	m/hr	-	2.500	-
1154	Concrete Pipes, 1.5m pipes, 1,050mm dia	Roads & Bridges	Civil	Roads & External Works	Drainage	m/day	-	2.900	4.200	m/hr	-	0.363	-
1155	Concrete Pipes, 1.5m pipes, 1,500mm dia	Roads & Bridges	Civil	Roads & External Works	Drainage	m/day	-	2.500	3.800	m/hr	-	0.313	-
1156	Concrete Pipes, 1.5m pipes, 1,800mm dia	Roads & Bridges	Civil	Roads & External Works	Drainage	m/day	-	2.100	2.600	m/hr	-	0.263	-
1157	Concrete Pipes, 2.5m pipes, 375mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	3.600	-	m/hr	-	3.600	-
1158	Concrete Pipes, 2.5m pipes, 375mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	4.300	-	m/hr	-	4.300	-
1159	Concrete Pipes, 2.5m pipes, 375mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	5.000	8.000	m/hr	-	5.000	8.000
1160	Concrete Pipes, 2.5m pipes, 450mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	3.400	-	m/hr	-	3.400	-
1161	Concrete Pipes, 2.5m pipes, 450mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	4.100	-	m/hr	-	4.100	-
1162	Concrete Pipes, 2.5m pipes, 450mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	4.500	9.000	m/hr	-	4.500	9.000
1163	Concrete Pipes, 2.5m pipes, 525mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	3.300	-	m/hr	-	3.300	-
1164	Concrete Pipes, 2.5m pipes, 525mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	3.800	-	m/hr	-	3.800	-
1165	Concrete Pipes, 2.5m pipes, 525mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	4.100	-	m/hr	-	4.100	-
1166	Concrete Pipes, 2.5m pipes, 600mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	3.000	-	m/hr	-	3.000	-
1167	Concrete Pipes, 2.5m pipes, 600mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	3.500	-	m/hr	-	3.500	-
1168	Concrete Pipes, 2.5m pipes, 600mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	4.000	-	m/hr	-	4.000	-
1169	Concrete Pipes, 2.5m pipes, 675mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.800	-	m/hr	-	2.800	-
1170	Concrete Pipes, 2.5m pipes, 675mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	3.300	-	m/hr	-	3.300	-
1171	Concrete Pipes, 2.5m pipes, 675mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	3.700	-	m/hr	-	3.700	-
1172	Concrete Pipes, 2.5m pipes, 750mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	2.600	-	m/hr	-	2.600	-
1173	Concrete Pipes, 2.5m pipes, 750mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	3.100	-	m/hr	-	3.100	-
1174	Concrete Pipes, 2.5m pipes, 750mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	3.600	-	m/hr	-	3.600	-
1175	Lay Shingle Around Pipework, under 150mm dia	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	-	7.000	-	m/hr	-	7.000	-
1176	Lay Shingle Around Pipework, over 150mm dia	Roads & Bridges	Civil	Roads & External Works	Drainage	m/hr	4.000	5.500	9.000	m/hr	4.000	5.500	9.000
	Roads & External Works - Land Drains												
975	Land Drains, Concrete, butt jointed, under 150mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Land Drains	m/hr	-	11.600	-	m/hr	-	11.600	-
976	Land Drains, Concrete, butt jointed, under 150mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Land Drains	m/hr	-	14.100	-	m/hr	-	14.100	-
977	Land Drains, Concrete, butt jointed, under 150mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Land Drains	m/hr	-	18.800	-	m/hr	-	18.800	-
978	Land Drains, Concrete, butt jointed, 150-225mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Land Drains	m/hr	-	8.400	-	m/hr	-	8.400	-
979	Land Drains, Concrete, butt jointed, 150-225mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Land Drains	m/hr	-	10.200	-	m/hr	-	10.200	-
980	Land Drains, Concrete, butt jointed, 150-225mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Land Drains	m/hr	-	11.900	-	m/hr	-	11.900	-
981	Land Drains, Concrete, butt jointed, 225-300mm dia, 0-5m run	Roads & Bridges	Civil	Roads & External Works	Land Drains	m/hr	-	5.400	-	m/hr	-	5.400	-
982	Land Drains, Concrete, butt jointed, 225-300mm dia, 5-30m run	Roads & Bridges	Civil	Roads & External Works	Land Drains	m/hr	-	6.500	-	m/hr	-	6.500	-
983	Land Drains, Concrete, butt jointed, 225-300mm dia, over 30m run	Roads & Bridges	Civil	Roads & External Works	Land Drains	m/hr	-	7.900	-	m/hr	-	7.900	-
	Roads & External Works - Manholes and Gulleys												
1032	Concrete Pre-Cast Manhole Units, 610 x 455 x 51 mm	Roads & Bridges	Civil	Roads & External Works	Manholes and Gulleys	hrs/no	-	1.200	-	no/hrs	-	0.833	-
1033	Concrete Pre-Cast Manhole Units, 990 x 610 x 64 mm	Roads & Bridges	Civil	Roads & External Works	Manholes and Gulleys	hrs/no	-	1.600	-	no/hrs	-	0.625	-
1034	Brickwork Manhole, 1.0 brick engineering	Roads & Bridges	Civil	Roads & External Works	Manholes and Gulleys	m2/hr	-	0.300	-	m2/hr	-	0.300	-
1035	Brickwork Manhole, 1.5 brick engineering	Roads & Bridges	Civil	Roads & External Works	Manholes and Gulleys	m2/hr	-	0.200	-	m2/hr	-	0.200	-
1036	Brickwork Manhole, 2.0 brick engineering	Roads & Bridges	Civil	Roads & External Works	Manholes and Gulleys	m2/hr	-	0.200	-	m2/hr	-	0.200	-
1037	Benching to Manhole, under 0.5m2	Roads & Bridges	Civil	Roads & External Works	Manholes and Gulleys	hrs/no	-	0.900	-	no/hrs	-	1.111	-
1038	Benching to Manhole, 0.5-0.75m2	Roads & Bridges	Civil	Roads & External Works	Manholes and Gulleys	hrs/no	-	1.200	-	no/hrs	-	0.833	-
1039	Benching to Manhole, 0.75-1.0m2	Roads & Bridges	Civil	Roads & External Works	Manholes and Gulleys	hrs/no	-	1.800	-	no/hrs	-	0.556	-
1040	Brickwork Manhole, build in pipes, under 150mm dia	Roads & Bridges	Civil	Roads & External Works	Manholes and Gulleys	hrs/no	-	0.100	-	no/hrs	-	10.000	-
1041	Brickwork Manhole, build in pipes, 150-225mm dia	Roads & Bridges	Civil	Roads & External Works	Manholes and Gulleys	hrs/no	-	0.200	-	no/hrs	-	5.000	-
1042	Brickwork Manhole, build in pipes, over 225mm dia	Roads & Bridges	Civil	Roads & External Works	Manholes and Gulleys	hrs/no	-	0.300	-	no/hrs	-	3.333	-
1043	Brickwork Manhole, build in cast iron covers	Roads & Bridges	Civil	Roads & External Works	Manholes and Gulleys	hrs/no	0.300	0.600	1.200	no/hrs	-	1.667	-
1044	Yard Gulleys, 75-150mm dia pipes, bed and level	Roads & Bridges	Civil	Roads & External Works	Manholes and Gulleys	no/hr	-	2.200	-	no/hr	-	2.200	-
1045	Yard Gulleys, 150-225mm dia pipes, bed and level	Roads & Bridges	Civil	Roads & External Works	Manholes and Gulleys	no/hr	-	1.800	-	no/hr	-	1.800	-

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
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1046	Yard Gulleys, 225-300mm dia pipes, bed and level	Roads & Bridges	Civil	Roads & External Works	Manholes and Gulleys	no/hr	-	1.500	-	no/hr	-	1.500	-
1047	Road Gulleys, 600mm deep, bed and level	Roads & Bridges	Civil	Roads & External Works	Manholes and Gulleys	no/hr	-	1.200	-	no/hr	-	1.200	-
1048	Road Gulleys, 750mm deep, bed and level	Roads & Bridges	Civil	Roads & External Works	Manholes and Gulleys	no/hr	-	0.800	-	no/hr	-	0.800	-
1049	Road Gulleys, 900mm deep, bed and level	Roads & Bridges	Civil	Roads & External Works	Manholes and Gulleys	no/hr	-	0.400	-	no/hr	-	0.400	-
1050	Road Gulleys, 1,200mm deep, bed and level	Roads & Bridges	Civil	Roads & External Works	Manholes and Gulleys	no/hr	-	0.300	-	no/hr	-	0.300	-
1051	Road Gulleys, install gratings	Roads & Bridges	Civil	Roads & External Works	Manholes and Gulleys	no/hr	-	5.000	-	no/hr	-	5.000	-
1052	PVC Manhole	Roads & Bridges	Civil	Roads & External Works	Manholes and Gulleys	mins/no	-	15.000	-	no/hrs	-	4.000	-
	B14 Paving and surfacing												
	Roads & External Works - Road Works												
1009	Concrete Road surfacing, Kerbs or Side Haunches	Roads & Bridges	Civil	Roads & External Works	Paving and surfacing	m3/hr	-	0.400	-	m3/hr	-	0.400	-
1010	Concrete Road surfacing, 150mm thick	Roads & Bridges	Civil	Roads & External Works	Paving and surfacing	m2/hr	-	12.500	-	m2/hr	-	12.500	-
1011	Concrete Road surfacing, 200mm thick	Roads & Bridges	Civil	Roads & External Works	Paving and surfacing	m2/hr	-	7.700	-	m2/hr	-	7.700	-
1012	Concrete Road surfacing, 300mm thick	Roads & Bridges	Civil	Roads & External Works	Paving and surfacing	m2/hr	-	6.700	-	m2/hr	-	6.700	-
	Roads & External Works - Kerbs & Paving												
984	Concrete Slabs, laid on bedding, to slight falls	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	m2/hr	2.700	-	4.200	m2/hr	2.700	-	4.200
985	Concrete Slabs, laid on bedding, to steep falls	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	m2/hr	2.300	-	2.700	m2/hr	2.300	-	2.700
986	Concrete Slabs, laid in mortar, to slight falls	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	m2/hr	1.500	-	2.300	m2/hr	1.500	-	2.300
987	Concrete Slabs, laid in mortar, to steep falls	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	m2/hr	1.100	-	1.500	m2/hr	1.100	-	1.500
988	Concrete Slabs, laid on sand, to slight falls	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	m2/hr	1.700	-	2.800	m2/hr	1.700	-	2.800
989	Concrete Slabs, laid on sand, to steep falls	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	m2/hr	1.600	-	1.900	m2/hr	1.600	-	1.900
990	Cobble Stones, laid in mortar, no patterns	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	m2/hr	-	0.300	-	m2/hr	-	0.300	-
991	Cobble Stones, laid in mortar, with patterns	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	m2/hr	-	0.200	-	m2/hr	-	0.200	-
992	Artificial Stone, laid on sand, with patterns	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	m2/hr	-	2.500	-	m2/hr	-	2.500	-
993	Brick Paviers, in mortar, straight joints	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	m2/hr	0.900	1.300	1.900	m2/hr	0.900	1.300	1.900
994	Brick Paviers, in mortar, herringbone pattern	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	m2/hr	-	1.000	1.200	m2/hr	-	1.000	1.200
995	Gravel Paths, including preparation of sub-base	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	m2/hr	-	10.500	-	m2/hr	-	10.500	-
996	Concrete Paths, 100mm thick, including preparation of sub-base	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	m2/hr	-	2.500	-	m2/hr	-	2.500	-
997	Concrete Kerbs or Channels, laid straight	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	m/hr	-	6.200	-	m/hr	-	6.200	-
998	Concrete Kerbs or Channels, laid to 5m radius	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	m/hr	-	4.500	-	m/hr	-	4.500	-
999	Concrete Kerbs or Channels, laid to 10m radius	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	m/hr	-	5.000	-	m/hr	-	5.000	-
1000	Concrete Kerbs or Channels, laid to 20m radius	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	m/hr	-	5.500	-	m/hr	-	5.500	-
1001	Stone/Granite Kerbs or Channels, laid straight	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	m/hr	-	3.500	-	m/hr	-	3.500	-
1002	Concrete Edging, laid straight	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	m/hr	-	7.700	-	m/hr	-	7.700	-
1003	Concrete Edging, laid to 5m radius	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	m/hr	-	5.800	-	m/hr	-	5.800	-
1004	Concrete Edging, laid to 10m radius	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	m/hr	-	6.200	-	m/hr	-	6.200	-
1005	Concrete Edging, laid to 20m radius	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	m/hr	-	7.100	-	m/hr	-	7.100	-
1006	Cutting and Fitting Ends, Concrete Kerbs	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	no/hr	-	6.600	-	no/hr	-	6.600	-
1007	Cutting and Fitting Ends, Channels	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	no/hr	-	5.800	-	no/hr	-	5.800	-
1008	Cutting and Fitting Ends, Concrete Edging	Roads & Bridges	Civil	Roads & External Works	Kerbs & Paving	no/hr	-	8.300	-	no/hr	-	8.300	-
	Roads & External Works - Carpentry & Joinery												
1015	Formwork to Soffit of Manhole	Roads & Bridges	Civil	Roads & External Works	Carpentry & Joinery	m2/hr	-	1.800	-	m2/hr	-	1.800	-
1016	Formwork to Walls of Manhole	Roads & Bridges	Civil	Roads & External Works	Carpentry & Joinery	m2/hr	11.200	14.200	20.200	m2/hr	11.200	14.200	20.200
1017	Formwork to Road Edges, straight	Roads & Bridges	Civil	Roads & External Works	Carpentry & Joinery	m/hr	-	7.700	-	m/hr	-	7.700	-
1018	Formwork to Road Edges, curves	Roads & Bridges	Civil	Roads & External Works	Carpentry & Joinery	m/hr	-	6.200	-	m/hr	-	6.200	-
	B15 Fencing												
	Roads & External Works - Fencing Works												
1019	Infrastructure Hoarding, timber posts, plywood nailed to horizon	Roads & Bridges	Civil	Roads & External Works	Fencing Works	m/hr	1.000	1.200	-	m/hr	1.000	1.200	-
1020	Post Erection, Timber / Metal, dig, erect, fix	Roads & Bridges	Civil	Roads & External Works	Fencing Works	no/hr	3.300	4.500	-	no/hr	3.300	4.500	-
1021	Post Erection, Concrete, dig, erect, fix	Roads & Bridges	Civil	Roads & External Works	Fencing Works	no/hr	3.200	4.000	-	no/hr	3.200	4.000	-
1022	Fence Erection, Chainlink, posts at 1.5m	Roads & Bridges	Civil	Roads & External Works	Fencing Works	m/hr	-	4.200	-	m/hr	-	4.200	-
1023	Fence Erection, Chainlink, posts at 2.0m	Roads & Bridges	Civil	Roads & External Works	Fencing Works	m/hr	-	4.400	-	m/hr	-	4.400	-

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
	SECTION A - RULE OF THUMB												
1024	Fence Erection, Chainlink, posts at 3.0m	Roads & Bridges	Civil	Roads & External Works	Fencing Works	m/hr	-	5.500	-	m/hr	-	5.500	-
1025	Fence Erection, Chestnut Pailings, posts at 1.5m	Roads & Bridges	Civil	Roads & External Works	Fencing Works	m/hr	-	23.800	-	m/hr	-	23.800	-
1026	Fence Erection, Chestnut Pailings, posts at 2.0m	Roads & Bridges	Civil	Roads & External Works	Fencing Works	m/hr	-	33.300	-	m/hr	-	33.300	-
1027	Fence Erection, Chestnut Pailings, posts at 3.0m	Roads & Bridges	Civil	Roads & External Works	Fencing Works	m/hr	-	41.600	-	m/hr	-	41.600	-
1028	Fence Erection, Barbed Wire, posts at 1.5m	Roads & Bridges	Civil	Roads & External Works	Fencing Works	m/hr	-	71.400	-	m/hr	-	71.400	-
1029	Fence Erection, Barbed Wire, posts at 2.0m	Roads & Bridges	Civil	Roads & External Works	Fencing Works	m/hr	-	100.000	-	m/hr	-	100.000	-
1030	Fence Erection, Barbed Wire, posts at 3.0m	Roads & Bridges	Civil	Roads & External Works	Fencing Works	m/hr	-	125.000	-	m/hr	-	125.000	-
1031	Gate Erection, Chainlink on frame	Roads & Bridges	Civil	Roads & External Works	Fencing Works	no/hr	-	4.100	-	no/hr	-	4.100	-
	INSTALL FENCE	Roads & Bridges	Civil	Roads & External Works	Fencing Works	MH/L.M.	2.400	1.200	0.960	L.m./mh	0.417	0.833	1.042
	INSTALL GATES	Roads & Bridges	Civil	Roads & External Works	Fencing Works	MH/L.M.	6.000	3.000	2.400	L.m./mh	0.167	0.333	0.417
	TO RAIL	Roads & Bridges	Civil	Roads & External Works	Fencing Works	MH/L.M.	0.600	0.300	0.240	L.m./mh	1.667	3.333	4.167
	BARBWIRE, 3-STRANDS	Roads & Bridges	Civil	Roads & External Works	Fencing Works	MH/L.M.	0.600	0.300	0.240	L.m./mh	1.667	3.333	4.167
	B16 Landscaping												
	Roads & External Works - Landscaping												
969	Top Soil, spread, level and prepare for turf or seeding	Roads & Bridges	Civil	Roads & External Works	Landscaping	m2/hr	-	2.500	-	m2/hr	-	2.500	-
970	Top Soil, rake in fertilizer for seeding	Roads & Bridges	Civil	Roads & External Works	Landscaping	m2/hr	-	25.000	-	m2/hr	-	25.000	-
971	Planting, Shrubs and Hedges, under 750mm high	Roads & Bridges	Civil	Roads & External Works	Landscaping	no/hr	-	4.000	-	no/hr	-	4.000	-
972	Planting, Shrubs and Hedges, over 750mm high	Roads & Bridges	Civil	Roads & External Works	Landscaping	no/hr	-	1.500	-	no/hr	-	1.500	-
973	Planting, Saplings, under 3.0m high	Roads & Bridges	Civil	Roads & External Works	Landscaping	no/hr	-	1.700	-	no/hr	-	1.700	-
974	Turfing, including for minor preparations	Roads & Bridges	Civil	Roads & External Works	Landscaping	m2/hr	-	16.800	-	m2/hr	-	16.800	-
	B17 Railway work												
	Railway Works - Trackwork												
878	FST Floating Track Slab, side restraints	Railway	Civil	Railway Works	Trackwork	m/day	9.600	-	-	m/hr	1.200	-	-
879	FST Floating Track Slab, resin pads	Railway	Civil	Railway Works	Trackwork	m/day	10.200	-	-	m/hr	1.275	-	-
880	FST Floating Track Slab, slab units	Railway	Civil	Railway Works	Trackwork	m/day	10.600	-	-	m/hr	1.325	-	-
881	PCBT - Pre-cast Concrete Block Track, in Bored Tunnels	Railway	Civil	Railway Works	Trackwork	m/day	17.100	41.000	-	m/hr	2.138	5.125	-
882	PCBT - Pre-cast Concrete Block Track, in Cut and Cover Tunnels	Railway	Civil	Railway Works	Trackwork	m/day	-	35.000	-	m/hr	-	4.375	-
883	PCBT - Pre-cast Concrete Block Track, in Station Tunnels	Railway	Civil	Railway Works	Trackwork	m/day	-	35.000	-	m/hr	-	4.375	-
884	IST - Isolated Slab Track, in Bored Tunnels	Railway	Civil	Railway Works	Trackwork	m/day	-	20.000	-	m/hr	-	2.500	-
885	IST - Isolated Slab Track, in Cut and Cover Tunnels	Railway	Civil	Railway Works	Trackwork	m/day	-	34.000	-	m/hr	-	4.250	-
886	IST - Isolated Slab Track, in Station	Railway	Civil	Railway Works	Trackwork	m/day	-	29.000	-	m/hr	-	3.625	-
887	FST - Floating Slab Track, in Station	Railway	Civil	Railway Works	Trackwork	m/day	3.600	4.600	5.700	m/hr	0.450	0.575	0.713
888	Ballasted Track, in Mainline	Railway	Civil	Railway Works	Trackwork	m/day	57.000	71.000	115.000	m/hr	7.125	8.875	14.375
889	Ballasted Track, in Depot	Railway	Civil	Railway Works	Trackwork	m/day	-	28.000	-	m/hr	-	3.500	-
890	Non-Ballasted Track, in Depot	Railway	Civil	Railway Works	Trackwork	m/day	8.500	12.800	17.400	m/hr	1.063	1.600	2.175
891	Embedded / Paved Track, in Depot	Railway	Civil	Railway Works	Trackwork	m/day	-	71.000	-	m/hr	-	8.875	-
892	Heavy Maintenance / Train Wash Track, in Depot	Railway	Civil	Railway Works	Trackwork	m/day	-	29.000	-	m/hr	-	3.625	-
893	Maintenance Pit, in Depot	Railway	Civil	Railway Works	Trackwork	m/day	-	52.000	-	m/hr	-	6.500	-
894	Siding Trackwork, in Depot	Railway	Civil	Railway Works	Trackwork	m/day	-	38.000	-	m/hr	-	4.750	-
	B18 Tunnel excavation												
	Tunneling - Rock Tunnels												
Ref	Task / Description												
1231	Excavation, non explosive chemical method, cycle time	Tunnel	Civil	Tunnel excavation	Rock Excavation	mins	8.000	6.000	5.500	hr	0.133	0.100	0.092
1232	Excavation, non explosive chemical method, Class I Granite	Tunnel	Civil	Tunnel excavation	Rock Excavation	m3/cycle	0.300	0.900	1.200	m3/cycle	0.300	0.900	1.200
1233	Excavation, non explosive chemical method, Class II Granite	Tunnel	Civil	Tunnel excavation	Rock Excavation	m3/cycle	2.000	2.600	2.900	m3/cycle	2.000	2.600	2.900
1234	Excavation, non explosive chemical method, Class III Granite	Tunnel	Civil	Tunnel excavation	Rock Excavation	m3/cycle	1.200	1.400	1.800	m3/cycle	1.200	1.400	1.800
	B19 Tunnel linings												
	Tunneling - NATM Tunnels												
1192	Standard Advance Method, used on tunnels with max diameter	Tunnel	Civil	Tunnel lining	NATM Tunnels	m	-	7.000	-	m	-	7.000	-

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
	SECTION A - RULE OF THUMB												
1193	Half Face Advance Method, used on tunnels with max diameter	Tunnel	Civil	Tunnel lining	NATM Tunnels	m	-	10.000	-	m	-	10.000	-
1194	Double side Drift Advance Method, used on tunnels with diameter	Tunnel	Civil	Tunnel lining	NATM Tunnels	m	-	10.000	-	m	-	10.000	-
1195	Double side Drift Advance Method, used on tunnels with diameter	Tunnel	Civil	Tunnel lining	NATM Tunnels	m	-	10.000	-	m	-	10.000	-
1196	Excavation, London Clay, internal diameter under 7.0m	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	2.500	2.900	3.200	m/hr	0.313	0.363	0.400
1197	Excavation, London Clay, internal diameter 7.0-10.0m	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	1.500	2.000	2.500	m/hr	0.188	0.250	0.313
1198	Excavation, London Clay, internal diameter over 10.0m	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	1.000	1.300	1.500	m/hr	0.125	0.163	0.188
1199	Excavation, Woolwich/Reading Beds, internal diameter 2.0-7.0m	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	1.500	1.800	2.000	m/hr	0.188	0.225	0.250
1200	Excavation, Woolwich/Reading Beds, internal diameter 7.0-10.0m	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	-	1.500	-	m/hr	-	0.188	-
1201	Excavation, Woolwich/Reading Beds, internal diameter over 10.0m	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	-	1.000	1.500	m/hr	-	0.125	0.188
1202	Excavation, London Clay, Inclined Tunnels, diameter 2.0-7.0m	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	1.500	2.000	3.200	m/hr	0.188	0.250	0.400
1203	Excavation, London Clay, Inclined Tunnels, diameter 7.0-10.0m	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	0.500	1.000	2.200	m/hr	0.063	0.125	0.275
1204	Excavation, London Clay, Vertical Shafts, diameter 2.0-9.0m	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	1.000	1.500	2.200	m/hr	0.125	0.188	0.275
1205	Excavation, London Clay, Vertical Shafts, diameter 9.0-15.0m	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	0.500	1.000	2.600	m/hr	0.063	0.125	0.325
1206	Excavation, London Clay, Circulation Halls	Tunnel	Civil	Tunnel lining	NATM Tunnels	m circumf/day	0.800	1.000	1.200	m circumf/hr	0.100	0.125	0.150
1207	Excavation, London Clay, Junction Excavation	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	-	0.200	-	m/hr	-	0.025	-
1208	Mucking Capacity, 1 access with 2 crews	Tunnel	Civil	Tunnel lining	NATM Tunnels	m3/day	190.000	225.000	279.000	m3/hr	23.750	28.125	34.875
1209	Mucking Capacity, 1 access with 4 crews	Tunnel	Civil	Tunnel lining	NATM Tunnels	m3/day	255.000	300.000	366.000	m3/hr	31.875	37.500	45.750
1210	Mucking Capacity, 2 access with 4 crews	Tunnel	Civil	Tunnel lining	NATM Tunnels	m3/day	382.000	450.000	549.000	m3/hr	47.750	56.250	68.625
1211	Sprayed Secondary Lining, Tunnels, diameter under 6.5m	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	2.100	2.500	2.800	m/hr	0.263	0.313	0.350
1212	Sprayed Secondary Lining, Tunnels, diameter over 6.5m	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	1.500	2.000	2.400	m/hr	0.188	0.250	0.300
1213	Sprayed Secondary Lining, Inclined Tunnels, diameter under 6.5m	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	1.500	2.000	2.300	m/hr	0.188	0.250	0.288
1214	Sprayed Secondary Lining, Inclined Tunnels, diameter over 6.5m	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	1.000	1.500	1.900	m/hr	0.125	0.188	0.238
1215	Sprayed Secondary Lining, Vertical Shafts, diameter under 6.5m	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	1.800	2.000	2.500	m/hr	0.225	0.250	0.313
1216	Sprayed Secondary Lining, Vertical Shafts, diameter over 6.5m	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	2.200	2.500	3.100	m/hr	0.275	0.313	0.388
1217	Sprayed Secondary Lining, Circulation Halls, diameter under 10m	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	-	2.000	2.300	m/hr	-	0.250	0.288
1218	Sprayed Secondary Lining, Intermediate Landing Tunnels with	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	1.700	2.000	2.100	m/hr	0.213	0.250	0.263
1219	Sprayed Secondary Lining, Intermediate Landing Tunnels with	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	1.600	2.100	2.300	m/hr	0.200	0.263	0.288
1220	Sprayed Secondary Lining, Tunnel Junctions	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	-	0.200	0.300	m/hr	-	0.025	0.038
1221	Insitu Permanent Lining, 12m bays, 350-400mm reinforced with	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	-	8.400	12.000	m/hr	-	1.050	1.500
1222	Insitu Permanent Lining, extra over excavate/lining time to allow	Tunnel	Civil	Tunnel lining	NATM Tunnels	%	-	25.000	-	%	-	25.000	-
1223	Excavate and Line Cycle Time, Running Tunnels	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	3.200	4.000	4.900	m/hr	0.400	0.500	0.613
1224	Excavate and Line Cycle Time, Station Access Adits	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	3.300	3.900	4.200	m/hr	0.413	0.488	0.525
1225	Excavate and Line Cycle Time, Concourse Tunnels	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	2.200	2.500	2.700	m/hr	0.275	0.313	0.338
1226	Excavate and Line Cycle Time, Escalator Tunnels	Tunnel	Civil	Tunnel lining	NATM Tunnels	m/day	1.200	1.500	1.700	m/hr	0.150	0.188	0.213
	Tunneling - Soft Ground												
1227	Excavate vertical access shaft, 6m diameter	Tunnel	Civil	Tunnel excavation	Soft Ground Excavation	m/day	-	3.000	5.000	m/hr	-	0.375	0.625
1228	Excavate vertical access shaft, 10m diameter	Tunnel	Civil	Tunnel excavation	Soft Ground Excavation	m/day	-	1.500	2.500	m/hr	-	0.188	0.313
	Tunneling - Medium Ground												
1229	Excavate vertical access shaft, 6m diameter	Tunnel	Civil	Tunnel excavation	Medium Ground Excavation	m/day	0.400	0.700	1.000	m/hr	0.050	0.088	0.125
1230	Excavate vertical access shaft, 10m diameter	Tunnel	Civil	Tunnel excavation	Medium Ground Excavation	m/day	0.700	1.000	1.600	m/hr	0.088	0.125	0.200
	B20 Tunnel support and stabilisation												
	Tunneling - Cut and Cover												
1235	Formwork Tunnel Forms, Wall and Slab poured as one	Tunnel	Civil	Tunnel support and stabilisation	Formwork	m2/hr	13.000	15.600	17.500	m2/hr	13.000	15.600	17.500
	SECTION C - CONCRETE WORK												
	C1 Generally												
	Concrete Works - Concrete Mixing												
448	Concrete Weight, 1m3	Building	Civil	Concrete Works	Concrete Mixing	Tonnes	-	2.400	-	kg	-	2,400.000	-
449	Readymix Lorry, Length	Building	Civil	Concrete Works	Concrete Mixing	m	-	8.300	-	m	-	8.300	-
450	Readymix Lorry, Width	Building	Civil	Concrete Works	Concrete Mixing	m	-	2.500	-	m	-	2.500	-

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
	SECTION A - RULE OF THUMB												
451	Readymix Lorry, Height	Building	Civil	Concrete Works	Concrete Mixing	m	-	3.700	-	m	-	3.700	-
452	Readymix Lorry, Length	Building	Civil	Concrete Works	Concrete Mixing	Tonnes	-	24.400	-	kg	-	24.400.000	-
453	Readymix Lorry, Turning Circle	Building	Civil	Concrete Works	Concrete Mixing	m	-	16.400	-	m	-	16.400	-
454	Readymix Lorry, Allowable Access Ramp Gradient	Building	Civil	Concrete Works	Concrete Mixing	degrees	-	17.000	20.000	degrees	-	17.000	20.000
455	Mixing Concrete, By Hand	Building	Civil	Concrete Works	Concrete Mixing	m3/hr	-	0.300	-	m3/hr	-	0.300	-
456	Mixing Concrete, Single Drum Paddle Mixer	Building	Civil	Concrete Works	Concrete Mixing	m3/hr	158.000	180.000	210.000	m3/hr	158.000	180.000	210.000
457	Mixing Concrete, Double Drum Paddle Mixer	Building	Civil	Concrete Works	Concrete Mixing	m3/hr	315.000	370.000	420.000	m3/hr	315.000	370.000	420.000
458	Mixing Concrete, Single Drum Plant Pan Mixer	Building	Civil	Concrete Works	Concrete Mixing	m3/hr	-	120.000	-	m3/hr	-	120.000	-
459	Mixing Concrete, Dry Mix Plant	Building	Civil	Concrete Works	Concrete Mixing	m3/hr	-	90.000	-	m3/hr	-	90.000	-
	Concrete Works - Post Tensioning												
501	Lag for Initial Stress Tensioning after 1st bay cast	Building	Civil	Concrete Works	Post Tensioning	hrs	-	48.000	-	hrs	-	48.000	-
502	Lag for Final Stress Tensioning after Initial Stress	Building	Civil	Concrete Works	Post Tensioning	hrs	-	120.000	-	hrs	-	120.000	-
	Concrete Works - Concrete Finishes												
485	Surface Finishes, Steel Float By Hand	Building	Civil	Concrete Works	Concrete Finishes	m2/hr	9.200	13.900	25.000	m2/hr	9.200	13.900	25.000
486	Surface Finishes, Wood Float By Hand	Building	Civil	Concrete Works	Concrete Finishes	m2/hr	11.700	17.200	29.400	m2/hr	11.700	17.200	29.400
487	Surface Finishes, Power Float	Building	Civil	Concrete Works	Concrete Finishes	m2/hr	13.900	20.800	37.000	m2/hr	13.900	20.800	37.000
488	Surface Finishes, Light Brush on Trowel	Building	Civil	Concrete Works	Concrete Finishes	m2/hr	55.800	90.100	170.000	m2/hr	55.800	90.100	170.000
489	Surface Finishes, Brush on Trowel Margin	Building	Civil	Concrete Works	Concrete Finishes	m2/hr	28.80	48.500	85.000	m2/hr	28.80	48.500	85.000
490	Surface Finishes, Sprayed By Pump, expose aggregate	Building	Civil	Concrete Works	Concrete Finishes	m2/hr	65.000	95.000	145.000	m2/hr	65.000	95.000	145.000
491	Surface Finishes, Wire Brush, expose aggregate	Building	Civil	Concrete Works	Concrete Finishes	m2/hr	15.000	25.000	30.000	m2/hr	15.000	25.000	30.000
492	Making Good Walls, prepare, shutter, pour	Building	Civil	Concrete Works	Concrete Finishes	m2/hr	-	5.500	8.600	m2/hr	-	5.500	8.600
493	Making Good Columns, prepare, shutter, pour	Building	Civil	Concrete Works	Concrete Finishes	m2/hr	-	2.800	6.900	m2/hr	-	2.800	6.900
494	Making Good Sides of Beams, prepare, shutter, pour	Building	Civil	Concrete Works	Concrete Finishes	m2/hr	-	2.800	7.000	m2/hr	-	2.800	7.000
495	Making Good Slab Soffits, prepare, shutter, pour	Building	Civil	Concrete Works	Concrete Finishes	m2/hr	-	4.200	5.500	m2/hr	-	4.200	5.500
496	Making Good Bolt Holes, prepare, shutter, pour	Building	Civil	Concrete Works	Concrete Finishes	no/hr	14.800	16.800	25.800	no/hr	14.800	16.800	25.800
497	Making Good Rubdown Precast Concrete, prepare, shutter, po	Building	Civil	Concrete Works	Concrete Finishes	m2/hr	-	18.000	-	m2/hr	-	18.000	-
498	Making Good Scabble 3 head brush hammer, prepare, shutter,	Building	Civil	Concrete Works	Concrete Finishes	hrs/m2	30.700	59.500	73.800	m2/hrs	0.033	0.017	0.014
	C2 Poured concrete												
	Concrete Works - Concrete Placement												
460	Placing concrete, lorry based pump	Building	Civil	Concrete Works	Concrete Placement	m3/hr	30.000	40.000	50.000	m3/hr	30.000	40.000	50.000
461	Hollorib Decking, concrete topping	Building	Civil	Concrete Works	Concrete Placement	m2/hr	85.000	100.000	120.000	m2/hr	85.000	100.000	120.000
462	Hollorib Decking, concrete topping, incl PowerFloat	Building	Civil	Concrete Works	Concrete Placement	m2/hr	40.000	50.000	70.000	m2/hr	40.000	50.000	70.000
463	Placing Concrete, By Wheelbarrow over 1-10m	Building	Civil	Concrete Works	Concrete Placement	m3/hr	2.100	2.300	2.500	m3/hr	2.100	2.300	2.500
464	Placing Concrete, By Wheelbarrow over 10-20m	Building	Civil	Concrete Works	Concrete Placement	m3/hr	1.500	1.800	2.100	m3/hr	1.500	1.800	2.100
465	Placing Concrete, By Wheelbarrow over 20-50m	Building	Civil	Concrete Works	Concrete Placement	m3/hr	0.800	1.100	1.500	m3/hr	0.800	1.100	1.500
466	Placing Direct From Readymix Lorry, Mass Fill	Building	Civil	Concrete Works	Concrete Placement	m3/hr	2.800	3.100	3.300	m3/hr	2.800	3.100	3.300
467	Placing Direct From Readymix Lorry, 50mm Blinding	Building	Civil	Concrete Works	Concrete Placement	m3/hr	-	1.300	1.600	m3/hr	-	1.300	1.600
468	Placing Direct From Readymix Lorry, Ground Beams	Building	Civil	Concrete Works	Concrete Placement	m3/hr	1.500	-	1.700	m3/hr	1.500	-	1.700
469	Placing Direct From Readymix Lorry, Pile Caps	Building	Civil	Concrete Works	Concrete Placement	m3/hr	1.000	1.500	2.300	m3/hr	1.000	1.500	2.300
470	Placing Direct From Readymix Lorry, Duct Walls	Building	Civil	Concrete Works	Concrete Placement	m3/hr	-	0.800	1.100	m3/hr	-	0.800	1.100
471	Placing Direct From Readymix Lorry, Stub Columns	Building	Civil	Concrete Works	Concrete Placement	m3/hr	-	0.400	0.600	m3/hr	-	0.400	0.600
472	Placing Direct From Readymix Lorry, Ground Slab	Building	Civil	Concrete Works	Concrete Placement	m3/hr	2.100	2.300	2.600	m3/hr	2.100	2.300	2.600
473	Placing Direct From Readymix Lorry, Drains Bed and Cover	Building	Civil	Concrete Works	Concrete Placement	m3/hr	-	0.900	1.000	m3/hr	-	0.900	1.000
474	Placing From Tower Crane, Pile Caps	Building	Civil	Concrete Works	Concrete Placement	m3/hr	1.200	1.400	1.600	m3/hr	1.200	1.400	1.600
475	Placing From Tower Crane, Mass Fill	Building	Civil	Concrete Works	Concrete Placement	m3/hr	4.000	4.500	5.500	m3/hr	4.000	4.500	5.500
476	Placing From Tower Crane, Slabs under 150mm thick	Building	Civil	Concrete Works	Concrete Placement	m3/hr	0.900	1.300	1.700	m3/hr	0.900	1.300	1.700
477	Placing From Tower Crane, Slabs over 150mm thick	Building	Civil	Concrete Works	Concrete Placement	m3/hr	1.200	1.500	1.800	m3/hr	1.200	1.500	1.800
478	Placing From Tower Crane, Trough/Coffered Slabs	Building	Civil	Concrete Works	Concrete Placement	m3/hr	0.900	1.100	1.200	m3/hr	0.900	1.100	1.200
479	Placing From Tower Crane, Stairs and Landings	Building	Civil	Concrete Works	Concrete Placement	m3/hr	0.600	0.700	0.900	m3/hr	0.600	0.700	0.900
480	Placing From Tower Crane, Blinding	Building	Civil	Concrete Works	Concrete Placement	m3/hr	0.800	1.000	1.100	m3/hr	0.800	1.000	1.100
481	Placing From Tower Crane, Beams under 150mm thick	Building	Civil	Concrete Works	Concrete Placement	m3/hr	0.500	0.600	0.800	m3/hr	0.500	0.600	0.800
482	Placing From Tower Crane, Beams over 150mm thick	Building	Civil	Concrete Works	Concrete Placement	m3/hr	0.600	0.800	1.000	m3/hr	0.600	0.800	1.000
483	Placing From Tower Crane, Walls	Building	Civil	Concrete Works	Concrete Placement	m3/hr	0.600	1.100	1.500	m3/hr	0.600	1.100	1.500
484	Placing From Tower Crane, Columns	Building	Civil	Concrete Works	Concrete Placement	m3/hr	0.400	0.500	0.600	m3/hr	0.400	0.500	0.600

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
	SECTION A - RULE OF THUMB												
	C3 Reinforcement												
	Concrete Works - Reinforcement												
405	Slabs/Foundations, steelfixing, 6mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	40.300	38.400	36.500	kg/hrs	24.814	26.042	27.397
406	Slabs/Foundations, steelfixing, 8mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	28.200	26.900	25.800	kg/hrs	35.461	37.175	38.760
407	Slabs/Foundations, steelfixing, 10mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	22.500	20.600	20.100	kg/hrs	44.444	48.544	49.751
408	Slabs/Foundations, steelfixing, 12mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	16.900	16.300	15.400	kg/hrs	59.172	61.350	64.935
409	Slabs/Foundations, steelfixing, 16mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	12.000	11.500	10.900	kg/hrs	83.333	86.957	91.743
410	Slabs/Foundations, steelfixing, 20mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	9.200	8.600	8.200	kg/hrs	108.696	116.279	121.951
411	Slabs/Foundations, steelfixing, 25mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	6.900	6.700	6.500	kg/hrs	144.928	149.254	153.846
412	Slabs/Foundations, steelfixing, 32mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	5.700	5.500	5.200	kg/hrs	175.439	181.818	192.308
413	Slabs/Foundations, steelfixing, 40mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	5.300	5.100	4.900	kg/hrs	188.679	196.078	204.082
414	Slabs/Foundations, steelfixing, 50mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	5.200	4.900	4.600	kg/hrs	192.308	204.082	217.391
415	Beams/Columns, steelfixing, 6mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	55.400	52.800	50.600	kg/hrs	18.051	18.939	19.763
416	Beams/Columns, steelfixing, 8mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	38.800	37.000	35.100	kg/hrs	25.773	27.027	28.490
417	Beams/Columns, steelfixing, 10mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	29.500	28.400	26.900	kg/hrs	33.898	35.211	37.175
418	Beams/Columns, steelfixing, 12mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	23.400	22.400	21.900	kg/hrs	42.735	44.643	45.662
419	Beams/Columns, steelfixing, 16mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	16.600	15.800	15.100	kg/hrs	60.241	63.291	66.225
420	Beams/Columns, steelfixing, 20mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	12.400	11.900	11.300	kg/hrs	80.645	84.034	88.496
421	Beams/Columns, steelfixing, 25mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	9.900	9.200	8.700	kg/hrs	101.010	108.696	114.943
422	Beams/Columns, steelfixing, 32mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	6.800	6.600	6.200	kg/hrs	147.059	151.515	161.290
423	Beams/Columns, steelfixing, 40mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	6.100	5.900	5.600	kg/hrs	163.934	169.492	178.571
424	Beams/Columns, steelfixing, 50mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	6.100	5.900	5.600	kg/hrs	163.934	169.492	178.571
425	Walls, steelfixing, 6mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	41.200	40.800	39.100	kg/hrs	24.272	24.510	25.575
426	Walls, steelfixing, 8mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	29.200	28.600	27.400	kg/hrs	34.247	34.965	36.496
427	Walls, steelfixing, 10mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	22.700	22.000	21.200	kg/hrs	44.053	45.455	47.170
428	Walls, steelfixing, 12mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	17.600	17.300	16.900	kg/hrs	56.818	57.803	59.172
429	Walls, steelfixing, 16mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	12.400	12.200	11.800	kg/hrs	80.645	81.967	84.746
430	Walls, steelfixing, 20mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	9.400	9.200	8.700	kg/hrs	106.383	108.696	114.943
431	Walls, steelfixing, 25mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	7.400	7.200	7.000	kg/hrs	135.135	138.889	142.857
432	Walls, steelfixing, 32mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	7.000	6.800	6.400	kg/hrs	142.857	147.059	156.250
433	Walls, steelfixing, 40mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	6.400	6.100	5.900	kg/hrs	156.250	163.934	169.492
434	Walls, steelfixing, 50mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	5.300	5.100	4.800	kg/hrs	188.679	196.078	208.333
435	Staircases, steelfixing, 6mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	48.900	48.000	45.500	kg/hrs	20.450	20.833	21.978
436	Staircases, steelfixing, 8mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	34.400	33.600	31.900	kg/hrs	29.070	29.762	31.348
437	Staircases, steelfixing, 10mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	26.600	25.800	24.300	kg/hrs	37.594	38.760	41.152
438	Staircases, steelfixing, 12mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	20.900	20.400	19.500	kg/hrs	47.847	49.020	51.282
439	Staircases, steelfixing, 16mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	14.600	14.400	13.800	kg/hrs	68.493	69.444	72.464
440	Staircases, steelfixing, 20mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	11.300	10.800	10.500	kg/hrs	88.496	92.593	95.238
441	Staircases, steelfixing, 25mm	Building	Civil	Concrete Works	Reinforcement	hrs/tonne	8.600	8.400	8.200	kg/hrs	116.279	119.048	121.951
	Concrete Works - Reinforcement Ratios												
442	Pile Cap, Concrete m3 x Ratio = Rebar Tonnes	Building	Civil	Concrete Works	Reinforcement Ratios	% ratio	-	14.800	-	% ratio	-	14.800	-
443	Base Slab, Concrete m3 x Ratio = Rebar Tonnes	Building	Civil	Concrete Works	Reinforcement Ratios	% ratio	-	13.200	14.100	% ratio	-	13.200	14.100
444	Suspended Slab, Concrete m3 x Ratio = Rebar Tonnes	Building	Civil	Concrete Works	Reinforcement Ratios	% ratio	-	20.600	25.600	% ratio	-	20.600	25.600
445	Platform Slab, Concrete m3 x Ratio = Rebar Tonnes	Building	Civil	Concrete Works	Reinforcement Ratios	% ratio	-	15.600	-	% ratio	-	15.600	-
446	Columns, Concrete m3 x Ratio = Rebar Tonnes	Building	Civil	Concrete Works	Reinforcement Ratios	% ratio	15.800	18.700	28.700	% ratio	15.800	18.700	28.700
447	Walls, Concrete m3 x Ratio = Rebar Tonnes	Building	Civil	Concrete Works	Reinforcement Ratios	% ratio	14.700	15.000	-	% ratio	14.700	15.000	-
	C4 Shuttering												
	Concrete Works - Formwork												
350	Pilecaps, < 0.7m2	Building	Civil	Concrete Works	Formwork	m2/hr	0.900	1.600	2.000	m2/hr	0.900	1.600	2.000
351	Pilecaps, 0.7-2.5m2	Building	Civil	Concrete Works	Formwork	m2/hr	1.600	2.000	2.300	m2/hr	1.600	2.000	2.300
352	Pilecaps, 2.5-3.0m2	Building	Civil	Concrete Works	Formwork	m2/hr	2.000	2.300	2.500	m2/hr	2.000	2.300	2.500
353	Pilecaps, > 3.0m2	Building	Civil	Concrete Works	Formwork	m2/hr	2.300	2.500	3.100	m2/hr	2.300	2.500	3.100
354	Ground Beams, < 0.7m2	Building	Civil	Concrete Works	Formwork	m2/hr	1.100	1.700	1.800	m2/hr	1.100	1.700	1.800

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
	SECTION A - RULE OF THUMB												
355	Ground Beams, 0.7-1.5m2	Building	Civil	Concrete Works	Formwork	m2/hr	1.700	1.800	2.500	m2/hr	1.700	1.800	2.500
356	Ground Beams, 1.5-3.0m2	Building	Civil	Concrete Works	Formwork	m2/hr	1.800	2.500	2.600	m2/hr	1.800	2.500	2.600
357	Ground Beams, 3.0-5.0m2	Building	Civil	Concrete Works	Formwork	m2/hr	2.500	2.600	3.500	m2/hr	2.500	2.600	3.500
358	Elevated Plain Slab Soffit	Building	Civil	Concrete Works	Formwork	m2/hr	0.600	0.800	1.200	m2/hr	0.600	0.800	1.200
359	Beams, on erected falsework, width 100-200mm	Building	Civil	Concrete Works	Formwork	m2/hr	0.900	1.000	1.100	m2/hr	0.900	1.000	1.100
360	Beams, on erected falsework, width 200-300mm	Building	Civil	Concrete Works	Formwork	m2/hr	1.000	1.100	1.300	m2/hr	1.000	1.100	1.300
361	Beams, on erected falsework, width 300-500mm	Building	Civil	Concrete Works	Formwork	m2/hr	1.200	1.300	1.500	m2/hr	1.200	1.300	1.500
362	Beams, on erected falsework, width 500-750mm	Building	Civil	Concrete Works	Formwork	m2/hr	1.500	1.600	1.800	m2/hr	1.500	1.600	1.800
363	Beams, on erected falsework, width over 750mm	Building	Civil	Concrete Works	Formwork	m2/hr	1.400	1.500	1.700	m2/hr	1.400	1.500	1.700
364	Walls, Construct Kickers	Building	Civil	Concrete Works	Formwork	m2/hr	5.300	7.100	10.000	m2/hr	5.300	7.100	10.000
365	Walls, Fully Framed Formwork/Struts, 1.0-2.0m2	Building	Civil	Concrete Works	Formwork	m2/hr	0.900	1.800	1.900	m2/hr	0.900	1.800	1.900
366	Walls, Fully Framed Formwork/Struts, 2.0-5.0m2	Building	Civil	Concrete Works	Formwork	m2/hr	1.000	2.200	2.500	m2/hr	1.000	2.200	2.500
367	Walls, Fully Framed Formwork/Struts, over 5.0m2	Building	Civil	Concrete Works	Formwork	m2/hr	1.200	2.500	2.900	m2/hr	1.200	2.500	2.900
368	Walls, StoriForm Shutters, 1.0-3.0m2	Building	Civil	Concrete Works	Formwork	m2/hr	1.000	1.400	2.000	m2/hr	1.000	1.400	2.000
369	Walls, StoriForm Shutters, 3.0-5.0m2	Building	Civil	Concrete Works	Formwork	m2/hr	1.900	2.300	3.300	m2/hr	1.900	2.300	3.300
370	Walls, StoriForm Shutters, 5.0-10.0m2	Building	Civil	Concrete Works	Formwork	m2/hr	2.300	2.800	3.500	m2/hr	2.300	2.800	3.500
371	Walls, StoriForm Shutters, 10.0-15.0m2	Building	Civil	Concrete Works	Formwork	m2/hr	3.200	4.500	4.000	m2/hr	3.200	4.500	4.000
372	Walls, StoriForm Shutters, over 15.0m2	Building	Civil	Concrete Works	Formwork	m2/hr	3.800	4.800	5.400	m2/hr	3.800	4.800	5.400
373	Ground Slabs	Building	Civil	Concrete Works	Formwork	m2/hr	1.000	1.500	1.800	m2/hr	1.000	1.500	1.800
374	Columns, Construct Kickers, direct to slab	Building	Civil	Concrete Works	Formwork	no/hr	3.200	4.100	5.400	no/hr	3.200	4.100	5.400
375	Columns, Construct Kickers, suspended from soffit slab	Building	Civil	Concrete Works	Formwork	no/hr	1.200	2.800	3.200	no/hr	1.200	2.800	3.200
376	Columns, Square Sides, Timber Clamp/Prop, csa < 0.1m2	Building	Civil	Concrete Works	Formwork	m2/hr	1.300	1.600	1.800	m2/hr	1.300	1.600	1.800
377	Columns, Square Sides, Timber Clamp/Prop, csa 0.1-0.4m2	Building	Civil	Concrete Works	Formwork	m2/hr	1.800	2.100	2.400	m2/hr	1.800	2.100	2.400
378	Columns, Square Sides, Timber Clamp/Prop, csa over 0.4m2	Building	Civil	Concrete Works	Formwork	m2/hr	2.000	2.300	2.500	m2/hr	2.000	2.300	2.500
379	Columns, Square Sides, Steel Forms, 1.5 x 1.5 x 9.0m high	Building	Civil	Concrete Works	Formwork	m2/hr	7.900	9.500	10.300	m2/hr	7.900	9.500	10.300
380	Columns, Square Sides, Steel Forms, 2.0 x 2.0 x 9.0m high	Building	Civil	Concrete Works	Formwork	m2/hr	6.900	7.500	8.300	m2/hr	6.900	7.500	8.300
381	Columns, Square Sides, Steel Forms, 2.0 x 4.0 x 9.0m high	Building	Civil	Concrete Works	Formwork	m2/hr	8.500	10.200	12.000	m2/hr	8.500	10.200	12.000
382	Columns, Round Sides, Sacrificial Plastic Mould, 3.0-4.0m dia	Building	Civil	Concrete Works	Formwork	m2/hr	3.500	4.500	6.000	m2/hr	3.500	4.500	6.000
383	Columns, Round Sides, Steel Mould, 3.0-4.0m dia	Building	Civil	Concrete Works	Formwork	m2/hr	5.200	6.500	7.500	m2/hr	5.200	6.500	7.500
384	Columns, Sloping Column Heads, extra over rate	Building	Civil	Concrete Works	Formwork	hrs/no	-	2.500	3.500	no/hrs	-	0.400	0.286
385	Staircases, Stair Soffit, Sloping	Building	Civil	Concrete Works	Formwork	m2/hr	0.700	0.800	1.000	m2/hr	0.700	0.800	1.000
386	Staircases, Stair Soffit, Flat Landing	Building	Civil	Concrete Works	Formwork	m2/hr	0.800	0.900	1.200	m2/hr	0.800	0.900	1.200
387	Staircases, Wall Strings	Building	Civil	Concrete Works	Formwork	m2/hr	0.400	0.600	-	m2/hr	0.400	0.600	-
388	Staircases, Open Strings	Building	Civil	Concrete Works	Formwork	m2/hr	0.700	0.800	-	m2/hr	0.700	0.800	-
389	Staircases, Riser Boards fixed to strings	Building	Civil	Concrete Works	Formwork	m2/hr	-	2.500	2.800	m2/hr	-	2.500	2.800
390	Staircases, Risers fixed to Strings	Building	Civil	Concrete Works	Formwork	m2/hr	-	2.300	2.600	m2/hr	-	2.300	2.600
391	Waffle Flooring, 2.4m grid	Building	Civil	Concrete Works	Formwork	m2/hr	1.100	1.400	1.800	m2/hr	1.100	1.400	1.800
392	Shaft Slip Forming	Building	Civil	Concrete Works	Formwork	mm/hr	-	300.000	500.000	mm/hr	-	300.000	500.000
393	Table Form, Aluminum System, 400m2 bays	Building	Civil	Concrete Works	Formwork	m2/hr	2.100	3.200	3.800	m2/hr	2.100	3.200	3.800
394	Table Form, H-Frame Steel Falsework, 400m2 bays	Building	Civil	Concrete Works	Formwork	m2/hr	1.900	3.000	3.500	m2/hr	1.900	3.000	3.500
395	Tunnel Forms, Wall and Slab poured as one	Building	Civil	Concrete Works	Formwork	m2/hr	-	15.600	17.500	m2/hr	-	15.600	17.500
396	Hollorib Decking, lay deck	Building	Civil	Concrete Works	Formwork	m2/hr	-	43.500	47.500	m2/hr	-	43.500	47.500
397	Hollorib Decking, shear connecting studs	Building	Civil	Concrete Works	Formwork	m2/hr	-	29.300	31.200	m2/hr	-	29.300	31.200
398	Stop Ends, no perforations	Building	Civil	Concrete Works	Formwork	m2/hr	2.800	3.500	4.200	m2/hr	2.800	3.500	4.200
399	Stop Ends, minor perforations	Building	Civil	Concrete Works	Formwork	m2/hr	1.200	1.500	1.900	m2/hr	1.200	1.500	1.900
400	Stop Ends, dense perforations	Building	Civil	Concrete Works	Formwork	m2/hr	0.900	1.100	1.400	m2/hr	0.900	1.100	1.400
401	Box Outs, 0.01-0.05m2	Building	Civil	Concrete Works	Formwork	no/hr	7.600	8.200	9.100	no/hr	7.600	8.200	9.100
402	Box Outs, over 0.05m2	Building	Civil	Concrete Works	Formwork	no/hr	3.100	3.900	4.500	no/hr	3.100	3.900	4.500
403	Dummy Frames, under 3.0m2	Building	Civil	Concrete Works	Formwork	no/hr	4.500	6.200	7.100	no/hr	4.500	6.200	7.100
404	Dummy Frames, over 3.0m2	Building	Civil	Concrete Works	Formwork	no/hr	3.100	3.700	4.500	no/hr	3.100	3.700	4.500
	Roads & Bridges Works - Formwork												
963	Shaft Slip Forming	Roads & Bridges	Civil	Concrete Works	Formwork	mm/hr	-	300.000	500.000	mm/hr	-	300.000	500.000
	C5 Precast concrete												
	Concrete Works - Pre-Cast Concrete												
Ref	Task / Description												
499	Precast Plank and Block Flooring System, Plank Elements	Building	Civil	Concrete Works	Pre-Cast Concrete	hrs/plank	0.400	0.200	0.100	plank/hrs	2.500	5.000	10.000
500	Precast Plank and Block Flooring System, Block Elements	Building	Civil	Concrete Works	Pre-Cast Concrete	hrs/1000no	2.700	1.200	0.900	hrs/1000no	2.700	1.200	0.900

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
	SECTION A - RULE OF THUMB												
654	Browning (undercoat), Internal Walls under 2.5m high	Building	Civil	Finishes	Plastering	m2/hr	2.200	2.800	3.100	m2/hr	2.200	2.800	3.100
655	Browning (undercoat), Internal Walls over 2.5m high	Building	Civil	Finishes	Plastering	m2/hr	2.100	2.600	2.800	m2/hr	2.100	2.600	2.800
656	Browning (undercoat), Reveals and Columns less than 100mm wide	Building	Civil	Finishes	Plastering	m2/hr	9.900	10.000	10.100	m2/hr	9.900	10.000	10.100
657	Browning (undercoat), Reveals and Columns 100-200mm wide	Building	Civil	Finishes	Plastering	m2/hr	5.200	5.400	6.400	m2/hr	5.200	5.400	6.400
658	Browning (undercoat), Reveals and Columns 200-300mm wide	Building	Civil	Finishes	Plastering	m2/hr	3.300	3.600	3.900	m2/hr	3.300	3.600	3.900
659	Covings	Building	Civil	Finishes	Plastering	m/hr	-	5.000	-	m/hr	-	5.000	-
660	Skimming (topcoat), Internal Walls under 2.5m high	Building	Civil	Finishes	Plastering	m2/hr	6.100	6.700	7.300	m2/hr	6.100	6.700	7.300
661	Skimming (topcoat), Internal Walls over 2.5m high	Building	Civil	Finishes	Plastering	m2/hr	5.500	6.100	6.700	m2/hr	5.500	6.100	6.700
662	Skimming (topcoat), Reveals and Columns less than 100mm wide	Building	Civil	Finishes	Plastering	m2/hr	12.600	13.800	15.400	m2/hr	12.600	13.800	15.400
663	Skimming (topcoat), Reveals and Columns 100-200mm wide	Building	Civil	Finishes	Plastering	m2/hr	7.700	8.300	9.800	m2/hr	7.700	8.300	9.800
664	Skimming (topcoat), Reveals and Columns 200-300mm wide	Building	Civil	Finishes	Plastering	m2/hr	4.500	5.000	5.500	m2/hr	4.500	5.000	5.500
665	Plaster Board to Ceilings	Building	Civil	Finishes	Plastering	m2/hr	3.200	4.500	5.500	m2/hr	3.200	4.500	5.500
666	Plastering Ceilings, 1 Bonding, 1 Skimming	Building	Civil	Finishes	Plastering	m2/hr	1.100	1.700	2.400	m2/hr	1.100	1.700	2.400
667	Plastering Ceilings, Topcoat Skimming	Building	Civil	Finishes	Plastering	m2/hr	2.700	3.200	5.400	m2/hr	2.700	3.200	5.400
	Construction Finishess - Rendering												
649	Large Wall Areas, applied in 2 coats	Building	Civil	Finishes	Rendering	m2/hr	-	2.200	2.700	m2/hr	-	2.200	2.700
650	Small Wall Areas, applied in 2 coats	Building	Civil	Finishes	Rendering	m2/hr	-	1.500	1.700	m2/hr	-	1.500	1.700
651	Narrow Widths, applied in 2 coats	Building	Civil	Finishes	Rendering	m2/hr	-	1.200	1.400	m2/hr	-	1.200	1.400
652	Columns and Beams, applied in 2 coats	Building	Civil	Finishes	Rendering	m2/hr	-	1.500	1.700	m2/hr	-	1.500	1.700
653	Staircase and Soffits, applied in 2 coats	Building	Civil	Finishes	Rendering	m2/hr	-	1.400	-	m2/hr	-	1.400	-
	SECTION E - METALWORK												
	E 1 Generally												
	Structural Frames - Finishes												
1236	Grit Blasting to structural steel frames, standard to SA2.5	Building	Civil	Finishes	Blasting structural steel	m2/12hours	60.000	80.000	100.000	m2/12hou	60.000	80.000	100.000
	E2 Structural metalwork												
	Roads & Bridges Works - Structural Steelwork												
964	Simple Universal Beam Steel Roads & Bridges, erect support s	Roads & Bridges	Civil	Structural Steelwork	Structure Steel	days/no	-	1.200	-	no/hr	-	0.104	-
965	Simple Universal Beam Steel Roads & Bridges, erect 15m truss	Roads & Bridges	Civil	Structural Steelwork	Structure Steel	m/day	-	3.300	-	m/hr	-	0.413	-
	Roads & Bridges Works - Decking												
967	Simple Universal Beam Steel Roads & Bridges, concrete Road	Roads & Bridges	Civil	Structural Steelwork	Structure Steel	m/day	-	7.100	-	m/hr	-	0.888	-
	Roof Structures and Coverings - Steel Frames												
537	Steel Frame and Roof Members	Roads & Bridges	Civil	Roof Structures and Coverings	Structure Steel	Tons/day	3.400	-	4.600	kg/hr	425.000	-	575.000
538	Wall Frame, Bow String Truss and Frame	Roads & Bridges	Civil	Roof Structures and Coverings	Structure Steel	Tons/day	-	1.600	-	kg/hr	-	200.000	-
539	Roof Frame, Curved Truss and Frame	Roads & Bridges	Civil	Roof Structures and Coverings	Structure Steel	Tons/day	-	5.200	-	kg/hr	-	650.000	-
540	Wall Frame, Glazed Frame and Atrium	Roads & Bridges	Civil	Roof Structures and Coverings	Structure Steel	Tons/day	-	0.300	-	kg/hr	-	37.500	-
	E3 Non structural metalwork												
	Roads & Bridges Works - Finishes												
968	Simple Universal Beam Steel Roads & Bridges, Roads & Bridge	Roads & Bridges	Civil	Finishes	Metalwork	m/day	-	17.000	-	m/hr	-	2.125	-
	Finishes Builders Work and Finishes - Metalwork												
832	Install Metal Door and Frame	Building	Civil	Finishes	Metalwork	no/hr	-	0.200	-	no/hr	-	0.200	-
833	Install Balustrade & Railings	Building	Civil	Finishes	Metalwork	m/hr	-	1.500	-	m/hr	-	1.500	-

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
	SECTION A - RULE OF THUMB												
834	Install Railings to Staircases	Building	Civil	Finishes	Metalwork	no/day	-	0.800	-	no/hr	-	0.100	-
	Finishes Builders Work and Finishes - Metal Wall Panels	Building	Civil	Finishes	Metalwork								
835	Sub-Frame Installation, 1.5x0.5m panels	Building	Civil	Finishes	Metalwork	m2/day	12.200	15.000	17.500	m2/hr	1.525	1.875	2.188
836	VE Panel Installation, 1.5x0.5m panels	Building	Civil	Finishes	Metalwork	m2/day	1.000	1.400	1.900	m2/hr	0.125	0.175	0.238
	Roof Structures and Coverings - Metal Decking	Building	Civil	Finishes	Metalwork								
557	Metal Decking, large areas	Building	Civil	Finishes	Metalwork	m2/day	-	70.000	-	m2/hr	-	8.750	-
558	Metal Decking, small or complicated	Building	Civil	Finishes	Metalwork	m2/day	-	28.000	-	m2/hr	-	3.500	-
559	Titanium Sheeted Roofs	Building	Civil	Finishes	Metalwork	m2/day	-	9.500	-	m2/hr	-	1.188	-
560	Copper Roofs, flat work	Building	Civil	Finishes	Metalwork	m2/day	-	3.000	-	m2/hr	-	0.375	-
561	Copper Roofs, sloping work	Building	Civil	Finishes	Metalwork	m2/day	-	2.700	-	m2/hr	-	0.338	-
562	Zinc Roofs, flat work	Building	Civil	Finishes	Metalwork	m2/day	-	2.400	-	m2/hr	-	0.300	-
563	Zinc Roofs, sloping work	Building	Civil	Finishes	Metalwork	m2/day	-	2.100	-	m2/hr	-	0.263	-
564	Aluminium Roofs, flat work	Building	Civil	Finishes	Metalwork	m2/day	-	2.800	-	m2/hr	-	0.350	-
565	Aluminium Roofs, sloping work	Building	Civil	Finishes	Metalwork	m2/day	-	1.900	-	m2/hr	-	0.238	-
566	Lead Roofs, flat work	Building	Civil	Finishes	Metalwork	m2/day	-	2.500	-	m2/hr	-	0.313	-
567	Lead Roofs, sloping work	Building	Civil	Finishes	Metalwork	m2/day	-	2.100	-	m2/hr	-	0.263	-
568	Lead Roofs, dormer cheeks	Building	Civil	Finishes	Metalwork	m2/day	-	1.300	-	m2/hr	-	0.163	-
569	Lead Roofs, flat gutters	Building	Civil	Finishes	Metalwork	m/day	-	88.000	-	m/hr	-	11.000	-
570	Lead Roofs, flat copings	Building	Civil	Finishes	Metalwork	m/day	-	76.000	-	m/hr	-	9.500	-
571	Lead Roofs, stepped gutters	Building	Civil	Finishes	Metalwork	m/day	-	3.500	-	m/hr	-	0.438	-
572	Lead Roofs, shaped copings	Building	Civil	Finishes	Metalwork	m/day	-	3.300	-	m/hr	-	0.413	-
573	Lead Roofs, cover step flashings	Building	Civil	Finishes	Metalwork	m/day	-	3.200	-	m/hr	-	0.400	-
574	Lead Roofs, rooflight flashings	Building	Civil	Finishes	Metalwork	no/day	-	0.800	-	no/hr	-	0.100	-
575	Lead Roofs, domed roof coverings	Building	Civil	Finishes	Metalwork	m2/day	-	0.700	-	m2/hr	-	0.088	-
	SECTION F - WOODWORK												
	F1 Generally												
	Finishes Builders Work and Finishes - Carpentry Carcass	Building	Civil	Finishes	Woodwork								
756	Windows, Timber Frames for Bricklaying	Building	Civil	Finishes	Woodwork	hrs/no	1.100	0.500	0.100	no/hrs	0.909	2.000	10.000
757	Windows, Drill, Screw & Plug extra over	Building	Civil	Finishes	Woodwork	hrs/no	0.300	0.100	-	no/hrs	3.333	10.000	-
758	Door Frames, Softwood, 1.0-3.0m2	Building	Civil	Finishes	Woodwork	hrs/no	-	0.200	-	no/hrs	-	5.000	-
759	Door Frames, Softwood, 3.0-7.0m2	Building	Civil	Finishes	Woodwork	hrs/no	0.500	0.400	-	no/hrs	2.000	2.500	-
760	Door Frames, Softwood, 7.0-10.0m2	Building	Civil	Finishes	Woodwork	hrs/no	1.200	0.800	-	no/hrs	0.833	1.250	-
761	Door Frames, Hardwood, 1.0-3.0m2	Building	Civil	Finishes	Woodwork	hrs/no	-	0.300	-	no/hrs	-	3.333	-
762	Door Frames, Hardwood, 3.0-7.0m2	Building	Civil	Finishes	Woodwork	hrs/no	0.600	0.300	-	no/hrs	1.667	3.333	-
763	Door Frames, Hardwood, 7.0-10.0m2	Building	Civil	Finishes	Woodwork	hrs/no	1.400	1.000	-	no/hrs	0.714	1.000	-
764	Erect Water Tank Platform	Building	Civil	Finishes	Woodwork	no/hr	-	2.300	-	no/hr	-	2.300	-
765	Fix Studding For Bath	Building	Civil	Finishes	Woodwork	hrs/m	-	0.100	-	m/hrs	-	10.000	-
766	Cut Access Hatch	Building	Civil	Finishes	Woodwork	no/hr	-	0.300	-	no/hr	-	0.300	-
767	Floor Joists, under 3m	Building	Civil	Finishes	Woodwork	no/hr	9.000	9.600	11.600	no/hr	9.000	9.600	11.600
768	Floor Joists, 3.0-4.5m	Building	Civil	Finishes	Woodwork	no/hr	6.800	7.200	9.700	no/hr	6.800	7.200	9.700
769	Floor Joists, 4.5-6.0m	Building	Civil	Finishes	Woodwork	no/hr	5.500	5.800	7.300	no/hr	5.500	5.800	7.300
770	Ceiling Joists, under 3m	Building	Civil	Finishes	Woodwork	no/hr	12.800	14.000	14.700	no/hr	12.800	14.000	14.700
771	Ceiling Joists, 3.0-4.5m	Building	Civil	Finishes	Woodwork	no/hr	10.800	12.100	12.600	no/hr	10.800	12.100	12.600
772	Ceiling Joists, 4.5-6.0m	Building	Civil	Finishes	Woodwork	no/hr	9.600	10.800	11.100	no/hr	9.600	10.800	11.100
773	Ceiling Joists, Notch to Beams	Building	Civil	Finishes	Woodwork	no/hr	20.000	25.000	28.500	no/hr	20.000	25.000	28.500
774	Ceiling Joists, Pack Joist Ends	Building	Civil	Finishes	Woodwork	no/hr	20.100	23.800	26.300	no/hr	20.100	23.800	26.300
775	Ceiling Joists, Nailing Joists together	Building	Civil	Finishes	Woodwork	m/hr	-	23.000	-	m/hr	-	23.000	-
776	Ceiling Joists, Bolting Joists Together	Building	Civil	Finishes	Woodwork	m/hr	-	12.600	-	m/hr	-	12.600	-
777	Floor Boards, Butt Jointed	Building	Civil	Finishes	Woodwork	m2/hr	-	1.700	-	m2/hr	-	1.700	-
778	Floor Boards, T&G Boards, under 75mm wide	Building	Civil	Finishes	Woodwork	m2/hr	-	3.400	-	m2/hr	-	3.400	-
779	Floor Boards, T&G Boards, 75-100mm wide	Building	Civil	Finishes	Woodwork	m2/hr	-	3.800	-	m2/hr	-	3.800	-
780	Floor Boards, T&G Boards, 100-125mm wide	Building	Civil	Finishes	Woodwork	m2/hr	-	4.200	-	m2/hr	-	4.200	-
781	Floor Boards, T&G Boards, 125-150mm wide	Building	Civil	Finishes	Woodwork	m2/hr	-	5.500	-	m2/hr	-	5.500	-

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
	SECTION A - RULE OF THUMB												
782	Plywood Sheeting, Butt Jointed, nailed	Building	Civil	Finishes	Woodwork	m2/hr	-	9.100	10.200	m2/hr	-	9.100	10.200
783	Plywood Sheeting, Butt Jointed, screwed	Building	Civil	Finishes	Woodwork	m2/hr	-	4.100	4.800	m2/hr	-	4.100	4.800
784	Plywood Sheeting, T&G Jointed, nailed	Building	Civil	Finishes	Woodwork	m2/hr	-	8.300	9.100	m2/hr	-	8.300	9.100
785	Plywood Sheeting, T&G Jointed, screwed	Building	Civil	Finishes	Woodwork	m2/hr	-	4.000	4.600	m2/hr	-	4.000	4.600
786	Chipboard Sheeting, Butt Jointed, nailed	Building	Civil	Finishes	Woodwork	m2/hr	-	10.000	11.500	m2/hr	-	10.000	11.500
787	Chipboard Sheeting, Butt Jointed, screwed	Building	Civil	Finishes	Woodwork	m2/hr	-	5.100	5.800	m2/hr	-	5.100	5.800
788	Chipboard Sheeting, T&G Jointed, nailed	Building	Civil	Finishes	Woodwork	m2/hr	-	9.300	9.100	m2/hr	-	9.300	9.100
789	Chipboard Sheeting, T&G Jointed, screwed	Building	Civil	Finishes	Woodwork	m2/hr	-	5.500	5.900	m2/hr	-	5.500	5.900
	Finishes Builders Work and Finishes - Carpentry Final Fixing												
790	Windows, Softwood, 3.0-7.0m2	Building	Civil	Finishes	Woodwork	hrs/no	0.600	0.400	0.300	no/hrs	1.667	2.500	3.333
791	Windows, Softwood, 7.0-10.0m2	Building	Civil	Finishes	Woodwork	hrs/no	1.300	0.900	0.600	no/hrs	0.769	1.111	1.667
792	Windows, Hardwood, 1.0-3.0m2	Building	Civil	Finishes	Woodwork	hrs/no	0.400	0.300	-	no/hrs	2.500	3.333	-
793	Windows, Hardwood, 3.0-7.0m2	Building	Civil	Finishes	Woodwork	hrs/no	0.700	0.500	0.400	no/hrs	1.429	2.000	2.500
794	Windows, Hardwood, 7.0-10.0m2	Building	Civil	Finishes	Woodwork	hrs/no	1.600	1.200	0.700	no/hrs	0.625	0.833	1.429
795	Windows, Aluminum, 1.0-3.0m2	Building	Civil	Finishes	Woodwork	hrs/no	0.200	0.300	-	no/hrs	5.000	3.333	-
796	Windows, Aluminum, 3.0-7.0m2	Building	Civil	Finishes	Woodwork	hrs/no	0.500	0.400	0.300	no/hrs	2.000	2.500	3.333
797	Windows, Aluminum, 7.0-10.0m2	Building	Civil	Finishes	Woodwork	hrs/no	1.200	0.800	0.500	no/hrs	0.833	1.250	2.000
798	Windows, Steel, 1.0-3.0m2	Building	Civil	Finishes	Woodwork	hrs/no	0.400	0.300	0.200	no/hrs	2.500	3.333	5.000
799	Windows, Steel, 3.0-7.0m2	Building	Civil	Finishes	Woodwork	hrs/no	1.200	0.600	0.500	no/hrs	0.833	1.667	2.000
800	Windows, Steel, 7.0-10.0m2	Building	Civil	Finishes	Woodwork	hrs/no	1.400	1.200	1.000	no/hrs	0.714	0.833	1.000
801	Window Boards, nailed	Building	Civil	Finishes	Woodwork	hrs/m	-	0.300	0.200	m/hrs	-	3.333	5.000
802	Window Boards, screwed	Building	Civil	Finishes	Woodwork	hrs/m	-	0.400	0.300	m/hrs	-	2.500	3.333
803	Mouldings, Softwood, Nailed	Building	Civil	Finishes	Woodwork	m/hr	-	6.300	8.500	m/hr	-	6.300	8.500
804	Mouldings, Softwood, Screwed	Building	Civil	Finishes	Woodwork	m/hr	-	4.600	5.600	m/hr	-	4.600	5.600
805	Mouldings, Softwood, Gun Nailed	Building	Civil	Finishes	Woodwork	m/hr	-	8.200	11.100	m/hr	-	8.200	11.100
806	Mouldings, Hardwood, Nailed	Building	Civil	Finishes	Woodwork	m/hr	-	3.300	5.500	m/hr	-	3.300	5.500
807	Mouldings, Hardwood, Screwed	Building	Civil	Finishes	Woodwork	m/hr	-	2.400	3.700	m/hr	-	2.400	3.700
808	Mouldings, Hardwood, Gun Nailed	Building	Civil	Finishes	Woodwork	m/hr	-	8.500	11.300	m/hr	-	8.500	11.300
809	Skirting, Aluminum, Screwed 150-300mm centres	Building	Civil	Finishes	Woodwork	m/hr	-	7.600	-	m/hr	-	7.600	-
810	Skirting, Aluminum, Screwed 300-450mm centres	Building	Civil	Finishes	Woodwork	m/hr	-	4.500	-	m/hr	-	4.500	-
811	Skirting, Plastic, Adhesive Fixing	Building	Civil	Finishes	Woodwork	m/hr	-	8.600	-	m/hr	-	8.600	-
812	Architrave Mouldings	Building	Civil	Finishes	Woodwork	m/hr	9.500	12.200	18.200	m/hr	9.500	12.200	18.200
813	Architrave, Fix to Doors	Building	Civil	Finishes	Woodwork	hrs/door	-	1.200	-	door/hrs	-	0.833	-
814	Door Stop Mouldings	Building	Civil	Finishes	Woodwork	m/hr	10.100	16.900	25.000	m/hr	10.100	16.900	25.000
815	Glazed Bead Mouldings	Building	Civil	Finishes	Woodwork	m/hr	15.500	18.600	20.400	m/hr	15.500	18.600	20.400
816	Hanging Doors, Softwood, Single Pair Butts	Building	Civil	Finishes	Woodwork	hrs/no	1.300	0.900	0.600	no/hrs	-	-	-
817	Hanging Doors, Hardwood, Single Pair Butts	Building	Civil	Finishes	Woodwork	hrs/no	1.900	1.200	0.900	no/hrs	0.526	0.833	1.111
818	Cut Mortice to Receive Lock, Softwood	Building	Civil	Finishes	Woodwork	hrs/no	-	0.200	-	no/hrs	-	5.000	-
819	Cut Mortice to Receive Lock, Hardwood	Building	Civil	Finishes	Woodwork	hrs/no	-	0.600	-	no/hrs	-	1.667	-
820	Cut & Fix Formica Bath Panel	Building	Civil	Finishes	Woodwork	hrs/no	-	0.400	-	no/hrs	-	2.500	-
821	Kitchen Cupboards, Floor Units	Building	Civil	Finishes	Woodwork	hrs/no	-	0.800	0.600	no/hrs	-	1.250	1.667
822	Kitchen Cupboards, Wall Units	Building	Civil	Finishes	Woodwork	hrs/no	-	0.700	0.500	no/hrs	-	1.429	2.000
823	Kitchen Cupboards, Shelf Units	Building	Civil	Finishes	Woodwork	hrs/no	-	0.800	0.700	no/hrs	-	1.250	1.429
824	Staircase, pre-made, simple, straight flight	Building	Civil	Finishes	Woodwork	hrs/no	1.900	1.500	1.100	no/hrs	0.526	0.667	0.909
825	Staircase, pre-made, 2 straight flights, 1 landing	Building	Civil	Finishes	Woodwork	hrs/no	3.700	2.900	2.600	no/hrs	0.270	0.345	0.385
826	Staircase, pre-made, 2 straight flights, 2 landings	Building	Civil	Finishes	Woodwork	hrs/no	-	6.300	-	no/hrs	-	0.159	-
827	Staircase, Balustrades/Handrails, fix horizontal	Building	Civil	Finishes	Woodwork	hrs/no	1.200	0.600	0.100	no/hrs	0.833	1.667	10.000
828	Staircase, Balustrades/Handrails, fix raking	Building	Civil	Finishes	Woodwork	hrs/no	0.900	0.500	0.300	no/hrs	1.111	2.000	3.333
829	Staircase, Cut and Fix Newel to Walls	Building	Civil	Finishes	Woodwork	hrs/no	0.900	-	0.200	no/hrs	1.111	-	5.000
830	Windows, Softwood, 1.0-3.0m2	Building	Civil	Finishes	Woodwork	hrs/no	0.300	0.200	-	no/hrs	3.333	5.000	-
831	Raised Flooring, metal system	Building	Civil	Finishes	Woodwork	m2/hr	-	0.500	-	m2/hr	-	0.500	-
	F2 Framework												
	Roof Structures and Coverings - Timber Frames												
		Building	Civil	Finishes	Woodwork								
503	Roof Trusses	Building	Civil	Finishes	Woodwork	no/hr	-	1.300	-	no/hr	-	1.300	-
504	Wall Plates	Building	Civil	Finishes	Woodwork	m/hr	-	2.700	-	m/hr	-	2.700	-
505	Roof Rafters	Building	Civil	Finishes	Woodwork	m/hr	-	1.200	-	m/hr	-	1.200	-

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
	SECTION A - RULE OF THUMB												
506	Ceiling Joists	Building	Civil	Finishes	Woodwork	m/hr	-	32.100	-	m/hr	-	32.100	-
507	Roof Carcass, Common Rafters, under 3m	Building	Civil	Finishes	Woodwork	no/hr	18.200	20.000	21.700	no/hr	18.200	20.000	21.700
508	Roof Carcass, Common Rafters, 3-6mm	Building	Civil	Finishes	Woodwork	no/hr	13.300	16.600	18.200	no/hr	13.300	16.600	18.200
509	Roof Carcass, Common Rafters, over 6m	Building	Civil	Finishes	Woodwork	no/hr	14.100	15.600	16.100	no/hr	14.100	15.600	16.100
510	Roof Carcass, Jack Rafters, under 3m	Building	Civil	Finishes	Woodwork	no/hr	18.800	20.100	21.700	no/hr	18.800	20.100	21.700
511	Roof Carcass, Jack Rafters, 3-6mm	Building	Civil	Finishes	Woodwork	no/hr	10.400	16.100	16.600	no/hr	10.400	16.100	16.600
512	Roof Carcass, Purlins, under 3m	Building	Civil	Finishes	Woodwork	no/hr	5.100	5.400	5.800	no/hr	5.100	5.400	5.800
513	Roof Carcass, Purlins, 3-6mm	Building	Civil	Finishes	Woodwork	no/hr	4.300	4.800	5.100	no/hr	4.300	4.800	5.100
514	Roof Carcass, Purlins, over 6m	Building	Civil	Finishes	Woodwork	no/hr	3.500	4.300	4.600	no/hr	3.500	4.300	4.600
515	Roof Carcass, Binders, under 3m	Building	Civil	Finishes	Woodwork	no/hr	5.700	6.600	7.600	no/hr	5.700	6.600	7.600
516	Roof Carcass, Binders, 3-6mm	Building	Civil	Finishes	Woodwork	no/hr	2.100	2.300	2.500	no/hr	2.100	2.300	2.500
517	Roof Carcass, Binders, over 6m	Building	Civil	Finishes	Woodwork	no/hr	1.300	1.500	1.600	no/hr	1.300	1.500	1.600
518	Roof Carcass, Hangers, under 3m	Building	Civil	Finishes	Woodwork	no/hr	8.200	9.000	9.600	no/hr	8.200	9.000	9.600
519	Roof Carcass, Collars under 3m	Building	Civil	Finishes	Woodwork	no/hr	7.600	8.000	9.100	no/hr	7.600	8.000	9.100
520	Roof Carcass, Collars 3-m	Building	Civil	Finishes	Woodwork	no/hr	6.500	7.400	8.300	no/hr	6.500	7.400	8.300
521	Roof Carcass, Ridge Boards under 3m	Building	Civil	Finishes	Woodwork	no/hr	12.000	13.100	15.300	no/hr	12.000	13.100	15.300
522	Roof Carcass, Cut Rafter Feet to line	Building	Civil	Finishes	Woodwork	no/hr	142.000	166.000	175.000	no/hr	142.000	166.000	175.000
523	Roof Soffits, Softwood, nailed	Building	Civil	Finishes	Woodwork	m/hr	-	9.200	-	m/hr	-	9.200	-
524	Roof Soffits, Softwood, screwed	Building	Civil	Finishes	Woodwork	m/hr	-	3.900	-	m/hr	-	3.900	-
525	Roof Soffits Asbestos, under 300mm nailed	Building	Civil	Finishes	Woodwork	m/hr	-	9.100	-	m/hr	-	9.100	-
526	Roof Soffits Asbestos, under 300mm screwed	Building	Civil	Finishes	Woodwork	m/hr	-	3.800	-	m/hr	-	3.800	-
527	Roof Soffits, Asbestos, over 300mm nailed	Building	Civil	Finishes	Woodwork	m/hr	-	3.500	-	m/hr	-	3.500	-
528	Roof Soffits, Asbestos, over 300mm screwed	Building	Civil	Finishes	Woodwork	m/hr	-	1.300	-	m/hr	-	1.300	-
529	Roof Facia Panels, Softwood	Building	Civil	Finishes	Woodwork	m/hr	5.100	7.200	9.300	m/hr	5.100	7.200	9.300
530	Roof Facia Panels, Asbestos	Building	Civil	Finishes	Woodwork	m/hr	1.300	2.500	3.900	m/hr	1.300	2.500	3.900
531	Roof Facia Panel Studding, nailed	Building	Civil	Finishes	Woodwork	m/hr	7.300	8.100	9.000	m/hr	7.300	8.100	9.000
532	Roof Facia Panel Studding, screwed	Building	Civil	Finishes	Woodwork	m/hr	4.600	5.200	5.800	m/hr	4.600	5.200	5.800
533	Roof Facia Panel Studding, bolted to beams	Building	Civil	Finishes	Woodwork	m/hr	5.400	5.900	6.600	m/hr	5.400	5.900	6.600
534	Roof Works, Fix Herringbone Strutting	Building	Civil	Finishes	Woodwork	m/hr	-	5.100	-	m/hr	-	5.100	-
535	Roof Works, Fix Firing Strips	Building	Civil	Finishes	Woodwork	m/hr	-	25.000	-	m/hr	-	25.000	-
536	Roof Works, Fix Drip/Tilt Filleting	Building	Civil	Finishes	Woodwork	m/hr	-	20.500	-	m/hr	-	20.500	-
	SECTION G - THERMAL AND MOISTURE PROTECTION												
	G1 Generally												
	Water Engineering - Waterproofing												
1181	Asphalt coatings, horizontal surfaces	Building	Civil	Foundation & Excavation	Waterproofing	m2/hr	3.500	4.200	5.800	m2/hr	3.500	4.200	5.800
1182	Asphalt coatings, vertical surfaces	Building	Civil	Foundation & Excavation	Waterproofing	m2/hr	1.200	1.700	2.200	m2/hr	1.200	1.700	2.200
1183	Bituminous Brushed application, 2 coats	Building	Civil	Foundation & Excavation	Waterproofing	m2/hr	4.800	5.000	6.300	m2/hr	4.800	5.000	6.300
1184	Bituminous Brushed application, 3 coats	Building	Civil	Foundation & Excavation	Waterproofing	m2/hr	3.300	3.500	4.400	m2/hr	3.300	3.500	4.400
1185	Bituminous Sheets, horizontal surfaces	Building	Civil	Foundation & Excavation	Waterproofing	m2/hr	3.800	4.000	4.800	m2/hr	3.800	4.000	4.800
1186	Bituminous Sheets, vertical surfaces	Building	Civil	Foundation & Excavation	Waterproofing	m2/hr	3.300	3.500	4.200	m2/hr	3.300	3.500	4.200
1187	Polythene Sheets, horizontal surfaces	Building	Civil	Foundation & Excavation	Waterproofing	m2/hr	-	20.000	-	m2/hr	-	20.000	-
1188	Bentonite Sheets, horizontal surfaces	Building	Civil	Foundation & Excavation	Waterproofing	m2/hr	18.700	25.000	31.300	m2/hr	18.700	25.000	31.300
1189	Bentonite Sheets, vertical surfaces	Building	Civil	Foundation & Excavation	Waterproofing	m2/hr	11.200	15.000	17.300	m2/hr	11.200	15.000	17.300
1190	Epoxy Based application, 1 coat	Building	Civil	Finishes	Waterproofing	m2/hr	-	75.000	-	m2/hr	-	75.000	-
1191	Epoxy Based application, 2 coat	Building	Civil	Finishes	Waterproofing	m2/hr	-	38.000	-	m2/hr	-	38.000	-
	Roof Structures and Coverings - Slates and Tiling												
544	Slate Roofs, Welsh Slate 3-5mm	Building	Civil	Finishes	Roofing	m2/day	-	18.000	-	m2/hr	-	2.250	-
545	Slate Roofs, Cumbrian Slate 8-11mm	Building	Civil	Finishes	Roofing	m2/day	-	8.500	-	m2/hr	-	1.063	-
546	Slate Roofs, Asbestos Slates	Building	Civil	Finishes	Roofing	m2/day	-	36.000	-	m2/hr	-	4.500	-
547	Tiled Roofs, Concrete Tiles	Building	Civil	Finishes	Roofing	m2/day	-	52.000	-	m2/hr	-	6.500	-
548	Tiled Roofs, Clay Pan Tiles	Building	Civil	Finishes	Roofing	m2/day	-	26.000	-	m2/hr	-	3.250	-
	Roof Structures and Coverings - Sheeted Roofs												
554	PVC Sheeted Roofs, large areas	Building	Civil	Finishes	Roofing	m2/day	-	50.000	-	m2/hr	-	6.250	-

Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
SECTION A - RULE OF THUMB												
25 mm diameter black seamless steel pipe with threaded fittings	Building	MEP	MEP Second Fix	Fire Fighting Pipe	M		30.000				3.750	
32 mm diameter black seamless steel pipe with threaded fittings	Building	MEP	MEP Second Fix	Fire Fighting Pipe	M		30.000				3.750	
40 mm diameter black seamless steel pipe with threaded fittings	Building	MEP	MEP Second Fix	Fire Fighting Pipe	M		30.000				3.750	
50 mm diameter black seamless steel pipe with threaded fittings	Building	MEP	MEP Second Fix	Fire Fighting Pipe	M		30.000				3.750	
65 mm diameter black seamless steel pipe with grooved-end	Building	MEP	MEP Second Fix	Fire Fighting Pipe	M		20.000				2.500	
80 mm diameter black seamless steel pipe with grooved-end	Building	MEP	MEP Second Fix	Fire Fighting Pipe	M		20.000				2.500	
100 mm diameter black seamless steel pipe with grooved-end	Building	MEP	MEP Second Fix	Fire Fighting Pipe	M		20.000				2.500	
100 mm diameter black seamless steel pipe with grooved-end	Building	MEP	MEP Second Fix	Fire Fighting Pipe	M		20.000				2.500	
125 mm diameter black seamless steel pipe with grooved-end	Building	MEP	MEP Second Fix	Fire Fighting Pipe	M		20.000				2.500	
150 mm diameter black seamless steel pipe with grooved-end	Building	MEP	MEP Second Fix	Fire Fighting Pipe	M		18.000				2.250	
200 mm diameter black seamless steel pipe with grooved-end	Building	MEP	MEP Second Fix	Fire Fighting Pipe	M		18.000				2.250	
250 mm diameter black seamless steel pipe with grooved-end	Building	MEP	MEP Second Fix	Fire Fighting Pipe	M		18.000				2.250	
300 mm diameter black seamless steel pipe with grooved-end	Building	MEP	MEP Second Fix	Fire Fighting Pipe	M		18.000				2.250	
MEP Activities -Hot & Cold Water Distribution Pipes												
20 mm diameter C.P.V.C pipes including fittings	Building	MEP	MEP Second Fix	Water Distribution Pipe	M		36.000				4.500	
25 mm diameter C.P.V.C pipes including fittings	Building	MEP	MEP Second Fix	Water Distribution Pipe	M		36.000				4.500	
32 mm diameter C.P.V.C pipes including fittings	Building	MEP	MEP Second Fix	Water Distribution Pipe	M		36.000				4.500	
40 mm diameter C.P.V.C pipes including fittings	Building	MEP	MEP Second Fix	Water Distribution Pipe	M		36.000				4.500	
50 mm diameter C.P.V.C pipes including fittings	Building	MEP	MEP Second Fix	Water Distribution Pipe	M		36.000				4.500	
63 mm diameter C.P.V.C pipes including fittings	Building	MEP	MEP Second Fix	Water Distribution Pipe	M		24.000				3.000	
75 mm diameter C.P.V.C pipes including fittings	Building	MEP	MEP Second Fix	Water Distribution Pipe	M		24.000				3.000	
90 mm diameter C.P.V.C pipes including fittings	Building	MEP	MEP Second Fix	Water Distribution Pipe	M		24.000				3.000	
MEP Activities -Sanitary & Rainwater Pipes												
40 mm diameter UPVC pipes with elastomere joint socket include fittings	Building	MEP	MEP Second Fix	Sanitary & Rainwater Pipe	M		36.000				4.500	
50 mm diameter UPVC pipes with elastomere joint socket include fittings	Building	MEP	MEP Second Fix	Sanitary & Rainwater Pipe	M		36.000				4.500	
63 mm diameter UPVC pipes with elastomere joint socket include fittings	Building	MEP	MEP Second Fix	Sanitary & Rainwater Pipe	M		30.000				3.750	
75 mm diameter UPVC pipes with elastomere joint socket include fittings	Building	MEP	MEP Second Fix	Sanitary & Rainwater Pipe	M		30.000				3.750	
110 mm diameter UPVC pipes with elastomere joint socket include fittings	Building	MEP	MEP Second Fix	Sanitary & Rainwater Pipe	M		24.000				3.000	
125 mm diameter UPVC pipes with elastomere joint socket include fittings	Building	MEP	MEP Second Fix	Sanitary & Rainwater Pipe	M		24.000				3.000	
160 mm diameter UPVC pipes with elastomere joint socket include fittings	Building	MEP	MEP Second Fix	Sanitary & Rainwater Pipe	M		18.000				2.250	
200 mm diameter UPVC pipes with elastomere joint socket include fittings	Building	MEP	MEP Second Fix	Sanitary & Rainwater Pipe	M		18.000				2.250	
25 mm diameter PVC condensate pipes with insulation	Building	MEP	MEP Second Fix	Sanitary & Rainwater Pipe	M		30.000				3.750	
32 mm diameter PVC condensate pipes with insulation	Building	MEP	MEP Second Fix	Sanitary & Rainwater Pipe	M		30.000				3.750	
40 mm diameter PVC condensate pipes with insulation	Building	MEP	MEP Second Fix	Sanitary & Rainwater Pipe	M		30.000				3.750	
50 mm diameter PVC condensate pipes with insulation	Building	MEP	MEP Second Fix	Sanitary & Rainwater Pipe	M		30.000				3.750	
60 mm diameter PVC condensate pipes with insulation	Building	MEP	MEP Second Fix	Sanitary & Rainwater Pipe	M		20.000				2.500	
110 mm diameter PVC condensate pipes with insulation	Building	MEP	MEP Second Fix	Sanitary & Rainwater Pipe	M		20.000				2.500	
MEP Activities -Hydronic Pipes (Chilled Water Pipes)												
15 mm diameter seamless black steel pipe include fittings	Building	MEP	MEP Second Fix	Chilled Water Pipes	M		30.000				3.750	
20 mm diameter seamless black steel pipe include fittings	Building	MEP	MEP Second Fix	Chilled Water Pipes	M		30.000				3.750	
25 mm diameter seamless black steel pipe include fittings	Building	MEP	MEP Second Fix	Chilled Water Pipes	M		30.000				3.750	
32 mm diameter seamless black steel pipe include fittings	Building	MEP	MEP Second Fix	Chilled Water Pipes	M		30.000				3.750	
40 mm diameter seamless black steel pipe include fittings	Building	MEP	MEP Second Fix	Chilled Water Pipes	M		30.000				3.750	
50 mm diameter seamless black steel pipe include fittings	Building	MEP	MEP Second Fix	Chilled Water Pipes	M		30.000				3.750	
65 mm diameter seamless black steel pipe include fittings	Building	MEP	MEP Second Fix	Chilled Water Pipes	M		20.000				2.500	
80 mm diameter seamless black steel pipe include fittings	Building	MEP	MEP Second Fix	Chilled Water Pipes	M		20.000				2.500	
100 mm diameter seamless black steel pipe include fittings	Building	MEP	MEP Second Fix	Chilled Water Pipes	M		20.000				2.500	
125 mm diameter seamless black steel pipe include fittings	Building	MEP	MEP Second Fix	Chilled Water Pipes	M		20.000				2.500	
150 mm diameter seamless black steel pipe include fittings	Building	MEP	MEP Second Fix	Chilled Water Pipes	M		20.000				2.500	
200 mm diameter seamless black steel pipe include fittings	Building	MEP	MEP Second Fix	Chilled Water Pipes	M		18.000				2.250	
250 mm diameter seamless black steel pipe include fittings	Building	MEP	MEP Second Fix	Chilled Water Pipes	M		18.000				2.250	
300 mm diameter seamless black steel pipe include fittings	Building	MEP	MEP Second Fix	Chilled Water Pipes	M		18.000				2.250	
MEP Activities -Hydronic Pipes Insulation(Chilled Water Pipes Insulation)												

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
	SECTION A - RULE OF THUMB												
675	Window Glazing, Double Glazed Units	Building	Civil	Finishes	Door&Windows	m2/hr	-	1.300	-	m2/hr	-	1.300	-
	SECTION J - FINISHES												
	J1 Generally												
	Finishes Builders Work and Finishes - Restoration Works												
676	Façade Cleaning, Water Jetting	Building	Civil	Finishes	Cleaning	m2/day	-	25.000	-	m2/hr	-	3.125	-
677	Façade Cleaning, Acid Etching	Building	Civil	Finishes	Cleaning	m2/day	-	9.000	-	m2/hr	-	1.125	-
678	Façade Cleaning, Grit Blasting	Building	Civil	Finishes	Cleaning	m2/day	-	12.000	-	m2/hr	-	1.500	-
679	Cladding Restoration, Brickwork	Building	Civil	Finishes	Restoration	m2/day	-	6.500	-	m2/hr	-	0.813	-
680	Cladding Restoration, Stonework courses	Building	Civil	Finishes	Restoration	m/day	-	20.000	-	m/hr	-	2.500	-
	J2 Backgrounds												
	Finishes Builders Work and Finishes - Wallpapering												
837	Strip Existing Wallpaper (3 layers) & Prepare Walls	Building	Civil	Finishes	Wallpapering	m2/hr	-	5.000	-	m2/hr	-	5.000	-
838	Fix Wallpaper and lining paper	Building	Civil	Finishes	Wallpapering	m2/hr	-	5.000	-	m2/hr	-	5.000	-
839	Fix Vinyl and Washable paper	Building	Civil	Finishes	Wallpapering	m2/hr	-	4.200	-	m2/hr	-	4.200	-
840	Fix Ceiling Lining Paper	Building	Civil	Finishes	Wallpapering	m2/hr	-	4.000	-	m2/hr	-	4.000	-
	Finishes Builders Work and Finishes - Wall Finishes												
708	Mosaic Tiling, 0.045x0.045m	Building	Civil	Finishes	Wall Tiling	no/hr	-	1.100	1.500	no/hr	-	1.100	1.500
709	Clay, quarry Tiles, Window Cills, setout and level	Building	Civil	Finishes	Wall Tiling	m/hr	-	55.500	-	m/hr	-	55.500	-
710	Clay, quarry Tiles, Window Cills, fix, grout and clean	Building	Civil	Finishes	Wall Tiling	m2/hr	-	1.500	-	m2/hr	-	1.500	-
711	Ceramic Tiles 150x150mm, Ledges/Upstands	Building	Civil	Finishes	Wall Tiling	no/hr	20.400	27.100	32.000	no/hr	20.400	27.100	32.000
712	Ceramic Tiles 150x150mm, Areas under 1.5m2 per room	Building	Civil	Finishes	Wall Tiling	m2/hr	0.900	1.000	1.200	m2/hr	0.900	1.000	1.200
713	Ceramic Tiles 150x150mm, Areas of 1.5-2.5m2 per room	Building	Civil	Finishes	Wall Tiling	m2/hr	1.400	1.600	1.900	m2/hr	1.400	1.600	1.900
714	Ceramic Tiles 150x150mm, Areas over 2.5m2 per room	Building	Civil	Finishes	Wall Tiling	m2/hr	1.500	1.700	2.100	m2/hr	1.500	1.700	2.100
715	Ceramic Tiles 150x150mm, Extra Over for Cutting	Building	Civil	Finishes	Wall Tiling	no/hr	-	41.600	-	no/hr	-	41.600	-
716	Ceramic Tiles 108x108mm, Ledges/Upstands	Building	Civil	Finishes	Wall Tiling	no/hr	-	62.500	-	no/hr	-	62.500	-
717	Ceramic Tiles 108x108mm, Areas under 1.5m2 per room	Building	Civil	Finishes	Wall Tiling	m2/hr	1.000	1.300	1.500	m2/hr	1.000	1.300	1.500
718	Ceramic Tiles 108x108mm, Areas of 1.5-2.5m2 per room	Building	Civil	Finishes	Wall Tiling	m2/hr	1.600	1.800	2.100	m2/hr	1.600	1.800	2.100
719	Ceramic Tiles 108x108mm, Areas over 2.5m2 per room	Building	Civil	Finishes	Wall Tiling	m2/hr	1.700	1.900	2.200	m2/hr	1.700	1.900	2.200
720	Ceramic Tiles 108x108mm, Extra Over for Cutting	Building	Civil	Finishes	Wall Tiling	no/hr	-	125.000	-	no/hr	-	125.000	-
721	Ceramic Tiles, Grouting Works	Building	Civil	Finishes	Wall Tiling	m2/hr	2.200	2.500	2.600	m2/hr	2.200	2.500	2.600
	Finishes Builders Work and Finishes - Stonework												
681	Fix 0.5m2 Stones to Metal Support Frame	Building	Civil	Finishes	Stonework	m2/day	5.600	7.000	7.800	m2/hr	0.700	0.875	0.975
682	Fix 0.5-0.75m2 Stones to Metal Support Frame	Building	Civil	Finishes	Stonework	m2/day	7.200	9.000	10.100	m2/hr	0.900	1.125	1.263
683	Fix 0.75-1.0m2 Stones to Metal Support Frame	Building	Civil	Finishes	Stonework	m2/day	6.900	8.700	9.700	m2/hr	0.863	1.088	1.213
684	Fix Complex Stonework to Metal Support Frame	Building	Civil	Finishes	Stonework	m2/day	-	1.800	-	m2/hr	-	0.225	-
685	Fix Curved Stone Cladding	Building	Civil	Finishes	Stonework	m2/day	6.900	8.000	9.200	m2/hr	0.863	1.000	1.150
686	Fix Stone Edge Beams/Window Reveals	Building	Civil	Finishes	Stonework	m2/day	-	2.300	3.200	m2/hr	-	0.288	0.400
687	Fix Stone Soffits	Building	Civil	Finishes	Stonework	m2/day	-	4.000	-	m2/hr	-	0.500	-
688	Stone Floors	Building	Civil	Finishes	Stonework	m2/day	6.900	10.400	12.200	m2/hr	0.863	1.300	1.525
689	Granite Wall Panels, First Fix	Building	Civil	Finishes	Stonework	m2/hr	-	1.300	-	m2/hr	-	1.300	-
690	Granite Wall Panels, Second Fix	Building	Civil	Finishes	Stonework	m2/hr	-	1.100	-	m2/hr	-	1.100	-
	J3 Finishes												
	Finishes Builders Work and Finishes - Floor Finishes												
691	Granolithic Flooring	Building	Civil	Finishes	Flooring	m2/hr	-	3.100	-	m2/hr	-	3.100	-
692	Terrazzo Flooring, in-situ	Building	Civil	Finishes	Flooring	m2/hr	-	3.600	-	m2/hr	-	3.600	-
693	Terrazzo Flooring, pre-cast	Building	Civil	Finishes	Flooring	m2/hr	-	4.600	5.100	m2/hr	-	4.600	5.100

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
	SECTION A - RULE OF THUMB												
694	Mosaic Tiling, 0.045x0.045m	Building	Civil	Finishes	Flooring	m2/hr	-	1.500	2.200	m2/hr	-	1.500	2.200
695	Clay, quarry Tiles, small areas, much cutting	Building	Civil	Finishes	Flooring	m2/hr	-	0.800	1.100	m2/hr	-	0.800	1.100
696	Clay, quarry Tiles, large areas, little cutting	Building	Civil	Finishes	Flooring	m2/hr	-	2.200	2.800	m2/hr	-	2.200	2.800
697	Raised Floor System	Building	Civil	Finishes	Flooring	m2/hr	-	2.600	-	m2/hr	-	2.600	-
698	Linolium/Thermo-Plastic Flooring	Building	Civil	Finishes	Flooring	m2/hr	-	3.100	5.000	m2/hr	-	3.100	5.000
699	Thermo-Plastic Floor Tiles	Building	Civil	Finishes	Flooring	m2/hr	-	3.300	5.600	m2/hr	-	3.300	5.600
700	Wood Block Flooring, lay blocks	Building	Civil	Finishes	Flooring	m2/hr	-	1.500	2.100	m2/hr	-	1.500	2.100
701	Wood Block Flooring, sand and polish	Building	Civil	Finishes	Flooring	m2/hr	-	3.100	-	m2/hr	-	3.100	-
702	Carpeting, Underlay & Gripper	Building	Civil	Finishes	Flooring	m2/hr	-	5.600	6.100	m2/hr	-	5.600	6.100
703	Carpeting, Adhesive Fixing	Building	Civil	Finishes	Flooring	m2/hr	-	3.500	4.200	m2/hr	-	3.500	4.200
704	Carpeting, Fully Fitted	Building	Civil	Finishes	Flooring	m2/hr	-	2.000	2.800	m2/hr	-	2.000	2.800
705	Hardboard Sheeting Coverings, small areas	Building	Civil	Finishes	Flooring	m2/hr	-	3.700	4.100	m2/hr	-	3.700	4.100
706	Hardboard Sheeting Coverings, large areas	Building	Civil	Finishes	Flooring	m2/hr	-	6.600	7.200	m2/hr	-	6.600	7.200
707	Floor Sheeting Coverings, Lay Lino	Building	Civil	Finishes	Flooring	m2/hr	-	9.500	10.500	m2/hr	-	9.500	10.500
	Finishes Builders Work and Finishes - Painting												
841	Prepare Walls	Building	Civil	Finishes	Painting	m2/hr	-	14.200	-	m2/hr	-	14.200	-
842	Prepare Doors	Building	Civil	Finishes	Painting	m2/hr	-	12.500	-	m2/hr	-	12.500	-
843	Prepare Door Frames	Building	Civil	Finishes	Painting	m/hr	-	25.000	-	m/hr	-	25.000	-
844	Burn Off / Heat Strip Paintwork	Building	Civil	Finishes	Painting	m2/hr	-	1.100	-	m2/hr	-	1.100	-
845	Internal Timber, 1 coat primer before fixing, generally	Building	Civil	Finishes	Painting	m2/hr	-	6.700	-	m2/hr	-	6.700	-
846	Internal Timber, 1 coat primer before fixing, timber lengths	Building	Civil	Finishes	Painting	m/hr	-	20.000	-	m/hr	-	20.000	-
847	Internal Timber, knot, 1 primer, stop, 1 undercoat, 1 gloss	Building	Civil	Finishes	Painting	m2/hr	-	1.700	2.100	m2/hr	-	1.700	2.100
848	Internal Timber, touchup primer, 1 undercoat, 1 coat gloss	Building	Civil	Finishes	Painting	m2/hr	-	3.100	3.800	m2/hr	-	3.100	3.800
849	Internal Timber, polyurethane varnish, 2 coats	Building	Civil	Finishes	Painting	m2/hr	-	3.300	-	m2/hr	-	3.300	-
850	Internal Timber, polyurethane varnish, 3 coats	Building	Civil	Finishes	Painting	m2/hr	-	2.200	-	m2/hr	-	2.200	-
851	Internal Timber, linseed oil to hardwood, 2 coats	Building	Civil	Finishes	Painting	m2/hr	-	3.600	-	m2/hr	-	3.600	-
852	External Timber, windows and frames	Building	Civil	Finishes	Painting	m2/hr	-	2.400	-	m2/hr	-	2.400	-
853	External Timber, knot, 1 primer, 2 undercoats, 1 coat gloss,	Building	Civil	Finishes	Painting	m2/hr	-	1.500	-	m2/hr	-	1.500	-
854	External Timber, touchup primer, 2 undercoats, 1 coat gloss,	Building	Civil	Finishes	Painting	m2/hr	-	2.000	-	m2/hr	-	2.000	-
855	External Timber, 2 coats wood preservative	Building	Civil	Finishes	Painting	m2/hr	-	4.000	-	m2/hr	-	4.000	-
856	External Timber, 3 coats polyurethane varnish	Building	Civil	Finishes	Painting	m2/hr	-	2.000	-	m2/hr	-	2.000	-
857	Internal Walls, 2 coats emulsion to plaster	Building	Civil	Finishes	Painting	m2/hr	-	8.000	-	m2/hr	-	8.000	-
858	Internal Walls, 2 coats emulsion to brick/blockwork	Building	Civil	Finishes	Painting	m2/hr	-	6.000	-	m2/hr	-	6.000	-
859	Internal Walls, 1 mist, 2 coats emulsion to plaster	Building	Civil	Finishes	Painting	m2/hr	-	6.000	-	m2/hr	-	6.000	-
860	Internal Walls, 1 mist, 2 coats emulsion to brick/blockwork	Building	Civil	Finishes	Painting	m2/hr	-	4.500	-	m2/hr	-	4.500	-
861	Internal Walls, 1 primer, 1 undercoat, 1 gloss to plaster	Building	Civil	Finishes	Painting	m2/hr	-	2.300	-	m2/hr	-	2.300	-
862	Internal Walls, undercoat to door frame	Building	Civil	Finishes	Painting	m/hr	-	20.000	-	m/hr	-	20.000	-
863	Internal Walls, gloss to door frame	Building	Civil	Finishes	Painting	m/hr	-	16.500	-	m/hr	-	16.500	-
864	Internal Walls, undercoat to door	Building	Civil	Finishes	Painting	m2/hr	-	7.100	-	m2/hr	-	7.100	-
865	Internal Walls, gloss to door	Building	Civil	Finishes	Painting	m2/hr	-	6.200	-	m2/hr	-	6.200	-
866	External Walls, 2 coats sandtex to render/concrete	Building	Civil	Finishes	Painting	m2/hr	-	2.500	-	m2/hr	-	2.500	-
867	External Walls, 2 coats sandtex to brick/blockwork	Building	Civil	Finishes	Painting	m2/hr	-	2.000	-	m2/hr	-	2.000	-
868	External Walls, 1 sealer, 2 emulsion to render/concrete	Building	Civil	Finishes	Painting	m2/hr	-	2.000	-	m2/hr	-	2.000	-
869	External Walls, 1 sealer, 2 emulsion to brick/blockwork	Building	Civil	Finishes	Painting	m2/hr	-	1.700	-	m2/hr	-	1.700	-
870	Floors, epoxy paint	Building	Civil	Finishes	Painting	m2/hr	-	2.900	-	m2/hr	-	2.900	-
871	Ceilings, emulsion paint, 2 coats	Building	Civil	Finishes	Painting	m2/hr	-	6.100	-	m2/hr	-	6.100	-
872	Ceilings, emulsion paint, 3 coats	Building	Civil	Finishes	Painting	m2/hr	-	5.000	-	m2/hr	-	5.000	-
873	Ceilings, textured paint	Building	Civil	Finishes	Painting	m2/hr	-	4.200	-	m2/hr	-	4.200	-
874	Ceilings, artex finish	Building	Civil	Finishes	Painting	m2/hr	-	4.100	-	m2/hr	-	4.100	-
875	Internal Steelwork, 1 primer, 1 undercoat, 1 gloss	Building	Civil	Finishes	Painting	m2/hr	1.300	2.400	-	m2/hr	1.300	2.400	-
876	External Steelwork, 1 primer, 2 undercoats, 1 gloss	Building	Civil	Finishes	Painting	m2/hr	0.900	1.700	-	m2/hr	0.900	1.700	-
877	Guttering Steelwork, 1 coat primer, 2 undercoats, 1 gloss	Building	Civil	Finishes	Painting	m/hr	-	2.500	-	m/hr	-	2.500	-
	Roads & Bridges Works - Paintwork												
966	Simple Universal Beam Steel Roads & Bridges, paintwork to all	Building	Civil	Finishes	Painting	m/day	-	6.900	-	m/hr	-	0.863	-
	NEW FLAT PLATES	Building	Civil	Finishes	Painting								
	SURFACE PREPARATION	Building	Civil	Finishes	Painting								
	IN TERMS OF WEIGHT	Building	Civil	Finishes	Painting	MH/TON	16.000	8.000	6.400	ton/mhr	0.063	0.125	0.156

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
	SECTION A - RULE OF THUMB												
	IN TERMS OF AREA	Building	Civil	Finishes	Painting	MH/S.M.	0.860	0.430	0.340	m2/mhr	1.163	2.326	2.941
	SAND PREPARATION					MH/TON	60.000	30.000	24.000	ton/mhr	0.017	0.033	0.042
	Construction Finishes - Screeding												
642	Sand/Cement Floor Screed, 15-20mm thick	Building	Civil	Finishes	Screeding	m2/hr	-	4.800	5.700	m2/hr	-	4.800	5.700
643	Sand/Cement Floor Screed, 20-30mm thick	Building	Civil	Finishes	Screeding	m2/hr	-	4.600	5.500	m2/hr	-	4.600	5.500
644	Sand/Cement Floor Screed, 30-40mm thick	Building	Civil	Finishes	Screeding	m2/hr	3.200	4.200	5.300	m2/hr	3.200	4.200	5.300
645	Sand/Cement Floor Screed, 40-50mm thick	Building	Civil	Finishes	Screeding	m2/hr	2.000	3.800	5.200	m2/hr	2.000	3.800	5.200
646	Sand/Cement Floor Screed, 50-65mm thick	Building	Civil	Finishes	Screeding	m2/hr	-	3.300	3.900	m2/hr	-	3.300	3.900
647	Sand/Cement Floor Screed, 65-100mm thick	Building	Civil	Finishes	Screeding	m2/hr	-	3.000	3.600	m2/hr	-	3.000	3.600
648	Fix/Setout Screed Battens	Building	Civil	Finishes	Screeding	m/hr	-	10.000	-	m/hr	-	10.000	-
	J4 Suspended ceilings												
	Finishes Builders Work and Finishes - Ceiling Finishes												
722	Suspended Ceilings, office situations	Building	Civil	Finishes	Ceiling	m2/hr	-	2.600	3.500	m2/hr	-	2.600	3.500
723	Suspended Ceilings, First Fix	Building	Civil	Finishes	Ceiling	m2/hr	-	0.700	-	m2/hr	-	0.700	-
724	Suspended Ceilings, Second Fix					m2/hr	-	1.200	-	m2/hr	-	1.200	-
	SECTION K - ACCESSORIES												
	K1 Partitions												
	Finishes Builders Work and Finishes - Partitioning												
730	Timber Studding	Building	Civil	Finishes	Partitioning	m/hr	5.900	6.200	6.800	m/hr	5.900	6.200	6.800
731	Metalwork System (MF) Studding	Building	Civil	Finishes	Partitioning	m2/hr	1.600	2.000	2.500	m2/hr	1.600	2.000	2.500
732	Tape, Joint Sand and Top Coat Plasterboard	Building	Civil	Finishes	Partitioning	m2/hr	1.100	1.500	2.100	m2/hr	1.100	1.500	2.100
733	Skimming to Plasterboards	Building	Civil	Finishes	Partitioning	m2/hr	5.500	6.100	6.700	m2/hr	5.500	6.100	6.700
734	5mm Hardboard Paneling, excluding studding time	Building	Civil	Finishes	Partitioning	m2/hr	-	3.200	3.600	m2/hr	-	3.200	3.600
735	100mm Pine Paneling, excluding studding time	Building	Civil	Finishes	Partitioning	m2/hr	0.800	1.100	1.400	m2/hr	0.800	1.100	1.400
736	Quality Hardwood Paneling, excluding studding time	Building	Civil	Finishes	Partitioning	m2/hr	0.300	0.500	0.600	m2/hr	0.300	0.500	0.600
737	Fix 50mm Rocksil Insulation to cavities	Building	Civil	Finishes	Partitioning	m2/hr	-	17.800	20.200	m2/hr	-	17.800	20.200
738	Fix Timber Studding and Paramount Partitions	Building	Civil	Finishes	Partitioning	m2/hr	2.600	3.000	3.400	m2/hr	2.600	3.000	3.400
739	Fix Timber Studding and Demountable Partitions	Building	Civil	Finishes	Partitioning	m2/hr	0.800	1.100	1.600	m2/hr	0.800	1.100	1.600
740	Fix Timber Studding and Hills Duraboard Partitions	Building	Civil	Finishes	Partitioning	m2/hr	3.000	3.500	3.900	m2/hr	3.000	3.500	3.900
741	Fix Timber Studding and Gyproc Laminated Partitions	Building	Civil	Finishes	Partitioning	m2/hr	2.200	2.600	2.900	m2/hr	2.200	2.600	2.900
742	Stud Partitions, Butt Jointed, nailed	Building	Civil	Finishes	Partitioning	m/hr	5.900	7.300	9.100	m/hr	5.900	7.300	9.100
743	Stud Partitions, Butt Jointed, screwed	Building	Civil	Finishes	Partitioning	m/hr	3.500	4.600	5.800	m/hr	3.500	4.600	5.800
744	Stud Partitions, T&G Jointed, nailed	Building	Civil	Finishes	Partitioning	m/hr	2.900	3.600	4.800	m/hr	2.900	3.600	4.800
745	Stud Partitions, T&G Jointed, screwed	Building	Civil	Finishes	Partitioning	m/hr	2.100	2.800	3.700	m/hr	2.100	2.800	3.700
746	Stud Partitions, Fix Sole Plates	Building	Civil	Finishes	Partitioning	m/hr	-	11.100	-	m/hr	-	11.100	-
747	Stud Partitions, Fix Noggins	Building	Civil	Finishes	Partitioning	m/hr	-	16.600	-	m/hr	-	16.600	-
748	Stud Partitions, Drill 25-40mm Holes	Building	Civil	Finishes	Partitioning	no/hr	-	28.500	-	no/hr	-	28.500	-
749	Fix Toilet Partition System, Separation panels	Building	Civil	Finishes	Partitioning	hrs/no	-	0.800	-	no/hrs	-	1.250	-
750	Fix Toilet Partition System, Wall Front Panels	Building	Civil	Finishes	Partitioning	hrs/no	-	0.700	-	no/hrs	-	1.429	-
751	Fix Toilet Partition System, Separation Front Panels	Building	Civil	Finishes	Partitioning	hrs/no	-	0.600	-	no/hrs	-	1.667	-
752	Fix Toilet Partition System, End Front Panels	Building	Civil	Finishes	Partitioning	hrs/no	-	0.600	-	no/hrs	-	1.667	-
753	Fix Toilet Partition System, Hang Door to Panel	Building	Civil	Finishes	Partitioning	hrs/no	-	0.400	-	no/hrs	-	2.500	-
754	Fix Toilet Partition System, Hand Door plugged to wall	Building	Civil	Finishes	Partitioning	hrs/no	-	0.600	-	no/hrs	-	1.667	-
755	Fix Toilet Partition System, Fix Head Rails	Building	Civil	Finishes	Partitioning	hrs/no	-	0.100	-	no/hrs	-	10.000	-
	Finishes Builders Work and Finishes - Plasterboard												
725	Boarding to Plaster dabs	Building	Civil	Finishes	Plasterboard	m2/hr	3.600	4.000	5.500	m2/hr	3.600	4.000	5.500
726	Boarding to Stud-work/Metal Lathes	Building	Civil	Finishes	Plasterboard	m2/hr	4.000	5.000	6.700	m2/hr	4.000	5.000	6.700
727	Boarding 12mm nailed to studding	Building	Civil	Finishes	Plasterboard	m2/hr	-	12.500	-	m2/hr	-	12.500	-
728	Boarding 19mm nailed to studding	Building	Civil	Finishes	Plasterboard	m2/hr	-	16.500	-	m2/hr	-	16.500	-

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
	SECTION A - RULE OF THUMB												
		Building	MEP	MEP Fix	Escaltors								
934	Truss type, Overall Installation (excl arch finishes)	Building	MEP	MEP Fix	Escaltors	wks	14.000	12.000	11.000	hr	672.000	576.000	528.000
935	Truss type, Manufacture, test and deliver	Building	MEP	MEP Fix	Escaltors	wks	-	60.000	48.000	hr	-	2,880.000	2,304.000
936	Truss type, Phase A assemble truss , position/level	Building	MEP	MEP Fix	Escaltors	wks	-	1.000	-	hr	-	48.000	-
937	Truss type, Stop-Work for surrounding finishes	Building	MEP	MEP Fix	Escaltors	wks	8.000	6.000	4.000	hr	384.000	288.000	192.000
938	Truss type, Phase B decking and glazing etc	Building	MEP	MEP Fix	Escaltors	wks	-	5.000	-	hr	-	240.000	-
939	Truss type, Phase C performance testing	Building	MEP	MEP Fix	Escaltors	wks	-	2.000	-	hr	-	96.000	-
940	Truss type, Phase D full load testing	Building	MEP	MEP Fix	Escaltors	wks	-	2.000	-	hr	-	96.000	-
941	Truss type, Phase E final test and inspection	Building	MEP	MEP Fix	Escaltors	wks	-	2.000	-	hr	-	96.000	-
	SECTION O - MECHANICAL ENGINEERING INSTALLATIONS												
	O1 Pipework and gutterwork												
	Electrical and Mechanical Installations - Plumbing and Drainage												
895	Railway Station 1st Fix	Railway	MEP	MEP Fix	Plumbing	wks	-	30.000	-	hr	-	1,440.000	-
896	Railway Station 2nd Fix	Railway	MEP	MEP Fix	Plumbing	wks	-	6.000	-	hr	-	288.000	-
897	Railway Station T&C	Railway	MEP	MEP Fix	Plumbing	wks	-	8.000	-	hr	-	384.000	-
898	Cast Iron TimeSaver 100mm Pipes	Building	MEP	MEP Fix	Plumbing	m/hr	-	1.200	-	m/hr	-	1.200	-
899	Cast Iron TimeSaver 100mm Bends	Building	MEP	MEP Fix	Plumbing	hrs/no	-	1.300	-	no/hrs	-	0.769	-
900	Cast Iron TimeSaver 100mm Branches	Building	MEP	MEP Fix	Plumbing	hrs/no	-	2.200	-	no/hrs	-	0.455	-
901	Cast Iron TimeSaver 100mm Double Branches	Building	MEP	MEP Fix	Plumbing	hrs/no	-	2.500	-	no/hrs	-	0.400	-
902	Cast Iron Spigot Joint Pipes, 100mm	Building	MEP	MEP Fix	Plumbing	m/hr	-	1.100	-	m/hr	-	1.100	-
903	Cast Iron Spigot Joint Pipes, 150mm	Building	MEP	MEP Fix	Plumbing	m/hr	-	0.800	-	m/hr	-	0.800	-
904	Cast Iron Spigot Joint Pipes, 225mm	Building	MEP	MEP Fix	Plumbing	m/hr	-	0.500	-	m/hr	-	0.500	-
905	Cast Iron Spigot Joint Pipes, 300mm	Building	MEP	MEP Fix	Plumbing	m/hr	-	0.400	-	m/hr	-	0.400	-
906	Water Mains, 50-100mm dia	Building	MEP	MEP Fix	Plumbing	m/hr	-	2.700	-	m/hr	-	2.700	-
907	Water Mains, 150-200mm dia	Building	MEP	MEP Fix	Plumbing	m/hr	-	2.100	-	m/hr	-	2.100	-
908	Water Mains, 1,050mm dia	Building	MEP	MEP Fix	Plumbing	m/hr	-	0.400	-	m/hr	-	0.400	-
909	Gas Mains, 200mm dia	Building	MEP	MEP Fix	Plumbing	m/hr	-	1.800	-	m/hr	-	1.800	-
910	Gas Mains, 300mm dia	Building	MEP	MEP Fix	Plumbing	m/hr	-	1.200	-	m/hr	-	1.200	-
911	Gas Mains, 400mm dia	Building	MEP	MEP Fix	Plumbing	m/hr	-	1.100	-	m/hr	-	1.100	-
	Roof Structures and Coverings - Rainwater Works												
		Building	MEP	MEP Fix	Plumbing	Units	Slow	Ave	Fast				
		Building	MEP	MEP Fix	Plumbing								
584	UPVC Downpipes, 75mm	Building	MEP	MEP Fix	Plumbing	m/hr	-	3.300	-	m/hr	-	3.300	-
585	UPVC Guttering, 75mm	Building	MEP	MEP Fix	Plumbing	m/hr	-	3.100	-	m/hr	-	3.100	-
586	UPVC RWP Fittings, 75mm	Building	MEP	MEP Fix	Plumbing	no/hr	-	3.100	-	no/hr	-	3.100	-
587	Cast Iron Downpipes, 75mm	Building	MEP	MEP Fix	Plumbing	m/hr	-	2.100	-	m/hr	-	2.100	-
588	Cast Iron Guttering, 75mm	Building	MEP	MEP Fix	Plumbing	m/hr	-	2.500	-	m/hr	-	2.500	-
589	Cast Iron RWP Fittings, 75mm	Building	MEP	MEP Fix	Plumbing	no/hr	-	2.200	-	no/hr	-	2.200	-
590	Aluminium Downpipes, 72mm	Building	MEP	MEP Fix	Plumbing	m/hr	-	2.500	-	m/hr	-	2.500	-
591	Aluminium Guttering, 72mm	Building	MEP	MEP Fix	Plumbing	m/hr	-	2.900	-	m/hr	-	2.900	-
592	Aluminium RWP Fittings, 72mm	Building	MEP	MEP Fix	Plumbing	no/hr	-	1.900	-	no/hr	-	1.900	-
	O2 Equipment												
	Electrical and Mechanical Installations - Lift Installation												
942	Hydraulic Lift, Install 2 to 3 storeys	Building	MEP	MEP Fix	Equipment	wks/floor	-	3.000	-	floor/hr	-	0.007	-
943	Hydraulic Lift, Install 4 storeys and above	Building	MEP	MEP Fix	Equipment	wks/floor	-	2.000	-	floor/hr	-	0.010	-
944	Hydraulic Lift, Testing allow 2 wks plus	Building	MEP	MEP Fix	Equipment	day/floor	-	1.000	-	floor/hr	-	0.167	-
945	Standard Lift, Manufacture, test and deliver	Building	MEP	MEP Fix	Equipment	wks	-	12.000	-	hr	-	576.000	-
946	Non-Standard Lift, Manufacture, test and deliver	Building	MEP	MEP Fix	Equipment	wks	75.000	65.000	52.000	hr	3,600.000	3,120.000	2,496.000
	Electrical and Mechanical Installations - Commercial Kitchen												
958	Overall Installation for 100 persons or 50m2	Building	MEP	MEP Fix	Equipment	wks	-	3.000	-	hr	-	144.000	-
959	Overall Installation for 500 persons or 150m2	Building	MEP	MEP Fix	Equipment	wks	-	5.000	-	hr	-	240.000	-

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
	SECTION A - RULE OF THUMB												
960	Overall Installation for 1000 persons or 250m2	Building	MEP	MEP Fix	Equipment	wks	-	8.000	-	hr	-	384.000	-
961	Install Ovens, friers and large mixers etc	Building	MEP	MEP Fix	Equipment	mandays	-	1.000	-	manhour	-	8.000	-
962	Install Sinks, bain maries and washers etc	Building	MEP	MEP Fix	Equipment	mandays	-	2.000	-	manhour	-	16.000	-
	SECTION P - ELECTRICAL ENGINEERING INSTALLATIONS												
	P1 Generally												
	Roof Structures and Coverings - Roof Lights												
576	Large Lights on Tiled Roof	Building	MEP	MEP Fix	Equipment	no/day	-	1.100	-	no/hr	-	8.800	-
	Electrical and Mechanical Installations - Electrical System												
918	Railway Station 1st Fix	Railway	MEP	MEP Fix	Equipment	wks	-	38.000	-	hr	-	1,824.000	-
919	Railway Station 2nd Fix	Railway	MEP	MEP Fix	Equipment	wks	-	16.000	-	hr	-	768.000	-
920	Railway Station T&C	Railway	MEP	MEP Fix	Equipment	wks	-	8.000	-	hr	-	384.000	-
921	Cable Installation, 1 cable laid in trench and protect	Building	MEP	MEP Fix	Cabling	m/hr	-	6.200	-	m/hr	-	6.200	-
922	Cable Installation, 2 cable laid in trench and protect	Building	MEP	MEP Fix	Cabling	m/hr	-	5.600	-	m/hr	-	5.600	-
923	Cable Installation, 5 cable laid in trench and protect	Building	MEP	MEP Fix	Cabling	m/hr	-	4.300	-	m/hr	-	4.300	-
924	Cable Installation, 7 cable laid in trench and protect	Building	MEP	MEP Fix	Cabling	m/hr	-	3.700	-	m/hr	-	3.700	-
925	Cable Installation, 8 cable laid in trench and protect	Building	MEP	MEP Fix	Cabling	m/hr	-	3.500	-	m/hr	-	3.500	-
926	Cable Installation, 2 cable laid in trench and protect, 100mm dia	Building	MEP	MEP Fix	Cabling	m/hr	-	1.800	-	m/hr	-	1.800	-
927	Cable Installation, 2 cable laid in trench and protect, 135mm dia	Building	MEP	MEP Fix	Cabling	m/hr	-	1.600	-	m/hr	-	1.600	-
928	Cable Installation, 3 cable laid in trench and protect, 100mm dia	Building	MEP	MEP Fix	Cabling	m/hr	-	1.000	1.500	m/hr	-	1.000	1.500
929	Cable Installation, 6 cable laid in trench and protect, 100mm dia	Building	MEP	MEP Fix	Cabling	m/hr	-	0.700	1.200	m/hr	-	0.700	1.200
930	Cable Installation, 4 cable laid in trench and protect, 150mm dia	Building	MEP	MEP Fix	Cabling	m/hr	0.700	1.200	3.100	m/hr	0.700	1.200	3.100
931	Cable Installation, 36 cable laid in trench and protect, 100mm dia	Building	MEP	MEP Fix	Cabling	m/hr	-	0.200	-	m/hr	-	0.200	-
932	Cable Installation, 10 cable laid in trench and protect, 100mm dia	Building	MEP	MEP Fix	Cabling	m/hr	-	0.500	-	m/hr	-	0.500	-
933	Cable Installation, 1 cable laid in trench and protect, 300mm dia	Building	MEP	MEP Fix	Cabling	m/hr	-	1.300	-	m/hr	-	1.300	-
	Roads & External Works - Ducting												
1013	Lay PVC Cable Ducting, 89mm dia	Roads & Bridges	MEP	MEP Fix	Ducting	m/hr	-	11.900	-	m/hr	-	11.900	-
	Roads & External Works - Lighting												
1014	Lay Street Lighting Cables and connect	Roads & Bridges	MEP	MEP Fix	Lighting		-	6.200	-				
	Electrical and Mechanical Installations - Power Supply												
947	AC Install 2 no Service transformers, 6 men	Building	MEP	MEP Fix	Equipment	days	-	12.000	-	hr	-	96.000	-
948	AC Install 2 no Switchgear, 7 men	Building	MEP	MEP Fix	Equipment	days	-	12.000	-	hr	-	96.000	-
949	AC Install Associated Trays and ladders, 3 men	Building	MEP	MEP Fix	Equipment	days	11.000	5.000	-	hr	88.000	40.000	-
950	AC Cable Terminations in Tx and SWG Rooms, 3 men	Building	MEP	MEP Fix	Equipment	days	12.000	6.000	-	hr	96.000	48.000	-
951	DC Install Insulated Flooring in DC Room, 1 men	Building	MEP	MEP Fix	Equipment	days	-	5.000	-	hr	-	40.000	-
952	DC Install 1 set Rectifier Transformer and Rectifier, 7 men	Building	MEP	MEP Fix	Equipment	days	-	1.000	-	hr	-	8.000	-
953	DC Install Switchgear, 7 men	Building	MEP	MEP Fix	Equipment	days	-	10.000	-	hr	-	80.000	-
954	DC Primary Cable Terminations and Busduct, 18 men	Building	MEP	MEP Fix	Equipment	days	12.000	9.000	-	hr	96.000	72.000	-
955	DC Secondary Cable Terminations and Connections, 9 men	Building	MEP	MEP Fix	Equipment	days	12.000	6.000	-	hr	96.000	48.000	-
956	Trackside Cabling 33kV/Pilot Cables, 10 men	Building	MEP	MEP Fix	Equipment	m run/day	2,100.000	-	-	m run/hr	262.500	-	-
957	Trackside Cabling Terminations, 6 men	Building	MEP	MEP Fix	Equipment	days	-	1.000	-	hr	-	8.000	-
	P2 Control gear												
	Electrical and Mechanical Installations - Environmental Control												
915	Railway Station 1st Fix	Railway	MEP	MEP Fix	Equipment	wks	-	38.000	-	hr	-	1,824.000	-
916	Railway Station 2nd Fix	Railway	MEP	MEP Fix	Equipment	wks	-	16.000	-	hr	-	768.000	-
917	Railway Station T&C	Railway	MEP	MEP Fix	Equipment	wks	-	10.000	-	hr	-	480.000	-

	Task / Description	Structure	Discipline	Category	Type	Units	Slow	Ave	Fast	Units	Slow	Ave	Fast
	SECTION A - RULE OF THUMB												
	<u>Heating Vanitalting and Air Conditioning</u>												
	HACK PIPING	Building	MEP	MEP Fix	Equipment	MH/L.M.	7.000	3.500	2.800	L.m./mhr			
	DUCK WORK INSTALL	Building	MEP	MEP Fix	Equipment	MH/S.M.	12.000	6.000	4.800	m2/mhr			
	DUCK WORK FAB.	Building	MEP	MEP Fix	Equipment	MH/S.M.	36.000	18.000	14.400	m2/mhr			
	PACKAGE UNIT AIR CONDITIONER	Building	MEP	MEP Fix	Equipment	MH/EACH	48.000	24.000	19.200	each/mhr			
	UNIT HEATER	Building	MEP	MEP Fix	Equipment	MH/EACH	24.000	12.000	9.600	each/mhr			
	FINNED CONVERTER	Building	MEP	MEP Fix	Equipment	MH/EACH	10.000	5.000	4.000	each/mhr			
	EXHAUST FAN, PROPELLER	Building	MEP	MEP Fix	Equipment	MH/EACH	16.000	8.000	6.400	each/mhr			
	GRAVITY ROOF VENT	Building	MEP	MEP Fix	Equipment	MH/L.M.	14.600	7.300	5.840	L.m./mhr			
	POWER ROOF VENT	Building	MEP	MEP Fix	Equipment	MH/EACH	48.000	24.000	19.200	each/mhr			
	ROUND ROOF VENT	Building	MEP	MEP Fix	Equipment	MH/EACH	16.000	8.000	6.400	each/mhr			
	PLUMBING PIPING	Building	MEP	MEP Fix	Equipment	MH/L.M.	7.00	3.500	2.800	L.m./mhr			