



དཔལ་ལྷན་འབྲུག་གཞུང་། འབས་ཏྲིག་ལྷན་ཁག།

ROYAL GOVERNMENT OF BHUTAN

MINISTRY OF WORKS AND HUMAN SETTLEMENT

DEPARTMENT OF ENGINEERING SERVICES

“Construction Industry: Solutions through innovation and improved technology”

# BHUTAN SCHEDULE OF RATES - 2021

## CIVIL

## **FOREWORD**

The Bhutan Schedule of Rates (Civil) - 2021 is the revised edition of Bhutan Schedule of Rates (Civil) - 2020. This document is a guiding document for projecting the cost of construction works. Great effort has been made by the Department of Engineering Services to incorporate as many items as possible that are being used in construction works. However, due to high diversity in the type and class of construction materials available in the market, only the most commonly used materials have been incorporated with their average market rates. An additional chapter for Occupational Health and Safety has been inserted in BSR-2021.

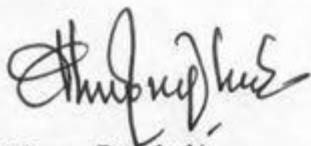
In this edition, rates for labour and materials have been revised. While the revision of labour rate is done as per the approval of the 80<sup>th</sup> session of the Third *Lhengye Zhungtshog*, the basic material rates are based on market price collected from four base towns of Gelephu, Phuentsholing, Samdrup Jongkhar and Thimphu. These rates have been applied in conjunction with the coefficients from Labour and Materials Coefficients - 2021 to develop Built-up item rates. In addition, following constants have been added:

- a. A fixed 5% for hand tools & equipment on labour cost, lubrication & corrective maintenance on machinery cost and wastages & unaccounted on materials cost.
- b. A fixed 1 % for water charges (sanitation, mixing of mortar, drinking, curing, etc.)
- c. 10% for contractor's profit and overhead charges when rate analysis is carried out by the procuring agencies. For rate analysis submitted by contractors for the tendered work, it can vary up to a maximum of 10%.

Besides the constants mentioned above, no other additions shall be permitted in the preparation of project estimates.

All the items of work prescribed in BSR - 2021 should be read and understood in conjunction with Specifications for Building and Road Works - 2021.

The users are encouraged to send comments and suggestions to the Department for making positive reforms in the schedule. With developments in terms of material use, construction technology and engineering practices taking place at a fast pace, a more relevant schedule of rates can only be developed through a collective effort of the people involved in the construction industry.



**(Karma Dupchuk)**  
**Director**  
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## **DISCLAIMER**

The Bhutan Schedule of Rates-2021 is prepared and published primarily as a tool to assist in the estimation of project costs only, **and the users are advised to refrain from using it for the purpose of *filling tenders, evaluating tenders, awarding works and/or making contractual payments***. This is owing to difficulty in obtaining comprehensive and accurate rates from base towns, and the associated complexity in their analysis besides market rates of items being dynamic in nature. Hence, BSR reflects only suggestive averages and not accurate current market rates.

The publisher shall not be accountable and responsible for any ambiguity, discrepancy, dispute or financial losses arising directly or indirectly as a result of individuals or agencies using the rates in the BSR-2021 for filling of their tenders, evaluating tenders, awarding works and/or making contractual payments.

## **PREFACE**

1. Bhutan Schedule of Rates - 2021 is the revised edition of Bhutan Schedule of Rates - 2020.
2. The rates for all the built - up items are for up to 10 Km radius and is inclusive of:
  - a) A fixed 5% for hand tools & equipment on labour cost, lubrication & corrective maintenance on machinery cost and wastages & unaccounted on materials cost.
  - b) A fixed 1% for water charges (sanitation, mixing of mortar, drinking, curing, etc.)
  - c) 10% for contractor's profit and overhead charges.
3. The built-up item rates are based on "Labour and Material Coefficients 2021" with the applicable percentages given above. The labour coefficients have been revised.
4. The schedule is designed primarily as a tool for estimation of construction projects only and not for payment to contractors or filling up tenders.
5. This Schedule shall be read along with the "Specifications for Building and Road works - 2021" and the "Labour and Materials Coefficients - 2021"
6. The following guidelines are provided:
  - a) Guideline for Cost Indices with sample calculation,
  - b) Guideline for Rate analysis, and
  - c) Guideline for Quick Cost
  - d) Guideline for Occupational Health and Safety Cost (OHS)
  - e) Guideline for Temporary Living Accommodation
7. Material Rates used in BSR-2021 were collected during the period November – December 2020. Users are advised to update rates accordingly with the prevailing market rates.
8. BSR contains the commonly used items only, for the items not covered in the BSR, rates shall be analyzed and workout by the engineers as may be relevant
9. The Labour Rates used in BSR 2021 are revised based on Build Bhutan Project in view of the increased labour rate in the market.
10. The Following new items/changes are incorporated in BSR 2021:
  - Chapter 1: Basic Rates – The basic rates for labour is revised
  - Chapter 11: Wood Work –
    - a) Blue pine and Champ are categorized as Class 'A', (Conifer)
    - b) Mixed conifer is categorized as Class 'B', (Conifer)
    - c) Teak/Sal wood is categorized as Class 'A', (Broad leaf)
    - d) Hollock wood is categorized as Class 'B', (Broad leaf)
  - Chapter 22: Occupational Health and Safety (OHS) – This chapter has been inserted with two items OHS 001 and OHS 002.
  - Section 4: Guideline for Cost Indices – the weightage in 'Sample Calculations of Cost Indices' have been revised. The changes were made as the labour rates have been revised.

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## **SECTION – 1**

### **Basic Rates of Materials, Labour and Hire Charges of Plants and Equipments**

Code	Description	Units	PL	GP	SJ	Th
<b>Chapter 1: BASIC RATES - LABOUR</b>						
<b>Bhutanese National Labour</b>						
<b>Category 1</b>						
LB0020	Auto-Mechanic Gd.1	day	632.50	632.50	632.50	632.50
LB0021	Carpenter Gd.1	day	632.50	632.50	632.50	632.50
LB0022	General Mechanic Gd.1	day	632.50	632.50	632.50	632.50
LB0023	Lharib	day	632.50	632.50	632.50	632.50
LB0024	Lineman Gd.1	day	632.50	632.50	632.50	632.50
LB0025	Plant Operator Gd.1	day	632.50	632.50	632.50	632.50
<b>Category 2</b>						
LB0030	Auto-Electrician Gd.1	day	632.50	632.50	632.50	632.50
LB0031	Auto-Mechanic Gd.2	day	632.50	632.50	632.50	632.50
LB0032	Blacksmith (metal-worker)	day	632.50	632.50	632.50	632.50
LB0033	Carpenter Gd.2	day	632.50	632.50	632.50	632.50
LB0034	General Mechanic Gd.2	day	632.50	632.50	632.50	632.50
LB0035	Lineman Gd.2	day	632.50	632.50	632.50	632.50
LB0036	Mason Gd.1	day	632.50	632.50	632.50	632.50
LB0037	Plant Operator Gd.2	day	632.50	632.50	632.50	632.50
LB0038	Plumber Gd.1	day	632.50	632.50	632.50	632.50
LB0039	Work Supervisor (Lajab)	day	632.50	632.50	632.50	632.50
<b>Category 3</b>						
LB0045	Auto-Electrician Gd.2	day	575.00	575.00	575.00	575.00
LB0046	Auto-Mechanic Gd.3	day	575.00	575.00	575.00	575.00
LB0047	Blaster	day	575.00	575.00	575.00	575.00
LB0048	Carpenter Gd.3	day	575.00	575.00	575.00	575.00
LB0049	General Mechanic Gd.3	day	575.00	575.00	575.00	575.00
LB0050	Lineman Gd.3	day	575.00	575.00	575.00	575.00
LB0051	Mason Gd.2	day	575.00	575.00	575.00	575.00
LB0052	Painter Gd.1	day	575.00	575.00	575.00	575.00
LB0053	Plant Operator Gd.3	day	575.00	575.00	575.00	575.00
LB0054	Plumber Gd.2	day	575.00	575.00	575.00	575.00
LB0055	Sawyer Gd.1	day	575.00	575.00	575.00	575.00
LB0056	Wireman Gd.1	day	575.00	575.00	575.00	575.00
<b>Category 4</b>						
LB0065	Cleaner	day	518.00	518.00	518.00	518.00
LB0066	Machine Operator	day	518.00	518.00	518.00	518.00
LB0067	Painter Gd.2	day	518.00	518.00	518.00	518.00
LB0068	Sawyer Gd.2	day	518.00	518.00	518.00	518.00
LB0069	Wireman Gd.2	day	518.00	518.00	518.00	518.00
<b>Category 5</b>						
LB0075	Labourer (Male)	day	460.00	460.00	460.00	460.00
LB0076	Labourer (Female)	day	460.00	460.00	460.00	460.00
LB0077	Labour	day	460.00	460.00	460.00	460.00



Code	Description	Units	PL	GP	S/J	TH
<b>BASIC RATES - BITUMEN PRODUCTS, CHEMICALS &amp; BLASTING MATERIALS</b>						
<b>Bitumen materials</b>						
MT0001	Bitumen 80\100	tonne	35842.00	35842.00	35842.00	45493.92
MT0002	Bitumen Emulsion	tonne	33700.00	33700.00	33700.00	43351.92
<b>Bitumen felt Type 3</b>						
MT0005	Grade 1	sq.m	252.63	252.63	215.93	262.78
MT0006	Grade 2	sq.m	179.22	179.22	129.56	185.05
<b>Sealing Compounds</b>						
MT0010	Hot sealing compound Grade A	kg	40.74	40.74	40.74	40.74
MT0011	Bitumen Solution primer	litre	51.36	51.36	51.36	51.36
<b>Joint-filler</b>						
MT0015	Pre-moulded bitumen impregnated fibre board, 12mm thick (IS: 1838 or equivalent)	sq.m	571.18	571.18	571.18	585.28
<b>Blasting materials</b>						
MT0020	Super dyne / Gelatine	kg	78.40	78.40	78.40	78.89
MT0021	Fuse Coil	each	69.16	69.16	69.16	70.16
MT0022	Detonator	each	5.84	5.84	5.84	5.85
MT0023	Drill rod - 8' - 0"	each	5709.50	5709.50	5709.50	5709.50
MT0024	Silent Blaster	kg	335.13	337.47	342.76	340.88
MT0025	Drill rod - 5' - 0"	each	4045.00	4045.00	3842.75	4114.23
MT0026	Drill rod - 3' - 0"	each	2947.00	2947.00	3408.13	3515.00
<b>Chemicals</b>						
MT0030	Aldrin Emulsifiable Concentrate 30% (for anti-termite treatment)	litre	284.58	304.98	305.00	308.88
<b>Fuels</b>						
MT0035	Kerosene	litre	37.50	37.00	36.50	39.50
MT0036	Diesel	litre	53.35	51.00	51.59	55.14
MT0037	Petrol	litre	56.69	53.52	54.11	58.68
<b>BASIC RATES - QUARRY &amp; FOREST PRODUCTS</b>						
MT0040	Firewood (stacked volume)	cu.m	699.97	650.00	735.00	775.00
MT0041	Royalty for earth, mud, boulder, sand & gravel	truck	50.00	50.00	50.00	50.00
MT0042	Mud dry	cu.m	85.70	84.85	85.00	85.00
MT0043	Sand	cu.m	473.33	383.08	462.39	1124.15
MT0044	Hay/husk	kg	67.88	67.55	68.90	68.90
MT0045	Straw, girth <100mm	bundle	12.34	13.10	13.36	13.26
MT0046	Cuttings	each	0.13	0.13	0.13	0.14
MT0047	Seedlings	each	6.12	6.50	6.57	6.63
MT0048	Grass Slips	each	0.09	0.09	0.09	0.09
MT0049	Natural Grass Turf	Sq.m	33.32	33.67	34.34	34.34

*Bhutan Schedule of Rates - 2020*

Code	Description	Units	PL	GP	S/J	TH
<b>S t o n e</b>						
MT0060	Boulder	cu.m	861.81	950.00	880.00	1049.85
MT0061	Dolep (flat stone)	Sq.m	1291.20	1291.20	1291.20	1291.20
<b>Crushed Rock</b>						
MT0064	100mm	cu.m	910.86	829.21	873.63	935.85
MT0065	75mm	cu.m	910.86	829.21	914.72	935.85
MT0066	63mm	cu.m	910.86	829.21	928.20	935.85
MT0067	50mm	cu.m	910.86	829.21	948.60	935.85
MT0068	40mm	cu.m	872.91	635.76	841.87	1121.75
MT0069	25mm	cu.m	981.94	898.95	1039.78	1199.85
MT0070	20mm	cu.m	967.20	853.78	1011.84	1199.85
MT0071	12.5 - 6mm	cu.m	963.02	821.19	979.52	1166.13
<b>Gravel/Shingles</b>						
MT0080	40mm to 20mm	cu.m	428.40	438.60	466.10	461.04
MT0081	20mm to 10mm	cu.m	551.57	548.76	559.74	552.84
<b>M a r b l e   I t e m s</b>						
<b>Marble Chips 6mm</b>						
MT0085	Black or White	tonne	6493.33	7708.33	7175.00	7984.84
MT0086	Coloured	tonne	6493.33	6666.67	6133.33	7600.00
<b>Marble Slab 20mm</b>						
MT0090	Black	sq.m	1057.80	995.96	1097.50	1338.37
MT0091	White	sq.m	1131.85	960.44	936.10	1233.64
MT0092	Black and White	sq.m	1030.14	1004.90	936.10	1370.38
MT0093	Coloured	sq.m	1310.74	1048.22	1147.50	1497.56
<b>Marble Slab 40mm</b>						
MT0100	Black	sq.m	1536.96	1500.76	1357.78	1939.44
MT0101	White	sq.m	1629.24	1500.76	1031.91	1936.88
MT0102	Black and White	sq.m	1683.55	1541.33	1031.91	2067.76
MT0103	Coloured	sq.m	1917.59	1725.93	1357.78	2340.32
<b>Kota Stone Slab</b>						
MT0110	20mm	sq.m	1062.50	982.43	656.18	1158.36
MT0111	40mm	sq.m	1887.66	1859.74	757.13	2136.61
<b>Granite stone slab</b>						
MT0114	Granite slab-18mm	sq.m	1452.60	1452.60	1200.00	1614.00
MT0115	Granite slab-20mm	sq.m	1506.40	1542.27	1592.48	1936.80
<b>L i m e</b>						
MT0120	Slaked lime	kg	22.75	27.54	34.33	35.33
MT0121	Unslaked lime	kg	24.25	35.17	17.00	34.17
<b>Others</b>						
MT0122	Sealed Bag	each	99.65	101.44	101.44	102.44

Code	Description	Units	PL	GP	S/J	TH
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## BASIC RATES - BRICK

### Brick materials

MT0125	Bricks 2nd class	1000#	9666.67	9000.00	9500.00	14166.67
MT0126	Brick aggregate	cu.m	2051.60	1989.00	2080.80	2305.20
MT0127	Graded brick aggregate	cu.m	2091.32	2049.08	1970.17	2440.37
MT0128	Interlocking cement earth block	1000#	23723.25	23723.25	23723.25	23445.64
MT0129	Interlocking cement earth block	1000#	14738.70	14637.75	14637.75	14526.71
MT0130	Concrete block bricks - Hollow Block	1000#	41053.00	41053.00	41053.00	47446.50
MT0131	Concrete block bricks - Solid Brick	1000#	7823.63	9640.73	10529.09	12265.43
MT0132	Concrete block bricks - Porous brick	1000#	10006.67	9472.48	9754.29	11760.68
MT0133	Concrete block bricks - Partition Hollow Brick	1000#	35332.50	33650.00	36342.00	36342.00

### AAC BLOCK

MT0140	Autoclaved aerated cement (AAC) blocks	Cu.m	4000.00	4950.00	6100.00	6500.00
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## BASIC RATES - CEMENT & CONCRETE MATERIALS

### Cement

MT0145	Cement (OPC/PSC)	tonne	6627.50	6874.80	7200.00	8147.50
MT0146	White Cement	tonne	33333.33	33091.98	35000.00	34000.00

### Additives & Ad-mixtures

MT0150	Red Oxide Pigment/other pigments	kg	167.00	173.40	105.00	180.00
MT0151	Water proofing compound	kg	110.60	102.67	150.00	140.00
MT0152	Floor Hardener (metallic)	kg	77.49	63.04	62.42	102.90
MT0153	Polymer modified adhesive mortar	kg	14.50	14.50	14.50	14.50

### Underlay for Slabs

#### Plastic Sheet

MT0155	50 micro-metre	sq.m	1.53	1.80	1.27	2.78
MT0156	100 micro-metre	sq.m	3.28	4.16	3.24	5.32
MT0157	200 micro-metre	sq.m	10.64	11.01	8.33	12.03

## BASIC RATES - STEEL & OTHER METAL MATERIALS

### Aluminium Materials

MT0160	Aluminium Fluted Strips 3.15mm thick 150mm wide	m	383.51	375.99	372.55	412.17
MT0161	Aluminium Strip 40x1.6mm	m	104.10	112.26	104.10	140.77

### Anodised Aluminium Section for doors, windows

MT0165	Sliding, open able and pivoted windows	kg	417.35	415.80	388.99	420.47
MT0166	Sliding and openable doors	kg	417.35	415.80	388.99	420.47
MT0167	Partitions framing	kg	417.35	415.80	388.99	420.47
MT0168	False ceiling framing	kg	417.35	415.80	388.99	420.47

### Aluminium Strip Edging

MT0175	57mmx12mmx1.6mm	m	113.82	101.35	103.55	154.02
MT0176	38mmx12mmx1.6mm	m	98.41	79.06	78.13	129.93

Code	Description	Units	PL	GP	S/J	TH
<b>Steel Materials</b>						
MT0181	Channels	kg	59.00	68.09	59.00	91.67
MT0182	Flats	kg	49.63	70.18	59.75	87.50
MT0183	Joists	kg	53.50	69.34	55.00	82.50
MT0184	Plates	kg	57.38	74.34	63.50	86.67
<b>Sheet (250 MPa)</b>						
MT0190	1mm	kg	94.79	78.49	69.51	123.75
MT0191	2mm	kg	89.52	78.49	69.51	123.75
MT0192	2.8mm	kg	86.36	78.49	69.51	123.75
MT0193	3.5mm	kg	78.99	78.49	69.51	123.75
<b>Mild steel Strips</b>						
MT0194	1830mm X 230mm X 3mm	kg	82.15	75.24	74.25	84.08
<b>Welded Tube (250 MPa)</b>						
MT0200	50mm dia	m	287.52	277.22	168.88	297.53
MT0201	40mm dia	m	188.52	191.76	123.60	215.91
<b>Reinforcing Bars &amp; Mesh</b>						
Thermo - Mechanically Treated ( TMT ) bars (yield strength 500						
MT0208	MPa)	kg	51.29	47.92	46.00	61.09
<b>Welded Mesh</b>						
MT0215	75mmx25mm	sq.m	229.60	220.77	300.00	264.77
MT0216	Expanded Metal (19mm x 3mm x 16 gauge)	sq.m	261.38	246.21	300.00	253.51
<b>Fasteners</b>						
MT0220	M.S. Rivets	kg	95.09	78.56	90.00	139.65
MT0221	M.S. Bolts & Nuts, Screws etc	kg	121.82	120.76	110.00	129.89
<b>Fencing Wire Products</b>						
MT0225	Barbed Wire	m	15.33	16.44	14.74	16.72
<b>G.I double knotted mesh</b>						
MT0230	100 x 100 x 8-gauge	sq.m	230.11	292.74	368.62	342.29
MT0231	100 x 100 x 12-gauge	sq.m	228.66	240.47	294.90	282.61
MT0232	150 x 150 x 8-gauge	sq.m	214.32	194.71	368.62	289.63
MT0233	150 x 150 x 12-gauge	sq.m	186.12	173.23	294.90	272.08
<b>G.I chain-link mesh</b>						
MT0240	100 x 100 x 8-gauge	sq.m	200.11	241.07	368.62	298.37
MT0241	100 x 100 x 12-gauge	sq.m	126.38	201.06	294.90	261.51
MT0242	75 x 75 x 8-gauge	sq.m	214.36	260.03	368.62	311.54
MT0243	75 x 75 x 12-gauge	sq.m	177.73	214.28	294.90	272.04
MT0244	50 x 50 x 8-gauge	sq.m	310.69	352.84	716.18	353.66
MT0245	50 x 50 x 12-gauge	sq.m	205.37	286.86	631.92	295.74
<b>Galvanised Iron</b>						
<b>Wires</b>						
MT0256	GI wires ( assorted diameters)	kg	89.00	115.85	77.94	131.65

Code	Description	Units	PL	GP	S/J	TH
<b>Stainless steel railings</b>						
MT0259	Stainless steel (grade 304) Hollow section round/square tubes	kg	398.43	394.94	391.44	415.91
MT0260	Stainless steel bolts/square bar and plates	kg	335.52	335.52	335.52	408.92

### BASIC RATES - ROOFING MATERIALS

MT0275	Corrugated Galvanised Iron Sheets 24G (0.63mm)	tonne	71667.43	71302.49	73885.41	77445.47
MT0278	Pre Painted Steel Corrugated Roofing Sheets 25g(.50mm)	tonne	110192.84	101928.37	110192.84	116641.78

### Fibreglass

MT0280	Reinforced polyester transparent sheets - 1.2mm, corrugated	sq.m	448.33	431.52	481.96	625.56
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### Roofing Slate

MT0285	600mm x 300mm	each	27.97	28.51	27.69	33.62
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### Concrete Roofing Tiles

#### Plain Pantile / Roman II 500mm x 250mm concrete tiles

MT0290	6mm	each	14.66	14.26	13.98	14.28
MT0291	8mm	each	16.85	16.85	16.52	17.34
MT0292	10mm	each	17.50	17.50	17.17	18.16

#### Coloured Pantile / Roman II 500mm x 250mm concrete tiles

MT0295	6mm	each	17.80	18.15	17.80	19.80
MT0296	8mm	each	18.44	18.80	18.44	20.31
MT0297	10mm	each	19.44	19.44	19.06	20.40

#### Super Roman 600mm x 330mm x 10mm concrete tiles

MT0300	Plain	each	33.05	33.69	33.05	35.19
MT0301	Coloured	each	36.86	37.58	36.86	39.27

#### Semi-sheet 600mm x 600mm x 8mm concrete tiles

MT0305	Plain	each	600.33	780.00	780.00	850.00
MT0306	Coloured	each	720.00	890.00	850.00	965.00

#### Steel Sheet - Hip/Ridge, 600mm

MT0310	Plain 1.8m long 24g	each	386.50	465.00	460.00	493.75
MT0311	Coloured 1.8m long 25g	each	956.67	1050.00	806.67	1125.00

### Shingle roofing

MT0315	1500mm (approx.)	pair	53.00	53.55	52.53	52.53
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### Red Mud Plastic Sheet

MT0320	Red mud plastic corrugated sheet, 1.5mm	sq.m	337.00	352.49	345.77	348.84
MT0321	Red mud plastic plain sheet, 1.3mm thk. (hip/ridge)	m	286.00	259.18	254.25	267.24

### BASIC RATES - CARPENTRY & JOINERY MATERIALS

### Timber

MT0325	Ballies 75 to 125mm dia	m	30.43	29.80	31.68	33.66
MT0326	Ballies 250 to 300mm dia	m	42.79	42.77	42.19	46.92
MT0327	Ballies 125 to 250mm dia	m	47.92	49.25	47.92	55.85

Code	Description	Units	PL	GP	S/J	TH
<b>Rough-sawn timber (urban rate)</b>						
MT0330	Class 'B', (conifer)	cu.m	12973.87	13829.41	14651.10	13498.83
MT0331	Class 'A', (conifer)	cu.m	13361.95	14217.49	15039.15	13886.92
MT0332	Class 'A', (Broad Leaf)	cu.m	12430.20	12078.11	12491.24	12063.29
MT0333	Class 'B', (Broad Leaf)	cu.m	11977.21	11625.47	12038.59	11610.30
<b>Plywood</b>						
MT0340	4mm, commercial ply	sq.m	156.06	112.64	151.50	182.06
MT0341	4mm, teak ply	sq.m	252.19	204.86	181.50	264.79
MT0342	6mm, commercial ply	sq.m	205.20	161.06	213.50	267.37
MT0343	12mm, commercial ply	sq.m	416.27	365.98	418.00	499.65
<b>Gypsum Wallboard</b>						
MT0345	10mm	sq.m	193.44	220.83	192.11	270.94
MT0346	12mm	sq.m	257.00	260.61	211.50	320.65
MT0347	15mm	sq.m	244.73	258.10	242.34	433.61
<b>Cement Bonded Particle board, Pre-laminated (both sides)</b>						
MT0350	6mm	sq.m	544.25	542.16	545.31	551.80
MT0351	8mm	sq.m	576.35	576.05	579.39	587.40
MT0352	10mm	sq.m	663.25	654.91	658.71	676.40
MT0353	12mm	sq.m	716.52	715.40	719.56	822.36
MT0354	16mm	sq.m	870.29	872.49	877.56	1134.20
MT0355	20mm	sq.m	1084.30	1082.64	1088.93	1481.35
MT0356	25mm	sq.m	1189.32	1148.44	1155.12	1900.33
MT0357	30mm	sq.m	1485.66	1475.36	1483.94	2304.32
<b>Plain Particle Board</b>						
MT0365	6mm	sq.m	334.00	475.00	410.35	429.51
MT0366	10mm	sq.m	449.00	450.00	519.78	631.56
MT0367	12mm	sq.m	433.33	615.00	657.50	788.08
MT0368	18mm	sq.m	649.82	810.00	884.87	965.04
MT0369	25mm	sq.m	935.80	1000.00	1100.19	1212.37
MT0370	35mm	sq.m	1203.74	1250.00	1322.18	1491.24
<b>Pre-laminated Particle Board (one side)</b>						
MT0375	8mm	sq.m	578.81	400.98	415.00	606.31
MT0376	10mm	sq.m	638.01	564.15	490.00	807.48
MT0377	12mm	sq.m	749.80	555.51	550.00	676.72
MT0378	18mm	sq.m	1008.13	824.65	650.00	884.34
<b>Skylight panel</b>						
MT0385	Translucent diffuser panel, for skylights etc	sq.m	730.63	743.89	756.43	884.34
<b>Cane Products</b>						
<b>Bamboo</b>						
MT0390	25mm dia	m	15.50	16.00	13.92	20.00
MT0391	75mm dia	m	17.50	18.00	18.21	30.00
MT0392	Mat	sq.m	74.97	77.01	96.39	96.90
MT0393	cane basket	each	297.21	289.17	289.17	310.00
<b>Prefab. Pannelling</b>						
<b>Flooring</b>						
MT0395	25mm, Class 'B' (conifer)	sq.m	531.84	447.57	451.96	440.94
MT0396	38mm, Class 'B' (conifer)	sq.m	695.92	639.38	645.66	629.92

Code	Description	Units	PL	GP	S/J	TH
<b>Wall panelling</b>						
MT0400	19mm, Class 'A' (conifer)	sq.m	739.67	725.58	725.58	704.45
MT0401	15mm, Class 'A' (conifer)	sq.m	652.13	639.71	639.71	621.08
MT0402	12mm, Class 'A' (conifer)	sq.m	601.07	589.62	589.62	572.45
MT0403	19mm, Class 'B' (conifer)	sq.m	646.81	634.49	634.49	616.00
MT0404	12mm, Class 'B' (conifer)	sq.m	586.27	588.48	588.48	571.34
MT0405	12mm, Class 'A' (conifer)	sq.m	692.08	678.89	678.89	659.12

**Wire Gauze**

	Galv. mild steel wire gauze, 85G (0.85mm average width of aperture),					
MT0410	0.56mm dia.	sq.m	214.20	220.63	214.71	234.60

**BASIC RATES - DOORS, WINDOWS & HARDWARE**

**Prefab. Timber Doors & Boards**

**Flush Door, block board core, commercial ply veneer, U\F bonded**

MT0415	25mm	sq.m	1029.00	1155.66	750.00	1109.69
MT0416	30mm	sq.m	1228.00	1313.98	1150.00	1208.13
MT0417	35mm	sq.m	1364.50	1531.36	2000.00	1408.75
MT0418	40mm	sq.m	1510.70	1582.47	1607.42	1606.50

**Flush Door, block board core, teak ply veneer, U\F bonded**

MT0425	25mm	sq.m	1484.54	1469.05	1477.06	1576.80
MT0426	30mm	sq.m	1676.60	1685.77	1696.73	1745.60
MT0427	35mm	sq.m	1867.30	1876.71	1889.84	1876.30
MT0428	40mm	sq.m	2268.40	2255.39	2273.77	2268.40

**Flush Door, block board core, ply veneer, chemically treated**

MT0435	25mm	sq.m	1214.00	1245.80	1279.77	1241.00
MT0436	30mm	sq.m	1407.00	1461.92	1501.78	1482.00
MT0437	35mm	sq.m	1549.00	1716.16	1762.96	1605.00
MT0438	40mm	sq.m	1679.00	1970.41	2024.14	1984.45

**Panelled Door, with single lock rail**

MT0445	30mm, 12mm veneered particle board panel	sq.m	1574.53	1544.54	1544.54	1573.94
MT0446	35mm, 12mm veneered particle board panel	sq.m	1593.97	1563.61	1563.61	1593.37
MT0447	40mm, 12mm veneered particle board panel	sq.m	1606.93	1576.32	1576.32	1606.33
MT0448	30mm, 12mm plywood panel	sq.m	1153.37	1131.39	1131.39	1152.93
MT0449	35mm, 12mm plywood panel	sq.m	1167.61	1145.38	1145.38	1167.18
MT0450	40mm, 12mm plywood panel	sq.m	1251.85	1228.01	1228.01	1251.38
MT0451	30mm, 9mm plywood panel	sq.m	1131.33	1109.78	1109.78	1130.91
MT0452	35mm, 9mm plywood panel	sq.m	1142.99	1121.22	1121.22	1142.57
MT0453	40mm, 9mm plywood panel	sq.m	1150.76	1128.84	1128.84	1150.34

**Panelled Door, with single lock rail & stile**

MT0465	30mm, 12mm veneered particle board panel	sq.m	1644.47	1597.93	1597.93	1628.35
MT0466	35mm, 12mm veneered particle board panel	sq.m	1649.71	1603.01	1603.01	1633.53
MT0467	40mm, 12mm veneered particle board panel	sq.m	1652.32	1605.56	1605.56	1636.12
MT0468	30mm, 12mm plywood panel	sq.m	1220.60	1186.06	1186.06	1208.63
MT0469	35mm, 12mm plywood panel	sq.m	1223.21	1188.60	1188.60	1211.22
MT0470	40mm, 12mm plywood panel	sq.m	1228.45	1193.69	1193.69	1216.41
MT0471	30mm, 9mm plywood panel	sq.m	1176.12	1142.83	1142.83	1164.59
MT0472	35mm, 9mm plywood panel	sq.m	1181.35	1147.92	1147.92	1169.77
MT0473	40mm, 9mm plywood panel	sq.m	1187.89	1154.27	1154.27	1176.25

Code	Description	Units	PL	GP	S/J	TH
<b>Panelled Door, with double lock rail &amp; stile</b>						
MT0485	30mm, 12mm veneered particle board panel	sq.m	1677.82	1615.10	1615.10	1645.84
MT0486	35mm, 12mm veneered particle board panel	sq.m	1714.13	1650.05	1650.05	1681.46
MT0487	40mm, 12mm veneered particle board panel	sq.m	1718.09	1653.87	1653.87	1685.35
MT0488	30mm, 12mm plywood panel	sq.m	1249.62	1202.91	1202.91	1225.80
MT0489	35mm, 12mm plywood panel	sq.m	1252.26	1205.45	1205.45	1228.40
MT0490	40mm, 12mm plywood panel	sq.m	1259.84	1212.75	1212.75	1235.84
MT0491	30mm, 9mm plywood panel	sq.m	1202.08	1157.14	1157.14	1179.17
MT0492	35mm, 9mm plywood panel	sq.m	1210.01	1164.77	1164.77	1186.94
MT0493	40mm, 9mm plywood panel	sq.m	1220.56	1174.94	1174.94	1197.31
<b>Prefab. fully glazed window shutters, incl. 75mm rail with preservative &amp; one primer coat, excluding glass</b>						
MT0505	30mm	sq.m	620.74	608.92	608.92	744.60
MT0506	35mm	sq.m	682.30	619.09	619.09	619.09
MT0507	40mm	sq.m	636.30	624.17	624.17	624.17
<b>Steel Doors and Windows</b>						
MT0510	Steel door with necessary hinges, lugs, glazing clips	sq.m	1224.63	1201.31	1201.31	1172.38
MT0511	Steel windows (fixed) with lugs and glazing clips	sq.m	388.77	381.37	381.37	372.19
MT0512	Steel windows (side hung) with hinges, lugs and glazing clips	sq.m	673.87	661.04	661.04	645.12
MT0513	Steel ventilators (top hung) with hinges, lugs and glazing clips.	sq.m	673.87	661.04	661.04	645.12
MT0514	Steel ventilators (centre hung) with pivots, lugs and glazing clips	sq.m	842.35	826.30	826.30	826.30
MT0515	Rolling shutters with all accessories, excluding top cover	sq.m	1145.58	1123.76	1123.76	1123.76
MT0516	Top cover for Rolling shutter	m	479.86	457.64	457.64	457.64
<b>Aluminium</b>						
<b>Anodised Aluminium Fittings: Butt Hinges</b>						
MT0530	100mm	each	25.00	44.52	49.82	45.00
MT0531	75mm	each	18.00	37.78	32.69	35.00
MT0532	50mm	each	10.00	28.06	22.23	20.00
<b>Anodised Aluminium Fittings: Handles</b>						
MT0540	150mm	each	26.60	50.40	27.50	51.25
MT0541	125mm	each	52.69	45.35	22.50	40.00
MT0542	100mm	each	43.67	35.80	20.00	34.00
MT0543	75mm	each	30.66	26.89	17.50	28.25
<b>Anodised Aluminium Fittings: Hooks and Eyes</b>						
MT0550	300mm	each	49.50	65.19	51.55	82.50
MT0551	200mm	each	35.20	49.90	39.91	45.00
MT0552	150mm	each	23.73	35.59	29.76	33.40
MT0553	100mm	each	18.90	26.71	22.75	23.00
<b>Anodised Aluminium Fittings: Kicking Plate</b>						
MT0560	4mm thick	sq.m	350.00	423.30	512.55	515.00
<b>Anodised Aluminium Fittings: Sliding Door Bolts</b>						
MT0565	300mm	each	212.00	201.33	173.97	265.00
MT0566	250mm	each	185.67	161.20	147.84	222.00
MT0567	200mm	each	162.50	124.27	139.48	180.00



Code	Description	Units	PL	GP	S/J	TH
<b>Anodised Aluminium Fittings: Tower Bolts (Barrel Type)</b>						
MT0570	200mm	each	102.50	85.00	35.00	92.50
MT0571	150mm	each	80.00	64.00	25.00	68.00
MT0572	100mm	each	55.00	46.67	20.00	46.40
<b>B r a s s</b>						
<b>Bright finished brass: Butt Hinges</b>						
MT0575	100mm	each	80.00	87.52	85.00	126.25
MT0576	75mm	each	60.00	64.64	57.50	97.50
MT0577	50mm	each	40.00	43.46	40.00	51.25
<b>Bright finished brass: Handles</b>						
MT0580	150mm	each	90.00	120.53	120.00	121.00
MT0581	125mm	each	80.00	95.02	80.00	97.00
MT0582	100mm	each	55.00	83.97	60.00	77.00
MT0583	75mm	each	45.00	66.55	50.00	61.00
<b>Bright finished brass: Hooks and Eyes</b>						
MT0590	150mm	each	47.50	66.88	40.00	69.00
MT0591	100mm	each	45.00	54.72	30.00	42.00
<b>Bright finished brass: Sliding Door Bolts</b>						
MT0595	300mm	each	576.67	559.10	621.80	736.67
MT0596	250mm	each	526.67	497.43	467.08	648.33
MT0597	200mm	each	470.00	346.38	491.00	571.67
<b>Bright finished brass: Tower Bolts (Barrel Type)</b>						
MT0600	250mm	each	208.33	259.17	185.00	312.50
MT0601	150mm	each	131.11	208.09	120.00	160.00
MT0602	100mm	each	99.44	106.23	80.00	102.50
<b>Door Closers/Stoppers</b>						
MT0605	Bright finished brass: Door Stopper	each	170.00	167.50	85.00	121.67
MT0606	Bright finished brass: Mortise Latch 100mm	each	805.80	874.98	850.00	987.50
MT0607	brass, hinged, spring-loaded type	each	765.00	842.78	742.77	650.00
MT0608	brass, over-head, hydraulic type	each	714.00	784.60	1250.00	966.67
<b>M i l d S t e e l</b>						
<b>Mild Steel: Butt Hinges</b>						
MT0615	100mm	each	23.33	34.51	18.00	58.75
MT0616	75mm	each	15.00	28.08	12.00	36.25
MT0617	50mm	each	10.00	20.10	7.50	25.00
<b>Mild Steel: Handles</b>						
MT0620	150mm	each	33.33	41.51	27.67	72.50
MT0621	125mm	each	26.67	35.63	21.00	51.25
MT0622	100mm	each	21.67	31.87	18.00	36.25
MT0623	75mm	each	20.00	25.20	8.00	30.00
<b>Mild Steel: Hooks and Eyes</b>						
MT0630	300mm	each	36.47	29.13	27.50	67.50
MT0631	200mm	each	36.77	28.56	20.67	52.50
MT0632	150mm	each	35.00	24.20	19.00	45.00
MT0633	100mm	each	20.63	28.05	14.25	35.00
<b>Mild Steel: Sliding Door Bolts</b>						
MT0640	300mm	each	193.33	226.65	121.25	195.00
MT0641	250mm	each	133.33	223.84	100.00	190.00
MT0642	200mm	each	105.00	178.79	82.50	153.33

Code	Description	Units	PL	GP	S/J	TH
<b>Mild Steel: Tower Bolts (Barrel Type)</b>						
MT0645	250mm	each	68.00	78.30	55.00	122.00
MT0646	150mm	each	48.50	56.30	31.67	81.40
MT0647	100mm	each	34.00	42.85	21.67	62.50
<b>MS Door Stopper</b>						
MT0650	Mild Steel: Door Stopper	each	92.50	119.03	100.00	116.67

#### BASIC RATES - TILES & GLASS MATERIALS

##### G l a s s

##### Plain Glass

MT0655	3mm thick	sq.m	362.25	395.00	495.90	416.84
MT0656	4mm thick	sq.m	390.95	485.00	507.50	524.39
MT0657	5.5mm thick	sq.m	509.31	595.00	771.10	806.70

##### Frosted Glass

MT0660	3mm thick	sq.m	586.42	535.00	520.00	755.40
MT0661	5.5mm thick	sq.m	737.06	645.00	620.00	807.00

##### T i l e s

##### Glazed tiles

MT0665	white, 150 x 150mm	each	24.87	18.72	21.03	19.61
MT0666	extra, for regular colours	each	1.97	1.97	1.97	1.95
MT0667	extra, for special colours	each	2.57	2.54	2.52	2.51
MT0668	White, 300 x 300 mm	each	34.60	44.71	33.31	44.92
MT0669	White, 200 x 200 mm	each	29.91	32.68	33.31	28.06
MT0670	White, 200 x 100 mm	each	27.03	36.04	18.17	26.00
MT0671	White, 100 x 100 mm	each	24.87	23.11	18.17	23.92
MT0672	Linoleum sheet, 2mm	sq.m	389.22	367.60	605.70	374.39
MT0673	450 x 300 mm	each	79.92	84.13	35.33	84.13
MT0674	600 x 300 mm	each	113.23	117.10	45.43	118.41
MT0675	600 x 600 mm	each	195.59	195.59	186.76	208.94

#### BASIC RATES - PLASTERING MATERIALS

MT0685	Plaster of Paris	kg	21.02	30.00	15.00	36.33
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#### BASIC RATES - PAINT & WALL PAPER MATERIALS

##### Distemper & Distemper Primers

MT0690	Dry Distemper	kg	58.33	67.50	50.00	57.50
MT0691	Acrylic washable distemper	kg	54.60	61.25	50.00	64.17
MT0692	Water proofing Cement paint	kg	39.67	38.75	50.00	121.25

##### Bhutanese Painting Materials

MT0695	Mud Paint for Bhutanese traditional painting	kg	55.25	62.50	65.00	90.00
MT0696	Animal glue	kg	76.25	143.33	160.00	143.00
MT0697	Cloth for Bhutanese painting	sq.m	48.33	98.33	35.00	109.00
MT0698	Paper for Bhutanese painting	sq.m	25.00	30.00	32.50	39.33
MT0699	Colour powder(excluding gold powder)	kg	470.00	475.00	341.67	613.12
MT0700	Gold powder	kg	2537.50	2666.67	2490.00	3175.00

*Bhutan Schedule of Rates - 2020*

Code	Description	Units	PL	GP	S/J	TH
<b>Primers</b>						
MT0710	Cement primer	litre	103.00	97.50	96.00	126.07
MT0711	Synthetic red lead primer	litre	114.38	152.50	141.25	181.00
MT0712	Red oxide primer, for metals	litre	110.00	135.00	134.50	160.64
MT0713	White primer, for wood	litre	137.50	135.00	152.00	183.57
MT0714	Pink primer, for wood	litre	169.00	140.00	156.00	192.57
<b>Finishing coat</b>						
MT0720	Aluminium paint	litre	297.50	308.45	250.00	327.86
MT0721	Red Corrugal paint	litre	147.50	195.72	180.00	235.71
MT0722	Synthetic enamel paint	litre	160.00	198.68	180.00	234.17
MT0723	High gloss synthetic enamel	litre	285.00	271.05	185.00	352.14
MT0724	Acrylic emulsion	litre	201.04	162.90	217.00	311.43
MT0725	Vinyl plastic emulsion paint (for cement plaster)	litre	288.53	244.39	1250.00	406.67
MT0726	Black\White bitumen enamel	litre	197.63	248.80	385.00	331.67
<b>Stains - Varnish - Polish</b>						
MT0730	Wood Stain (various colours)	litre	293.30	337.75	250.00	475.00
MT0731	Clear synthetic varnish	litre	250.00	227.08	220.00	326.00
MT0732	French Polish	litre	284.59	291.38	320.00	348.33
<b>Wood Preservative</b>						
MT0735	Wood preservative -Brown	litre	224.06	248.13	196.67	315.00
MT0736	Crude Coal Tar	litre	128.52	152.28	200.00	175.00
<b>Accessories</b>						
MT0740	Putty for wood	kg	26.00	30.94	33.33	43.33
MT0741	Wall Putty	kg	35.25	34.69	25.00	43.00
<b>Wall Paper</b>						
<b>Wall paper:</b>						
MT0745	Standard	sq.m	241.96	325.69	318.00	319.30
MT0746	High Quality	sq.m	328.69	446.51	431.00	433.50
<b>Road Marking Paint</b>						
MT1679	Thermoplastic road marking paint	litre	174.44	176.46	175.44	176.00

## BASIC RATES - DRAINAGE MATERIALS

### C.I. Manhole Covers

MT0750	Watertight C.I. Manhole Cover with frame, 300 x 300mm inside size Wt. of cover not less than 4.53 kg wt. of frame not less than 2.72 kg	each	774.54	863.06	789.90	839.14
MT0751	C.I. manhole cover with frame (light duty) internal dimension 455 x 610mm Total weight of Cover and frame not less than 38 kg. (Cover 23 kg. and frame 15 kg.)	each	2517.27	2340.28	1948.42	2911.91
MT0752	C.I. manhole cover and frame (medium duty) 500mm internal dia. Total weight of cover and frame not less than 116 kg. (cover 58 kg. and frame 58 kg)	each	7911.42	7911.42	5950.58	8208.90
MT0753	C.I.manhole cover 400mm dia. inside, mosquito proof with locking arrangement (Wt of cover not less than 7kg).	each	1770.39	1881.04	1853.71	1896.19

Code	Description	Units	PL	GP	S/J	TH
<b>Rain-water Pipes &amp; Fittings</b>						
<b>Cast Iron</b>						
MT0760	Pipe, 100mm dia.	m	1133.00	1160.61	1071.00	1133.22
MT0761	Bend 100mm	each	293.55	316.23	214.20	293.61
MT0762	Head 100mm	each	267.80	279.46	229.50	267.85
MT0763	Offset 100mm, 75mm projection	each	389.34	353.00	357.00	389.42
MT0764	Offset 100mm, 150mm projection	each	581.95	608.30	591.60	582.06
MT0765	Shoe, 100mm	each	453.20	479.02	497.40	453.29
MT0766	Grating	each	150.38	162.84	165.99	150.41
<b>R.C Non-Pressure pipe</b>						
<b>NP2 class</b>						
MT0768	100 mm dia	m	377.85	383.92	350.00	395.66
MT0769	150 mm dia	m	492.21	546.62	403.00	547.46
MT0770	225mm dia	m	665.02	698.12	627.50	839.95
MT0771	300mm dia	m	830.40	842.58	810.00	1021.86
MT0772	450mm dia	m	1128.30	1204.02	1104.00	1370.64
MT0773	600mm dia	m	1552.40	1766.66	1448.00	2051.21
MT0774	750mm dia	m	2281.00	2348.65	2061.00	2757.97
MT0775	900mm dia	m	2910.00	2985.00	3015.00	3248.34
MT0776	1050mm dia	m	4000.70	4738.64	3789.00	4724.96
MT0777	1200mm dia	m	6970.48	7588.47	5165.00	7389.96
<b>NP2 Class Collar</b>						
MT0783	100 mm dia	each	90.63	90.77	90.92	100.72
MT0784	150 mm dia	each	108.36	108.51	108.67	122.62
MT0785	225mm dia	each	131.17	132.36	132.57	148.90
MT0786	300mm dia	each	168.15	173.83	174.14	189.58
MT0787	450mm dia	each	274.63	261.87	262.33	285.78
MT0788	600mm dia	each	404.98	373.43	374.09	408.06
MT0789	750mm dia	each	576.01	549.08	550.04	602.55
MT0790	900mm dia	each	772.46	670.84	670.84	748.78
MT0791	1050mm dia	each	825.01	834.23	834.23	908.19
MT0792	1200mm dia	each	1126.11	1101.84	1101.84	1199.49
<b>RCC PIPE NP-3 CLASS SPIGOT &amp; SOCKET TYPE</b>						
MT1900	RCC pipe 450 mm dia NP-3 spigot & socket	m	1474.17	1463.64	1795.27	1626.27
MT1901	RCC pipe 600 mm dia NP-3 spigot & socket	m	2200.30	2199.67	2625.19	2444.03
MT1902	RCC pipe 900 mm dia NP-3 spigot & socket	m	3696.10	3700.07	4555.80	4111.21
MT1903	RCC pipe 1000 mm dia NP-3 spigot & socket	m	4116.30	4266.10	5148.11	4740.15
MT1904	RCC pipe 1200 mm dia NP-3 spigot & socket	m	6237.47	6494.26	7335.52	7216.03
<b>Stoneware Pipe Specials</b>						
<b>Stoneware pipes 60 cm long</b>						
MT0795	100mm dia	each	132.18	134.81	135.49	134.17
MT0796	150mm dia	each	294.40	300.27	301.75	298.82
MT0797	200mm dia	each	516.71	526.99	529.61	524.47
MT0778	230mm dia	each	632.07	644.66	647.84	641.56
MT0779	250mm dia	each	708.98	723.09	726.68	719.62
MT0780	300mm dia	each	877.21	894.67	899.11	890.38
MT0781	350mm dia	each	1051.46	1072.39	1077.69	1067.23
MT0782	400mm dia	each	1231.70	1256.22	1262.43	1250.18
MT0793	500mm dia	each	1616.23	1648.41	1656.56	1640.48
MT0794	600mm dia	each	1940.68	1979.31	1989.11	1969.80

Code	Description	Units	PL	GP	S/J	TH
<b>SW trap - P Type</b>						
MT0800	100 x 100mm	each	108.15	110.30	110.85	109.78
MT0801	150 x 100mm	each	122.57	125.01	125.62	124.40
MT0802	180 x 150mm	each	156.21	159.32	160.12	158.56

### **BASIC RATES - PLUMBING (PIPEWORK)**

#### **Water Supply Pipes**

##### **G.I pipe**

MT0805	15mm	m	123.43	145.00	132.50	164.45
MT0806	20mm	m	152.60	165.00	164.00	210.83
MT0807	25mm	m	202.07	215.00	221.00	263.96
MT0808	32mm	m	256.83	275.00	272.50	333.96
MT0809	40mm	m	296.70	320.00	327.50	396.37
MT0810	50mm	m	394.13	425.00	434.00	523.54
MT0811	65mm	m	496.20	550.00	545.00	670.03
MT0812	80mm	m	628.47	695.00	722.50	868.63
MT0813	100mm	m	913.57	950.00	1125.00	1261.63
MT0814	150mm	m	1414.25	1250.00	1585.00	2007.13

##### **H.D.P.E pressure class PN 12.5**

MT1685	20mm	m	27.96	28.39	28.17	28.68
MT1686	25mm	m	43.02	43.68	43.30	44.12
MT1687	32mm	m	66.00	68.76	62.05	67.82
MT1688	40mm	m	103.49	107.25	98.45	106.30
MT1689	50mm	m	161.81	167.88	154.05	166.22
MT1690	63mm	m	252.03	261.78	239.10	258.92
MT1691	75mm	m	358.99	373.00	340.20	368.82
MT1692	90mm	m	516.39	534.78	494.25	530.40
MT1693	110mm	m	770.40	800.13	730.70	791.46
MT1694	125mm	m	987.27	1024.97	938.20	1014.24
MT1695	140mm	m	1241.50	1288.98	1179.45	1275.42
MT1696	160mm	m	1617.97	1679.47	1538.35	1662.15
MT1697	180mm	m	2045.08	2122.48	1945.40	2100.89
MT1698	200mm	m	2526.89	2624.46	2398.45	2596.00
MT1699	225mm	m	3192.05	3312.44	3038.15	3279.14
MT1700	250mm	m	3687.79	3744.53	3737.25	3782.35
MT1701	280mm	m	4506.47	4672.49	4687.00	4743.65
MT1702	315mm	m	5704.95	5915.13	5934.00	6005.21
MT1703	355mm	m	7243.96	7510.84	7534.00	7625.22
MT1704	400mm	m	9388.84	9734.74	9765.00	9882.99

##### **H.D.P.E pressure class PN 10**

MT0817	20mm	m	25.00	25.04	27.00	26.31
MT0818	25mm	m	36.57	35.44	37.03	37.50
MT0819	32mm	m	57.27	59.18	55.10	58.82
MT0820	40mm	m	88.01	91.67	82.40	90.43
MT0821	50mm	m	134.22	139.74	126.25	137.92
MT0822	63mm	m	213.49	221.84	202.20	219.34
MT0823	75mm	m	302.66	314.29	287.25	310.94
MT0824	90mm	m	432.46	449.58	409.20	444.32
MT0825	110mm	m	640.48	665.52	607.10	658.02
MT0826	140mm	m	926.36	926.61	977.25	949.08
MT0827	160mm	m	1187.69	1179.59	1276.25	1216.20
MT0828	225mm	m	2668.33	2775.01	2523.05	2741.58
MT1710	250mm	m	3065.97	3113.14	3107.15	3144.59
MT1711	280mm	m	3741.38	3879.22	3891.00	3938.30
MT1712	315mm	m	4740.86	4915.52	4931.00	4990.37
MT1713	355mm	m	6030.00	6252.15	6272.00	6347.37
MT1714	400mm	m	7810.03	8097.77	8123.00	8221.08

Code	Description	Units	PL	GP	S/J	TH
<b>H.D.P.E Pipes of pressure class PN 6</b>						
MT0830	32mm	m	49.47	50.23	50.07	50.74
MT0831	40mm	m	62.38	63.34	63.11	63.98
MT0832	50mm	m	96.80	98.28	98.05	99.28
MT0833	63mm	m	150.57	152.89	152.30	154.43
MT0834	75mm	m	212.95	216.23	215.41	218.41
MT0835	90mm	m	301.14	305.77	305.10	308.86
MT0836	110mm	m	415.58	434.58	386.20	427.17
MT0837	140mm	m	672.03	700.80	630.10	690.62
MT0838	160mm	m	876.56	914.42	821.05	900.83
MT0839	225mm	m	1727.05	1799.45	1623.40	1774.70
MT1718	250mm	m	1967.58	1997.85	1994.05	2018.03
MT1719	280mm	m	2405.81	2494.44	2502.00	2532.43
MT1720	315mm	m	3044.85	3157.03	3167.00	3205.11
MT1721	355mm	m	3858.58	4000.74	4013.00	4061.66
MT1722	400mm	m	4990.72	5174.59	5194.00	5253.39
<b>H.D.P.E Pipes of pressure class PN 4</b>						
MT0841	40mm	m	51.57	57.67	60.00	52.76
MT0842	50mm	m	79.59	80.81	80.00	81.63
MT0843	63mm	m	107.55	109.20	109.00	110.31
MT0844	75mm	m	146.27	148.52	148.00	150.02
MT0845	90mm	m	212.95	216.23	215.00	218.41
MT0846	110mm	m	294.75	307.51	276.00	302.91
MT0847	140mm	m	479.02	495.62	460.00	491.98
MT0848	160mm	m	625.35	647.93	598.00	642.34
MT0849	225mm	m	1201.11	1252.30	1127.00	1234.32
MT1726	250mm	m	1361.65	1382.59	1380.00	1396.56
MT1727	280mm	m	1680.53	1742.44	1743.00	1768.98
MT1728	315mm	m	2100.66	2178.05	2185.00	2211.22
MT1729	355mm	m	2675.58	2774.15	2783.00	2816.40
MT1730	400mm	m	4263.23	4420.30	4434.00	4487.61
<b>H.D.P.E Pipes of pressure class PN 2.5</b>						
MT0852	110mm	m	204.35	207.49	207.00	209.59
MT0853	140mm	m	335.56	340.72	340.00	344.16
MT0854	160mm	m	434.50	441.19	440.00	445.64
MT0855	225mm	m	838.89	851.80	850.00	860.40
<b>PP-R Pipes (Pressure Normal 16)</b>						
MT1760	PN-16 pipe,16mm OD	m	83.79	83.79	83.79	93.10
MT1761	PN-16 pipe,20mm OD	m	94.72	94.72	94.72	105.25
MT1762	PN-16 pipe,25mm OD	m	145.73	145.73	145.73	161.92
MT1763	PN-16 pipe,32mm OD	m	236.81	236.81	236.81	263.12
MT1764	PN-16 pipe,40mm OD	m	378.89	378.89	378.89	420.99
MT1765	PN-16 pipe,50mm OD	m	597.48	597.48	597.48	663.87
MT1766	PN-16 pipe,63mm OD	m	951.79	951.79	951.79	1057.54
MT1767	PN-16 pipe,75mm OD	m	1352.54	1352.54	1352.54	1502.82
<b>PP-R Pipes (Pressure Normal 10)</b>						
MT1768	PN-10 pipe,90mm OD	m	1378.95	1378.95	1378.95	1532.17
MT1769	PN-10 pipe,110mm OD	m	2035.64	2035.64	2035.64	2261.82
MT1770	PN-10 pipe,160mm OD	m	4300.80	4300.80	4300.80	4778.66

Code	Description	Units	PL	GP	S/J	TH
<b>Chlorinated Polyvinyl Chloride (CPVC)</b>						
MT1800	15 mm nominal outer dia Pipes	m	70.54	60.00	50.00	53.91
MT1801	20 mm nominal outer dia Pipes	m	103.35	87.45	60.00	95.73
MT1802	25 mm nominal outer dia Pipes	m	139.44	131.50	107.00	137.76
MT1803	32 mm nominal outer dia Pipes	m	281.50	196.16	161.00	224.29
MT1804	40 mm nominal outer dia Pipes	m	314.30	266.13	215.00	309.01
MT1805	50 mm nominal outer dia Pipes	m	488.19	446.93	350.00	474.21
<b>Unplasticized Polyvinyl Chloride (uPVC)</b>						
MT1820	110 mm	m	439.16	439.16	439.16	461.12
MT1821	160 mm	m	829.89	829.89	829.89	871.39
MT1822	180 mm	m	901.69	901.69	901.69	946.78
MT1823	200 mm	m	1978.71	1978.71	1978.71	2077.65
MT1824	225 mm	m	2103.95	2103.95	2103.95	2209.15
MT1825	250 mm	m	2698.40	2698.40	2698.40	2833.32
MT1826	280 mm	m	2849.79	2849.79	2849.79	2992.28
MT1827	315 mm	m	3897.31	3897.31	3897.31	4092.18
MT1828	400 mm	m	4536.29	4536.29	4536.29	4763.10
MT1829	450 mm	m	4633.70	4633.70	4633.70	4865.38
MT1830	560 mm	m	4870.25	4870.25	4870.25	5113.76
<b>Ductile Iron Pipes - Class K9</b>						
MT0856	80 mm	m	1250.00	1003.12	993.38	1002.54
MT0857	100 mm	m	1650.00	1167.29	1155.96	1166.62
MT0858	150 mm	m	1850.00	1700.33	1683.83	1699.36
MT0859	200 mm	m	2550.00	2341.27	2318.54	2339.53
MT0860	250 mm	m	3550.00	3111.54	3081.32	3109.34
MT0861	300 mm	m	3932.58	3932.58	3894.40	3930.33
MT0862	350 mm	m	4931.74	4931.74	4883.86	4928.93
MT0863	400 mm	m	5867.63	5867.63	5810.66	5864.27
MT0864	450 mm	m	6923.50	6923.50	6856.29	6919.55
MT0865	500 mm	m	8114.26	8114.26	8035.47	8109.62
MT0866	600 mm	m	11129.24	11129.24	11021.18	11122.88
<b>Ductile Iron Pipes - Class K7</b>						
MT0871	100 mm	m	1175.00	987.10	977.52	986.54
MT0872	150 mm	m	1551.00	1530.50	1515.64	1529.63
MT0873	200 mm	m	1739.00	2012.68	1993.14	2011.53
MT0874	250 mm	m	2397.00	2651.19	2625.45	2649.67
MT0875	300 mm	m	3337.00	3320.80	3288.56	3318.90
MT0876	350 mm	m	4141.85	4182.46	4141.85	4160.79
MT0877	400 mm	m	4916.45	4964.65	4916.45	4961.82
MT0878	450 mm	m	5749.32	5805.69	5749.32	5802.38
MT0879	500 mm	m	6782.96	6849.46	6782.96	6845.55
MT0880	600 mm	m	9196.33	9286.50	9196.33	9281.19
<b>Ductile Iron Pipes K -9 Double Flanged</b>						
MT0882	100 mm	m	1970.09	1989.41	1970.09	1987.96
MT0883	150 mm	m	2840.60	2868.45	2840.60	2866.60
MT0884	200 mm	m	3997.45	4036.65	3997.45	4033.58
MT0885	250 mm	m	5257.40	5308.95	5257.40	5312.75
MT0886	300 mm	m	6517.34	6581.24	6517.34	6577.24
MT0887	350 mm	m	8075.09	8154.26	8075.09	8148.94
MT0888	400 mm	m	9678.65	9773.54	9678.65	9767.83
MT0889	450 mm	m	13057.59	13185.60	13057.59	13177.55
MT0890	500 mm	m	15348.39	15498.87	15348.39	15489.49

Code	Description	Units	PL	GP	S/J	TH
MT0891	600 mm	m	19987.27	20183.23	19987.27	20171.04
<b>Pipe Fittings</b>						
<b>H.D.P.E welded-type fittings</b>						
MT0895	TEE, 20mm	each	55.66	50.24	42.26	70.84
MT0896	TEE, 25mm	each	75.90	72.57	58.99	97.15
MT0897	TEE, 32mm	each	91.08	106.05	99.83	165.97
MT0898	TEE, 50mm	each	141.68	175.07	177.10	177.10
MT0899	TEE, 63mm	each	222.64	251.91	202.40	202.40
MT0900	TEE, 90mm	each	303.60	303.60	303.60	354.20
MT0901	TEE, 110mm	each	493.35	328.90	328.90	366.85
MT0902	TEE, 160mm	each	1386.44	1416.80	1518.00	1787.87
MT0903	Elbow, 32mm	each	56.87	94.89	54.12	84.00
MT0904	Elbow, 50mm	each	114.42	159.05	113.57	277.29
MT0905	Elbow, 63mm	each	188.11	227.44	210.74	319.79
MT0906	Elbow, 90mm	each	251.31	336.24	328.40	446.80
MT0907	Elbow, 110mm	each	382.03	418.56	536.46	776.20
MT0908	Reducer, 90 x 50mm	each	240.40	251.84	254.27	253.00
MT0909	Reducer, 90 x 63mm	each	263.22	254.90	260.63	253.00
MT0910	Reducer, 110 x 63mm	each	275.77	280.71	260.63	303.60
MT0911	Reducer, 160 x 90mm	each	684.38	671.94	750.10	657.80
MT0912	Blank end, 50mm	each	106.80	119.12	123.32	151.80
MT0913	Blank end, 63mm	each	129.25	153.50	158.92	182.16
MT0914	Blank end, 90mm	each	284.85	298.40	308.94	349.14
MT0915	Blank end, 110mm	each	306.08	343.84	355.98	470.58
MT0916	Blank end, 160mm	each	526.83	589.44	610.25	698.28
<b>M.I. Fittings Union</b>						
MT0921	32mm	each	173.00	155.49	183.60	213.50
MT0922	40mm	each	227.50	197.50	214.20	240.50
<b>Brass Fittings Bibcock</b>						
MT0925	15mm	each	305.00	276.67	235.00	360.00
<b>Stopcock</b>						
MT0930	15mm nom-bore	each	367.50	328.95	390.00	491.00
MT0931	20mm nom-bore	each	497.50	414.75	380.00	498.00
MT0932	25mm nom-bore	each	585.00	514.90	450.00	644.00
<b>Wheel valve</b>						
MT0940	32mm nom-bore	each	942.91	1126.45	1126.45	1097.50
MT0941	40mm nom-bore	each	1150.86	1369.64	1369.64	1391.00
MT0942	50mm nom-bore	each	1302.77	1712.45	1712.45	1889.00
MT0943	65mm nom-bore	each	2500.21	3082.22	3082.22	3252.50
MT0944	80mm nom-bore	each	3320.78	4342.01	4342.01	4456.50
<b>Non return valve</b>						
MT0951	50mm nom-bore	each	1561.33	1703.92	1983.90	2170.00
MT0952	65mm nom-bore	each	3061.00	3392.92	3427.20	3845.00
MT0953	80mm nom-bore	each	4617.33	5137.85	5406.00	5612.00
<b>Rubber Gasket of S.B.R Quality</b>						
MT0960	80 mm	each	64.26	58.83	58.83	56.00
MT0961	100 mm	each	73.44	67.24	67.24	64.00
MT0962	150 mm	each	104.04	94.55	94.55	90.00
MT0963	200 mm	each	167.28	157.59	157.59	150.00
MT0964	250 mm	each	182.07	194.36	194.36	185.00
MT0965	300 mm	each	303.96	278.41	278.41	265.00
MT0966	350 mm	each	344.76	315.18	315.18	300.00
MT0967	400 mm	each	400.86	453.86	453.86	432.00



Code	Description	Units	PL	GP	S/J	TH
MT0968	450 mm	each	471.75	478.02	478.02	455.00
MT0969	500 mm	each	668.61	663.98	663.98	632.00
MT0970	600 mm	each	888.93	882.50	882.50	840.00
<b>Waste-water Pipework</b>						
<b>Cast Iron Pipes, Single Socketted, 1.83m long</b>						
MT0975	50mm	each	543.57	561.86	636.71	895.00
MT0976	75mm	each	747.57	815.57	718.13	1097.50
MT0977	100mm	each	926.07	967.26	1155.66	1425.00
MT0978	150mm	each	1232.07	1245.80	1309.10	1520.00
<b>Plain bend</b>						
MT0985	50mm	each	166.46	134.30	173.40	192.50
MT0986	75mm	each	177.58	154.70	183.60	290.00
MT0987	100mm	each	182.68	205.70	226.95	293.33
<b>Door bend</b>						
MT0990	50mm	each	218.48	225.88	230.15	212.50
MT0991	75mm	each	218.48	246.69	269.55	295.00
MT0992	100mm	each	218.48	289.37	338.98	356.00
<b>Collar</b>						
MT1000	50mm	each	129.01	165.47	174.79	124.00
MT1001	75mm	each	174.79	184.80	170.28	168.00
MT1002	100mm	each	236.17	253.23	287.52	227.00
<b>Heel rest bend</b>						
MT1010	50mm	each	133.17	135.53	159.69	128.00
MT1011	75mm	each	231.39	231.01	236.07	262.00
MT1012	100mm	each	219.59	283.47	278.60	333.00
<b>Single equal junction - plain</b>						
MT1020	50mm	each	229.41	225.88	293.74	220.00
MT1021	75mm	each	344.12	320.43	360.35	330.00
MT1022	100mm	each	469.74	409.73	453.57	451.00
<b>Single equal junction, door</b>						
MT1030	50mm	each	185.71	194.70	199.61	178.00
MT1031	75mm	each	235.97	233.87	252.14	226.00
MT1032	100mm	each	322.27	336.46	357.87	309.00
MT1033	150mm	each	344.12	382.50	374.00	330.00
<b>Double equal junction, plain</b>						
MT1040	50mm	each	316.80	226.14	242.69	304.00
MT1041	75mm	each	396.55	270.27	286.81	381.00
MT1042	100mm	each	594.27	540.54	556.12	571.00
<b>Double equal junction, door</b>						
MT1050	50mm	each	274.20	248.21	242.69	263.00
MT1051	75mm	each	351.22	297.85	286.81	337.00
MT1052	100mm	each	461.00	430.23	510.19	443.00

Code	Description	Units	PL	GP	S/J	TH
<b>Single unequal junction, plain</b>						
MT1060	75 x 50mm	each	229.41	241.59	241.64	220.00
MT1061	100 x 50mm	each	300.42	314.39	319.38	288.00
MT1062	100 x 75mm	each	349.57	359.62	359.31	336.00
<b>Single unequal junction, door</b>						
MT1070	75 x 50mm	each	246.34	254.28	264.75	236.00
MT1071	100 x 50mm	each	376.89	380.58	397.13	262.00
MT1072	100 x 75mm	each	400.92	414.77	421.94	385.00
<b>Double unequal junction, plain</b>						
MT1080	100 x 50	each	338.65	341.45	358.52	325.00
MT1081	100 x 75	each	393.27	382.42	408.16	378.00
<b>Double unequal junction, door</b>						
MT1085	100 x 50	each	355.04	344.60	375.06	341.00
MT1086	100 x 75	each	404.20	393.98	430.23	388.00
<b>Single equal Y-Junction</b>						
MT1090	50mm	each	207.56	173.35	231.66	199.00
MT1091	75mm	each	400.92	377.17	264.75	385.00
MT1092	100mm	each	557.13	526.35	496.41	535.00
<b>Double equal Y-Junction</b>						
MT1100	50mm	each	316.80	286.81	213.98	304.00
MT1101	75mm	each	443.53	353.00	305.51	426.00
MT1102	100mm	each	594.27	535.02	382.79	571.00
<b>Single unequal invert branch</b>						
MT1110	75 x 50mm	each	297.55	308.88	323.22	286.00
MT1111	100 x 50mm	each	405.76	423.61	437.95	396.00
<b>Offsets 50mm dia offset</b>						
MT1115	with 75mm projection	each	298.59	262.65	242.69	287.00
MT1116	with 150mm projection	each	413.04	421.29	435.73	397.00
<b>75mm dia offset</b>						
MT1120	with 75mm projection	each	275.71	283.66	280.50	265.00
MT1121	with 150mm projection	each	390.15	390.82	346.80	375.00
<b>100mm dia offset</b>						
MT1125	with 75mm projection	each	332.93	329.89	346.80	320.00
MT1126	with 150mm projection	each	405.76	408.68	433.50	390.00
<b>Terminal Guard</b>						
MT1130	50mm	each	131.09	137.89	192.68	126.00
MT1131	75mm	each	218.48	233.87	268.10	210.00
MT1132	100mm	each	333.19	330.94	330.31	320.00
MT1133	150mm	each	589.91	595.69	531.25	567.00
<b>P-type Nahani Trap</b>						
MT1140	100mm inlet & 50mm outlet	each	196.62	199.64	180.00	155.00
MT1141	100mm inlet & 75mm outlet	each	276.65	345.65	145.00	354.00
MT1142	C.I. P-trap 100mm	each	374.70	478.02	180.00	480.00
<b>Jointing Materials</b>						
MT1145	Pig lead	kg	99.41	108.11	114.71	95.00

Code	Description	Units	PL	GP	S/J	TH
<b>P.V.C Pipes &amp; fittings (Soil Waste and Vent)</b>						
<b>Pipes, Single Socketed 1.83 m long</b>						
MT1150	75mm	each	190.00	185.69	200.00	276.67
MT1151	90mm	each	305.00	265.08	320.00	400.67
MT1152	110mm	each	405.00	279.49	390.00	431.00
<b>Pipes, Single Socketed 3.00 m long</b>						
MT1160	75mm	each	360.50	331.25	352.50	339.60
MT1161	90mm	each	557.40	435.00	453.75	549.00
MT1162	110mm	each	675.31	523.75	542.50	563.33
<b>Pipes, Doubled Socketed 1.83 m long</b>						
MT1170	75mm	each	239.10	302.90	291.60	342.33
MT1171	90mm	each	400.00	478.51	387.10	475.00
MT1172	110mm	each	368.00	556.15	463.85	568.33
<b>Pipes, Doubled Socketed 1.20 m long</b>						
MT1180	75mm	each	264.50	244.88	250.96	310.00
MT1181	90mm	each	383.00	373.66	371.30	420.50
MT1182	110mm	each	520.00	442.01	451.93	545.33
<b>Pipe Connector</b>						
MT1190	110mm	each	97.50	120.00	60.00	107.50
<b>Reducer</b>						
MT1195	90x75mm	each	101.85	134.30	80.00	101.67
MT1196	110x75mm	each	111.10	134.00	96.67	114.33
MT1197	110x90mm	each	132.13	172.60	96.67	138.33
<b>Coupler</b>						
MT1205	75mm	each	50.50	52.50	48.33	66.33
MT1206	90mm	each	61.00	87.52	61.67	88.00
MT1207	110mm	each	76.50	73.33	66.67	99.00
<b>Plain bend</b>						
MT1215	75mm	each	58.50	71.75	55.00	75.00
MT1216	90mm	each	79.50	115.10	82.00	108.33
MT1217	110mm	each	90.00	122.00	90.00	116.00
<b>Door bend</b>						
MT1225	75mm	each	89.00	99.80	68.33	108.67
MT1226	90mm	each	119.00	155.53	121.67	144.33
MT1227	110mm	each	126.00	152.60	141.67	154.67
<b>Long Arm Bend</b>						
MT1235	75mm	each	176.87	187.27	193.57	153.33
MT1236	90mm	each	260.10	270.50	283.56	216.67
MT1237	110mm	each	353.74	353.74	363.17	290.00
<b>Plain Shoe</b>						
MT1239	75mm	each	114.44	120.17	119.65	110.00
MT1240	90mm	each	135.25	147.48	145.66	130.00
MT1241	110mm	each	166.46	174.79	176.87	160.00

Code	Description	Units	PL	GP	S/J	TH
<b>Single Tee, Plain</b>						
MT1245	75mm	each	76.50	88.64	66.67	94.00
MT1246	90mm	each	125.50	118.85	101.67	130.00
MT1247	110mm	each	137.00	147.93	118.33	164.33
<b>Single Tee, With Door</b>						
MT1255	75mm	each	94.00	97.14	78.67	113.67
MT1256	90mm	each	136.00	134.05	125.67	162.67
MT1257	110mm	each	153.50	165.45	150.00	189.33
<b>Double Tee, Plain</b>						
MT1265	75mm	each	153.50	151.38	126.33	189.33
MT1266	90mm	each	224.50	218.48	188.33	267.33
MT1267	110mm	each	317.00	226.47	255.00	371.67
<b>Double Tee, With Door</b>						
MT1275	75mm	each	228.50	225.58	160.00	262.67
MT1276	90mm	each	289.50	379.75	208.00	350.33
MT1277	110mm	each	326.67	307.19	270.33	384.50
<b>Single Y, Plain</b>						
MT1285	75mm	each	97.00	101.67	85.00	113.50
MT1286	90mm	each	149.50	132.00	126.33	175.33
MT1287	110mm	each	184.50	165.00	161.67	206.67
<b>Single Y, With Door</b>						
MT1295	75mm	each	116.00	150.00	122.56	143.33
MT1296	90mm	each	180.50	180.00	195.53	227.00
MT1297	110mm	each	244.50	212.50	226.19	291.33
<b>Double Y, Plain</b>						
MT1305	75mm	each	148.50	165.94	103.58	192.67
MT1306	90mm	each	213.50	245.00	205.24	264.67
MT1307	110mm	each	247.50	215.00	207.90	321.00
<b>Double Y, With Door</b>						
MT1315	75mm	each	190.50	201.99	162.50	275.00
MT1316	90mm	each	263.50	342.72	222.50	313.67
MT1317	110mm	each	296.50	273.65	259.25	390.00
<b>Seal Ring</b>						
MT1320	75 mm	each	30.60	32.30	32.80	36.67
MT1321	90 mm	each	45.90	42.50	41.68	50.00
MT1322	110 mm	each	53.55	51.00	55.50	60.00
<b>75mm dia. offset</b>						
MT1325	With 75mm projection	each	255.00	208.08	234.60	289.00
MT1326	With 150mm projection	each	295.00	301.72	290.70	295.00
<b>90mm dia. offset</b>						
MT1330	With 75mm projection	each	375.00	343.33	306.00	375.00
MT1331	With 150mm projection	each	462.00	426.56	459.00	462.00
<b>110mm dia. offset</b>						
MT1335	With 75mm projection	each	469.42	388.61	357.00	469.42
MT1336	With 150mm projection	each	540.08	435.87	448.80	540.08

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Code	Description	Units	PL	GP	S/J	TH
<b>Terminal Guard</b>						
MT1340	75mm	each	84.02	94.53	94.55	80.76
MT1341	90mm	each	94.53	110.28	105.06	90.86
MT1342	110mm	each	99.78	115.53	115.57	95.90
<b>Nahani Trap</b>						
MT1345	100mm inlet & 75mm outlet	each	138.30	173.06	171.67	213.68
<b>P-Trap without air vent</b>						
MT1350	Big	each	257.42	289.98	250.00	289.39
MT1351	Small	each	230.17	270.02	255.50	246.32
<b>BASIC RATES - PLUMBING (Sanitary Installation, Fittings &amp; accessories)</b>						
<b>B a t h s</b>						
MT1355	Porcelain bath tub, white enamelled, 1700x740x440mm	each	13779.68	12770.18	15166.67	12871.13
MT1356	Fibreglass bath tub	each	15672.49	15839.06	13500.00	15411.70
<b>B a s i n s, S i n k s</b>						
<b>Flat-back wash basin, white vitreous</b>						
MT1360	630 x 450mm	each	1443.08	1227.05	1016.67	832.84
MT1361	550 x 400mm	each	1277.85	985.34	850.00	689.83
<b>Angle back wash basin</b>						
MT1365	400mm x 400mm, white vitreous china	each	932.27	892.74	834.50	1372.92
<b>Pedestal for wash basin</b>						
MT1370	white vitreous china	each	1099.07	1441.57	1275.60	967.44
<b>Sinks White glazed vitreous China</b>						
MT1375	600 x 450 x 250	each	1761.58	2263.98	2220.90	2776.13
<b>Stainless Steel Kitchen Sinks</b>						
MT1380	single bowl, 450 x 400 x 150mm	each	1400.00	1115.50	990.00	1350.00
MT1381	single bowl, 580 x 480 x 175mm	each	1480.00	1201.00	1066.00	1450.00
MT1382	single bowl & drain-board, 940 x 460 x 160mm	each	1650.00	1527.00	1460.00	1950.00
MT1383	single bowl & drain-board, 1080 x 520 x 175mm	each	1350.00	1447.94	1653.32	1800.00
MT1384	single bowl & drain-board, 1150 x 515 x 175mm	each	2200.00	2182.02	2278.42	2450.00
MT1385	single bowl & double drain-board, 1740 x 520 x 200mm	each	2500.00	2766.23	2947.10	4308.33
MT1386	double bowl, 940 x 460 x 160mm	each	1650.00	2510.43	2521.48	4533.33
MT1387	double bowl, 1150 x 520 x 150mm	each	2600.00	3310.60	3075.00	4000.00
MT1388	double bowl & single drain-board, 1740 x 520 x 200mm	each	6250.00	6767.67	6793.17	7125.00
MT1389	double bowl & double drain-board, 1740 x 520 x 165mm	each	6250.00	7461.27	7493.57	8000.00
MT1390	single drain-board, 610 x 460mm	each	995.00	992.07	1021.42	1297.50
<b>W.C. P a n s</b>						
MT1400	Vitreous China European - white	each	1144.10	1242.00	1198.00	1211.40
MT1401	Vitreous China European - colour	each	1743.07	1663.00	1218.00	1791.86
MT1402	Vitreous China Indian type - 500mm, white	each	649.45	952.69	716.00	831.16
MT1403	Vitreous China Indian type - 580mm Orissa, white	each	656.18	1018.33	796.00	916.96
MT1404	Vitreous China Indian type - 580mm Orissa, colour	each	1154.11	1425.59	846.00	1388.06
MT1405	Plastic seat & lid for European pan	each	482.38	575.67	436.00	637.67
MT1406	Vitreous China Footrests (250 x 130 x 30), for Indian pan	pair	136.28	153.00	120.00	136.28

Code	Description	Units	PL	GP	S/J	TH
<b>C i s t e r n s</b>						
<b>C.I. Automatic flushing Cistern with fittings</b>						
MT1420	5 litres	each	1413.30	1273.99	1261.88	1463.78
MT1421	10 litres	each	1539.49	1651.91	1716.15	1665.68
MT1422	12.5 litres	each	1867.58	1908.36	1884.40	1968.53
<b>Vitreous China cistern - low level, incl. fittings &amp; flush-bend</b>						
MT1430	10 litres, white	each	1110.45	1076.80	898.46	1451.16
MT1431	10 litres, colour	each	1302.26	1388.06	946.41	1648.85
<b>F l o a t   V a l v e</b>						
MT1440	15mm ball valve with plastic float	each	416.04	501.93	469.42	597.29
<b>U r i n a l s</b>						
MT1445	White vitreous China flat-back lipped-front type urinals, 430 x 260 x 350mm	each	1059.98	996.28	1095.11	1261.88
<b>Flush fittings</b>						
MT1450	c.p flush valve, 32mm	each	3148.97	3360.91	3346.13	3196.75
MT1451	c.p flush valve, 32mm, concealed	each	3329.33	3360.91	3295.65	3104.21
MT1452	c.p flush bend, long	each	463.36	472.63	463.45	556.91
MT1453	c.p flush valve elbow	each	385.98	385.98	389.84	370.99
<b>C.p Cocks &amp; Spouts</b>						
MT1460	15mm pillar cock	each	484.56	440.47	405.20	632.00
MT1461	15mm pillar cock, swan neck, c.p knob	each	748.97	747.12	854.33	1000.00
MT1462	15mm pillar cock, aerator, c.p knob	each	401.58	545.74	430.70	650.00
MT1463	20mm pillar cock (for bath)	each	586.92	500.71	540.90	530.00
MT1464	15mm bib cock, vert, c.p knob	each	517.57	408.34	344.75	550.00
MT1465	15mm bib cock, inclined, c.p knob	each	483.55	463.36	440.00	500.00
MT1466	15mm bib cock, long nose, c.p knob	each	532.01	529.03	500.00	740.00
MT1467	15mm bib cock, long body, c.p knob	each	530.72	499.00	457.50	758.67
MT1468	15mm stop cock, c.p knob	each	479.51	469.32	368.00	645.00
MT1469	20mm stop cock, c.p knob	each	463.36	406.90	561.00	600.00
MT1470	15mm stop cock, concealed, c.p knob	each	682.42	573.95	576.67	975.00
MT1471	15mm stop cock, H/D concealed, c.p knob	each	772.27	619.57	576.67	946.67
MT1472	20mm stop cock, H/D concealed, c.p knob	each	875.24	718.09	688.33	1025.00
MT1473	15mm angle stop cock, c.p knob	each	566.94	445.72	350.00	620.00
MT1474	Wall spout, std, 15mm	each	472.63	564.40	472.63	561.00
MT1475	Wall spout, w/o diverter, used with single-lever mixers	each	682.68	873.64	682.68	642.60
MT1476	Wall spout, with diverter, used with single-lever mixers	each	934.75	1035.06	934.75	960.84
<b>C.p Brass Shower fittings for 15 to 20mm inlet</b>						
MT1510	rose, 100mm dia	each	829.19	676.26	563.33	719.40
MT1511	rose, 150mm dia	each	903.21	780.30	962.37	925.40
MT1512	shower, with flex tube	each	842.72	911.39	572.50	1050.00
MT1513	shower, revolving joint	each	572.22	525.40	563.33	563.30
MT1514	shower, adjustable with locking key	each	697.07	780.30	841.82	973.50
MT1515	shower arm, 15mm	each	435.10	364.14	360.00	288.33
MT1516	shower arm, 15mm, heavy duty	each	322.52	477.87	379.60	453.33
<b>C.p Mixers</b>						
MT1530	basin, single-hole, casted spout, 15mm	each	1859.50	1921.02	1340.00	2633.33
MT1531	basin, close-hole, 15mm	each	1559.68	1584.92	1226.00	2383.33
MT1532	sink, with spout J pipe, 15mm	each	1672.74	1633.55	1775.00	2430.00
MT1533	sink, with casted spout swinging, 15mm	each	1968.53	1842.51	2120.00	2596.67
MT1534	wall, non-telephonic type, 15mm	each	2387.47	2638.72	2050.00	3063.33
MT1535	wall, telephonic type with crutch and tel. shower, 15mm	each	3225.35	3252.36	2835.71	3422.50

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Code	Description	Units	PL	GP	S/J	TH
MT1536	wall, telephonic type without crutch and tel. shower, 15mm	each	2819.03	2452.78	2257.14	3285.00
MT1537	wall, telephonic type with crutch and without tel. shower, 15mm	each	3018.41	2391.95	2407.14	3445.00
MT1538	wall, telephonic type with C.P bend & flanges, 15mm	each	2902.31	2050.61	2692.86	3930.00
MT1539	Three hole mixer without pop-up, 15mm	each	3241.30	3074.63	3085.42	3028.50
MT1540	Three hole mixer with pop-up, 15mm	each	3978.34	3599.78	3600.57	4038.00
MT1541	basin, elbow action, surgical, 15mm	each	2205.60	2541.34	3017.61	2439.63
MT1542	basin, elbow action, surgical with shower, 15mm	each	2520.68	2520.68	2960.94	3280.88
MT1543	bath, with exposed adjustable legs with telephone shower arrangement with crutch, 15mm	each	3683.65	4011.73	3709.39	3987.53
MT1544	wall, with telephonic shower arrangement with 115mm long bend pipe for over head shower connection, 15mm	each	3675.99	3276.53	3524.95	4166.71
	shower, three in one, with bend flexible tube, and shower & hook,					
MT1545	15mm	each	4939.79	4136.22	4283.09	4556.21
MT1546	sink, with swivel spout, 15mm	each	1780.90	1540.59	1913.14	2268.85
<b>Traps, c.p</b>						
MT1580	32mm	each	1118.55	1118.55	1129.52	1026.33
MT1581	for bath	each	892.74	892.74	901.49	888.36
<b>Bathroom Accessories</b>						
<b>Brackets</b>						
MT1585	R.S. or C.I.Brackets	pair	114.44	135.25	155.27	187.50
<b>C.p. brass waste</b>						
MT1590	32mm	each	198.90	180.00	175.27	190.00
MT1591	40mm	each	336.60	351.14	312.29	335.00
<b>PVC waste</b>						
MT1595	32mm	each	65.96	66.30	96.67	90.00
<b>C.p. brass chain with plug</b>						
MT1600	32mm	each	188.70	195.06	189.52	186.00
MT1601	40mm	each	198.90	210.12	202.69	202.67
<b>Soap Containers</b>						
MT1605	c.p brass with bracket	each	287.20	252.49	232.93	290.00
MT1606	c.p Liquid Soap Container	each	462.65	416.16	404.04	476.67
MT1607	Recessed ceramic, 200 x 100mm	each	512.65	510.00	510.10	500.00
MT1608	Recessed ceramic, 150 x 150mm	each	510.10	520.20	520.10	520.00
<b>C.p Towel Rails</b>						
MT1615	20mm x 450mm	each	453.23	499.40	390.00	572.50
MT1616	20mm x 600mm	each	610.60	599.90	526.67	686.67
MT1617	20mm x 750mm	each	726.50	694.80	670.00	785.00
MT1618	C.p Towel Ring	each	456.20	435.30	363.33	528.33
<b>C.p Coat Hooks</b>						
MT1625	single	each	252.38	268.27	222.09	274.08
MT1626	double	each	356.86	369.22	312.95	357.36
<b>Glass self/Mirror</b>						
MT1630	Glass Shelf	each	716.75	655.97	656.18	886.68
MT1631	Mirror (Bevelled edge) 600mm x 450mm	each	582.99	673.82	656.18	773.95

Code	Description	Units	PL	GP	S/J	TH
<b>Toilet paper holders</b>						
MT1635	C.P. brass	each	460.85	424.54	362.51	402.79
MT1636	recessed ceramic (white), 200 x 100mm	each	724.39	703.69	703.69	676.37
MT1637	recessed ceramic (coloured), 200 x 100mm	each	789.26	766.71	766.71	736.94
MT1638	recessed ceramic (roll-type), 150 x 150mm	each	702.76	682.68	682.68	656.18

### Electric Water Heater

#### Electric Water Heaters

MT1645	10 litres, vertical	each	6304.80	6725.00	5300.00	6800.00
MT1646	15 litres, vertical	each	6995.80	7662.50	5633.33	7100.00
MT1647	25 litres, vertical	each	7836.20	8675.00	6706.67	8200.00
MT1648	35 litres, vertical	each	9849.40	10425.00	8506.67	9450.00
MT1649	50 litres, vertical	each	11515.00	12225.00	13666.67	13000.00
MT1650	75 litres, vertical	each	16564.50	17500.00	18333.33	18541.67
MT1651	100 litres, vertical	each	18717.33	21627.50	20333.33	21225.00

### Water Storage Tanks

#### H.D.P.E water storage tank

MT1665	270 litres	each	1850.00	1687.50	2006.00	2223.03
MT1666	500 litres	each	2750.00	3375.00	3580.00	3811.87
MT1667	1000 litres	each	5500.00	6750.00	7060.00	7623.73
MT1668	2000 litres	each	11000.00	13500.00	14320.00	15247.47
MT1669	3000 litres	each	17250.00	20250.00	21480.00	22871.20

## BASIC RATE: STEEL FORMWORK

### Steel Formwork

MT1670	Plates, angles and channels	kg	80.04	95.61	95.61	95.61
MT1671	Single Clip	each	98.51	98.51	98.51	98.51
MT1672	Double clip	each	120.32	120.32	120.32	120.32
MT1673	Adjustable span ESO+SI	each	2331.15	2331.15	2331.15	2331.15
MT1674	Adjustable telescopic prop(3m)	each	1428.77	1428.77	1428.77	1428.77
MT1675	Beam clamp	each	526.39	526.39	526.39	526.39
MT1676	Column clamp	each	1525.45	1525.45	1525.45	1525.45
MT1677	Prop 2 m	each	1037.74	1037.74	1037.74	1037.74

## BASIC RATE: uPVC WINDOWS

### uPVC Windows Accessories

MT1740	Window Frame Sash (Plain White)	kg	637.56	637.56	637.56	637.56
MT1741	Window Glass Sash	kg	278.30	278.30	278.30	278.30
MT1742	Wire mesh sash	kg	263.12	263.12	263.12	263.12
MT1743	Wire mesh	sqm	354.20	354.20	354.20	354.20
MT1744	EPDM Gasket	m	15.77	15.77	15.77	15.77
MT1745	Wool pile	m	18.26	18.26	18.26	18.26
MT1746	Glass Bead	m	27.88	27.88	27.88	27.88
MT1747	Interlock	each	153.82	153.82	153.82	153.82
MT1748	U-groove roller	each	28.34	28.34	28.34	28.34
MT1749	Touch lock	each	113.34	113.34	113.34	113.34
MT1750	Fastener Nut	each	18.22	18.22	18.22	18.22
MT1751	Aluminium Track	each	87.03	87.03	87.03	87.03
MT1752	Aluminium Reinforcement	m	92.94	92.94	92.94	92.94
MT1753	Window Frame Sash (Polished)	kg	1032.85	1032.85	1032.85	1032.85
MT1754	Window Frame Sash (Texture)	kg	1753.29	1753.29	1753.29	1753.29



Code	Description	Units	PL	GP	S/J	TH
<b>BASIC RATE: GEOTEXTILE MATERIALS</b>						
<b>Non Woven Geotextile</b>						
MT1780	Non Woven Geotextile	Sqm	48.00	52.00	45.00	60.00
<b>BASIC RATE: INTERLOCKING PAVER BLOCKS</b>						
<b>Interlocking Paver Blocks, Tiles, Kerb</b>						
MT2000	Interlocking Paver Block (Zig Zag) 80mm Thk. Colour	Sq.m	527.00	624.49	624.49	686.93
MT2001	Interlocking Paver Block (Zig Zag) 80mm Thk. Ash Grey	Sq.m	496.00	593.26	593.26	655.71
MT2002	Interlocking Paver Block (Zig Zag, Tri-Hex, Brook, Cosmic) 60mm Thk. Colour	Sq.m	465.00	562.04	562.04	624.49
MT2003	Interlocking Paver Block (Zig Zag, Tri-Hex, Brook, Cosmic) 60mm Thk. Ash Grey	Sq.m	343.00	530.81	530.81	686.93
MT2004	Interlocking Paver Block (Tri-Hex, Brook, Cosmic) 40mm Thk. Colour	Sq.m	418.00	468.36	468.36	530.81
MT2005	Interlocking Paver Block (Tri-Hex, Brook, Cosmic) 40mm Thk. Ash Grey	Sq.m	380.00	437.14	437.14	499.59
MT2006	Rectangular Paver Block 60mm Thk Colour	Sq.m	368.00	425.43	425.43	470.21
MT2007	Rectangular Paver Block 60mm Thk Ash Grey	Sq.m	345.00	403.04	403.04	447.82
MT2008	Rectangular Paver Block 40mm Thk Colour	Sq.m	322.00	403.04	403.04	447.82
MT2009	Rectangular Paver Block 40mm Thk Ash Grey	Sq.m	299.00	380.65	380.65	425.43
MT2010	Coral Stone Finished 60mm Thk. Colour	Sq.m	384.00	478.61	478.61	528.99
MT2011	Coral Stone Finished 60mm Thk. Ash Grey	Sq.m	360.00	453.42	453.42	503.80
MT2012	Coral Stone Finished 40mm Thk. Colour	Sq.m	322.00	453.42	453.42	503.80
MT2013	Coral Stone Finished 40mm Thk. Ash Grey	Sq.m	312.00	428.23	428.23	478.61
MT2014	Chequered tiles, Paver tiles. 25mm Thk. Colour	Sq.m	300.00	279.89	279.89	302.28
MT2015	Chequered tiles, Paver tiles. 25mm Thk. Ash Grey	Sq.m	276.00	257.50	257.50	279.89
MT2016	Kerb (Edging) Stone 100mm Thk.	Sq.m	600.00	671.73	671.73	694.12

## **SECTION 2**

# **Mechanical Transportation Costs**

**CARRIAGE OF MATERIALS - MECHANICAL TRANSPORT INCLUDING LOADING, UNLOADING AND STACKING**  
**1. HILL ROADS**

Sl.no	Materials	Unit	Quantity payable	Rate Per Km/unit							
				1 km	2km	3km	4 km	5 km	beyond 5 upto 10 km for every km	beyond 10 upto 20 km for every km	beyond 20 for every km
		1		3	4	5	6	7	8	9	10
1	Lime, moorum, building rubbish	cu.m	100%	190.67	206.35	221.71	236.36	250.37	14.62	13.22	11.27
2	Dry earth	cu.m	80%	238.33	257.94	277.13	295.45	312.96	18.28	16.53	14.08
3	Manure or Sludge	cu.m	95%	200.70	217.21	233.37	248.80	263.55	15.39	13.92	11.86
4	Excavated Rock	cu.m	50%	381.33	412.70	443.41	472.73	500.74	29.24	26.44	22.53
5	Sand, stone aggregates of less than 40 mm size	cu.m	100%	228.80	247.62	266.05	283.64	300.44	17.54	15.87	13.52
6	Stone aggregates of more than 40 mm size	cu.m	92.50%	247.35	267.70	287.62	306.63	324.80	18.97	17.15	14.62
7	Stone boulders	cu.m	85%	269.18	291.32	313.00	333.69	353.46	20.64	18.66	15.91
8	Bricks	1000 nos	100%	572.00	619.05	665.12	709.09	751.11	43.86	39.66	33.80
9	Tiles	1000 nos	100%	381.33	412.70	443.41	472.73	500.74	29.24	26.44	22.53
10	Cement	tonne	100%	143.00	154.76	166.28	177.27	187.78	10.97	9.92	8.45
11	GI, CI Pipes	tonne	100%	163.43	176.87	190.03	202.60	214.60	12.53	11.33	9.66
12	Concrete	tonne	100%	163.43	176.87	190.03	202.60	214.60	12.53	11.33	9.66
13	Steel	tonne	100%	143.00	154.76	166.28	177.27	187.78	10.97	9.92	8.45
14	Bitumen	tonne	100%	254.22	275.13	295.61	315.15	333.83	19.49	17.63	15.02
15	Timber	cu.m	100%	152.53	165.08	177.36	189.09	200.30	11.70	10.58	9.01

**NOTE : For manual transportation, refer the LMC ( CIVIL) - 2021 and SBRW**

**CARRIAGE OF MATERIALS - MECHANICAL TRANSPORT INCLUDING LOADING, UNLOADING AND STACKING**

**2. PLAIN ROADS**

Sl.no	Materials	Unit	Quantity payable	Rate Per Km/unit							
				1 km	2km	3km	4 km	5 km	beyond 5 upto 10 km for every km	beyond 10 upto 20 km for every km	beyond 20km for every km
		1		3	4	5	6	7	8	9	10
1	Lime, moorum, building rubbish	cu.m	100%	187.20	200.52	213.33	225.66	237.53	10.36	9.35	8.31
2	Dry earth	cu.m	80%	234.00	250.65	266.67	282.08	296.91	12.96	12.96	10.39
3	Manure or Sludge	cu.m	95%	197.05	211.08	224.56	237.54	250.03	10.91	9.85	8.75
4	Excavated Rock	cu.m	50%	374.40	401.05	426.67	451.32	475.06	20.73	18.71	16.63
5	Sand, stone aggregates of less than 40 mm size	cu.m	100%	224.64	240.63	256.00	270.79	285.04	12.44	11.23	9.98
6	Stone aggregates of more than 40 mm size	cu.m	92.50%	242.85	260.14	276.76	292.75	308.15	13.45	12.14	10.79
7	Stone boulders	cu.m	85%	264.28	283.09	301.18	318.58	335.34	14.63	13.21	11.74
8	Bricks	1000 nos	100%	561.60	601.57	640.00	676.98	712.59	31.09	28.06	24.94
9	Tiles	1000 nos	100%	374.40	401.05	426.67	451.32	475.06	20.73	18.71	16.63
10	Cement	tonne	100%	140.40	150.39	160.00	169.25	178.15	7.77	7.02	6.24
11	GI, CI Pipes	tonne	100%	160.46	171.88	182.86	193.42	203.60	8.88	8.02	7.13
12	Concrete	tonne	100%	160.46	171.88	182.86	193.42	203.60	8.88	8.02	7.13
13	Steel	tonne	100%	140.40	150.39	160.00	169.25	178.15	7.77	7.02	6.24
14	Bitumen	tonne	100%	249.60	267.36	284.44	300.88	316.71	13.82	12.47	11.09
15	Timber	cu.m	100%	149.76	160.42	170.67	180.53	190.02	8.29	7.48	6.65

**NOTE : For manual transportation, refer the LMC ( CIVIL) - 2021 and SBRW**

## **SECTION 3 - Built Up Rates**

Code	Description	Units	PL	GP	SJ	TH
<b>Chapter 1: DISMANTLING &amp; DEMOLITION WORK</b>						
<b>Concrete</b>						
DD0001	Demolishing cement concrete 1:3:6 & richer, including disposal of materials within 50m lead	cu.m	1088.67	1088.67	1088.67	1088.67
DD0002	Demolishing cement concrete 1:4:8 & leaner, including disposal of materials within 50m lead	cu.m	674.30	674.30	674.30	674.30
DD0003	Demolishing reinforced concrete, including stacking steel bars and disposal of rubbish within 50m lead	cu.m	1587.05	1587.05	1587.05	1587.05
<b>Lime concrete</b>						
DD0004	Demolishing lime concrete and disposal of rubbish within 50m lead	cu.m	286.29	286.29	286.29	286.29
<b>Stone Masonry</b>						
<b>Demolishing stone rubble masonry including stacking useful materials &amp; disposal of rubbish within 50m lead</b>						
DD0005	In lime mortar	cu.m	414.37	414.37	414.37	414.37
DD0006	In cement mortar	cu.m	847.58	847.58	847.58	847.58
<b>Dismantling dressed ashlar face stone work including stacking useful materials &amp; disposal of rubbish within 50m lead</b>						
DD0007	In lime mortar	cu.m	527.38	527.38	527.38	527.38
DD0008	In cement mortar	cu.m	1017.10	1017.10	1017.10	1017.10
<b>Removing mortar from stones, cleaning stones and concrete articles, and arranging in stacks</b>						
DD0009	In lime mortar	cu.m	436.70	436.70	436.70	436.70
DD0010	In cement mortar	cu.m	484.66	484.66	484.66	484.66
<b>Brick &amp; Hollow Block Masonry</b>						
DD0011	Demolishing hollow block masonry including stacking useful materials & disposal of rubbish within 50m lead	cu.m	1538.83	1538.83	1538.83	1538.83
DD0012	Demolishing reinforced brickwork, including stacking steel bars and disposal of rubbish within 50m lead	cu.m	1422.05	1422.05	1422.05	1422.05
DD0013	Extra for scraping, cleaning, straightening reinforcement from R.C & reinforced brick work	kg	4.35	4.35	4.35	4.35
DD0014	Extra for cutting reinforcement bars in reinforced cement concrete and reinforced brickwork( payment to be made for the cross sectional area of RCC or RB work)	sq.m	452.04	452.04	452.04	452.04

Code	Description	Units	PL	GP	SJ	TH
<b>Demolishing brick work including stacking useful materials &amp; disposal of rubbish within 50m lead</b>						
DD0015	In mud mortar	cu.m	244.86	244.86	244.86	244.86
DD0016	In lime mortar	cu.m	290.06	290.06	290.06	290.06
DD0017	In cement mortar	cu.m	715.73	715.73	715.73	715.73
<b>Removing Mortar from bricks and cleaning bricks including stacking useful materials within 50m lead</b>						
DD0018	From BW in mud mortar	1000#	1649.21	1649.21	1649.21	1649.21
DD0019	From BW in lime mortar	1000#	1904.61	1904.61	1904.61	1904.61
DD0020	From BW in cement mortar	1000#	2392.93	2392.93	2392.93	2392.93
<b>Steel Work</b>						
<b>Dismantling steelwork in single sections including dismembering and stacking within 50m lead</b>						
DD0021	In RS joists	kg	1.28	1.28	1.28	1.28
DD0022	In channels, angles, tees and flats	kg	1.13	1.13	1.13	1.13
DD0023	Dismantling steelwork in built up sections in channels, angles, tees and flats in all gusset plates, bolts, nuts, cutting rivets, welding etc. including dismembering and stacking within 50 m lead	kg	2.64	2.64	2.64	2.64
DD0024	Dismantling steelwork in built up sections without dismembering and stacking within 50 m lead	kg	2.26	2.26	2.26	2.26
<b>Wood work</b>						
DD0025	Dismantling wood work of sectional area 40 sq.cm and above in frames, trusses (<10m span) including stacking within 50m lead	cu.m	1168.65	1168.65	1168.65	1168.65
DD0026	Dismantling wood work of sectional area <40 sq.cm in frames, trusses including stacking within 50m lead	m	103.64	103.64	103.64	103.64
DD0027	Extra for dismantling trusses, rafters, purlins etc. of every additional span of 1 metre or part thereof for span >10m (sectional area > 40sq.cm)	cu.m	226.11	226.11	226.11	226.11
DD0028	Extra for dismantling trusses, rafters, purlins etc. every additional span of 1metre or part thereof >10m (sectional area < 40sq.cm)	m	1.04	1.04	1.04	1.04
DD0029	Dismantling doors, windows, and clerestory windows <3sq.m (steel, wood) including architrave, hold fasts, stacking within 50m lead	each	184.44	184.44	184.44	184.44
DD0030	Dismantling doors, windows and clerestory windows >3sq.m (steel/wood) including architrave, hold fasts, and stacking within 50m lead	each	251.38	251.38	251.38	251.38
DD0031	Taking out doors, windows and clerestory windows shutters <3sq.m (steel, wood) including stacking within 50m lead	each	69.83	69.83	69.83	69.83
DD0032	Taking out doors, windows and clerestory window shutters >3sq.m (steel or wood) including stacking within 50m lead	each	163.18	163.18	163.18	163.18

Code	Description	Units	PL	GP	SJ	TH
<b>Flooring</b>						
DD0040	Dismantling wooden flooring including stacking useful materials & disposal of rubbish within 50m lead	sq.m	73.88	73.88	73.88	73.88
DD0041	Dismantling dry brick patching in floors, drains etc including stacking useful materials & disposal of rubbish within 50m lead	cu.m	470.88	470.88	470.88	470.88
DD0042	Dismantling stone slab flooring laid in cement mortar including stacking useful materials & disposal of rubbish within 50m lead	sq.m	97.62	97.62	97.62	97.62
DD0043	Dismantling jack arch roofing and floors including stacking useful materials & disposal of rubbish within 50m lead	sq.m	94.18	94.18	94.18	94.18
<b>Roofing</b>						
DD0045	Dismantling G.I sheets including ridges, hips, valleys, gutters & stacking materials within 50m lead	sq.m	82.46	82.46	82.46	82.46
DD0046	Dismantling tiled roofing with batten boarding etc. complete including stacking useful materials & disposal of rubbish within 50m lead	sq.m	84.78	84.78	84.78	84.78
<b>Metal work</b>						
DD0050	Dismantling expanded metal, fabrics & battens, beading including stacking useful within 50m lead	sq.m	35.33	35.33	35.33	35.33
<b>Fencing</b>						
DD0055	Dismantling barbed wire, flexible wire including making rolls & stacking within 50m lead	kg	16.57	16.57	16.57	16.57
DD0056	Dismantling steel fence posts, struts & earth work\demolishing of concrete and stacking within 50m lead	each	157.27	157.27	157.27	157.27
DD0057	Dismantling R.C.C fence posts, struts including earth work\demolishing concrete footings, stacking, 50m lead	each	187.18	187.18	187.18	187.18
DD0058	Cutting ballies\wooden posts at ground or projection above concrete & stacking within 50m lead	each	47.09	47.09	47.09	47.09
<b>Ceiling &amp; Cladding</b>						
DD0065	Dismantling cement A.C, celotex, hardboard ceiling, partition, including stacking useful materials & disposal rubbish within 50m	sq.m	28.46	28.46	28.46	28.46
DD0066	Dismantling of ekra wall in cement mortar 1:6 or richer including stacking useful materials & disposal of rubbish within 50m lead	sq.m	49.18	49.18	49.18	49.18
DD0067	Dismantling old plaster or skirting, raking out joints and cleaning the surface for plaster including disposal of rubbish within 50m lead	sq.m	18.84	18.84	18.84	18.84



Code	Description	Units	PL	GP	SJ	TH
<b>P i p e s</b>						
<b>Dismantling of old S.W pipes including breaking joints, bed concrete, stacking of useful materials &amp; disposal of rubbish within 50m lead</b>						
DD0075	100mm dia	m	40.31	40.31	40.31	40.31
DD0076	150mm dia	m	44.45	44.45	44.45	44.45
DD0077	200mm dia	m	47.46	47.46	47.46	47.46
<b>Dismantling CI pipes including excavation and refilling trenches after taking out the pipes, breaking lead caulked joints, melting of lead and making into blocks, stacking of pies at site and disposal of rubbish within 50m lead</b>						
DD0078	Up to 150 mm dia	m	104.15	104.08	104.17	104.24
DD0079	From 150 mm up to 300 mm	m	164.46	164.27	164.47	164.66
DD0080	Above 300 mm dia	m	286.67	286.00	285.98	288.08
<b>Dismantling of G.I or HDPE pipes of diameter 100mm to 250mm including breaking bed concrete, clamps, etc. and stacking of useful materials &amp; disposal of rubbish within 50 m lead</b>						
DD0085	G.I Pipes	m	36.54	36.54	36.54	36.54
DD0086	H.D.P.E Pipes	m	48.22	48.22	48.22	48.22
<b>Precast Walls</b>						
<b>Dismantling of precast concrete or stone slabs in walls, partition walls etc. including stacking of useful materials &amp; disposal of rubbish within 50 m lead</b>						
DD0090	Up to 40 mm thickness	sq.m	112.37	112.37	112.37	112.37
DD0091	Above 40 mm thickness and up to 74mm thickness	sq.m	166.16	166.16	166.16	166.16
<b>Roads</b>						
DD0095	Dismantling water bound macadam road including stacking of useful materials & disposal of rubbish within 50 m lead	sq.m	84.38	84.38	84.38	84.38
DD0096	Dismantling bituminous road including cutting, stacking of useful materials & disposal of rubbish within 50 m lead	sq.m	13.00	13.00	13.00	13.00
<b>Cisterns</b>						
DD0100	Dismantling of flushing cistern of any size including stacking of useful materials & disposal of rubbish within 50 m lead	no	349.58	349.58	349.58	349.58

Code	Description	Units	PL	GP	SJ	TH
<b>Chapter 2: CLEARING AND GRUBBING</b>						
<b>Clearing Grass</b>						
CG0001	Clearing grass including removal of rubbish within 50m of site	sq.m		3.99	3.99	3.99
CG0002	Clearing jungle including uprooting of vegetation & trees of girth < 300mm & disposal within 50m of the site	sq.m		12.62	12.62	12.62
<b>Felling Trees (Manually)</b>						
<b>Felling trees including cutting of trunks and branches, removal of roots, stacking of serviceable materials and disposal of rubbish within 50m lead</b>						
CG0010	Girth 300 to 600mm	each		117.76	117.76	117.76
CG0011	Girth 600 to 1200m	each		531.15	531.15	531.15
CG0012	Girth 1200 to 2400	each		2472.11	2472.11	2472.11
CG0013	Girth > 2400mm	each		4944.22	4944.22	4944.22
<b>Felling Trees (Dozer)</b>						
<b>Felling of trees including removal of roots and disposal of rubbish using bull dozer (excluding cutting of trunks, branches &amp; stacking)</b>						
CG0020	Girth 300 to 600mm	Each		62.25	62.25	62.25
CG0021	Girth 600 to 1200m	Each		250.78	250.78	251.38
CG0022	Girth 1200 to 2400	Each		501.56	501.56	502.77
CG0023	Girth > 2400m	Each		916.65	916.65	919.07
<b>Landslide Debris</b>						
CG0030	Clearing grass, removal of landslide debris & surface material including excavation & disposal within 50m lead	cu.m		85.13	85.13	85.13

Code	Description	Units	PL	GP	SJ	TH
<b>Chapter 3: EARTH WORK</b>						
<b>Excavation (Manually)</b>						
<b>Surface dressing of ground, including removal of vegetations and inequalities &lt; 150mm deep, disposal of rubbish within 50m lead and 1.5m lifts</b>						
EW0001	Ordinary Soil	sq.m	12.77	12.77	12.77	12.77
EW0002	Hard Soil	sq.m	17.93	17.93	17.93	17.93
<b>Ploughing the existing ground to a depth 150mm to 250mm, and watering the same</b>						
EW0010	Ordinary Soil	sq.m	4.72	4.72	4.72	4.72
EW0011	Hard Soil	sq.m	11.30	11.30	11.30	11.30
<b>Earth work in surface excavation, depth &lt;300mm, width &gt;1.5m, area &gt;10 Sq.m in plan, including disposal of excavated earth within 50m lead &amp; 1.5m lift and disposed soil to be neatly dressed</b>						
EW0020	Ordinary Soil	sq.m	23.58	23.58	23.58	23.58
EW0021	Hard Soil	sq.m	32.96	32.96	32.96	32.96
<b>Earth work in excavation over areas, depth &gt;300mm, width &gt;1.5m, area &gt;10 Sq.m on plan, including disposal of excavated earth within 50m lead and 1.5m lift &amp; disposed soil to be neatly dressed</b>						
EW0030	Ordinary Soil	cu.m	162.02	162.02	162.02	162.02
EW0031	Hard Soil	cu.m	209.56	209.56	209.56	209.56
EW0032	Ordinary rock with or without blasting	cu.m	636.73	636.73	636.73	637.08
EW0033	Hard rock requiring blasting	cu.m	868.79	868.79	868.79	869.50
EW0034	Hard rock requiring chiselling (where blasting is prohibited)	cu.m	1393.71	1393.71	1393.71	1393.71
<b>Extra for every additional lead of 25m beyond 50m up to 250m and deposit to a level up to 1.5m (Manual)</b>						
EW0035	All Kinds of Soil	cu.m	48.97	48.97	48.97	48.97
<b>Extra for every additional lead of 250m beyond 50m up to 1000m and deposit to a level up to 1.5m (Mechanical)</b>						
EW0040	All Kinds of Soil	cu.m	81.24	81.24	81.24	81.24
<b>Mechanical Excavation</b>						
<b>Earth work in excavation over areas by Excavator including levelling and dressing</b>						
EW0046	All kinds of Soil	cu.m	65.33	65.33	65.33	65.33
EW0047	All kinds of rocks ( blasted)	cu.m	68.96	68.96	68.96	68.96
<b>Blasting Operation</b>						
<b>Blasting of rocks complete excluding the cost of collection and stacking of blasted rock</b>						
EW0055	Ordinary rock	cu.m	85.27	85.27	85.27	85.61
EW0056	Hard rock	cu.m	170.54	170.54	170.54	171.21
<b>Silent Blaster</b>						

Code	Description	Units	PL	GP	SJ	TH
<b>Breaking of rocks using non-explosive blaster (silent blaster) in over areas, depth &gt;300mm, width &gt;1.5m, area &gt;10sq.m on plan including stacking of boulders or useful materials and disposal of rubbish etc. complete</b>						
EW0065	Ordinary rock	cu.m	4743.47	4770.81	4832.52	4810.55
EW0066	Hard rock	cu.m	4957.43	4984.78	5046.49	5024.51
<b>Breaking of rocks using non-explosive blaster (silent blaster) in foundation trenches width &lt;1.5m, area &lt;10sq.m on plan including stacking of boulders or useful materials and disposal of rubbish etc. complete</b>						
EW0075	Ordinary rock	cu.m	4812.79	4840.13	4901.84	4879.86
EW0076	Hard rock	cu.m	5070.44	5097.79	5159.50	5137.52
<b>Excavation &amp; Banking</b>						
<b>Earth work in rough excavation &amp; banking of excavated earth in layers &lt; 200 mm in depth for road, flood/guide banks &amp; depressions, including watering, power rolling, dressing, lead upto 50m &amp; 1.5m lift</b>						
EW0085	All Kinds of Soil	cu.m	239.50	239.50	239.50	239.50
<b>Banking excavated earth for road, flood banks, guide banks &amp; depressions, in layers &lt;200mm depth, including watering, rolling &amp; dressing up within 50m lead &amp; 1.5m lift</b>						
EW0096	All Kinds of Soil	cu.m	157.26	157.26	157.26	157.26
EW0097	Deduction - for not rolling with power roller in layered banking works	cu.m	26.90	26.90	26.90	26.90
EW0098	Deduction - for not watering in layered, banking works	cu.m	8.02	8.02	8.02	8.02
<b>Trenches Excavation</b>						
<b>Excavation in foundation trenches or drains not exceeding 1.5m in width or area 10 sq.m on plan, including dressing &amp; ramming, disposal of surplus soil within 50m lead &amp; 1.5m lift</b>						
EW0105	Ordinary Soil	cu.m	172.83	172.83	172.83	172.83
EW0106	Hard Soil	cu.m	221.50	221.50	221.50	221.50
EW0107	Ordinary rock with or without blasting	cu.m	681.12	681.12	681.12	681.60
EW0108	Hard rock requiring blasting	cu.m	970.85	970.85	970.85	972.06
EW0109	Hard rock requiring chiselling (where blasting is prohibited)	cu.m	1410.50	1410.50	1410.50	1410.50
<b>Extra for every additional lift of 1.5m or part thereof</b>						
EW0115	All kinds of soils	cu.m	18.84	18.84	18.84	18.84
EW0116	All kinds of rocks	cu.m	33.53	33.53	33.53	33.53
<b>Extra for trench, pit works per cu.m per m depth</b>						
EW0125	Under water	cu.m	58.30	58.30	58.30	58.30
EW0126	In foul conditions	cu.m	55.38	55.38	55.38	55.38

Code	Description	Units	PL	GP	SJ	TH
<b>Excavation/Refilling for Pipes/Cables</b>						
<b>Hand excavation and refilling in layers &lt; 200mm, of trenches for pipes &amp; sockets, cables, including dressing of sides/ ramming of bottom, depth upto 1.5m, disposal of surplus material within lead of 50m: All kinds of soil</b>						
EW0135	Pipes, cables etc. 80mm < dia < 300mm	m	241.91	241.91	241.91	241.91
EW0136	Pipes, cables etc. dia.>300 mm	m	377.59	377.59	377.59	377.59
<b>Hand excavation and refilling in layers &lt; 200mm, of trenches for pipes &amp; sockets, cables, including dressing of sides/ ramming of bottom, depth upto 1.5m, disposal of surplus material within lead of 50m: Ordinary rock with or without blasting</b>						
EW0155	Pipes, cables etc. 80mm < dia < 300mm	m	943.34	943.34	943.34	943.91
EW0156	Pipes, cables etc. dia.> 300mm	m	1085.47	1085.47	1085.47	1086.13
<b>Hand excavation and refilling in layers &lt; 200mm, of trenches for pipes &amp; sockets, cables, including dressing of sides/ ramming of bottom, depth upto 1.5m, disposal of surplus material within lead of 50m: Hard rock requiring blasting</b>						
EW0165	Pipes, cables etc. 80mm < dia < 300mm	m	1282.34	1282.34	1282.34	1283.75
EW0166	Pipes, cables etc. dia.> 300mm	m	1475.63	1475.63	1475.63	1477.25
<b>Hand excavation and refilling in layers &lt; 200mm, of trenches for pipes &amp; sockets, cables, including dressing of sides/ ramming of bottom, depth upto 1.5m, disposal of surplus material within lead of 50m: Hard rock requiring chiselling (where blasting is prohibited)</b>						
EW0175	Pipes, cables etc. 80mm < dia < 300mm	m	1796.72	1796.72	1796.72	1796.72
EW0176	Pipes, cables etc. dia.> 300mm	m	2067.65	2067.65	2067.65	2067.65
<b>Extra for excavating trenches for pipes, cables etc., 1.5 &lt; depth &lt; 3m</b>						
EW0185	All kinds of Soils	m	501.30	501.30	501.30	501.30
EW0186	All kinds of Rocks	m	2584.56	2584.56	2584.56	2584.56
<b>Filling or bedding</b>						
EW0195	Filling of trenches, sides of foundations etc. in layers <200mm using selected excavated earth, ramming etc. within lead 50 m & lift 1.5m	cu.m	111.32	111.32	111.32	111.32
EW0196	Providing & laying sand bedding, including watering, ramming, dressing	cu.m	744.63	782.29	648.19	1420.17
EW0197	Providing & laying dry earth bedding, including consolidating each deposited layer by watering, ramming and dressing	cu.m	214.11	213.12	213.30	213.30
<b>Timbering for Trenches &amp; cuts</b>						
<b>Open timbering over areas including lagging &amp; strutting of trenches, cuts (per sq.m face area timbered)</b>						
EW0205	Depth not exceeding 1.5m	sq.m	146.19	154.67	163.63	152.59
EW0206	1.5m < depth < 3 m	sq.m	150.76	159.23	168.19	157.15
EW0207	Depth > 3 m	sq.m	158.79	167.26	176.22	165.18

Code	Description	Units	PL	GP	SJ	TH
<b>Close timbering over areas including lagging &amp; strutting of trenches, cuts ( per sq.m face area timbered)</b>						
EW0215	Depth not exceeding 1.5m	sq.m	408.16	433.60	458.86	424.96
EW0216	1.5m < depth < 3m	sq.m	420.04	445.48	470.74	436.85
EW0217	3m < depth < 4.5m	sq.m	431.88	457.33	482.58	448.69
<b>Close timbering including lagging &amp; strutting of shafts, wells, cess pits, manholes (per sq.m face area timbered)</b>						
EW0225	Depth not exceeding 1.5m	sq.m	371.75	393.74	416.30	387.35
EW0226	1.5m < Depth < 3m	sq.m	387.41	409.40	431.96	403.01
EW0227	3m < Depth < 4.5m	sq.m	404.24	426.23	448.80	419.84
<b>D e - W a t e r i n g</b>						
EW0235	Pumping out water caused by springs, river, seepage, broken water mains, drains, and alike	cu.m	134.46	134.46	134.46	134.46
<b>A n t i - T e r m i t e T r e a t m e n t</b>						
EW0240	Providing and injecting chemical emulsion for Pre-construction anti-termite treatment using aldrin emulsifiable 0.5% concentration	sq.m	149.45	153.02	153.03	153.71
<b>Providing and injecting chemical emulsion for Post-construction, using aldrin emulsifiable 0.5% concentration</b>						
EW0245	Along outside of foundation	m	377.41	380.98	380.98	381.66
EW0246	Along external walls below concrete \ masonry apron	m	289.98	290.58	290.58	290.69
EW0247	Under existing floors including drilling & plugging 12mm holes with mortar 1:2	sq.m	509.24	510.03	510.03	510.18
EW0248	Voids in masonry including drilling holes at 45 degree & plugging with cement mortar 1:2)	m	319.63	320.01	320.01	320.08
EW0249	Woodwork (using chemical in oil or kerosene based solution) including drilling & plugging 6mm holes	m	315.89	316.00	316.00	316.03

Code	Description	Units	PL	GP	SJ	TH
<b>Chapter 4: DRAINAGE</b>						
<b>Plinth Protection</b>						
<b>Providing and laying Plinth Protection and grouted with fine sand mix including well rammed, finishing the top smooth</b>						
DR0001	With 50mm thick cement concrete 1:3:6, 20mm aggregates, laid over 75mm thick layer of compacted gravel (40mm)	sq.m	386.57	385.52	396.81	441.61
DR0002	With 50mm thick cement concrete 1:3:6, 20mm gravel or shingles laid over 75mm thick layer of compacted gravel (40mm)	sq.m	363.63	369.86	363.63	439.84
DR0003	With 50mm thick cement concrete 1:3:6, 20mm aggregate, laid over 75mm thick layer of compacted dry brick aggregate(40mm)	sq.m	532.95	525.50	542.61	608.29
DR0004	With 50mm thick cement concrete 1:3:6, 20mm gravel or shingles laid on 75mm thick layer of compacted dry brick aggregate(40mm)	sq.m	509.71	508.44	517.33	572.11
<b>Open Surface Drains</b>						
<b>Constructing second class brick masonry open surface drain in cement mortar 1:4 including earth work in excavation 100 mm thick concrete bed 1:5:10, 40mm aggregate and 25mm thick cement concrete 1:2:4, 12 mm aggregate for filling haunches including 12mm cement plastering 1:4 with a floating coat of neat cement and disposal of surplus earth etc. complete</b>						
DR0010	100mm wide x 200mm depth	m	598.99	589.80	600.77	753.50
DR0011	150mm wide x 200mm depth	m	628.42	619.21	630.60	788.77
DR0012	250mm wide x 300mm depth	m	868.40	854.20	871.10	1093.91
DR0013	300mm wide x 450mm depth	m	1293.52	1261.67	1294.93	1652.11
<b>Extra for additional depth of brick masonry drain</b>						
DR0020	100mm wide .....per metre additional depth	m	1833.46	1783.24	1832.44	2378.62
DR0021	150mm wide .....per metre additional depth	m	1842.34	1792.12	1841.31	2387.50
DR0022	250mm wide .....per metre additional depth	m	1859.39	1809.16	1858.36	2404.55
<b>Constructing random rubble masonry open surface drain in cement mortar 1:6 including earth work in excavation, 100mm thick concrete base 1:5:10, 40 mm aggregate 25mm thick cement concrete 1:2:4, 12mm aggregate for filling haunches, including 20mm cement plaster with a floating coat of neat cement and disposal of surplus earth</b>						
DR0030	100mm wide x 200mm depth	m	1007.99	1029.02	1019.24	1175.45
DR0031	150mm wide x 200mm depth	m	1036.41	1057.44	1048.02	1209.51
DR0032	250mm wide x 300mm depth	m	1379.25	1409.49	1395.09	1606.82
DR0033	300mm wide x 450mm depth	m	2659.92	2745.07	2692.39	3103.92
<b>Extra for additional depth of random rubble masonry drain</b>						
DR0040	100mm wide .....per metre additional depth	m	3008.05	3102.42	3046.00	3462.04
DR0041	150mm wide .....per metre additional depth	m	3016.69	3111.06	3054.64	3470.68
DR0042	250mm wide .....per metre additional depth	m	3033.98	3128.34	3071.93	3487.97

Code	Description	Units	PL	GP	SJ	TH
<b>Stoneware Pipe Drains &amp; Fittings</b>						
<b>Providing, laying and jointing glazed Stone Ware pipes with stiff mixture of cement mortar 1:3 including testing of joints complete</b>						
DR0047	100mm dia.	m	395.48	401.31	402.80	401.52
DR0048	150mm dia.	m	782.57	795.40	798.64	794.66
DR0049	200mm dia.	m	1282.33	1304.69	1310.39	1302.42
<b>Providing, laying and jointing glazed Stone Ware pipes with stiff mixture of cement mortar 1:1 including testing of joints complete</b>						
DR0050	100mm dia.	m	404.07	410.22	412.12	412.14
DR0051	150mm dia.	m	795.46	808.77	812.64	810.51
DR0052	200mm dia.	m	1299.34	1322.33	1328.87	1323.33
DR0053	230mm dia.	m	1571.94	1599.99	1607.85	1600.65
DR0054	250mm dia.	m	1752.47	1783.89	1792.75	1784.54
DR0055	300mm dia.	m	2148.22	2187.20	2198.22	2188.51
DR0056	350mm dia.	m	2564.73	2611.78	2625.23	2615.30
DR0057	400mm dia.	m	2988.93	3044.16	3060.05	3048.92
DR0058	500mm dia.	m	3850.07	3921.92	3942.17	3924.30
DR0059	600mm dia.	m	4583.26	4669.30	4693.45	4670.92
<b>Providing and laying cement concrete 1:5:10, 40mm aggregates encasing Stone Ware pipes including 150mm concrete bed</b>						
DR0060	100mm dia S.W pipe	m	623.44	624.14	625.24	770.51
DR0061	150mm dia S.W pipe	m	667.95	668.71	669.89	825.53
DR0062	200mm dia S.W pipe	m	767.30	768.17	769.52	948.31
<b>Providing &amp; laying cement concrete 1:5:10, 40mm aggregates upto haunches of S.W pipes including 150mm concrete bed</b>						
DR0070	100mm dia. S.W pipe	m	417.91	418.38	419.12	516.50
DR0071	150mm dia. S.W pipe	m	459.00	459.52	460.33	567.29
DR0072	200mm dia. S.W pipe	m	534.42	535.03	535.97	660.50
<b>Providing &amp; fixing square mouth S.W gully-trap A-grade including C.I grating, C.I. cover with frame of 300 x 300 mm, brick masonry chamber</b>						
DR0080	100 x 100mm P Type	each	2282.27	2372.56	2319.23	2708.82
DR0081	150 x 100mm P or S Type	each	2374.19	2351.81	2432.64	3367.00
DR0082	180 x 150mm P or S Type	each	2577.64	2668.16	2627.13	3061.51



Code	Description	Units	PL	GP	SJ	TH
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### R.C.C Pipes & Fittings

**Providing & laying NP2 class R.C.C pipes, including collars, jointing in cement mortar 1:2 including testing of joints etc. complete**

DR0088	100mm dia	m	578.03	586.56	548.76	612.29
DR0089	150mm dia	m	737.48	802.73	637.36	819.42
DR0090	225mm dia.	m	1014.41	1054.03	971.95	1231.22
DR0091	300mm dia.	m	1200.61	1217.85	1180.20	1436.92
DR0092	450mm dia.	m	1652.77	1735.96	1619.97	1947.16
DR0093	600mm dia.	m	2253.35	2489.66	2118.88	2845.26
DR0094	750mm dia.	m	3194.12	3261.36	2926.74	3769.95
DR0095	900mm dia.	m	4131.31	4173.08	4209.08	4528.27
DR0096	1050mm dia.	m	5232.60	6098.99	4991.30	6127.30
DR0097	1200mm dia.	m	9034.68	9741.64	6914.67	9568.43

### SPIGOT & SOCKET TYPE RCC PIPE (NP-3 CLASS)

**Providing and laying Non Pressure NP-3 class (Medium duty) R.C.C. PIPES, spigot & socket type with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete**

DR0220	450 mm dia NP-3 spigot & socket	m	1894.42	1882.55	2269.65	2075.13
DR0221	600 mm dia NP-3 spigot & socket	m	2727.87	2727.68	3224.38	3016.52
DR0222	900 mm dia NP-3 spigot & socket	m	4558.85	4564.33	5563.09	5049.76
DR0223	1000 mm dia NP-3 spigot & socket	m	5117.67	5293.37	6322.85	5852.89
DR0224	1200 mm dia NP-3 spigot & socket	m	7813.63	8114.35	9096.38	8964.31

### Manholes

**Constructing Brick masonry manhole in cement mortar 1:5, R.C.C top slab with 1:2:4 20mm aggregates, foundation concrete 1:4:8 40mm aggregates, 12mm plaster in CM 1:3 finished with floating coat of neat cement and making channels in cement concrete 1:2:4 20mm aggregates, neatly finished complete**

DR0105	Inside dimension 900 x 800mm & 450mm deep including C.I. cover & frame (weight >38 kg)	each	9307.15	8991.16	8676.33	11163.43
DR0106	Inside dimension 900 x 800mm & 600mm deep including C.I. cover & frame (weight >38 kg)	each	10003.24	9653.93	9364.62	12164.37
DR0107	Inside dimension 1200 x 900mm & 900mm deep including C.I. cover & frame weight >116 kg)	each	21745.20	21449.43	19437.32	25408.53

### Extra for additional depth of manholes

DR0115	900 x 800mm	m	6174.37	5947.06	6146.32	8329.21
DR0116	1200 x 900mm	m	7385.05	7114.96	7352.41	9954.50

Code	Description	Units	PL	GP	SJ	TH
<b>Chapter 5: MORTARS</b>						
<b>Cement Mortar</b>						
MR0001	Cement mortar 1:1 (1 cement : 1 sand)	cu.m	8762.76	9083.85	9375.26	11052.70
MR0002	Cement mortar 1:2 (1 cement : 2 sand)	cu.m	6285.13	6517.07	6647.65	8132.64
MR0003	Cement mortar 1:3 (1 cement : 3 sand)	cu.m	5047.11	5234.53	5284.52	6674.24
MR0004	Cement mortar 1:4 (1 cement : 4 sand)	cu.m	4042.04	4191.95	4192.63	5438.66
MR0005	Cement mortar 1:5 (1 cement : 5 sand)	cu.m	3500.84	3630.57	3604.69	4773.35
MR0006	Cement mortar 1:6 (1 cement : 6 sand)	cu.m	3036.97	3149.38	3100.74	4203.08
<b>Lime Mortar</b>						
MR0010	Lime mortar 1:2 (1 lime putty : 2 Brick Powder)	cu.m	10118.86	11580.76	13632.99	14469.04
MR0011	Lime Mortar 1:1 :1 (1 Lime putty : 1 Brick Powder : 1 Sand)	cu.m	10522.00	14350.71	9619.02	14518.35
<b>Mud Mortar</b>						
MR0015	Mud mortar	cu.m	548.46	547.28	547.49	547.49
<b>White Cement Mortar</b>						
MR0020	White Cement mortar 1:2 (1 white cement : 2 sand)	cu.m	27559.25	27402.44	28797.51	28732.96
MR0021	White Cement mortar 1:3 (1 white cement : 3 sand)	cu.m	20869.57	20766.26	21757.94	21989.02
MR0022	White Cement mortar 1:5 (1 white cement : 5 sand)	cu.m	13092.57	13045.58	13592.09	14056.48
<b>Cement Lime Mortar</b>						
MR0025	Cement lime mortar 1:1:3 (1 cement : 1 lime putty : 3 sand)	cu.m	9364.32	11820.61	9080.13	12766.14
MR0026	Cement lime mortar 1:1:6 (1 cement : 1 lime putty : 6 sand)	cu.m	6337.20	7889.04	6104.38	8810.53

Code	Description	Units	PL	GP	SJ	TH
<b>Chapter 6: CONCRETE WORK</b>						
<b>Plain Cement Concrete</b>						
<b>Providing and laying in position plain cement concrete excluding the cost of centering and shuttering - All work upto plinth level.</b>						
CW0001	1:1:2 (1 cement : 1 sand : 2 graded crushed rock 20 mm nominal size)	cu.m	7043.62	7110.01	7447.10	8665.75
CW0002	1:1.5:3 (1 cement : 1.5 sand : 3 graded crushed rock 20 mm nominal size)	cu.m	5417.23	5426.09	5682.54	6661.50
CW0003	1:2:4 (1 cement : 2 sand : 4 graded crushed rock 20 mm nominal size)	cu.m	4869.40	4847.62	5079.89	6003.63
CW0004	1:2:4 (1 cement : 2 sand : 4 graded crushed rock 40 mm nominal size)	cu.m	4872.40	4898.52	5036.94	6012.80
CW0005	1:3:6 (1 cement : 3 sand : 6 graded crushed rock 20 mm nominal size)	cu.m	4223.47	4168.97	4366.14	5195.85
CW0006	1:3:6 (1 cement : 3 sand : 6 graded crushed rock 40 mm nominal size)	cu.m	4111.24	4119.35	4200.71	5095.15
CW0007	1:3:6 (1 cement : 3 sand : 6 graded gravel/shingles 40 mm nominal size)	cu.m	3635.75	3724.62	3767.96	4379.46
CW0008	1:4:8 (1 cement : 4 sand : 8 graded crushed stone 40 mm nominal size)	cu.m	3608.47	3600.05	3663.18	4522.11
CW0009	1:4:8 (1 cement : 4 sand : 8 graded crushed stone 50 mm nominal size)	cu.m	3638.94	3604.87	3748.88	4372.85
CW0010	1:4:8 (1 cement : 4 sand : 8 graded gravel/shingles 40 mm nominal size)	cu.m	3110.08	3185.04	3207.57	3775.28
CW0011	1:5:10 (1 cement : 5 sand : 10 graded crushed stone 40 mm nominal size)	cu.m	3245.73	3228.84	3276.89	4061.26
CW0012	1:5:10 (1 cement : 5 sand : 10 graded crushed stone 50 mm nominal size)	cu.m	3254.40	3212.82	3338.69	3896.97
CW0013	1:5:10 (1 cement : 5 sand : 10 graded gravel/shingles 40 mm nominal size)	cu.m	2756.41	2819.12	2829.67	3335.17
<b>Providing and laying in position plain cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets etc. upto floor five level, excluding the cost of centering and shuttering</b>						
CW0020	1:1:2 (1 cement : 1 sand : 2 graded crushed rock 20 mm nominal size)	cu.m	7540.71	7607.09	7944.18	9162.83
CW0021	1:1.5:3 (1 cement : 1.5 sand : 3 graded crushed rock 20 mm nominal size)	cu.m	5915.44	5924.15	6180.78	7159.97
CW0022	1:2:4 (1 cement : 2 sand : 4 graded crushed rock 20 mm nominal size)	cu.m	5366.48	5344.71	5576.97	6500.71
CW0023	1:2:4 (1 cement : 2 sand : 4 graded crushed rock 40 mm nominal size)	cu.m	5273.33	5299.61	5437.84	6413.49
CW0024	1:3:6 (1 cement : 3 sand : 6 graded crushed rock 20 mm nominal size)	cu.m	4625.52	4571.02	4768.19	5597.90
CW0025	1:3:6 (1 cement : 3 sand : 6 graded crushed rock 40 mm nominal size)	cu.m	4513.29	4521.40	4602.76	5497.20
CW0026	1:3:6 (1 cement : 3 sand : 6 graded gravel/shingles 40 mm nominal size)	cu.m	4037.80	4126.67	4170.01	4781.51

Code	Description	Units	PL	GP	SJ	TH
<b>Pre-cast Cement Concrete</b>						
<b>Providing and fixing upto floor five level pre-cast cement concrete lacing courses, copings, bed plates, anchor blocks, plain window sills, shelves, louvers, steps, staircases etc. including hoisting and setting in position with cement mortar 1:3 (1 cement : 3 sand) cost of required formwork and finishing smooth with 6 mm thick cement plaster on exposed surface complete</b>						
CW0050	1:2:4 (1 cement : 2 sand : 4 graded crushed rock 20 mm nominal size)	cu.m	6950.49	6947.03	7196.64	8213.60
CW0051	1:3:6 (1 cement : 3 sand : 6 graded crushed rock 20 mm nominal size)	cu.m	6276.81	6244.39	6447.33	7441.16
<b>Providing and fixing at or near ground level pre-cast cement concrete in kerbs, edgings etc. as per approval pattern and setting in position with cement mortar 1:3 (1 cement : 3 sand) cost of required formwork and finishing smooth with 6 mm thick cement plaster on exposed surface complete</b>						
CW0060	1:2:4 (1 cement : 2 sand : 4 graded crushed rock 20 mm nominal size)	cu.m	6629.92	6623.21	6859.08	7895.90
<b>Providing and fixing upto floor five level pre-cast cement concrete solid block including hoisting and setting in position with cement mortar 1:3 (1 cement : 3 sand) including the cost of required formwork and finishing smooth with 6 mm thick cement plaster on exposed surface complete</b>						
CW0070	1:2:4 (1 cement : 2 sand : 4 graded crushed rock 20 mm nominal size)	cu.m	7326.34	7338.38	7579.24	8755.10
CW0071	1:3:6 (1 cement : 3 sand : 6 graded crushed rock 20 mm nominal size)	cu.m	6595.43	6575.12	6781.38	7864.64
<b>Providing and fixing upto floor five level pre-cast cement concrete hollow block including hoisting and setting in position with cement mortar 1:3 (1 cement : 3 sand) including the cost of required formwork and finishing smooth with 6 mm thick cement plaster on exposed surface complete</b>						
CW0080	1:2:4 (1 cement : 2 sand : 4 graded crushed rock 20 mm nominal size)	cu.m	4951.76	4954.86	5098.28	5773.30
CW0081	1:3:6 (1 cement : 3 sand : 6 graded crushed rock 20 mm nominal size)	cu.m	4507.49	4490.85	4614.71	5227.22
<b>Lime Concrete</b>						
<b>Providing and laying lime concrete, with 40 % mortar comprising of 1:1:1 lime mortar, in footings and bases for columns excluding cost of formwork</b>						
CW0090	With graded stone aggregate of 40 mm	cu.m	6067.29	7544.28	5672.07	7938.70
CW0091	with graded brick aggregate of 40 mm	cu.m	7403.35	8888.52	6909.31	9384.64
<b>Extra</b>						
<b>Extra for laying cement concrete work</b>						
CW0135	Cement concrete work in super-structure above floor five level for each four floors or part thereof	cu.m	8% of the rates worked out for respective items			
CW0136	In or under water, mud, including the cost of pumping or bailing out water and removing slush etc. complete....per metre depth (concrete not leaner than 1:2:4)	cu.m	787.00	793.35	801.69	826.01
CW0137	Cement concrete work under foul conditions	cu.m	874.86	874.86	874.86	874.86
CW0140	Providing and mixing water-proofing materials in in the proportion 12 kg/cu.m or as prescribed by the manufacturer	cu.m	1565.48	1454.53	2117.02	1977.03

Code	Description	Units	PL	GP	SJ	TH
<b>Chapter 7: DAMP-PROOFING</b>						
<b>Concrete Course</b>						
<b>Providing and laying damp-proof course with cement concrete 1:2:4, 12.5mm aggregate</b>						
DP0001	25mm thick	sq.m	178.36	177.42	183.08	205.39
DP0002	40mm thick	sq.m	252.98	251.47	260.54	296.23
<b>Providing and laying damp-proof course with cement concrete 1:2:4, 20mm aggregate</b>						
DP0010	50mm thick	sq.m	302.93	302.51	313.82	358.51
<b>Bituminous Coatings</b>						
DP0015	Applying a coat of hot bitumen (maxphalt 80\100 or equivalent) using 1.7 kg per sq.m including the surface cleaning	sq.m	132.97	132.89	132.82	152.39
<b>Moisture Barriers</b>						
<b>Providing and laying moisture barrier using plastic sheeting underlay</b>						
DP0020	50 micro-metre	sq.m	14.60	14.94	14.29	16.13
DP0021	100 micro-metre	sq.m	16.75	17.83	16.70	19.25
DP0022	200 micro-metre	sq.m	25.76	26.22	22.93	27.46
<b>Providing and laying Bitumen felt Type 3 in wall bases etc.</b>						
DP0030	Grade 2	sq.m	234.59	234.59	194.92	241.73

Code	Description	Units	PL	GP	SJ	TH
<b>Chapter 8: REINFORCED CONCRETE</b>						
<b>Concreting Items</b>						
<b>Providing &amp; laying in position reinforced cement concrete excluding the cost of centering, shuttering and reinforcement - all work upto plinth level</b>						
RC0001	1:1:2 (1 cement : 1 sand : 2 graded crushed rock 20 mm nominal size)	cu.m	7099.32	7165.70	7502.79	8721.44
RC0002	1:1.5:3 (1 cement : 1.5 sand : 3 graded crushed rock 20 mm nominal size)	cu.m	5472.93	5481.79	5738.23	6717.20
RC0003	1:2:4 (1 cement : 2 sand : 4 graded crushed rock 20 mm nominal size)	cu.m	4925.09	4903.32	5135.58	6059.32
<b>Providing &amp; laying in position reinforced cement concrete work in walls (any thickness) including attached pilasters buttresses, piers, abutments etc. upto floor five level excluding the cost of centering, shuttering and reinforcement</b>						
RC0005	1:1:2 (1 cement : 1 sand : 2 graded crushed rock 20 mm nominal size)	cu.m	7089.04	7155.43	7492.52	8711.17
RC0006	1:1.5:3 (1 cement : 1.5 sand : 3 graded crushed rock 20 mm nominal size)	cu.m	5462.65	5471.51	5727.96	6706.92
RC0007	1:2:4 (1 cement : 2 sand : 4 graded crushed rock 20 mm nominal size)	cu.m	4874.57	4852.79	5085.06	6008.80
<b>Providing &amp; laying in position reinforced cement concrete work in plinth and skirting courses, fillets, columns , pillars, posts and struts upto floor five level excluding the cost of centering, shuttering and reinforcement.</b>						
RC0009	1:1:2 (1 cement : 1 sand : 2 graded crushed rock 20 mm nominal size)	cu.m	7177.58	7243.97	7581.06	8799.71
RC0010	1:1.5:3 (1 cement : 1.5 sand : 3 graded crushed rock 20 mm nominal size)	cu.m	5551.19	5560.05	5816.50	6795.46
RC0011	1:2:4 (1 cement : 2 sand : 4 graded crushed rock 20 mm nominal size)	cu.m	5003.35	4981.58	5213.85	6137.59
<b>Providing &amp; laying in position reinforced cement concrete work in suspended floor, roofs having slope upto 15 Degree, landings, balconies, shelves and chajjas upto floor five level excluding the cost of centering, shuttering and reinforcement</b>						
RC0013	1:1:2 (1 cement : 1 sand : 2 graded crushed rock 20 mm nominal size)	cu.m	7343.83	7410.21	7747.30	8965.95
RC0014	1:1.5:3 (1 cement : 1.5 sand : 3 graded crushed rock 20 mm nominal size)	cu.m	5717.43	5726.29	5982.74	6961.70
RC0015	1:2:4 (1 cement : 2 sand : 4 graded crushed rock 20 mm nominal size)	cu.m	5169.60	5147.82	5380.09	6303.83
<b>Providing &amp; laying in position reinforced cement concrete work in beams, lintels, bands, plain window sills, staircases, spiral staircases upto floor five level excluding the cost of centering, shuttering and reinforcement</b>						
RC0017	1:1:2 (1 cement : 1 sand : 2 graded crushed rock 20 mm nominal size)	cu.m	7172.69	7239.08	7576.16	8794.81
RC0018	1:1.5:3 (1 cement : 1.5 sand : 3 graded crushed rock 20 mm nominal size)	cu.m	5546.30	5555.16	5811.61	6790.57

Code	Description	Units	PL	GP	SJ	TH
RC0019	1:2:4 (1 cement : 2 sand : 4 graded crushed rock 20 mm nominal size)	cu.m	4998.46	4976.69	5208.95	6132.70

**Providing & laying in position reinforced cement concrete work in kerbs, steps and the like upto floor five level excluding the cost of centering, shuttering and reinforcement**

RC0020	1:1:2 (1 cement : 1 sand : 2 graded crushed rock 20 mm nominal size)	cu.m	7172.69	7239.08	7576.16	8794.81
RC0021	1:1.5:3 (1 cement : 1.5 sand : 3 graded crushed rock 20 mm nominal size)	cu.m	5546.30	5555.16	5811.61	6790.57
RC0022	1:2:4 (1 cement : 2 sand : 4 graded crushed rock 20 mm nominal size)	cu.m	4998.46	4976.69	5208.95	6132.70

**Providing & laying in position reinforced cement concrete work in arches and arch ribs upto floor five level excluding the cost of centering, shuttering and reinforcement**

RC0023	1:1:2 (1 cement : 1 sand : 2 graded crushed rock 20 mm nominal size)	cu.m	9024.87	9091.26	9428.35	10647.00
RC0024	1:1.5:3 (1 cement : 1.5 sand : 3 graded crushed rock 20 mm nominal size)	cu.m	7398.48	7407.34	7663.79	8642.75
RC0025	1:2:4 (1 cement : 2 sand : 4 graded crushed rock 20 mm nominal size)	cu.m	6850.64	6828.87	7061.14	7984.88

**Providing & laying in position reinforced cement concrete work in domes, vaults, shells folded plates and roofs having more than 15° upto floor five level excluding the cost of centering, shuttering and reinforcement**

RC0026	1:1:2 (1 cement : 1 sand : 2 graded crushed rock 20 mm nominal size)	cu.m	8980.77	9043.52	9392.89	10642.45
RC0027	1:1.5:3 (1 cement : 1.5 sand : 3 graded crushed rock 20 mm nominal size)	cu.m	7286.80	7296.07	7557.34	8555.72
RC0028	1:2:4 (1 cement : 2 sand : 4 graded crushed rock 20 mm nominal size)	cu.m	6729.16	6706.94	6943.84	7886.03

**Providing & laying in position reinforced cement concrete work in vertical and horizontal fins individually or forming box louvers, fascias and eaves boards - upto floor five level excluding the cost of centering, shuttering and reinforcement**

RC0029	1:1.5:3 (1 cement : 1.5 sand : 3 graded crushed rock 20 mm nominal size)	cu.m	6211.18	6219.40	6484.00	7505.69
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#### **Traditional Cornices**

**Bhutan type Traditional Cornices in R.C.C 1:1.5:3, 20 mm aggregate including cost of formwork including finishing with 6mm thick plaster on the exposed surface with cement mortar 1:3 as per standrad design excluding cost of reinforcement & decorative painting .**

RC0030	Single Storied building, including Phana	m	2754.44	2762.96	2780.38	2812.44
RC0031	Multi-Storied building..at floor 2 level including the cost of lhanglag and at other floors where Lhanglag is provided	m	2786.52	2794.75	2811.75	2843.55
RC0032	Multi-Storied building.. at all middle floor levels (excluding the cost of phana)	m	3485.78	3500.36	3534.87	3609.97
RC0033	Phana	m	1651.13	1653.39	1657.07	1665.41
RC0034	Lintel Cornice (only cornice portion at external face)	m	1679.13	1683.12	1690.78	1702.29

Code	Description	Units	PL	GP	SJ	TH
<b>Bhutan type Traditional Cornices in R.C.C 1:2:4, 20 mm aggregate including cost of formwork including finishing with 6mm thick plaster on the exposed surface with cement mortar 1:3 as per standrad design excluding cost of reinforcement &amp; decorative painting</b>						
RC0040	Single Storied building, including Phana	m	2733.65	2741.16	2757.63	2787.29
RC0041	Multi-Storied building..at floor 2 level and at other floors where Lhanglag is provided including the cost of lhanglag	m	2766.02	2773.24	2789.30	2818.74
RC0042	Multi-Storied building.. at all middle floor levels (excluding the cost of phana)	m	3811.43	3823.69	3856.03	3925.67
RC0043	Phana	m	1647.27	1649.34	1652.84	1660.73
RC0044	Lintel cornice (only cornice portion at external face)	m	1670.85	1674.43	1681.71	1692.27
<b>Extra for R.C Works</b>						
RC0050	Applying cement slurry on R.C.C slabs using 2.75 kg per sq.m for receiving C.C. floor including roughening, cleaning & dampen the surface	sq.m	33.74	34.53	35.57	38.61
RC0051	Extra for R.C.C work above floor 5 level for every four floors or part thereof, excluding cost of reinforcement	cu.m	8% of respective item rates			
RC0052	Extra for rendering in cement mortar 1:2, the top of suspended floors\landings\staircase treads and risers	sq.m	67.14	67.84	68.23	72.69
RC0053	Rendering smooth finishing of the exposed surface with 6mm thick C.M 1:3	sq.m	149.25	150.60	150.96	160.96
RC0054	Providing throating, plastering drip and moulding to R.C.C chajjas	m	46.81	46.81	46.81	46.81
<b>Precast Items</b>						
<b>Providing &amp; fixing, below &amp; including floor 2 level, Precast R.C.C jali 1:2:4, 12.5mm aggregate, reinforced with mild steel wire 1.6mm dia., including roughening, cleaning, fixing, finishing in cement mortar 1:3, excluding plastering of the jambs, sills, soffits</b>						
RC0060	50 mm thick	sq.m	1239.71	1227.53	1331.28	1334.80
RC0061	40 mm thick	sq.m	1090.95	1079.14	1180.63	1175.23
RC0062	25 mm thick	sq.m	1014.72	1003.48	1101.57	1082.79
<b>Providing &amp; fixing, below &amp; including floor 2 level, Precast R.C.C 1:2:4, 20mm aggregate including finishing, plastering with 6mm cement plaster 1:3 and formwork, but excluding reinforcement cost</b>						
RC0070	String courses, copings, bed plates, anchor blocks, plain window sills	cu.m	12354.30	12526.14	12924.69	13776.52
RC0071	Small lintels & joists < 1.5m clear span, shelves	cu.m	11241.90	11394.50	11777.98	12597.37
RC0072	Joists, span > 1.5m, shelves	cu.m	8980.36	9026.39	9288.30	10351.12
<b>Steel Reinforcement</b>						
RC0083	Providing & fixing Thermo-Mechanically Treated reinforcement bar (Yield Strength 500 MPa) for R.C.C work including cutting, bending, binding and placing in position complete	kg	77.38	73.25	70.90	89.38



Code	Description	Units	PL	GP	SJ	TH
<b>Form work</b>						

**Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork**

RC0090	Foundation and plinth etc.	sq.m	366.28	379.44	393.30	376.13
RC0091	Walls, pilasters, buttresses, string course etc.	sq.m	848.34	862.06	877.85	860.60
RC0092	Lintels, beams, girders, bresummers, cantilevers etc.	sq.m	488.29	503.74	522.64	503.72
RC0093	Columns, pillars, post, struts etc.	sq.m	654.36	670.76	689.98	669.51
RC0094	Staircase (except spiral staircase) excluding landing	sq.m	542.94	558.14	573.80	553.82
RC0095	Suspended floor, roof, landing, shelves and their supports, balconies, chajias, etc.	sq.m	855.78	871.05	891.69	873.90
RC0096	Spiral stair case excluding landing	sq.m	687.44	701.94	718.39	700.04
RC0097	Arches, curved surfaces	sq.m	2440.00	2379.02	2374.32	2467.02
RC0098	Domes, vaults, shell roof	sq.m	2758.26	2861.20	2966.14	2828.44

**Expansion Joints****Providing & filling or fixing in position in expansion joints**

RC0105	Blown bitumen	cu.m	52118.33	51966.78	52224.59	64168.33
RC0106	Bitumen mix filler of proportion 80 kg of hot bitumen, 1 kg of cement and 0.25 cum of sand for expansion joints	cu.m	17910.85	17901.36	17864.26	21403.63
RC0107	12 mm bitumen impregnated fibre board	sq.m	927.96	927.96	927.96	945.23

**Providing and fixing sheet-covering over expansion joints with iron screws as per design to match the colour shade of the distemper or wall treatment**

RC0116	Aluminium fluted strip 3.15x150mm	m	547.99	538.78	534.57	583.10
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**Design Mix Concrete**

**Providing & laying in position machine batched, machine mixed and machine vibrated M-20 design mix cement concrete for reinforced cement concrete structural elements, excluding the cost of centering, shuttering and reinforcement, Including admixtures in recommended proportions (as per IS 9103) to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per the direction of the engineer**

**Note: Mix design should be done by a qualified engineer**

RC0130	All work upto plinth level	cu.m	5205.84	5183.28	5421.43	6356.37
RC0131	All work from plinth level to floor five level	cu.m	5416.73	5394.16	5632.32	6567.25
RC0132	Walls, Columns, Pillars, posts and struts	cu.m	5517.34	5494.77	5732.93	6667.87
RC0133	Beams, Plinth beams, girders, bresummers, cantilevers, suspended floors, lintels, roofs and staircases including spiral staircases, shelves etc.	cu.m	5673.68	5651.11	5889.27	6824.21

**Add or deduct for providing richer or leaner mixes respectively at all floors providing**

RC0135	Providing M-25 grade RCC instead of M-20 grade RCC	cu.m	increase/decrease rate by 3% as applicable			
RC0136	Providing M-30 grade RCC instead of M-20 grade RCC	cu.m	154.63	160.40	167.98	190.09
RC0137	Providing M-35 grade RCC instead of M-20 grade RCC	cu.m	309.25	320.79	335.97	380.18

Code	Description	Units	PL	GP	SJ	TH
<b>Chapter 9: BRICK WORK</b>						
<b>One - Brick Masonry (250mm)</b>						
<b>Providing &amp; laying Second-Class Brick work in Foundation &amp; Plinth</b>						
BW0001	In cement mortar 1:3	cu.m	7076.49	6806.82	7056.71	9619.81
BW0002	In cement mortar 1:4	cu.m	6825.22	6546.18	6783.74	9310.91
BW0003	In cement mortar 1:5	cu.m	6689.92	6405.83	6636.75	9144.59
BW0004	In cement mortar 1:6	cu.m	6573.95	6285.53	6510.77	9002.02
BW0005	In mud mortar	cu.m	5844.11	5527.29	5764.74	7980.40
<b>Extras</b>						
BW0010	Extra for brick work in square or rectangular pillars	cu.m	672.89	672.89	672.89	672.89
BW0011	Extra for brick in circular pillars	cu.m	3167.37	3056.94	3139.76	3912.80
BW0012	Extra for brick work in superstructure above plinth level, up to floor two level	cu.m	331.47	331.47	331.47	331.47
BW0013	Extra for brick work in superstructure above floor two level...per floor	cu.m	124.65	124.65	124.65	124.65
BW0014	Extra for providing hoop iron 25x1.6mm or equivalent reinforcement in masonry at every third course, embedded in cement mortar	sq.m	59.63	84.32	71.79	105.14
BW0015	Extra for mixing water-proofing compound in cement mortar	cu.m	264.36	245.87	356.28	332.95
<b>Half - Brick Masonry (125mm)</b>						
<b>Providing &amp; laying Second-Class Half-brick Masonry (125 mm) in superstructure below floor 2 level</b>						
BW0020	In cement mortar 1:3	sq.m	991.54	955.78	987.36	1305.19
BW0021	In cement mortar 1:4	sq.m	966.41	929.72	960.07	1274.30
<b>Extras for Half-Brick</b>						
BW0030	Extra for half-brick masonry in superstructure above floor 2 level...per floor	sq.m	14.61	14.61	14.61	14.61
BW0031	Extra for mixing water-proofing compound in cement mortar	sq.m	32.12	30.27	41.31	38.98
<b>Brick Masonry (75 mm)</b>						
BW0032	75mm thick brick masonry (second class bricks) in cement mortar 1:3 in partitions etc. in superstructure below floor 2 level	sq.m	512.20	491.48	510.46	704.38
<b>Extra for 75 mm Brick Masonry</b>						
BW0033	Extra for 75mm brick masonry in cement mortar 1:3 in partitions etc. in superstructure above floor 2 level...Per floor	sq.m	14.61	14.61	14.61	14.61

Code	Description	Units	PL	GP	SJ	TH
<b>Traditional Cornices</b>						
<b>Providing &amp; laying second class brick work in Bhutan type Traditional Cornices in cement mortar 1:3, including 12mm plaster in cement mortar 1:5, but excluding decorative painting. (Measurement to be taken along the cornice and wall junction)</b>						
BW0040	Floor one level including lhanglag	m	1714.83	1706.40	1715.57	1816.77
BW0041	Middle Floor levels excluding phana	m	2591.91	2568.94	2591.37	2838.80
<b>Pointing</b>						
<b>Pointing on brickwork with cement mortar 1:3</b>						
BW0050	Flush pointing	sq.m	110.00	110.56	110.71	114.88
BW0051	Ruled pointing	sq.m	120.53	121.09	121.24	125.41
BW0052	Cut, weather struck pointing	sq.m	166.40	166.97	167.12	171.28
BW0053	Raised & cut pointing	sq.m	219.39	220.25	220.48	226.88
<b>Interlocking Cement Earth Block</b>						
<b>Providing &amp; laying ICEB (300mmX150mmX100mm) in Foundation &amp; Plinth</b>						
BW0060	In cement mortar 1:3	cu.m	7575.32	7605.26	7610.45	7770.16
BW0061	In cement mortar 1:4	cu.m	7341.26	7362.29	7358.19	7475.38
BW0062	In cement mortar 1:5	cu.m	7279.71	7298.62	7289.30	7406.75
BW0063	In cement mortar 1:6	cu.m	7213.57	7230.02	7217.45	7325.44
BW0064	In mud mortar	cu.m	6855.86	6855.73	6855.75	6783.86
<b>Extras</b>						
BW0070	Extra for ICEB work in square or rectangular pillars	cu.m	352.61	352.61	352.61	352.61
BW0071	Extra for ICEB work in superstructure above plinth level, up to floor two level	cu.m	175.83	175.83	175.83	175.83
BW0072	Extra for ICEB work in superstructure above floor two level...per floor	cu.m	64.99	64.99	64.99	64.99
<b>Providing &amp; laying ICEB(300mmX150mmX100mm) in superstructure below floor 2 level</b>						
BW0080	In cement mortar 1:3	sq.m	1146.40	1148.23	1148.62	1151.71
BW0081	In cement mortar 1:4	sq.m	1138.83	1140.37	1140.39	1142.39
<b>Extras</b>						
BW0090	Extra for ICEB work in superstructure above floor 2 level...per floor	sq.m	15.28	15.28	15.28	15.28
<b>Providing &amp; laying ICEB (250mmX125mmX100mm) in Foundation &amp; Plinth</b>						
BW0100	In cement mortar 1:3	cu.m	6985.59	6967.88	6969.72	7088.26
BW0101	In cement mortar 1:4	cu.m	6883.85	6862.34	6859.18	6963.18
BW0102	In cement mortar 1:5	cu.m	6785.82	6760.65	6752.68	6842.66
BW0103	In cement mortar 1:6	cu.m	6779.17	6753.75	6745.46	6834.49
BW0104	In mud mortar	cu.m	6518.07	6480.21	6480.24	6438.79

Code	Description	Units	PL	GP	SJ	TH
<b>Extras</b>						
BW0110	Extra for ICEB work in square or rectangular pillars	cu.m	503.83	503.83	503.83	503.83
BW0111	Extra for ICEB work in superstructure above plinth level, up to floor two level	cu.m	251.22	251.22	251.22	251.22
BW0112	Extra for ICEB work in superstructure above floor two level...per floor	cu.m	92.84	92.84	92.84	92.84
<b>Providing &amp; laying ICEB(250mmX125mmX100mm) in superstructure below floor 2 level</b>						
BW0120	In cement mortar 1:3	sq.m	959.28	956.78	957.25	968.90
BW0121	In cement mortar 1:4	sq.m	950.08	947.24	947.25	957.59
<b>Extras</b>						
BW0130	Extra for ICEB work in superstructure above floor 2 level...per floor	sq.m	18.51	18.51	18.51	18.51
<b>Concrete Hollow Block Brick</b>						
<b>Providing &amp; laying concrete block brick in Foundation &amp; Plinth</b>						
BW0140	In cement mortar 1:3	cu.m	5888.55	5935.40	5947.90	6825.10
BW0141	In cement mortar 1:4	cu.m	5637.28	5674.76	5674.93	6516.20
BW0142	In cement mortar 1:5	cu.m	5501.98	5534.41	5527.94	6349.87
BW0143	In cement mortar 1:6	cu.m	5386.01	5414.12	5401.96	6207.31
<b>Concrete Solid Brick</b>						
<b>Providing &amp; laying concrete block brick in Foundation &amp; Plinth</b>						
BW0145	In cement mortar 1:3	cu.m	6713.52	7627.22	8109.07	9373.85
BW0146	In cement mortar 1:4	cu.m	6462.26	7366.58	7836.09	9064.96
BW0147	In cement mortar 1:5	cu.m	6326.96	7226.23	7689.11	8898.63
BW0148	In cement mortar 1:6	cu.m	6210.99	7105.93	7563.12	8756.06
<b>Concrete Porous Brick</b>						
<b>Providing &amp; laying concrete block brick in Foundation &amp; Plinth</b>						
BW0150	In cement mortar 1:3	cu.m	7773.70	7538.33	7699.72	9107.18
BW0151	In cement mortar 1:4	cu.m	7522.44	7277.69	7426.75	8798.29
BW0152	In cement mortar 1:5	cu.m	7387.14	7137.34	7279.76	8631.96
BW0153	In cement mortar 1:6	cu.m	7271.17	7017.04	7153.78	8489.39
<b>Extras</b>						
BW0170	Extra for concrete block brick in square or rectangular pillars	cu.m	672.89	672.89	672.89	672.89
BW0171	Extra for concrete block brick in circular pillars	cu.m	2756.67	2756.67	2756.67	2942.08
BW0172	Extra for concrete block brick work in superstructure above plinth level, up to floor two level	cu.m	331.47	331.47	331.47	331.47
BW0173	Extra for concrete block brick work in superstructure above floor two level...per floor	cu.m	124.65	124.65	124.65	124.65
BW0174	Extra, for providing hoop iron 25x1.6mm or equivalent reinforcement in masonry at every third course, embedded in cement mortar	sq.m	59.63	84.32	71.79	105.14
BW0175	Extra, for mixing water-proofing compound in cement mortar	cu.m	264.36	245.87	356.28	332.95

Code	Description	Units	PL	GP	SJ	TH
<b>Concrete Hollow Block Brick</b>						
<b>Providing &amp; laying concrete Hollow block brick Masonry (190 mm) in superstructure below floor 2 level</b>						
BW0190	In cement mortar 1:3	sq.m	1051.45	1056.13	1057.38	1192.78
BW0191	In cement mortar 1:4	sq.m	1026.32	1030.07	1030.09	1161.89
<b>Concrete Partition Hollow Block</b>						
<b>Providing &amp; laying Concrete Partition Hollow Block Masonry (90 mm) in superstructure below floor 2 level</b>						
BW0194	In cement mortar 1:3	sq.m	961.39	939.59	983.22	1017.96
BW0195	In cement mortar 1:4	sq.m	936.26	913.52	955.92	987.07
<b>Concrete Solid Brick</b>						
<b>Providing &amp; laying Concrete Solid Block Masonry (115 mm) in superstructure below floor 2 level</b>						
BW0198	In cement mortar 1:3	sq.m	891.22	995.59	1050.81	1191.05
BW0199	In cement mortar 1:4	sq.m	866.09	969.52	1023.52	1160.16
<b>Concrete Porous Brick</b>						
<b>Providing &amp; laying Concrete Porous Brick Masonry (110 mm) in superstructure below floor 2 level</b>						
BW0202	In cement mortar 1:3	sq.m	1130.20	1096.18	1117.85	1297.97
BW0203	In cement mortar 1:4	sq.m	1105.08	1070.12	1090.55	1267.08
<b>E x t r a s</b>						
BW0220	Extra, for concrete block half-brick masonry in superstructure above floor 2 level...per floor	sq.m	14.61	14.61	14.61	14.61
BW0221	Extra, for mixing water-proofing compound in cement mortar	sq.m	32.12	30.27	41.31	38.98
<b>Pointing</b>						
<b>Pointing on concrete block brick work with cement mortar 1:3</b>						
BW0230	Flush pointing	sq.m	110.00	110.56	110.71	114.88
BW0231	Ruled pointing	sq.m	120.53	121.09	121.24	125.41
BW0232	Cut, weather struck pointing	sq.m	166.40	166.97	167.12	171.28
BW0233	Raised & cut pointing	sq.m	219.39	220.25	220.48	226.88
<b>AAC Block</b>						
BW0240	Providing and laying autoclaved aerated cement blocks masonry (AAC blocks) in super structure above plinth level up to floor V level with RCC band at sill level and lintel level with approved block laying polymer modified adhesive mortar all complete as per direction of Engineer-in-Charge. (The payment of RCC band and reinforcement shall be made separately).	Cu.m	7260.02	7435.00	8776.54	9243.16

Code	Description	Units	PL	GP	SJ	TH
<b>Chapter 10: STONE/MUD</b>						
<b>Rammed Mud Work</b>						
SM0001	Constructing rammed mud walls in superstructure including the cost of form work	cu.m	756.59	760.13	765.51	759.82
<b>Random Rubble Masonry</b>						
<b>Providing &amp; laying Random Rubble Masonry with hard stone in foundation &amp; plinth</b>						
SM0005	In cement mortar 1:4	cu.m	4290.45	4442.80	4361.36	4970.70
SM0006	In cement mortar 1:5	cu.m	4111.86	4257.54	4167.34	4751.15
SM0007	In cement mortar 1:6	cu.m	3958.78	4098.75	4001.04	4562.96
SM0008	Hammer dressed, in mud mortar	cu.m	3252.55	3355.04	3273.45	3471.59
<b>Extras</b>						
SM0015	Extra for random rubble masonry with hard stone in superstructure above plinth, below & including floor 2 level	cu.m	402.80	402.80	402.80	402.80
SM0016	Extra for random rubble masonry with hard stone in superstructure above floor 2 level	cu.m	178.65	178.65	178.65	178.65
SM0017	Extra for random rubble masonry work with hard stone in square or rectangular pillars	cu.m	649.21	649.21	649.21	649.21
SM0018	Extra for random rubble masonry work with hard stone in circular pillars	cu.m	830.92	830.92	830.92	830.92
SM0019	Extra for random rubble masonry work with hard stone for mixing water-proofing materials in cement mortar	cu.m	254.19	236.63	341.52	319.36
<b>Coursed Rubble Masonry</b>						
<b>Providing &amp; laying Coursed Rubble Masonry with hard stone hammer-dressed in foundation &amp; plinth</b>						
SM0025	In cement mortar 1:3	cu.m	4966.10	5135.49	5060.66	5695.54
SM0026	In cement mortar 1:4	cu.m	4664.58	4822.72	4733.10	5324.86
SM0027	In cement mortar 1:5	cu.m	4502.22	4654.30	4556.71	5125.27
SM0028	In cement mortar 1:6	cu.m	4363.05	4509.95	4405.53	4954.19
<b>Extras</b>						
SM0035	Extra for C.R. masonry with hard stone in superstructure above plinth, below & including floor 2 level	cu.m	375.31	375.31	375.31	375.31
SM0036	Extra for C.R. masonry with hard stone in superstructure above floor 2 level	cu.m	178.65	178.65	178.65	178.65
SM0037	Extra for C.R masonry with hard stone in square or rectangular pillars	cu.m	474.83	474.83	474.83	474.83
SM0038	Extra for C.R masonry with hard stone in circular pillars	cu.m	1253.06	1285.98	1259.85	1323.26
SM0039	Extra for C.R masonry with hard stone chisel dressed in foundations and plinth	cu.m	99.99	99.99	99.99	99.99
SM0040	Extra for C.R masonry with hard stone chisel dressed in superstructure above plinth, below & including floor 2 level	cu.m	412.59	412.59	412.59	412.59
SM0041	Extra for C.R masonry with hard stone for mixing water-proofing materials	cu.m	305.80	284.54	411.52	384.68

Code	Description	Units	PL	GP	SJ	TH
<b>Dry Hand Packed Rubble Masonry</b>						
SM0050	Providing and laying dry hand packed rubble masonry with stone boulders >0.04Cu.m	cu.m	2430.61	2533.49	2451.83	2649.97
SM0051	Providing and laying dry hand packed rubble masonry hammer dressed (facing), with stone-boulder > 0.04 cu.m	cu.m	2622.76	2735.93	2646.10	2864.06
SM0052	Providing and laying dry hand packed rubble masonry chisel dressed (facing) with stone-boulder > 0.04 cu.m	cu.m	2844.05	2957.21	2867.39	3085.35
<b>Stone Masonry in Concrete Mortar</b>						
SM0060	Providing and laying with hard stone (average volume 0.008 Cu.m) hand packed stone masonry in cement concrete mortar 1:2:4, 20mm aggregates	cu.m	4287.02	4387.16	4380.19	4873.31
SM0061	Providing & laying with hard stone (average volume 0.008 Cu.m) hand packed stone masonry in cement concrete mortar 1:3:6, 20mm aggregates	cu.m	3996.99	4085.61	4067.89	4534.04
SM0062	Providing and laying hammer dressed stone masonry with hard stone (average volume 0.008 Cu.m) in cement concrete mortar 1:2:4 20mm aggregates	cu.m	4443.64	4554.06	4538.93	5051.86
SM0063	Providing and laying hammer dressed stone masonry with hard stone (average volume 0.008 Cu.m) in concrete mortar 1:3:6 20mm aggregates	cu.m	4209.04	4307.95	4282.07	4768.04
SM0064	Providing and laying rubble masonry chisel dressed (facing) with hard stone (average volume 0.008 cu.m) in concrete mortar 1:2:4 20mm aggregates	cu.m	5239.57	5350.00	5334.86	5847.79
SM0065	Providing and laying rubble masonry chisel dressed (facing) with hard stone (average volume 0.008 cu.m) in concrete mortar 1:3:6 20mm aggregates	cu.m	5004.98	5103.89	5078.00	5563.97
<b>Stone Soling Filling &amp; Edging</b>						
SM0070	Providing and laying Hammer dressed dry stone soling	cu.m	1845.56	1958.72	1868.90	2086.86
SM0071	Providing and laying Chisel dressed dry stone soling	cu.m	1959.86	2073.02	1983.20	2201.16
SM0072	Providing and laying Hand packed stone filling or soling with stones	cu.m	1477.67	1580.55	1498.89	1697.03
SM0073	Providing and laying Hammer dressed stone edging 150 x 250 mm with stones including excavation, refilling and disposal of surplus earth within 30 m lead	m	110.96	115.69	111.94	121.05
<b>Stone Pavement Hammer Dressed</b>						
<b>Providing and laying hammer dressed 150mm thick flat stone pavement with hammer dressed stone edging 150mm wide &amp; 250mm deep on both sides, including grouting joints</b>						
SM0080	With cement concrete mortar 1:3:6, 12mm aggregate	sq.m	537.35	554.69	545.71	612.54
SM0081	With cement mortar 1:3	sq.m	473.96	494.31	478.62	520.17
SM0082	With sand or earth etc.	sq.m	522.98	548.18	527.97	577.90

Code	Description	Units	PL	GP	SJ	TH
<b>Flat Stone (Dolep) Paving</b>						
<b>Providing &amp; laying hammer dressed flat stone paving in cement mortar 1:6 on prepared bedding (excluding the cost of</b>						
SM0090	20mm	sq.m	2169.27	2169.38	2169.33	2170.44
SM0091	30mm	sq.m	2339.05	2339.16	2339.11	2340.21
SM0092	40mm	sq.m	2508.83	2508.94	2508.89	2509.99
<b>Providing and laying hammer dressed dry dolep paving including preparation of bed</b>						
SM0093	30mm	sq.m	2336.01	2336.01	2336.01	2336.01
SM0094	40mm	sq.m	2505.79	2505.79	2505.79	2505.79
<b>Providing &amp; laying all sides chisel dressed flat stone paving in cement mortar 1:6 on prepared bedding (excluding the cost of bedding)</b>						
SM0100	20mm	sq.m	2339.05	2339.16	2339.11	2340.21
SM0101	30mm	sq.m	2508.83	2508.94	2508.89	2509.99
SM0102	40mm	sq.m	2735.20	2735.31	2735.26	2736.36
<b>Providing and laying chisel dressed dry dolep paving including preparation of bed</b>						
SM0103	30mm	sq.m	2505.79	2505.79	2505.79	2505.79
SM0104	40mm	sq.m	2732.16	2732.16	2732.16	2732.16
<b>Pointing</b>						
<b>Providing &amp; laying pointing on stone work with cement mortar 1:3</b>						
SM0110	Flush pointing	sq.m	111.98	112.41	112.53	115.72
SM0111	Ruled pointing	sq.m	119.60	120.03	120.14	123.34
SM0112	Raised and cut pointing	sq.m	222.89	223.60	223.79	229.08
<b>Gabion Work</b>						
<b>Providing &amp; filling hand-packed stone in G.I mesh 4mm (8swg) including supplying and weaving of mesh complete</b>						
SM0120	Double-knotted mesh....100mm	cu.m	2950.70	3345.82	3111.41	3693.53
SM0121	Double-knotted mesh....150mm	cu.m	2877.01	2888.41	3064.74	3447.81
SM0122	Chain-link mesh....100mm	cu.m	2810.72	3104.72	2966.24	3488.60
<b>Providing &amp; filling hand-packed stone in G.I mesh of wire 3.25mm (10swg) including supplying of machine woven mesh complete.</b>						
<b>SM0125</b>	Doubly twisted hexagonal mesh 90mm x 100mm opening.	cu.m	3450.85	4028.68	3445.62	4424.55
<b>SM0126</b>	Doubly twisted hexagonal mesh 100mm x 120mm opening.	cu.m	3314.85	3851.64	3311.91	4223.37
<b>Providing &amp; filling hand-packed stone in G.I mesh of wire 2.64mm (12swg) including supplying of machine woven mesh complete.</b>						
<b>SM0127</b>	Doubly twisted hexagonal mesh 90mm x 100mm opening.	cu.m	3139.40	3623.24	3139.40	3963.83
<b>SM0128</b>	Doubly twisted hexagonal mesh 100mm x 120mm opening.	cu.m	3018.97	3466.47	3021.00	3785.68



Code	Description	Units	PL	GP	SJ	TH
<b>Precast Stone Masonry</b>						
<b>Providing &amp; laying Precast Stone Masonry blocks (1:5:8) in cement mortar 1:6 in foundation and plinth</b>						
SM0130	30 cms thick	sq.m	1400.11	1384.37	1413.96	1586.85
SM0131	20 cms thick	sq.m	938.64	927.11	948.12	1063.98
<b>Providing &amp; laying Precast Stone Masonry blocks (1:5:8) in cement mortar 1:6 in superstructure up to floor two level</b>						
SM0140	20 cms thick	sq.m	943.28	931.74	952.75	1068.61
SM0141	15 cms thick	sq.m	708.01	699.32	715.16	802.12
SM0142	10 cms thick	sq.m	479.57	473.69	484.31	542.34
<b>Extra for Precast Stone Masonry blocks</b>						
SM0150	Extra for Precast Stone Masonry blocks in superstructure above floor two level...per floor	sq.m	109.24	109.24	109.24	109.24

Code	Description	Units	PL	GP	SJ	TH
<b>Chapter 11: WOOD WORK</b>						
<b>Dressed Timber Framing</b>						
<b>Providing &amp; fixing in position dressed wood work in frames of doors, windows, clerestory windows and other frames, wrought and framed</b>						
WW0001	Class 'A' (conifer)	cu.m	26354.88	27402.81	28409.25	26997.91
WW0003	Class 'B' (conifer)	cu.m	25879.53	26927.46	27933.93	26522.54
WW0004	Class 'A' (broad leaf)	cu.m	25213.60	24782.34	25288.37	24764.18
WW0005	Class 'B' (broad leaf)	cu.m	24658.75	24227.91	24733.93	24209.33
<b>Providing &amp; fixing Class 'A' (conifer) moulded beading to door, window frames with iron screws including plugs, priming coat on unexposed surfaces</b>						
WW0010	50 x 12 mm	m	88.67	89.12	89.87	89.23
WW0011	50 x 20 mm	m	95.95	96.82	98.00	96.81
<b>Providing &amp; fixing joists, including hoisting, applying wood preservative on unexposed surfaces</b>						
WW0020	Class 'A' (conifer)	cu.m	23055.59	24109.42	25103.25	23720.90
WW0021	Class 'B' (conifer)	cu.m	22580.24	23634.07	24627.93	23245.53
WW0022	Class 'A' (broad leaf)	cu.m	21914.31	21488.94	21982.37	21487.17
WW0023	Class 'B' (broad leaf)	cu.m	21359.46	20934.51	21427.93	20932.32
<b>Providing &amp; fixing Eaves board (225x25mm) with moulding fitted and fixed with necessary screws</b>						
WW0030	Class 'B' (conifer)	m	176.42	182.50	188.35	180.15
<b>Traditional Cornices</b>						
<b>Providing, making &amp; fixing woodwork dressed in traditional cornices complete as per standard design in Class 'B' (conifer), including applying wood preservative on unexposed surfaces, excluding decorative painting (Measurement to be taken along the cornice and wall junction line)</b>						
WW0035	At floor one level including lhanglag	m	2597.84	2670.72	2723.32	2660.33
WW0036	At all other floor levels (excluding phana)	m	3586.12	3692.95	3769.45	3678.32
WW0037	For single-storied structure including phana	m	3112.97	3219.95	3293.98	3207.94
WW0038	Phana	m	1536.03	1574.96	1594.94	1577.69
WW0039	Lintel level	m	2177.50	2253.35	2326.19	2224.04
<b>Providing &amp; fixing traditional wooden Tshegay for windows\railing etc. as per standard design</b>						
WW0045	In Class 'B' (conifer)	sq.m	3738.90	3770.84	3801.51	3758.50
WW0046	In Class 'A' (conifer)	sq.m	3753.39	3785.32	3816.00	3772.98
<b>Undressed Timber Framing</b>						
WW0055	Providing & fixing Class 'B' (conifer) (undressed) in wall-frames etc.	cu.m	22992.22	24040.15	25046.62	23635.23
WW0056	Providing & fixing Class 'B' (broad leaf) Wood (undressed) in wall-frames etc.	cu.m	21383.87	20953.04	21459.06	20934.45

Code	Description	Units	PL	GP	SJ	TH
<b>Providing &amp; fixing roof framing, in trusses, purlins, rafters, posts, post plates including hoisting, etc. (excluding steel items)</b>						
WW0060	Class 'B' (conifer)	cu.m	28412.39	29460.33	30466.80	29055.41
WW0061	Class 'A' (conifer)	cu.m	28887.74	29935.68	30942.11	29530.77
WW0062	Class 'A' (broad leaf)	cu.m	27746.46	27315.20	27821.23	27297.04
WW0063	Class 'B' (broad leaf)	cu.m	27191.61	26760.77	27266.79	26742.19
<b>Providing &amp; fixing gussets for timber trusses including wood preservative (coal tar)</b>						
WW0070	12mm phenolic plywood	sq.m	730.24	668.65	732.37	832.38
<b>Wall and ceiling Linings</b>						
<b>Providing and fixing to frames (wall or ceiling) Gypsum plaster board including finishing of joints smooth complete (excluding cost of frame)</b>						
WW0080	10 mm thick	sq.m	480.15	513.70	478.52	575.08
WW0081	12 mm thick	sq.m	558.00	562.42	502.27	635.97
WW0082	15 mm thick	sq.m	542.97	559.35	540.05	656.98
<b>Providing &amp; fixing to frames (wall or ceiling) Class 'A' (conifer) plain lining, tongued and grooved, including necessary fixtures, wooden plugs and priming coat on unexposed surfaces (excluding cost of frames)</b>						
WW0090	12 mm thick	sq.m	400.44	411.07	425.13	410.58
WW0091	20 mm thick	sq.m	495.19	517.15	538.24	508.67
<b>Providing &amp; fixing to frames (wall or ceiling) Plain Particle Board Lining with necessary nails etc. complete (excluding cost of frames)</b>						
WW0100	6 mm	sq.m	613.97	778.46	703.04	725.39
WW0101	10 mm	sq.m	748.13	749.29	830.69	961.09
WW0102	12 mm	sq.m	812.79	941.77	991.35	1143.68
WW0103	18 mm	sq.m	982.40	1169.25	1256.59	1350.11
<b>Providing &amp; fixing Pre-laminated Particle Board Lining with necessary nails etc. complete (excluding cost of frame)</b>						
WW0110	8 mm	sq.m	899.56	692.11	708.46	931.63
WW0111	10 mm	sq.m	968.62	882.46	795.95	1166.32
WW0112	12 mm	sq.m	1099.02	872.37	865.95	1013.78
WW0113	18 mm	sq.m	1400.38	1186.35	982.60	1255.97
<b>Cement Bonded Particle board</b>						
<b>Providing &amp; fixing Cement Bonded Particle board (pre-laminated both sides for wall/ceiling) lining with necessary nails/screws etc. complete, excluding the cost of frame</b>						
WW0120	6 mm	sq.m	859.24	856.80	860.48	868.05
WW0121	8 mm	sq.m	896.68	896.33	900.24	909.58
WW0122	10 mm	sq.m	998.06	988.33	992.77	1013.40
WW0123	12 mm	sq.m	1060.20	1058.89	1063.75	1183.67
WW0124	16 mm	sq.m	1239.59	1242.15	1248.06	1547.44
WW0125	20 mm	sq.m	1489.24	1487.30	1494.64	1952.42

Code	Description	Units	PL	GP	SJ	TH
<b>Providing &amp; fixing Plywood lining with necessary nails etc. including beading complete (excluding cost of frame)</b>						
WW0130	4 mm, commercial	sq.m	633.75	584.76	636.38	668.18
WW0131	4 mm, teak	sq.m	751.49	697.71	673.13	769.50
WW0132	6 mm, commercial	sq.m	693.94	644.07	712.33	772.67
<b>Providing &amp; fixing Pre-fabricated wall panelling profiles with necessary nails etc. complete but excluding the cost of frame)</b>						
WW0140	19 mm, Class 'A' (conifer)	sq.m	1087.21	1070.78	1070.78	1046.12
WW0141	19 mm, Class 'B' (conifer)	sq.m	978.88	964.51	964.51	942.95
WW0142	15 mm, Class 'A' (conifer)	sq.m	985.09	970.60	970.60	948.86
<b>Providing &amp; fixing wooden skirting in Class 'B' (conifer) with necessary nails or screws complete</b>						
WW0150	20 mm	sq.m	1825.84	1844.26	1865.79	1840.77
WW0151	25 mm	sq.m	1906.06	1929.77	1956.38	1924.23
<b>B a m b o o   W a l l i n g</b>						
WW0160	Providing & fixing 75mm thick split bamboo wall including grooving frames, 20mm plaster cement mortar 1:4 both sides (excluding cost of frame)	sq.m	840.56	855.04	858.28	1019.49
WW0161	Providing & fixing 75mm thick split bamboo wall including grooving frames, 20mm plaster cement mortar 1:5 both sides (excluding cost of frame)	sq.m	816.36	829.93	831.99	989.74
WW0162	Providing & fixing 75mm thick split bamboo wall including grooving frames, 20mm plaster cement mortar 1:6 both sides (excluding cost of frame)	sq.m	795.57	808.36	809.39	964.17
WW0163	Providing & fixing 75mm thick split bamboo wall including grooving frames, 20mm mud plaster both sides (excluding cost of frame)	sq.m	409.98	417.69	420.91	526.30
WW0164	Providing & fixing 150mm thick split bamboo wall including grooving frames, 60mm mud plaster both sides (excluding cost of frame)	sq.m	492.78	500.39	503.63	609.02
WW0165	Providing & fixing split Bamboo matting (excluding the cost of framing and beading)	sq.m	107.76	110.26	134.00	134.63
<b>P a r t i t i o n s</b>						
<b>Providing &amp; fixing Panelled or Panelled-&amp;-Glazed partition, single-central-panelling including frame etc. complete</b>						
WW0170	100mm framing, 38mm thick Class 'B' (conifer) panelling	sq.m	2585.96	2647.41	2725.62	2633.19
WW0171	75mm framing, 38mm thick Class 'B' (conifer) panelling	sq.m	2438.52	2494.01	2566.48	2482.09
WW0172	100mm framing, 38mm thick Class 'A' (conifer) or Class 'A' (conifer) panelling	sq.m	2609.73	2671.19	2749.39	2656.97
WW0173	75mm framing, 38mm thick Class 'A' (conifer) or Class 'A' (conifer) panelling	sq.m	2459.59	2515.08	2587.55	2503.16
<b>Providing &amp; fixing Panelled or Panelled-&amp;-Glazed, Plywood panelling from both sides including frame</b>						
WW0180	100mm framing, 4mm Commercial Ply	sq.m	1361.49	1265.15	1392.20	1449.61
WW0181	75mm framing, 4mm Commercial Ply	sq.m	1230.51	1128.20	1249.52	1314.97
WW0182	100mm framing, 4mm Teak Ply	sq.m	1608.20	1501.81	1469.19	1661.92
WW0183	75mm framing, 4mm Teak Ply	sq.m	1467.47	1355.68	1317.02	1517.04

Code	Description	Units	PL	GP	SJ	TH
<b>Providing &amp; fixing Panelled with Pre-fabricated profiles from both sides including the frame and prime coat on concealed face</b>						
WW0190	100mm, 12mm Class 'A' (conifer)	sq.m	2372.77	2361.12	2388.45	2327.36
WW0191	75mm, 12mm Class 'A' (conifer)	sq.m	2232.03	2215.00	2236.27	2182.49
WW0192	100mm, 12mm Class 'B' (conifer)	sq.m	2338.24	2358.47	2385.80	2324.78
WW0193	75mm, 12mm Class 'B' (conifer)	sq.m	2197.50	2212.35	2233.62	2179.91
WW0194	100mm, 12mm Class 'A' (conifer)	sq.m	2585.10	2569.40	2596.74	2529.58
WW0195	75mm, 12mm Class 'A' (conifer)	sq.m	2444.37	2423.28	2444.56	2384.71
<b>Door &amp; Window Shutters</b>						
<b>Providing &amp; fixing 25mm thick Panelled or glazed Shutters for cup-boards etc. complete including hinges</b>						
WW0200	Class 'A' (conifer)	sq.m	1889.41	2000.17	2059.51	1992.90
WW0201	Class 'B' (conifer)	sq.m	1499.41	1610.17	1669.51	1602.90
<b>Providing &amp; fixing 35mm thick Panelled or glazed doors and windows Shutters etc. complete including hinges</b>						
WW0210	Class 'A' (conifer)	sq.m	2079.86	2218.74	2315.33	2210.41
WW0211	Class 'B' (conifer)	sq.m	1698.55	1837.42	1934.01	1829.10
<b>Providing &amp; fixing 38mm thick Panelled or glazed doors and windows Shutters etc. complete including hinges</b>						
WW0220	Class 'A' (conifer)	sq.m	2111.04	2251.91	2350.41	2242.81
WW0221	Class 'B' (conifer)	sq.m	1728.82	1869.69	1968.20	1860.59
<b>Providing &amp; fixing 44mm thick Panelled or glazed doors and windows Shutters etc. complete including hinges</b>						
WW0230	Class 'A' (conifer)	sq.m	2161.06	2305.02	2406.50	2294.73
WW0231	Class 'B' (conifer)	sq.m	1775.17	1919.14	2020.61	1908.84
<b>Providing &amp; fixing 50mm thick Panelled or glazed doors and windows Shutters etc. complete including hinges</b>						
WW0240	Class 'A' (conifer)	sq.m	2237.44	2386.29	2492.46	2374.11
WW0241	Class 'B' (conifer)	sq.m	1865.13	2015.69	2134.86	2013.47
<b>Providing &amp; fixing Wire-gauze Shutters 25mm for doors &amp; windows using galvanised M.S wire gauze 0.56mm dia wire including the cost of hinges</b>						
WW0250	Class 'A' (conifer)	sq.m	1601.26	1692.47	1723.74	1697.98
WW0251	Class 'B' (conifer)	sq.m	1133.01	1224.22	1255.50	1229.73
<b>Providing &amp; fixing Wire-gauze Shutters 35mm for doors &amp; windows using galvanised M.S wire gauze 0.56mm dia wire including the cost of hinges</b>						
WW0260	Class 'A' (conifer)	sq.m	1696.34	1793.64	1830.76	1796.80
WW0261	Class 'B' (conifer)	sq.m	1225.33	1322.63	1359.75	1325.79

Code	Description	Units	PL	GP	SJ	TH
<b>Providing &amp; fixing Wire-gauze Shutters 38mm for doors &amp; windows using galvanised M.S wire gauze 0.56mm dia wire including the cost of hinges</b>						
WW0270	Class 'A' (conifer)	sq.m	1725.96	1825.16	1864.10	1827.58
WW0271	Class 'B' (conifer)	sq.m	1254.09	1353.29	1392.23	1355.71
<b>Providing &amp; fixing Battened door &amp; window shutters 20mm, with ledges and braces (25 mm), including the cost of hinges</b>						
WW0280	Class 'A' (conifer)	sq.m	1543.51	1605.52	1601.50	1648.19
WW0281	Class 'A' (conifer)	sq.m	1543.51	1605.52	1601.50	1648.19
WW0282	Class 'B' (conifer)	sq.m	1527.21	1589.22	1585.21	1631.89
<b>Providing &amp; fixing battened garage door with ledges and braces (38mm) in Class 'B' (conifer), including mountings etc. complete</b>						
WW0290	22 mm	sq.m	1491.73	1582.51	1605.30	1601.37
<b>Providing &amp; fixing battened and framed door shutters, Class 'B' (conifer) excluding the cost of hinges</b>						
WW0295	38mm	sq.m	1387.09	1448.51	1431.48	1493.82
<b>Venetian Works</b>						
WW0300	Providing & fixing 38mm thick louvered shutters for windows, doors with fixed 12mm venetians, in Class 'B' (conifer) excluding the cost of hinges	sq.m	1453.91	1574.76	1491.28	1616.49
WW0301	Providing & fixing Class 'B' (conifer) venetians 50mm wide, 10mm thick at 45mm apart in ventilators above doors (excluding frame)	sq.m	620.27	625.36	630.24	623.39
<b>Trellis</b>						
WW0310	Providing & fixing plain trellis of 38x12mm laths with 38mm gap (excluding frames) including fixing beading 50x12mm with Class 'B' (conifer)	sq.m	966.41	983.38	999.68	976.82
WW0311	Providing & fixing Door & window shutters of plain trellis of 38x12mm laths with 38mm gap (excluding frame) including fixing beading 50x12mm with Class 'B' (conifer)	sq.m	1599.12	1687.83	1633.36	1777.43
<b>Compound Gates</b>						
WW0320	Providing & fixing Compound Gate including hinge-supports complete as per	sq.m	1597.59	1834.81	1773.06	1985.72
<b>Window Accessories</b>						
WW0325	Providing & fixing M.S. round or square bars in window frames	kg	97.50	93.18	90.71	110.07
WW0326	Providing & fixing M.S. round or square bars with M.S. flats in window frames	kg	83.75	84.97	80.49	102.98

Code	Description	Units	PL	GP	SJ	TH
WW0327	Providing & fixing ornamental steel grills in frames with M.S. flats & bars including round headed bolts and nuts etc.	kg	173.94	200.31	186.93	222.54
WW0328	Providing & fixing expanded metal 20x60mm strands 3.25x1.6mm including 60x20mm beading of Class 'B' (conifer)	sq.m	631.66	616.68	690.01	624.30

#### Pre-fabricated shutters

##### Providing & fixing Flush Door shutters with pre-laminated Cement Bonded Particle board

WW0335	25mm	sq.m	1408.80	1361.11	1368.90	2238.23
WW0336	30mm	sq.m	1754.50	1742.48	1752.49	2709.50

##### Providing & fixing Flush Door shutters (pre-fabricated), block-board core with commercial ply veneer

WW0345	25mm	sq.m	1221.78	1369.53	1142.11	1315.91
WW0346	30mm	sq.m	1453.92	1554.23	1362.93	1430.74
WW0347	35mm	sq.m	1613.16	1807.80	1825.32	1664.77
WW0348	40mm	sq.m	1783.71	1867.43	1896.53	1895.46

##### Providing & fixing flush door shutters (pre-fabricated), block-board core with teak ply veneer

WW0355	25mm	sq.m	1753.19	1735.12	1744.46	1860.81
WW0356	30mm	sq.m	1977.24	1987.93	2000.71	2057.73
WW0357	35mm	sq.m	2199.70	2210.67	2225.99	2210.20
WW0358	40mm	sq.m	2667.60	2652.42	2673.86	2667.60

##### Providing & fixing flush door shutters (pre-fabricated), block-board core with ply veneer, chemically treated

WW0365	25mm	sq.m	1437.59	1474.68	1514.32	1469.09
WW0366	30mm	sq.m	1662.73	1726.79	1773.30	1750.22
WW0367	35mm	sq.m	1828.38	2023.38	2077.98	1893.71
WW0368	40mm	sq.m	1980.04	2319.97	2382.66	2336.36

##### Providing & fixing panelled doors, with 12mm particle board panels with horizontal middle rail including prime coat

WW0375	30mm	sq.m	1858.17	1823.17	1823.17	1857.48
WW0376	35mm	sq.m	1880.85	1845.43	1845.43	1880.14
WW0377	40mm	sq.m	1895.96	1860.25	1860.25	1895.26

##### Providing & fixing panelled doors, with 12mm plywood panels with horizontal middle rail including prime coat

WW0385	30mm	sq.m	1366.86	1341.23	1341.23	1366.35
WW0386	35mm	sq.m	1383.48	1357.54	1357.54	1382.97
WW0387	40mm	sq.m	1481.74	1453.93	1453.93	1481.19

##### Providing & fixing panelled doors, with 9mm plywood panels with horizontal middle rail including prime coat

WW0395	30mm	sq.m	1341.15	1316.01	1316.01	1340.66
WW0396	35mm	sq.m	1354.75	1329.36	1329.36	1354.26
WW0397	40mm	sq.m	1363.82	1338.25	1338.25	1363.33

Code	Description	Units	PL	GP	SJ	TH
<b>Providing &amp; fixing panelled doors, with 12mm particle board panels with horizontal single lock rail &amp; stile including prime coat</b>						
WW0400	30mm	sq.m	1939.76	1885.47	1885.47	1920.95
WW0401	35mm	sq.m	1945.86	1891.39	1891.39	1926.99
WW0402	40mm	sq.m	1948.91	1894.37	1894.37	1930.01
<b>Providing &amp; fixing panelled doors, with 12mm plywood panels with horizontal single lock rail &amp; stile including prime coat</b>						
WW0410	30mm	sq.m	1445.29	1404.99	1404.99	1431.32
WW0411	35mm	sq.m	1448.34	1407.95	1407.95	1434.35
WW0412	40mm	sq.m	1454.44	1413.89	1413.89	1440.40
<b>Providing &amp; fixing panelled doors, with 9mm plywood panels with horizontal single lock rail &amp; stile including prime coat</b>						
WW0420	30mm	sq.m	1393.40	1354.56	1354.56	1379.95
WW0421	35mm	sq.m	1399.51	1360.50	1360.50	1385.99
WW0422	40mm	sq.m	1407.13	1367.91	1367.91	1393.55
<b>Providing &amp; fixing panelled doors, with 12mm particle board panels with horizontal double lock rail &amp; stile including prime coat</b>						
WW0430	30mm	sq.m	1978.66	1905.49	1905.49	1941.35
WW0431	35mm	sq.m	2021.02	1946.27	1946.27	1982.90
WW0432	40mm	sq.m	2025.63	1950.72	1950.72	1987.44
<b>Providing &amp; fixing panelled doors, with 12mm plywood panels with horizontal double lock rail &amp; stile including prime coat</b>						
WW0440	30mm	sq.m	1479.14	1424.65	1424.65	1451.35
WW0441	35mm	sq.m	1482.23	1427.61	1427.61	1454.39
WW0442	40mm	sq.m	1491.07	1436.13	1436.13	1463.07
<b>Providing &amp; fixing panelled doors, with 9mm plywood panels with horizontal double lock rail &amp; stile including prime coat</b>						
WW0450	30mm	sq.m	1423.68	1371.26	1371.26	1396.96
WW0451	35mm	sq.m	1432.93	1380.16	1380.16	1406.02
WW0452	40mm	sq.m	1445.24	1392.02	1392.02	1418.12
<b>Providing &amp; fixing panelled doors, with 9mm plywood panels with horizontal double lock rail &amp; stile including prime coat</b>						
WW0460	30mm	sq.m	745.52	731.73	731.73	890.01
WW0461	35mm	sq.m	817.33	743.60	743.60	743.60
WW0462	40mm	sq.m	763.67	749.52	749.52	749.52
<b>Shelving &amp; Cupboards</b>						
<b>Providing &amp; fixing 38mm thick wooden shelves supported on 40x40x6mm 'T' or 'L' iron brackets fixed at suitable distance but not exceeding 75 cm apart in 7.5x7.5x15cm blocks of cement concrete 1:3:6, 20 mm aggregates</b>						
WW0470	Class 'B' (conifer)	sq.m	1216.68	1257.39	1297.60	1246.31



Code	Description	Units	PL	GP	SJ	TH
<b>Providing &amp; fixing 25mm thick Cupboard (900x2000x450 mm...LxHxD) with glazed or panelled shutters, 25mm thick partitions and shelves supported on 25x25mm wooden runners, 50x20mm architraves and 25mm dia curtain rod mounted on wooden brackets, including with Anodised Aluminium Hinges and frame in Class 'B' (conifer)</b>						
WW0475	Class 'B' (conifer)	each	7234.95	7462.99	7630.02	7572.14
WW0476	Class 'A' (conifer)	each	7858.96	8086.99	8254.02	8196.14
<b>Extras for Cupboards including frame of Class 'B' (conifer)</b>						
WW0485	For additional depth of 50mm or part thereof	50mm	382.41	386.98	392.77	393.61
WW0486	For additional width of 100mm or part thereof including shutters of Class 'B' (conifer)	100mm	611.27	602.97	606.65	619.38
WW0487	For additional width of 100mm or part thereof, including shutters of Class 'A' (conifer) wood	100mm	609.52	601.28	604.95	617.66
WW0488	For additional height of 100mm or part thereof, including shutters of Class 'B' (conifer)	100mm	484.51	481.54	486.13	492.75
WW0489	For additional height of 100mm or part thereof, including shutters of Class 'A' (conifer)	100mm	483.44	480.51	485.10	491.69
<b>R a i l i n g</b>						
<b>Providing &amp; fixing railing with 90x60mm top &amp; bottom rails, trellis 60x45mm including 2 coats of paint etc. all complete</b>						
WW0495	900 mm high, Class 'A' (conifer)	m	658.22	680.97	699.78	685.57
WW0496	900 mm high, Class 'B' (conifer)	m	649.62	672.37	691.18	676.97
WW0497	1000 mm high, Class 'A' (conifer)	m	758.44	784.54	806.04	790.17
WW0498	1000 mm high, Class 'B' (conifer)	m	748.61	774.71	796.22	780.35
WW0499	1200 mm high, Class 'A' (conifer)	m	896.75	927.56	952.93	934.27
WW0500	1200 mm high, Class 'B' (conifer)	m	885.16	915.97	941.34	922.68
<b>P e l m e t s</b>						
<b>Providing &amp; fixing 100x12mm, with 25mm dia. wooden curtain rod and brackets including M.S flats 25x3x100mm and plugs etc. complete</b>						
WW0505	Class 'A' (conifer)	m	223.16	228.22	230.97	228.03
WW0506	Class 'B' (conifer)	m	221.51	226.58	229.33	226.39
<b>Providing &amp; fixing 150x12mm, with 25mm dia. wooden curtain rod and brackets including M.S flats 25x3x100mm and plugs etc. complete</b>						
WW0515	Class 'A' (conifer)	m	232.04	237.67	240.97	237.27
WW0516	Class 'B' (conifer)	m	228.40	233.32	236.98	232.30
<b>S h u t t e r s F i t t i n g s</b>						
<b>Providing &amp; fixing M.S. pressed butt hinges with necessary screws etc. complete</b>						
WW0525	100mm	each	41.55	54.59	35.33	82.87
WW0526	75mm	each	31.83	47.08	28.33	56.62
WW0527	50mm	each	26.00	37.78	23.08	43.49

Code	Description	Units	PL	GP	SJ	TH
<b>Providing &amp; fixing M.S tower bolt (barrel type) with necessary screws etc. complete</b>						
WW0535	250mm	each		86.68	98.70	149.68
WW0536	150mm	each		65.25	74.35	103.63
WW0537	100mm	each		48.34	58.66	81.58
<b>Providing &amp; fixing M.S. sliding door bolt, bright finished, enamelled with necessary screws etc. complete</b>						
WW0545	300mm	each		257.29	296.03	260.17
WW0546	250mm	each		187.29	292.75	254.34
WW0547	200mm	each		154.24	240.20	211.57
<b>Providing &amp; fixing M.S. handle with necessary screws etc. complete</b>						
WW0555	150mm	each		43.41	52.95	89.10
WW0556	125mm	each		35.64	46.09	64.31
WW0557	100mm	each		29.80	41.70	46.81
WW0558	75mm	each		27.86	33.92	39.52
<b>Providing &amp; fixing M.S. hook-and-eye with necessary screws etc. complete</b>						
WW0565	300mm	each		47.07	38.50	83.27
WW0566	200mm	each		47.42	37.84	65.77
WW0567	150mm	each		45.36	32.76	57.02
WW0568	100mm	each		28.60	37.25	40.83
<b>M.S door stopper</b>						
WW0575	Providing & fixing M.S. door stopper with nuts and necessary screws complete	each		147.52	178.47	175.71
<b>Providing &amp; fixing anodised aluminium butt hinges with necessary aluminium screws etc. complete</b>						
WW0580	100mm	each		39.35	62.12	62.68
WW0581	75mm	each		31.18	54.26	51.02
<b>Providing &amp; fixing anodised aluminium tower bolt (barrel type) with aluminium screws etc. complete</b>						
WW0590	200mm	each		77.35	106.51	115.26
WW0591	150mm	each		69.82	80.32	84.98
WW0592	100mm	each		59.32	60.10	59.79
<b>Providing &amp; fixing anodised aluminium sliding door bolts with nuts and aluminium screws etc. complete</b>						
WW0600	300mm	each		282.96	270.52	344.79
WW0601	250mm	each		252.24	223.70	294.63
WW0602	200mm	each		225.22	180.62	245.63
<b>Providing &amp; fixing anodised aluminium handle with necessary aluminium screws etc. complete</b>						
WW0610	150mm	each		35.56	63.32	64.31
WW0611	125mm	each		45.59	39.06	51.19
WW0612	100mm	each		38.94	46.29	44.19
WW0613	75mm	each		40.29	35.89	37.48

Code	Description	Units	PL	GP	SJ	TH
<b>Providing &amp; fixing anodised aluminium hook-and-eye with necessary screws etc. complete</b>						
WW0620	300mm	each	62.27	80.58	64.67	100.77
WW0621	200mm	each	45.59	62.74	51.09	57.02
WW0622	150mm	each	32.21	46.05	39.25	43.49
WW0623	100mm	each	26.58	35.68	31.07	31.36
<b>Kicking plate</b>						
WW0630	Providing & fixing anodised aluminium kicking plate, 4mm thick with necessary aluminium screws etc. complete	sq.m	554.98	640.49	744.61	747.46
<b>Providing &amp; fixing brass pressed butt hinges with necessary screws etc. complete</b>						
WW0635	100mm	each	107.65	116.43	113.49	161.61
WW0636	75mm	each	84.32	89.74	81.41	128.07
WW0637	50mm	each	60.99	65.03	60.99	74.12
<b>Providing &amp; fixing brass tower bolt (barrel type) with necessary screws etc. complete</b>						
WW0645	250mm	each	250.39	309.69	223.17	371.90
WW0646	150mm	each	158.61	248.41	145.65	192.31
WW0647	100mm	each	121.66	129.58	98.98	125.23
<b>Providing &amp; fixing brass sliding door bolt with nuts necessary screws etc. complete</b>						
WW0655	300mm	each	701.01	680.51	753.66	887.65
WW0656	250mm	each	642.68	608.58	573.17	784.61
WW0657	200mm	each	576.57	432.37	601.07	695.17
<b>Providing &amp; fixing brass handle with necessary screws etc. complete</b>						
WW0665	150mm	each	109.52	145.13	144.51	145.68
WW0666	125mm	each	97.85	115.37	97.85	117.68
WW0667	100mm	each	68.69	102.48	74.52	94.35
WW0668	75mm	each	57.02	82.17	62.85	75.69
<b>Other fittings</b>						
WW0675	Providing & fixing bright finish brass 100 mm mortise latch & pair of levers, handles with necessary screws etc. complete	each	951.89	1032.59	1003.45	1163.85
WW0676	Providing & fixing bright finish brass spring-loaded, hinged door-closer with necessary screws etc. complete	each	920.71	1011.44	894.78	786.55
WW0677	Providing & fixing bright finish brass hydraulic door-closer	each	870.63	952.98	1495.90	1165.38
WW0678	Providing & fixing bright finished brass door stopper with nuts and necessary screws etc. complete	each	203.29	200.38	104.14	146.91
<b>Providing &amp; fixing bright finished brass hook-and-eye with necessary screws etc. complete</b>						
WW0685	150mm	each	59.94	82.54	51.19	85.02
WW0686	100mm	each	57.02	68.36	39.52	53.52

Code	Description	Units	PL	GP	SJ	TH
<b>Fixing Accessories</b>						
WW0695	P&f 40x3mm M.S. hold fast 400mm long, fixing to frame with 10mm bolts & nuts, plugs, concrete blocks 300x100x150mm with 1:3:6, 20mm aggregate	each	101.58	111.03	107.08	124.11
<b>Ceiling Insulation</b>						
WW0700	Providing & laying dry earth in ceilings in proportion 1:5 (1 straw: 5 dry earth) including plastic underlay	cu.m	246.56	248.61	242.62	260.15
<b>Sky light</b>						
WW0705	Providing & fixing skylight translucent diffuser panel including 50x12 beading etc. complete	sq.m	1337.52	1357.96	1377.35	1528.38
<b>Timber Carving</b>						
WW0710	Providing & fixing Decorative Traditional Timber Carving	sq.m	1697.78	1697.78	1697.78	1697.78
<b>uPVC Window (with wire mesh)</b>						
Providing, fixing and installation of 2-track, UPVC sliding windows including wire mesh, 88mm wide, 5mm clear glass with hardware fittings - EPDM gaskets, U- groove roller, Aluminium track, Fastner nut, interlock, touch lock and wool pile, complete.						
WW0715	Plain white window	sq.m	6696.18	6796.13	7001.51	7043.03
WW0716	Polished window	sq.m	8805.89	8905.83	9111.22	9152.74
WW0717	Textured Window	sq.m	12171.13	12271.08	12476.46	12517.98
<b>uPVC Window (without wire mesh)</b>						
Providing, fixing and installation of 2-track, UPVC sliding windows including 5mm clear glass with hardware fittings - EPDM gaskets, U- groove roller, Aluminium track, Fastner nut, interlock, touch lock and wool pile, complete.						
WW0718	Plain white window	sq.m	6222.69	6796.13	7001.51	7043.03
WW0719	Polished window	sq.m	8332.40	8432.34	8637.73	8679.25
WW0720	Textured Window	sq.m	11697.64	11797.59	12002.97	12044.49

Code	Description	Units	PL	GP	SJ	TH
<b>Chapter 12: STEEL</b>						
<b>Single Sections</b>						
<b>Steel work in single section including cutting, hoisting, fixing and applying priming coat of red lead paint</b>						
SW0001	In R.S. joists	kg	76.84	96.31	78.72	112.48
SW0002	In Flats	kg	73.59	98.83	86.04	120.10
SW0003	In Tees, angles and channels	kg	85.92	97.12	85.97	126.06
<b>Fabricated &amp; Built-up Sections</b>						
<b>Steel work riveted or bolted, in built up sections, trusses, frame-works, including cutting, hoisting, fixing and appl. priming coat of red lead paint</b>						
SW0010	In R.S. joists	kg	79.86	99.03	84.01	116.03
SW0011	In Tees, angles, flats and channels	kg	192.41	211.29	202.57	233.79
<b>Steel work welded, in built up sections, trusses, frame-works including cutting, hoisting, fixing and appl. priming coat of red</b>						
SW0020	In R.S. joists	kg	78.20	98.26	82.59	113.96
SW0021	In Tees, angles, flats and channels	kg	80.97	100.46	91.39	121.98
SW0022	In Tubular sections	kg	82.10	80.72	55.57	86.59
<b>Doors/Windows &amp; Accessories</b>						
<b>Providing &amp; fixing in position with vertical channels 20x10x2mm and braced with flat iron, diagonals 20x5mm with top and bottom rails of T-iron 40x40x6mm with 38mm dia steel pulleys complete with bolts, nuts, locking arrangement, stoppers handles including applying a priming coat of red lead paint</b>						
SW0030	Collapsible steel shutters	sq.m	5489.21	6109.60	5738.95	6959.36
<b>Providing &amp; fixing in position including applying a priming coat of red lead paint</b>						
SW0035	Rolling shutters, including all accessories complete but excluding top cover	sq.m	1744.48	1719.03	1719.03	1719.03
SW0036	Top cover for rolling shutters	m	776.43	750.51	750.51	750.51
<b>Providing &amp; fixing anodised Aluminium section for doors, windows, ventilators, partitions framing, false ceiling framing of specified sections including all accessories such as U-rubber gasket for fixing glass panes, weather strips or weather seals, roller, springs, etc complete (excluding the cost of glass panes or boards in case of partitions/doors/windows and ceiling boards in case of ceiling)</b>						
SW0045	Sliding, open able and pivoted windows	kg	537.95	536.14	504.86	541.58
SW0046	Sliding and open able doors	kg	540.78	538.97	507.69	544.41
SW0047	Partition framing	kg	532.29	530.48	499.20	535.92
SW0048	False ceiling framing	kg	530.02	528.22	496.94	533.66
<b>Extra for providing and fixing plain glass panes on aluminium section complete (excluding the cost of aluminium frame &amp; accessories)</b>						
SW0055	4mm thick plain glass	sq.m	601.31	711.03	737.27	756.97
SW0056	5.5mm thick, plain glass	sq.m	739.38	839.35	1044.78	1086.30
SW0057	5.5mm thick frosted glass	sq.m	1005.07	897.67	868.51	1086.65

Code	Description	Units	PL	GP	SJ	TH
<b>Providing &amp; fixing steel glazed doors, windows, ventilators of standard rolled steel sections joints mitred and welded with 15x3mm lugs embedded as required including p&amp;f glass panes and a coat of primer</b>						
SW0065	Doors	sq.m	2193.68	2200.03	2293.31	2188.91
SW0066	Windows fixed	sq.m	1214.11	1238.63	1330.74	1250.28
SW0067	Windows side hung	sq.m	1552.06	1570.74	1664.34	1574.84
SW0068	Ventilators top hung	sq.m	1546.69	1564.89	1656.99	1568.67
SW0069	Ventilators centre hung	sq.m	1743.23	1757.67	1849.78	1780.02
<b>Extra for Bhutan type Architraves</b>						
SW0075	Extra for Providing & fixing Bhutan type architraves with 24G steel sheet....per sq.m. of window area	sq.m	380.93	346.21	326.62	376.92
<b>Steel Fasteners</b>						
SW0080	Providing & fixing M.S. round hold-down bolts with nuts and washer plates	kg	70.19	71.20	66.79	86.35
SW0081	Providing & fixing bolts of various sizes including nuts & washers	kg	187.36	186.12	173.57	196.77
SW0082	Providing & fixing M.S. rivets of various sizes	kg	208.96	189.68	203.02	260.95
<b>Plates</b>						
SW0090	Providing, making and fixing M.S. straps, flats, sole plates etc.	kg	70.84	92.11	79.94	109.71
<b>Fan Clamps</b>						
SW0095	Providing & fixing M.S. fan clamps of 16 mm dia. in R.C. slabs, including painting with red lead paint	each	148.85	142.16	138.36	168.27
<b>Steel Form Work</b>						
SW0100	Providing and fixing steel form work in foundations, footings, bases of columns etc for mass concrete	sq.m	456.56	463.85	437.05	485.76
SW0101	Providing and fixing steel form work in suspended floors, roofs, landings, shelves and their support, balconies, chajias etc	sq.m	757.34	777.56	752.46	798.87
SW0102	Providing and fixing steel form work in lintels, beams, girders, bresummers, cantilevers, etc.	sq.m	725.51	736.29	700.77	766.44
SW0103	Providing and fixing steel form work in columns, pillars, posts, struts etc.	sq.m	1259.06	1256.26	1179.18	1321.67
<b>Stainless Steel (Grade 304) Railing</b>						
SW0110	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc... including welding, grinding, buffing, polishing and making curvature (wherever required) and fittings the same with necessary stainless steel nuts and bolts complete, i/e fixing railing with necessary accessories and stainless steel dash fasteners, stainless steel bolts etc, of required size on the top of the floor or the side of waist slab with suitable arrangement as per approval of engineers in charge.	Kg	980.01	975.52	971.04	1088.05

Code	Description	Units	PL	GP	SJ	TH
<b>Chapter 13: FLOORING</b>						
<b>Brick Flooring</b>						
<b>Providing &amp; laying 2nd class Brick-on-edge flooring</b>						
FL0001	In cement mortar 1:4	sq.m	856.93	821.15	851.27	1168.31
FL0002	In cement mortar 1:6	sq.m	828.50	791.59	820.30	1133.45
FL0003	In dry brick , including filling joints with sand on bedding of 12.5mm mud mortar	sq.m	754.40	714.78	742.89	1035.65
<b>Providing &amp; laying 2nd class Flat brick flooring</b>						
FL0010	In cement mortar 1:4	sq.m	618.08	596.76	615.50	820.52
FL0011	In cement mortar 1:6	sq.m	592.52	570.37	587.85	788.83
FL0012	In dry brick, filling joints with sand, on a base of 12.5mm mud mortar	sq.m	482.29	457.85	474.89	658.44
<b>Providing &amp; laying pointing on brick flooring with cement mortar 1:2</b>						
FL0020	Flush pointing	sq.m	84.52	84.82	84.82	87.31
FL0021	Ruled pointing	sq.m	91.78	92.08	92.08	94.57
<b>Providing &amp; laying pointing on brick flooring with cement mortar 1:4</b>						
FL0030	Flush pointing	sq.m	84.52	84.82	84.82	87.31
FL0031	Ruled pointing	sq.m	91.78	92.08	92.08	94.57
<b>Providing &amp; laying Pointing on brick flooring with cement mortar 1:6</b>						
FL0040	Flush pointing	sq.m	82.51	82.73	82.64	84.84
FL0041	Ruled pointing	sq.m	89.77	89.99	89.89	92.10
<b>Concrete Flooring</b>						
<b>Pal cement concrete flooring 1:2:4, finished with floating coat of neat cement</b>						
FL0050	12mm aggregates, 25mm thick	sq.m	278.24	277.95	284.41	308.97
FL0051	20mm aggregates, 40mm thick	sq.m	367.36	367.67	377.56	415.75
FL0052	20mm aggregates, 50mm thick	sq.m	419.24	419.46	431.62	478.77
FL0053	20mm aggregates, 75mm thick	sq.m	543.37	543.23	560.86	629.80
FL0054	20mm river gravel, 40mm thick	sq.m	657.65	667.52	653.90	805.03
FL0055	20mm river gravel, 50mm thick	sq.m	781.69	793.84	776.67	964.59
<b>Providing &amp; laying cement concrete flooring 1:3:6, finished with a floating coat of neat cement</b>						
FL0060	20mm aggregates, 50mm	sq.m	381.85	380.30	391.25	435.95
FL0061	20mm river gravel, 50mm	sq.m	358.23	362.97	365.57	399.19

Code	Description	Units	PL	GP	SJ	TH
<b>Red Oxide Flooring</b>						
<b>Providing &amp; laying 40mm red oxide flooring, finished with a floating coat of neat cement (red oxide mixed) including cement slurry etc. complete</b>						
FL0070	Under layer of 30mm thick cement concrete 1:2:4, 12.5mm aggregates and top layer of 10mm thick plaster of cement red oxide mixed	sq.m	954.48	960.56	939.35	1019.12
<b>Surface Hardening</b>						
<b>Providing &amp; laying 62mm thick flooring with sub-layer cement concrete 1:2:4 20mm aggregates, top layer with metallic cement hardener consisting of mix 1:2 (1 cement hardener: 2 6mm stone aggregate), the metallic hardening compound is mixed by volume in the ratio 4 parts of cement &amp; 1 part of metallic hardening compound including cement slurry</b>						
FL0075	50mm thick sub-layer and 12mm topping	sq.m	802.93	768.29	784.13	888.66
<b>Extra for Concrete flooring</b>						
FL0080	Extra for making chequers on concrete floors, steps, landings, pavements etc.	sq.m	41.17	41.17	41.17	41.17
<b>Terrazzo-Marble Chip Flooring</b>						
<b>Providing &amp; laying 40mm thick marble chips flooring top layer 6mm thick with white, black or black and white marble chips of nominal size 1.5-3mm in proportion 1:2 (cement: chips), on 34mm thick concrete base in cement concrete 1:2:4, 12.5mm aggregate ( cement and marble powder mix shall be of the ratio 3 part of cement to 1 part of marble powder)</b>						
FL0085	In grey cement	sq.m	1092.15	1104.36	1108.21	1151.26
FL0086	In white cement	sq.m	1234.61	1244.69	1256.90	1291.39
<b>Extra for coloured chips</b>						
FL0095	Extra for coloured chips instead of black, white or black and white chips in top 6mm layer of marble chips flooring	sq.m	65.90	67.66	62.25	77.13
FL0096	Extra for coloured chips instead of black, white or black and white chips in top 10mm layer marble chips flooring	sq.m	106.05	108.88	100.17	124.12
<b>Providing &amp; laying 40mm thick marble chips flooring top layer 10mm thick with white, black or black and white marble chips of size 6mm in proportion 1:2 (cement : chips), on 30mm cement concrete 1:2:4 base, 12.5mm aggregate</b>						
FL0105	In grey cement	sq.m	1136.59	1156.91	1157.58	1205.36
FL0106	In white cement	sq.m	1323.67	1340.61	1352.34	1386.52
<b>Extra for Terrazzo Flooring</b>						
FL0115	Extra for Providing & fixing glass strips in joints of terrazzo floors	m	51.28	53.12	58.77	54.34
FL0116	Extra for terrazzo flooring laid as floor borders, margins, bands, 75 < width > 300mm	sq.m	33.72	33.72	33.72	33.72



Code	Description	Units	PL	GP	SJ	TH
FL0117	Extra for laying terrazzo flooring on stair case treads, width < 300mm including forming nosing	sq.m		50.58	50.58	50.58
FL0118	Extra for laying terrazzo in narrow bands width <75mm	m		3.59	3.59	3.59
FL0119	Extra for making moulded nosing in terrazzo, including moulded returns, ends, angles	m		136.31	136.31	136.31
FL0120	Providing & fixing aluminium strip 40x1.6mm in joints of terrazzo floor	m		150.72	160.25	193.50

### Skirting

**Providing & laying Cement plaster skirting < 300mm height with cement mortar 1:3 with a floating coat of neat cement including rounding off junctions with floor**

FL0130	20mm	sq.m		360.85	365.57	367.16	401.02
FL0131	22mm	sq.m		375.99	381.27	383.01	421.06

**Providing & fixing Terrazzo or Marble chips skirting < 300mm height top layer 6mm thick with white or black, black and white marble chips size 4mm in proportion 1:2, laid on 12.5mm thick cement plaster 1:3 base**

FL0140	In grey cement	sq.m		1033.86	1050.69	1047.78	1084.93
FL0141	In white cement	sq.m		1167.82	1182.20	1187.23	1214.61

### Marble Stone Flooring

**Providing & laying marble stone flooring over 20mm thick base of cement mortar 1:4, jointed with grey cement slurry mixed with pigment where necessary, rubbing & polishing complete**

FL0150	20mm thick black marble	sq.m		2023.10	1944.95	2083.07	2439.64
FL0151	20mm thick white marble	sq.m		2122.43	1897.29	1866.55	2299.15
FL0152	20mm thick black and white marble	sq.m		1985.99	1956.93	1866.55	2482.59
FL0153	20mm thick coloured marble	sq.m		2362.43	2015.05	2150.15	2653.20
FL0154	40mm thick black marble	sq.m		2669.01	2625.36	2435.60	2957.56
FL0155	40mm thick white marble	sq.m		2540.70	2538.06	2050.91	2725.91
FL0156	40mm thick black and white marble	sq.m		2628.00	2679.78	2138.21	2813.21
FL0157	40mm thick coloured marble	sq.m		2665.91	2924.21	2432.24	2953.76

**Providing & laying Kota stone flooring over 20mm thick base of cement mortar 1:4, jointed with grey cement slurry mixed with pigment where necessary, rubbing & polishing complete**

FL0160	20mm	sq.m		1427.10	1611.55	1500.66	2042.58
FL0161	40mm	sq.m		1683.74	1781.48	1616.41	2288.50

### Extras for Marble stone flooring

FL0170	Extra for marble stone flooring for laying in step-treads, width < 300 mm	sq.m		90.84	90.84	90.84	90.84
FL0171	Extra for marble stone flooring for nosing in step-treads	m		77.02	77.02	77.02	77.02

Code	Description	Units	PL	GP	SJ	TH
<b>Providing and laying Pre-Polished/ Polished Granite of approved quality and source in flooring using necessary cement bedding in C.M. 1:4 upto 20 mm thick average cement slurry for fixing the tiles with required slopes, curing, cleaning, filling the joints with pigments of similar colour and at all levels with all leads and lifts etc. complete as per directions of site in-charge and as per pattern required</b>						
FL0175	18mm Thick granite stone flooring over 18mm thick base of cement mortar 1:4.	sq.m	2446.08	2450.88	2113.92	2702.75
FL0176	20mm Thick granite stone flooring over 20mm thick base of cement mortar 1:4.	sq.m	2518.25	2571.17	2640.44	3135.79
FL0177	Extra, for granite stone flooring for laying in step-tread, width <300 mm	sq.m	90.84	90.84	90.84	90.84
FL0178	Extra, for granite stone flooring for nosing in step-treads	m	77.02	77.02	77.02	77.02
<b>Timber Flooring</b>						
<b>Providing &amp; fixing Cement Bonded Particle board flooring including nails/screws etc. complete excluding the cost of frame</b>						
FL0180	25mm	sq.m	1681.11	1631.05	1639.23	2552.01
FL0181	30mm	sq.m	2044.10	2031.49	2041.99	3046.85
<b>Providing &amp; fixing Plain Particle-Board Flooring fixing with necessary screws etc. complete, excluding cost of frame</b>						
FL0190	25mm	sq.m	1316.00	1390.90	1507.77	1638.64
FL0191	35mm	sq.m	1628.57	1682.53	1766.73	1963.95
<b>Providing &amp; fixing Class 'B' (conifer) Flooring including fixing with iron screws etc. complete, excluding the cost of frame</b>						
FL0200	25mm thick, T&G	sq.m	654.82	684.57	713.14	673.07
FL0201	25mm thick, half-lapped	sq.m	611.45	641.20	669.77	629.70
FL0202	40mm thick, T&G	sq.m	914.18	960.09	1004.18	942.35
FL0203	40mm thick, half-lapped	sq.m	902.10	948.01	992.10	930.27
FL0204	45mm thick, T&G	sq.m	984.88	1034.28	1081.73	1015.19
FL0205	45mm thick, half-lapped	sq.m	966.01	1015.41	1062.86	996.32
<b>Parquet flooring</b>						
<b>Providing &amp; fixing Parquet (wood block) flooring including blown bitumen underlay and iron screws etc. complete, excluding cost of frame</b>						
FL0210	38mm thick, Class 'A' (conifer) wood	sq.m	3912.97	3954.69	3994.76	3989.24
<b>Providing &amp; fixing Pre-Fabricated Flooring Profiles in Class 'B' (conifer) including necessary screws etc. complete</b>						
FL0215	25mm thick	sq.m	844.76	746.46	751.58	738.73
FL0216	38mm thick	sq.m	1036.17	970.22	977.54	959.18
<b>Vinyl &amp; Linoleum Flooring</b>						
<b>Providing &amp; fixing 2mm thick Vinyl or Linoleum sheet laid with special adhesive, including 2 coat of bitumen applied over subfloor on prepared surface @ 1.5 kg/sq.m each coat including the cost of base concrete</b>						
FL0225	Over base of 25mm thick cement concrete 1:2:4, 12.5mm aggregate	sq.m	988.71	963.05	1247.11	1042.94
<b>Mud flooring</b>						
FL0230	Providing & laying rammed mud flooring complete	sq.m	89.79	89.38	90.66	90.66

Code	Description	Units	PL	GP	SJ	TH
<b>Chapter 14: TILING - WALL &amp; FLOOR</b>						
GL0001	Providing & fixing white/ coloured Glazed tiles, 150 x 150 mm in skirting, step risers, dado, finished with flush-pointing in white cement	sq.m	2306.48	1987.59	2110.65	2059.30
<b>Providing &amp; fixing white/ coloured glazed tiles in flooring, treads of steps and landings laid on bed of 12mm thick cement mortar 1:3 finished with flush pointing in white cement:</b>						
GL0005	for 150 x 150 mm	sq.m	1951.11	1632.22	1755.28	1703.93
GL0006	for 100 x 100 mm	sq.m	3821.83	3620.01	3046.24	3739.41
GL0007	for 200 x 100 mm	sq.m	2469.27	2998.32	1958.12	2438.14
GL0008	for 200 x 200 mm	sq.m	1656.65	1741.06	1761.37	1631.13
GL0009	for 300 x 300 mm	sq.m	1202.62	1347.76	1190.18	1375.69
<b>Extra for laying glazed tiles</b>						
GL0015	In treads of steps, width <300mm	sq.m	179.10	179.10	179.10	179.10
GL0016	In skirting, risers of steps, dado where tiles are required to be cut (only area of portion of cut tiles to be measured)	sq.m	1032.18	1032.18	1032.18	1032.18

Code	Description	Units	PL	GP	SJ	TH
<b>Chapter 15: ROOFING</b>						
<b>C.G.I Sheet ing</b>						
<b>Providing &amp; fixing Corrugated Galvanised Iron (CGI) sheeting, including bolts, hooks and nuts 8mm dia. with bitumen and G.I limpet washers filled with white lead for connection, excluding the cost of purlins, rafter and trusses</b>						
RF0001	24g	sq.m	697.66	694.63	716.03	745.51
<b>Providing &amp; fixing Pre Painted Steel Corrugated Roofing sheets, including bolts, hooks and nuts 8mm dia. with bitumen and G.I limpet washers filled with white lead for connection, excluding the cost of purlins, rafter and trusses.</b>						
RF0003	25g (0.50mm)	sq.m	1016.74	948.29	1016.74	1070.16
<b>Providing &amp; fixing 600mm ridges or hips in plain G.I. including bolts, hooks and nuts 8mm dia G.I limpet and bitumen washers for connection</b>						
RF0005	24g.	m	519.17	569.22	566.03	587.54
<b>Providing &amp; fixing 600mm ridges or hips in Pre Painted Steel sheets, including bolts, hooks and nuts 8mm dia G.I limpet and bitumen washers for connection.</b>						
RF0007	25g. (0.50mm)	m	882.63	942.13	787.01	989.94
<b>Providing &amp; fixing 450mm over all semi-circular plain G.I gutter, including brackets, bolts, nuts, washers &amp; rain water pipes connections, excluding the cost of pipes</b>						
RF0010	24g sheet	m	514.19	584.13	570.85	619.23
<b>Extra for Galvanised Iron/ Pre Painted Steel sheets</b>						
RF0015	Extra for Providing & fixing curved C.G.I/PPI sheet in roofing	sq.m	13.68	13.68	13.68	13.68
RF0016	Extra for Providing & fixing C.G.I/PPI sheets vertically or to a pitch > 60 degrees	sq.m	12.81	12.81	12.81	12.81
RF0017	Extra for making straight-cut openings for chimney, sky lights	m	163.99	163.49	167.07	172.01
<b>Extra for making opening or recess in CGI roofing of girth &lt; 1 metre</b>						
RF0025	Area upto 0.01sq.m	each	41.21	41.21	41.21	41.21
RF0026	0.01 < Area < 0.04sq.m	each	98.03	98.03	98.03	98.03
RF0027	Area > 0.04sq.m	each	147.05	147.05	147.05	147.05
<b>Wind Bracing</b>						
RF0060	Providing & fixing wind tie of 40 x 6 mm flats	m	135.58	183.52	159.20	223.94
<b>Thatched Roofing</b>						
RF0065	Providing & fixing 150mm thatched roofing, including straws/grass bundles, half split bamboo fillet, tying strings complete	sq.m	895.37	922.32	870.21	1034.31

Code	Description	Units	PL	GP	SJ	TH
RF0066	Providing & fixing 25mm dia. bamboos at 225mm apart including moonj ban(rope) or string	sq.m	467.14	478.01	432.85	564.99
RF0067	Providing & fixing thatched coping to ridges and hips, girth <1 metre including tying and split bamboo wind tie complete	m	1648.70	1659.55	1614.25	1792.89

#### **Slate Roofing**

RF0075	Providing & fixing single slate roofing including bitumen felt water-proofing etc complete, excluding the cost of wooden reapers, trusses	sq.m	977.17	983.48	929.00	1055.53
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#### **Concrete Tiles Roofing**

**Providing & fixing PLAIN Pantile or Roman II concrete tiles-500mm x 250mm including tying wires but excluding the cost of frame work**

RF0080	6mm	sq.m	254.82	249.01	245.00	249.31
RF0081	8mm	sq.m	286.79	286.79	282.03	293.93
RF0082	10mm	sq.m	296.31	296.31	291.40	305.89

**Providing & fixing COLOURED Pantile or Roman concrete tiles-500mm x 250mm including tying wires but excluding the cost of frame work**

RF0090	6mm	sq.m	300.63	305.68	300.63	329.80
RF0091	8mm	sq.m	310.00	315.20	310.00	337.24
RF0092	10mm	sq.m	324.57	324.57	319.07	338.55

**Providing & fixing PLAIN Super Roman concrete tiles-600mm x 330mm including tying wires but excluding the cost of frame work**

RF0100	10mm	sq.m	338.57	344.57	338.57	358.56
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**Providing & fixing COLOURED Super Roman concrete tiles-600mm x 330mm including tying wires but excluding the cost of frame work**

RF0105	10mm	sq.m	374.17	380.84	374.17	396.64
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**Providing & fixing PLAIN Semi-Sheet concrete tiles-600mm x 600mm including tying wires but excluding the cost of frame work**

RF0110	8mm	sq.m	2829.17	3667.53	3667.53	3994.16
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**Providing & fixing COLOURED Semi-Sheet concrete tiles-600mm x 600mm including tying wires but excluding the cost of frame work**

RF0115	8mm	sq.m	3387.55	4180.81	3994.16	4530.77
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**Providing and fixing concrete tiles ridges or hips including tying wire etc. complete**

RF0120	Plain	m	913.42	1096.57	1084.91	1163.65
RF0121	Coloured	m	2243.68	2461.44	1893.72	2636.42

Code	Description	Units	PL	GP	SJ	TH
<b>Shinglep Roofing</b>						
RF0130	Providing & fixing shinglep roofing with shinglep of size 1350x125x12mm in 3 layers including tying, uplift protection complete	sq.m	819.99	832.58	815.78	827.67
<b>Red- Mud Plastic Sheeting</b>						
RF0135	Providing & fixing red mud corrugated plastic sheeting, 1.5 mm thick	sq.m	607.27	630.40	620.37	624.95
RF0136	Providing & fixing red mud plastic sheet 600 mm ridging, 1.3mm thick	m	668.22	631.14	624.31	642.28
<b>Corrugated Fibreglass Sheeting</b>						
RF0150	P&f 1.2mm transparent sheet including 8mm G.I J or L hooks, bitumen & G.I limpet washers etc complete, excluding cost of frame	sq.m	740.35	719.76	781.54	957.42
<b>Providing &amp; laying lime concrete terracing on roofing , average depth 100mm</b>						
RF0155	including drainage fall, ramming, rounding at parapets	sq.m	1218.20	1283.99	1397.31	1465.29
RF0156	including drainage fall, ramming, rounding at parapets and under-coat of hot bitumen 80/100	sq.m	1313.50	1379.22	1492.46	1580.02
<b>Providing &amp; laying cement concrete terracing on roof with cement concrete 1:3:6, 20mm aggregates over a base coat of bitumen 80/100 mixed with coarse sand</b>						
RF0165	115mm average thickness	sq.m	610.16	605.10	626.92	744.71
RF0166	Painting roof with bitumen including spreading sand, cleaning slab etc. complete	sq.m	108.27	108.40	107.56	131.78
<b>Rain Water Pipe</b>						
<b>Providing &amp; fixing C.I. rain water pipes &amp; fittings with necessary screws on the wall face including filling joints etc. complete</b>						
RF0175	100mm dia C.I pipes	m	1458.08	1491.90	1382.14	1458.35
RF0176	100mm dia C.I. head for pipe	each	315.31	328.92	270.64	315.37
RF0177	100mm dia C.I. bend for pipe	each	345.35	371.81	252.79	345.42
RF0178	100mm dia C.I. shoes for pipe	each	531.59	561.72	583.16	531.70
<b>Providing &amp; fixing 100mm dia C.I. offset for rain water pipe on wall face including filling joints</b>						
RF0185	75mm projection	each	457.10	414.71	419.37	457.19
RF0186	150mm projection	each	681.79	712.52	693.04	681.91
<b>Providing and fixing on wall face single socketed rigid PVC ( Working Pressure 4kgf per sq.cm) rain water pipes including jointing with seal ring leaving 10 mm gap for thermal expansion- complete</b>						
RF0190	75mm dia	m	500.83	490.12	498.58	495.07
RF0191	90mm dia	m	583.35	534.43	541.40	581.67
RF0192	110mmdia	m	632.17	572.24	581.28	591.14

Code	Description	Units	PL	GP	SJ	TH
<b>Providing and fixing on wall face PVC coupler for rigid rain water pipes including jointing with seal ring leaving 10 mm gap for thermal expansion - complete</b>						
RF0195	75 mm	each	177.44	183.74	180.04	210.07
RF0196	90 mm	each	225.38	248.39	216.30	266.44
RF0197	110 mm	each	261.31	251.67	254.39	302.61
<b>Providing and fixing on wall face PVC Single tee with door for rigid rain water pipes including jointing with seal ring leaving 10 mm gap for thermal expansion - complete</b>						
RF0200	75 mm	each	228.18	235.82	215.43	265.28
RF0201	90 mm	each	312.87	302.67	290.96	353.55
RF0202	110 mm	each	351.13	359.12	351.60	407.98
<b>Providing and fixing on wall face PVC plain Single tee for rigid rain water pipes including jointing with seal ring leaving 10 mm gap for thermal expansion - complete</b>						
RF0205	75 mm	each	207.77	225.90	201.43	242.34
RF0206	90 mm	each	300.62	284.94	262.96	315.44
RF0207	110 mm	each	331.89	338.69	314.66	378.82
<b>Providing and fixing on wall face PVC bend for rigid rain water pipes including jointing with seal ring leaving 10 mm gap for thermal expansion - complete</b>						
RF0210	75 mm	each	186.77	206.20	187.82	220.18
RF0211	90 mm	each	246.96	280.57	240.02	290.16
RF0212	110 mm	each	277.06	308.44	281.61	322.44
<b>Providing and fixing on wall face PVC shoe for rigid rain water pipes including jointing with seal ring leaving 10 mm gap for thermal expansion - complete</b>						
RF0215	75 mm	each	252.03	262.68	263.23	261.01
RF0216	90 mm	each	312.00	318.34	314.28	315.44
RF0217	110 mm	each	366.26	370.02	382.94	373.77

Code	Description	Units	PL	GP	SJ	TH
<b>Chapter 16: PLUMBING - INDOOR WORK</b>						
<b>Water Supply</b>						
<b>Providing &amp; fixing G.I. pipes including G.I. fittings &amp; clamps &amp; repair walls</b>						
PI0001	15mm	m	242.62	267.78	253.20	290.47
PI0002	20mm	m	286.16	300.63	299.46	354.09
PI0003	25mm	m	354.41	369.50	376.50	426.62
PI0004	32mm	m	432.99	454.19	451.27	522.97
PI0005	40mm	m	516.04	543.22	551.97	632.30
PI0006	50mm	m	666.24	702.24	712.74	817.20
<b>Providing &amp; fixing H.D.P.E pipes including clamps &amp; repair walls etc. complete</b>						
PI0010	20mm	m	137.31	137.35	139.64	138.84
PI0011	25mm	m	161.35	160.03	161.89	162.44
PI0012	32mm	m	280.40	282.63	277.87	282.20
PI0013	40mm	m	272.59	276.87	266.05	275.42
PI0014	50mm	m	363.04	369.47	353.74	367.35
<b>Providing and fixing 3-layer PP-R (Polypropylene Random Copolymer) PN-16 pipes, SDR 7.4 UV Stabilized and anti microbial fusion welded, having thermal stability for hot and cold water supply including all PP-R plain and brass Threaded Polypropylene random fittings including fixing pipe with clamps at 1.0m spacing. This includes testing of joints, cutting chases and making good the wall complete as per direction of Engineer-in- Charge.</b>						
PI0290	16mm	m	196.38	196.38	196.38	207.24
PI0291	20mm	m	218.65	218.65	218.65	230.92
PI0292	25mm	m	288.69	288.69	288.69	307.58
PI0293	32mm	m	489.84	489.84	489.84	520.53
PI0294	40mm	m	611.92	611.92	611.92	661.03
PI0295	50mm	m	903.46	903.46	903.46	980.90
<b>CPVC Pipe</b>						
<b>Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot &amp; cold water supply, including all CPVC plain &amp; brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes &amp; fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. Internal work - Exposed on wall</b>						
PI0300	15 mm nominal outer dia Pipes	m	192.70	176.72	161.55	204.97
PI0301	20 mm nominal outer dia Pipes	m	250.68	226.58	184.95	239.13
PI0302	25 mm nominal outer dia Pipes	m	305.41	254.86	217.70	264.36
PI0303	32 mm nominal outer dia Pipes	m	532.90	359.02	305.70	401.68
PI0304	40 mm nominal outer dia Pipes	m	612.07	479.56	402.02	544.59
PI0305	50 mm nominal outer dia Pipes	m	875.77	753.74	606.75	795.13



Code	Description	Units	PL	GP	SJ	TH
<b>Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot &amp; cold water supply, including all CPVC plain &amp; brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes &amp; fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge. Concealed work, including cutting chases and making the good walls etc.</b>						
PI0315	15 mm nominal outer dia Pipes	m	300.65	224.49	204.08	267.51
PI0316	20 mm nominal outer dia Pipes	m	367.62	280.53	224.49	302.42
PI0317	25 mm nominal outer dia Pipes	m	441.30	370.46	320.44	388.23
PI0318	32 mm nominal outer dia Pipes	m	731.31	502.46	430.68	564.88

### Storage Tanks

**Providing & fixing storage tank of M.S. sheet welded all round, including 40mm G.I scour pipe, 25mm G.I overflow , 15mm ball valve , pads for inlet and outlet pipes , red lead primer & two coats of bitumastic paint**

PI0020	270 litre capacity of 2mm steel sheet	each	10438.53	10119.41	9622.37	11144.16
PI0021	810 litre capacity of 2.8mm steel sheet	each	20359.73	19415.61	18040.88	21912.20
PI0022	1620 litre capacity of 3.15mm steel sheet	each	28898.61	29069.35	26843.18	32984.79

**Providing & fixing plastic tank including all accessories complete**

PI0030	270 litre capacity	each	2854.77	2765.39	3099.02	3501.36
PI0031	500 litre capacity	each	3946.92	4776.20	4977.42	5397.08
PI0032	1000 litre capacity	each	7218.33	8776.70	9100.41	9907.20
PI0033	2000 litre capacity	each	13646.30	16662.86	17581.51	18812.61
PI0034	3000 litre capacity	each	21012.58	24612.42	26009.35	27781.42

### Pans & Cisterns

**Providing & fixing Indian-type vitreous china w.c squatting pan, including 100 mm H.C.I P or S trap, 10 lit low level vitreous china cistern & fittings, repair walls**

PI0040	500mm, white	each	4333.87	4793.18	4154.79	5151.36
PI0041	580mm, white Orissa-model	each	4341.72	4869.75	4248.11	5251.46
PI0042	580mm, colour Orissa-model	each	4922.58	5344.83	4583.30	5801.02

**Providing & fixing European-type vitreous china w.c pedestal including seat and lid with c.p brass hinges, 15 lit white vitreous china low level cistern, fittings, brackets, repair walls**

PI0050	white, with plastic seat & lid	each	5147.65	5355.70	5050.85	5889.99
PI0051	coloured, with plastic seat & lid	each	6070.13	6209.92	5250.97	6797.74

### Foot Rests

PI0060	Providing & fixing white vitreous china foot rests (250x130x30mm) for Indian W.C	pair	201.43	220.93	182.43	201.42
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Code	Description	Units	PL	GP	SJ	TH
<b>Urinals</b>						
<b>Providing &amp; fixing white vitreous china flat back, lipped front urinal basin 430x260x350mm including C.I cistern &amp; fittings, brackets, G.I. flush pipe &amp; spreaders, brass unions, G.I. clamps, painting, repair walls</b>						
PI0065	One bowl-5 litres. C.I. cistern	each	4971.94	4759.40	4883.91	5351.57
PI0066	Two bowls-10 litres. C.I. cistern	each	7472.06	7478.87	7807.74	8175.54
PI0067	Three bowls-10 litres. C.I. cistern	each	9881.20	9813.71	10257.86	10820.20
<b>Baths</b>						
<b>Providing and fixing bath tubs with fittings and accessories complete</b>						
PI0075	Porcelain, white enamelled, with a pair of 20mm C.P pillar tap, 40mm C.P brass waste, 32mm C.P brass over flow, rubber plug. 40mm C.P trap etc.	each	20365.11	19574.18	22890.91	19595.94
PI0076	Fibreglass tub, white	each	22401.35	22982.37	20774.84	22387.83
PI0077	P-Trap, heavy duty, for bath-tub	each	1098.02	1098.02	1108.23	1092.91
<b>Basins &amp; Sinks</b>						
<b>Providing &amp; fixing white vitreous china wash basin, including C.I brackets, 15mm C.P. brass pillar taps, c.p. chain &amp; rubber plug, 32mm pvc waste, 32mm dia. trap &amp; union, repair walls</b>						
PI0085	Flat back wash basin 630x450mm with a pair of 15mm c.p. brass pillar taps	each	5382.59	5321.09	5050.35	5745.32
PI0086	Flat back wash basin 630x450mm with single 15mm c.p. brass pillar taps	each	4785.28	4775.22	4545.62	5036.09
PI0087	Flat back wash basin 550x400mm with a pair of 15mm c.p. brass pillar taps	each	5229.11	5039.12	4855.93	5482.84
PI0088	Flat back wash basin 550x400mm with single 15mm c.p. brass pillar tap	each	4631.80	4493.25	4351.19	4773.61
<b>Providing &amp; fixing white vitreous china angle back wash basin 400x400mm including brackets, 15mm c.p brass pillar taps, c.p brass chain &amp; rubber plug, 32mm c.p brass waste, 32mm dia c.p brass trap and M.I union and repair walls</b>						
PI0095	With single 15mm c.p. brass pillar tap	each	4493.57	4385.23	4333.11	5130.87
PI0096	With pair of 15mm c.p. brass pillar taps	each	5090.88	4931.10	4837.84	5840.10
<b>Flush Valve &amp; Bend</b>						
PI0105	Providing & fixing c.p. flush valve, 32mm with 40mm outlet	each	3730.02	3977.26	3960.02	3785.76
PI0106	Providing & fixing c.p. concealed flush valve, 32mm with 40mm outlet	each	3940.42	3977.26	3901.14	3677.81
PI0107	Providing & fixing c.p. flush bend, long	each	597.13	607.94	597.23	706.25
PI0108	Providing & fixing c.p. flush valve elbow	each	506.86	506.86	511.36	489.37
<b>Pedestals &amp; Kitchen Sinks</b>						
PI0115	Providing & fixing pedestals for basins, white vitreous china, recessed back for pipes and necessary fittings	each	1310.41	1709.96	1516.35	1156.86

Code	Description	Units	PL	GP	SJ	TH
<b>Providing &amp; fixing Kitchen Sinks including all connections and fittings</b>						
PI0120	White glazed vitreous china 600 x 450 x 250 mm including accessories and repairs to walls etc.	each	3328.17	3910.94	3897.07	4608.93
PI0121	Stainless steel, 450 x 400 x 150 mm, single bowl	each	1960.26	1628.38	1481.97	1901.93
PI0122	Stainless steel, 580 x 480 x 175 mm, single bowl	each	2053.58	1728.12	1570.63	2018.59
PI0123	Stainless steel, 940 x 460 x 160 mm, single bowl & drain-board	each	2415.44	2271.96	2193.80	2765.41
PI0124	Stainless steel, 1080 x 520 x 175 mm, single bowl & drain-board	each	2065.48	2179.73	2419.31	2590.43
PI0125	Stainless steel, 1150 x 515 x 175 mm, single bowl & drain-board	each	3057.05	3036.07	3148.52	3348.68
PI0126	Stainless steel, 1740 x 520 x 200 mm, single bowl & double drain-board	each	3570.56	3881.13	4092.11	4182.99
PI0127	Stainless steel, 940 x 460 x 160 mm, double bowl	each	3043.63	3419.18	3432.07	4806.87
PI0128	Stainless steel, 1150 x 520 x 160 mm, single bowl	each	3523.67	4352.62	4077.78	4573.56
PI0129	Stainless steel, 1740 x 520 x 200 mm, double bowl & single drain-board	each	7945.12	8549.00	8578.75	8965.85
PI0130	Stainless steel, 1740 x 520 x 200 mm, double bowl & double drain-board	each	7945.12	9358.12	9395.80	9986.58
<b>Drain Board, Rubber plug</b>						
PI0140	Providing & fixing stainless steel drain-board, 610 x 460 mm with all necessary fittings	each	1433.14	1429.73	1463.97	1786.02
PI0141	Providing & fixing c.p. brass chain & rubber plug for basin and sink	each	248.42	255.84	249.38	245.27
<b>W a s t e s</b>						
PI0150	Providing & fixing 32mm dia pvc. waste	each	105.25	105.64	141.06	133.29
PI0151	Providing & fixing 32mm c.p. brass waste	each	260.32	238.28	232.75	249.94
PI0152	Providing & fixing 40mm c.p. brass waste	each	420.96	437.91	392.60	419.09
<b>W a t e r H e a t e r s</b>						
<b>Providing &amp; fixing Electric water heater including necessary fittings</b>						
PI0160	10 litres	each	7468.46	7960.77	6299.00	8064.52
PI0161	15 litres	each	8286.71	9067.02	6700.58	8430.56
PI0162	25 litres	each	9270.56	10251.76	7956.32	9718.38
PI0163	35 litres	each	11619.06	12293.22	10056.11	11176.56
PI0164	50 litres	each	13580.26	14411.89	16094.56	15341.88
PI0165	70 litres	each	19470.76	20565.44	21538.46	21806.51
PI0166	100 litres	each	21987.69	25386.13	23877.37	24944.09
<b>W a t e r S u p p l y F i t t i n g s</b>						
<b>Providing &amp; fixing C.P. Brass shower fittings</b>						
PI0175	Shower with revolving joint, 15mm,	each	724.12	669.50	713.75	713.71
PI0176	Adjustable shower, with locking key, 15mm	each	869.76	966.85	1038.62	1192.23
PI0177	Shower arm, standard 15mm	each	564.16	481.38	476.55	473.96
PI0178	Shower arm, heavy duty 15mm	each	432.83	614.05	499.41	585.43
PI0179	Flexible shower tube & shower	each	1218.74	1298.84	1030.54	1460.53

Code	Description	Units	PL	GP	SJ	TH
<b>Providing &amp; fixing c.p. brass stop cock</b>						
PI0185	15mm, standard, c.p knob	each	615.97	604.07	485.88	809.02
PI0186	20mm, standard, c.p knob	each	597.13	531.26	711.03	756.52
PI0187	20mm, heavy-duty, c.p knob	each	1077.60	894.28	859.57	1252.31
PI0188	15mm, concealed, c.p knob	each	852.67	726.14	729.30	861.51
PI0189	15mm, angle, c.p knob	each	717.95	576.55	492.10	760.31
<b>Providing &amp; fixing c.p. brass pillar-cock</b>						
PI0195	15mm, standard, c.p knob	each	621.86	570.42	529.28	733.77
PI0196	15mm, swan neck, c.p knob	each	930.31	928.15	1053.22	931.51
<b>Providing &amp; fixing c.p. brass bibcock</b>						
PI0205	15mm, standard vertical, c.p knob	each	660.37	532.94	458.76	698.20
PI0206	15mm, inclined, c.p. knob	each	620.68	597.13	569.87	639.87
PI0207	15mm, long nose, c.p. knob	each	677.20	673.73	639.87	869.29
PI0208	15mm, long body, c.p. knob	each	675.70	638.70	590.29	906.10
<b>Providing &amp; fixing c.p. brass mixers, 15mm</b>						
PI0215	For basin, single-hole, casted spout	each	2225.79	2297.56	1619.77	3128.51
PI0216	For basin, close-hole	each	1876.03	1905.48	1486.78	2836.87
PI0217	For basin, elbow action, surgical	each	2629.53	3021.19	3576.78	2902.54
PI0218	For basin, elbow action, surgical with shower	each	2997.09	2997.09	3510.68	3883.90
PI0219	For sink, with spout J pipe	each	2007.93	1962.21	2127.22	2891.31
PI0220	For sink, with casted spout swinging	each	2352.98	2205.97	2529.68	2623.00
PI0221	For sink, with swivel spout	each	2134.10	1853.77	2288.37	2703.32
PI0222	For wall, non-telephonic type	each	2841.69	3134.79	2448.02	3630.12
PI0223	For wall, telephonic type with crutch and tel. shower	each	3819.13	3850.63	3364.60	4049.11
PI0224	For wall, telephonic type without crutch and tel. shower	each	3345.13	2917.88	2689.66	3888.71
PI0225	For wall, telephonic type with crutch and without tel. shower	each	3577.71	2846.92	2864.65	4075.36
PI0226	For wall, telephonic type with C.P bend & flanges	each	3442.29	2448.73	3197.95	4641.13
PI0227	For wall, with telephonic shower arrangement with 115mm long bend pipe for over head shower connection	each	4344.82	3878.83	4168.62	4917.27
PI0228	Three hole mixer without pop-up	each	3837.73	3643.31	3655.89	3589.49
PI0229	Three hole mixer with pop-up	each	4697.52	4255.91	4256.84	4767.12
PI0230	For bath, with exposed adjustable legs with telephone shower arrangement with crutch	each	4353.75	4736.48	4383.78	4708.24
PI0231	For shower, three in one, with bend flexible tube, and shower & hook	each	5819.10	4881.71	5053.03	5371.64
<b>Providing &amp; fixing Wall Spouts</b>						
PI0240	C.p., standard, 15mm	each	579.64	686.70	579.64	682.73
PI0241	With diverter, for use with single lever mixers	each	1118.73	1235.74	1118.73	1149.16

Code	Description	Units	PL	GP	SJ	TH
<b>Bathroom Accessories</b>						
PI0250	Providing & fixing 600x450mm bevelled edge mirror (superior glass) incl.4mm A.C sheet base fixed to wooden cleats	each	1075.99	1181.94	1161.36	1298.76
PI0251	Providing & fixing 450x120mm glass shelf, including c.p brass brackets fixed to wooden cleats	each	1137.76	1066.86	1067.10	1335.99
PI0252	Providing & fixing c.p. towel rail 750 x 20mm with c.p brass brackets fixed to wooden cleats	each	1054.88	1017.90	988.97	1123.12
PI0253	Providing & fixing c.p. towel rail 600 x 20mm with c.p brass brackets fixed to wooden cleats	each	919.67	907.19	821.76	1008.41
PI0254	Providing & fixing c.p. towel rail 450 x 20mm with c.p brass brackets fixed to wooden cleats	each	736.09	789.95	662.33	875.23
PI0255	Providing & fixing c.p. towel ring	each	635.87	611.49	527.54	720.02
<b>Providing &amp; fixing toilet paper holder</b>						
PI0260	C.P. brass	each	679.00	636.64	564.29	611.27
PI0261	Recessed ceramic, 200 x 100 mm, coloured,	each	1062.10	1035.80	1035.80	1001.07
PI0262	Recessed ceramic, 200 x 100 mm, white	each	901.63	877.48	877.48	845.61
PI0263	Recessed ceramic, roll-type, 150 x 150 mm	each	876.40	852.98	852.98	822.05
<b>Soap Container, Coat Hooks</b>						
PI0270	Providing & fixing Liquid soap container, c.p, including c.p brass lid & brackets, wooden cleats, c.p brass screws	each	681.10	626.87	612.73	697.45
<b>Providing &amp; fixing soap dish</b>						
PI0275	including brackets, wooden cleats, c.p. brass screws	each	476.42	435.94	413.12	479.69
PI0276	Recessed, ceramic, 150x150 mm	each	651.65	663.43	663.32	663.20
PI0277	Recessed, ceramic, 200x100 mm	each	654.62	651.53	651.65	639.87
<b>Providing &amp; fixing c.p coat hook</b>						
PI0285	Single	each	398.10	416.64	362.77	423.42
PI0286	Double	each	519.98	534.41	468.76	520.57

Code	Description	Units	PL	GP	SJ	TH
<b>Chapter 17: PLUMBING - OUTDOOR WORK</b>						
<b>External Water Supply Pipework</b>						
<b>Providing &amp; laying G.I. pipes including G.I. fittings (excluding trenching, refilling &amp; thrust block)</b>						
PO0001	15mm	m	157.18	182.34	167.76	205.03
PO0002	20mm	m	191.21	205.67	204.51	259.14
PO0003	25mm	m	255.89	270.97	277.97	328.09
PO0004	32mm	m	321.66	342.85	339.94	411.63
PO0005	40mm	m	372.88	400.06	408.81	489.14
PO0006	50mm	m	486.54	522.55	533.05	637.50
PO0007	65mm	m	628.22	690.98	685.15	831.00
PO0008	80mm	m	782.51	860.13	892.21	1062.68
PO0009	100mm	m	1129.95	1172.45	1376.60	1535.98
PO0010	150mm	m	1750.96	1559.35	1950.15	2442.59
<b>Providing &amp; laying H.D.P.E pipes, 12.5 PN, including H.D.P.E fittings (excluding trenching, refilling &amp; thrust block)</b>						
PO0640	20mm	m	52.79	53.29	53.03	53.62
PO0641	25mm	m	70.35	71.12	70.68	71.64
PO0642	32mm	m	99.05	102.26	94.43	101.17
PO0643	40mm	m	147.49	151.87	141.61	150.77
PO0644	50mm	m	215.52	222.60	206.47	220.67
PO0645	63mm	m	343.38	354.75	328.30	351.42
PO0646	75mm	m	468.16	484.50	446.24	479.63
PO0647	90mm	m	663.90	685.36	638.08	680.25
PO0648	110mm	m	966.44	1001.13	920.13	991.02
PO0649	140mm	m	1549.44	1604.82	1477.05	1589.01
PO0650	160mm	m	1988.61	2060.35	1895.73	2040.14
PO0651	225mm	m	3824.86	3965.29	3645.32	3926.45
PO0652	250mm	m	4435.30	4501.48	4493.00	4545.61
PO0653	280mm	m	5404.73	5598.41	5615.33	5681.41
PO0654	315mm	m	6819.63	7064.81	7086.83	7169.89
PO0655	355mm	m	8634.17	8945.50	8972.52	9078.93
PO0656	400mm	m	11157.89	11561.40	11596.70	11734.34
<b>Providing &amp; laying H.D.P.E pipes, 10 PN, including H.D.P.E fittings (excluding trenching, refilling &amp; thrust block)</b>						
PO0015	25mm	m	62.82	61.51	63.36	63.92
PO0016	32mm	m	88.86	91.09	86.33	90.66
PO0017	40mm	m	129.43	133.71	122.89	132.26
PO0018	50mm	m	183.34	189.77	174.04	187.65
PO0019	63mm	m	298.43	308.16	285.25	305.25
PO0020	75mm	m	402.45	416.01	384.47	412.10
PO0021	90mm	m	566.00	585.96	538.86	579.83
PO0022	110mm	m	814.89	844.10	775.95	835.35
PO0023	140mm	m	1181.81	1182.10	1241.18	1208.32
PO0024	160mm	m	1486.66	1477.21	1589.97	1519.92
PO0025	225mm	m	3213.91	3338.36	3044.43	3299.35
PO0665	250mm	m	3709.92	3764.94	3757.95	3801.63
PO0666	280mm	m	4512.22	4673.02	4686.76	4741.93
PO0667	315mm	m	5694.96	5898.72	5916.78	5986.04
PO0668	355mm	m	7218.02	7477.18	7500.33	7588.25
PO0669	400mm	m	9316.13	9651.79	9681.22	9795.64

Code	Description	Units	PL	GP	SJ	TH
<b>Providing &amp; laying H.D.P.E Pipes, 6 PN, including H.D.P.E fittings (excluding trenching, refilling &amp; thrust block)</b>						
PO0030	32mm	m	79.76	80.65	80.46	81.24
PO0031	40mm	m	99.53	100.65	100.38	101.40
PO0032	50mm	m	139.68	141.42	141.14	142.58
PO0033	63mm	m	225.02	227.73	227.04	229.53
PO0034	75mm	m	297.79	301.61	300.66	304.16
PO0035	90mm	m	412.81	418.21	417.42	421.81
PO0036	110mm	m	552.53	574.69	518.26	566.04
PO0037	140mm	m	885.12	918.69	836.21	906.81
PO0038	160mm	m	1123.72	1167.88	1058.96	1152.03
PO0039	225mm	m	2115.86	2200.31	1994.94	2171.44
PO0675	250mm	m	2428.59	2463.90	2459.47	2459.47
PO0676	280mm	m	2954.20	3057.60	3066.42	3101.92
PO0677	315mm	m	3716.49	3847.35	3858.98	3903.43
PO0678	355mm	m	4684.96	4850.79	4865.10	4921.86
PO0679	400mm	m	6027.27	6241.76	6264.40	6333.68
<b>Providing &amp; laying H.D.P.E Pipes, 4 PN, including H.D.P.E fittings (excluding trenching, refilling &amp; thrust block)</b>						
PO0045	40mm	m	86.92	94.03	96.76	88.31
PO0046	50mm	m	119.61	121.03	120.09	121.99
PO0047	63mm	m	174.84	176.77	176.53	178.06
PO0048	75mm	m	220.01	222.63	222.03	224.38
PO0049	90mm	m	309.93	313.75	312.32	316.30
PO0050	110mm	m	411.57	426.46	389.70	421.10
PO0051	140mm	m	659.97	679.33	637.78	675.09
PO0052	160mm	m	830.67	857.01	798.76	850.48
PO0053	225mm	m	1502.32	1562.03	1415.87	1541.06
PO0685	250mm	m	1721.73	1746.17	1743.15	1762.46
PO0686	280mm	m	2108.13	2180.36	2181.01	2211.31
PO0687	315mm	m	2615.04	2705.32	2713.43	2744.02
PO0688	355mm	m	3304.92	3419.92	3430.24	3469.20
PO0689	400mm	m	5178.61	5361.84	5377.82	5440.36
<b>Providing &amp; laying H.D.P.E Pipes, 2.5 PN, including H.D.P.E fittings (excluding trenching, refilling &amp; thrust block)</b>						
PO0060	110mm	m	306.11	309.78	309.21	312.23
PO0061	140mm	m	492.61	498.63	497.79	502.65
PO0062	160mm	m	608.03	615.83	614.45	621.03
PO0063	225mm	m	1079.77	1094.83	1092.73	1104.87
<b>Providing and fixing 3-layer PP-R (Polypropylene Random Copolymer) PN 16 pipes, SDR 7.4 UV Stabilized and anti microbial fusion welded, having thermal stability for hot and cold water supply including all PP-R plain and brass Threaded Polypropylene random fittings excluding trenching, refilling but including testing of joints complete as per direction of Engineer-in- Charge.</b>						
PO0700	16mm	m	110.94	110.94	110.94	121.80
PO0701	20mm	m	130.67	130.67	130.67	142.94
PO0702	25mm	m	190.17	190.17	190.17	209.05
PO0703	32mm	m	298.30	298.30	298.30	328.99
PO0704	40mm	m	468.76	468.76	468.76	517.87
PO0705	50mm	m	723.76	723.76	723.76	801.20
PO0706	63mm	m	1159.68	1159.68	1159.68	1283.05
PO0707	75mm	m	1627.18	1627.18	1627.18	1802.49
PO0708	90mm	m	1670.13	1670.13	1670.13	1848.86

Code	Description	Units	PL	GP	SJ	TH
<b>Providing and fixing 3-layer PP-R (Polypropylene Random Copolymer) PN 10 pipes, SDR 7.4 UV Stabilized and anti microbial fusion welded, having thermal stability for hot and cold water supply including all PP-R plain and brass Threaded Polypropylene random fittings excluding trenching, refilling but including testing of joints complete as per direction of Engineer-in- Charge.</b>						
PO0709	110mm	m	2442.41	2442.41	2442.41	2706.26
PO0710	160mm	m	5118.26	5118.26	5118.26	5675.71
<b>Providing and Laying Ductile Iron K - 9 pipes excluding trenching, refilling &amp; thrust block.</b>						
PO0065	80 mm	m	1485.60	1197.60	1186.23	1196.93
PO0066	100 mm	m	1639.00	1389.12	1375.89	1388.33
PO0067	150 mm	m	2201.81	2027.21	2007.96	2026.08
PO0068	200 mm	m	3029.11	2785.62	2759.09	2783.58
PO0069	250 mm	m	4211.93	3700.45	3665.20	3697.88
PO0070	300 mm	m	4677.51	4677.51	4632.98	4674.89
PO0071	350 mm	m	5860.56	5860.56	5804.70	5857.27
PO0072	400 mm	m	6986.20	6986.20	6919.74	6982.29
PO0073	450 mm	m	8243.66	8243.66	8165.25	8239.06
PO0074	500 mm	m	9660.93	9660.93	9569.02	9655.52
PO0075	600 mm	m	13237.54	13237.54	13111.49	13230.12
<b>Providing and Laying Ductile Iron K - 7 pipes excluding trenching, refilling &amp; thrust block.</b>						
PO0078	100 mm	m	1398.11	1178.91	1167.73	1178.26
PO0079	150 mm	m	1853.01	1829.09	1811.76	1828.08
PO0080	200 mm	m	2083.03	2402.29	2379.50	2400.95
PO0081	250 mm	m	2866.90	3163.43	3133.40	3161.66
PO0082	300 mm	m	3982.74	3963.84	3926.23	3961.63
PO0083	350 mm	m	4939.11	4986.48	4939.11	4961.21
PO0084	400 mm	m	5876.61	5932.84	5876.61	5929.53
PO0085	450 mm	m	6873.92	6939.68	6873.92	6935.81
PO0086	500 mm	m	8107.91	8185.48	8107.91	8180.92
PO0087	600 mm	m	10982.71	11087.90	10982.71	11081.70
<b>Providing and Laying Double Flanged (Screwed or Welded) Centrifugally Spun Ductile Iron K-9 Pipes excluding trenching, refilling &amp; thrust block.</b>						
PO0090	100 mm	m	2344.96	2367.49	2344.96	2365.79
PO0091	150 mm	m	3379.36	3411.85	3379.36	3409.69
PO0092	200 mm	m	4748.85	4794.57	4748.85	4790.99
PO0093	250 mm	m	6245.02	6305.15	6245.02	6309.59
PO0094	300 mm	m	7748.28	7822.83	7748.28	7818.16
PO0095	350 mm	m	9605.40	9697.76	9605.40	9691.56
PO0096	400 mm	m	11516.78	11627.48	11516.78	11620.81
PO0097	450 mm	m	15547.74	15697.08	15547.74	15687.68
PO0098	500 mm	m	18330.81	18506.35	18330.81	18495.41
PO0099	600 mm	m	23934.50	24163.09	23934.50	24148.88
<b>Brass Fittings</b>						
<b>Providing &amp; fixing brass stop cock</b>						
PO0100	15mm	each	440.03	395.06	466.27	584.09
PO0101	20mm	each	591.68	495.15	454.61	592.26
PO0102	25mm	each	693.75	611.98	536.27	762.58



Code	Description	Units	PL	GP	SJ	TH
<b>Providing &amp; fixing brass full way valve with wheel</b>						
PO0105	32mm	each	1111.27	1325.38	1325.38	1291.61
PO0106	40mm	each	1353.85	1609.07	1609.07	1633.99
PO0107	50mm	each	1678.49	2008.98	2008.98	2214.93
PO0108	65mm	each	2927.93	3606.88	3606.88	3805.52
PO0109	80mm	each	3885.18	5076.49	5076.49	5210.05
<b>Providing &amp; fixing non-return valve</b>						
PO0110	50mm	each	1832.69	1999.02	2325.64	2542.73
PO0111	65mm	each	3582.13	3969.33	4009.32	4496.70
PO0112	80mm	each	5397.67	6004.88	6317.69	6558.00
<b>Providing &amp; fixing brass bibcock</b>						
PO0114	15mm, brass	each	367.12	334.06	285.46	372.95
<b>H.D.P.E Fittings (Butt-Welded-Type)</b>						
<b>Providing &amp; fixing H.D.P.E, Equal Tee butt-welded-type fittings</b>						
PO0115	20mm	each	75.48	72.35	65.18	84.23
PO0116	25mm	each	98.81	96.89	85.81	111.06
PO0117	32mm	each	116.31	124.94	123.03	159.47
PO0118	50mm	each	174.64	186.68	174.64	174.64
PO0119	63mm	each	267.96	298.23	267.96	267.96
PO0120	90mm	each	361.28	361.28	361.28	419.61
PO0121	110mm	each	580.01	580.01	580.01	545.99
PO0122	160mm	each	1609.49	1644.49	1761.14	2072.22
<b>Providing &amp; fixing H.D.P.E Elbow</b>						
PO0125	32mm	each	76.87	95.18	71.67	95.31
PO0126	50mm	each	143.22	158.40	132.18	183.38
PO0127	63mm	each	228.15	224.07	214.44	311.51
PO0128	90mm	each	301.01	362.60	358.08	459.66
PO0129	110mm	each	451.69	503.37	571.32	567.37
<b>Providing &amp; fixing H.D.P.E Reducer</b>						
PO0130	90 x 50mm	each	288.43	281.87	283.27	282.54
PO0131	90 x 63mm	each	314.74	305.15	311.75	302.96
PO0132	110 x 63mm	each	329.20	316.01	304.44	329.20
PO0133	110 x 90mm	each	800.21	785.87	875.97	769.58
<b>Providing &amp; fixing H.D.P.E Blank End (Cap)</b>						
PO0140	50mm	each	134.42	112.05	114.48	130.89
PO0141	63mm	each	160.31	140.62	143.74	157.14
PO0142	90mm	each	339.67	355.29	367.44	413.78
PO0143	110mm	each	364.14	331.98	338.98	405.03
PO0144	160mm	each	618.60	566.86	578.85	691.81

Code	Description	Units	PL	GP	SJ	TH
<b>Providing and fixing push on joints to Centrifugally Spun D.I pipes including the cost of rubber gaskets</b>						
PO0150	80 mm	each	95.32	88.99	88.99	85.68
PO0151	100 mm	each	113.19	105.96	105.96	102.18
PO0152	150 mm	each	175.84	164.77	164.77	159.46
PO0153	200 mm	each	269.97	258.66	258.66	249.81
PO0154	250 mm	each	307.58	321.91	321.91	310.99
PO0155	300 mm	each	463.53	433.72	433.72	418.08
PO0156	350 mm	each	513.39	478.88	478.88	461.17
PO0157	400 mm	each	627.84	689.66	689.66	664.16
PO0158	450 mm	each	729.38	736.70	736.70	709.84
PO0159	500 mm	each	971.29	965.89	965.89	928.58
PO0160	600 mm	each	1302.76	1295.26	1295.26	1245.68
<b>Soil Waste Pipework</b>						
<b>Cast Iron Pipe and Fitting</b>						
<b>Providing lead-caulked joints to C.I pipes and fittings</b>						
PO0162	50mm dia pipe	each	173.29	181.10	187.03	169.33
PO0163	75mm dia pipe	each	211.77	220.70	227.47	207.24
PO0164	100mm dia pipe	each	251.18	261.13	268.67	246.14
PO0165	150mm dia pipe	each	369.14	387.01	400.56	360.09
<b>Providing &amp; fixing C.I Soil Waste and Vent pipes</b>						
PO0166	50mm dia	m	400.63	413.00	463.65	638.41
PO0167	75mm dia	m	606.99	653.00	587.07	843.75
PO0168	100mm dia	m	675.71	703.58	831.05	1013.28
PO0169	150mm dia	m	899.03	908.32	951.15	1093.84
<b>Waste Fittings &amp; Accessories</b>						
<b>Providing &amp; fixing C.I door bend including fittings</b>						
PO0170	50mm dia	each	266.19	274.82	279.80	259.21
PO0171	75mm dia	each	266.19	299.09	325.76	355.45
PO0172	100mm dia	each	266.19	348.89	406.75	426.61
<b>Providing &amp; fixing C.I plain bend including fittings</b>						
PO0180	50mm dia	each	205.51	167.99	213.60	235.88
PO0181	75mm dia	each	218.48	191.79	225.50	349.62
PO0182	100mm dia	each	224.43	251.28	276.07	353.51
<b>Providing &amp; fixing C.I heel rest bend</b>						
PO0190	50mm	each	166.67	169.42	197.61	160.64
PO0191	75mm	each	281.24	280.80	286.71	316.95
PO0192	100mm	each	267.48	342.00	336.32	399.78
<b>Providing &amp; fixing C.I double equal door junction including fittings</b>						
PO0200	100mm	each	549.10	513.20	606.49	528.10
PO0201	75mm	each	421.03	358.78	345.90	404.45
PO0202	50mm	each	331.18	300.86	294.43	318.12

Code	Description	Units	PL	GP	SJ	TH
<b>Providing &amp; fixing C.I double equal plain junction including fittings</b>						
PO0210	100mm	each	704.57	641.88	660.06	677.42
PO0211	75mm	each	473.91	326.60	345.90	455.77
PO0212	50mm	each	380.88	275.13	294.43	365.95
<b>Providing &amp; fixing C.I single equal door junction including fittings</b>						
PO0220	150mm	each	412.75	457.52	447.61	396.28
PO0221	100mm	each	387.26	403.81	428.79	371.78
PO0222	75mm	each	286.59	284.13	305.46	274.96
PO0223	50mm	each	227.96	238.44	244.18	218.96
<b>Providing &amp; fixing C.I single equal plain junction including fittings</b>						
PO0230	100mm	each	559.29	489.29	540.43	537.43
PO0231	75mm	each	412.75	385.12	431.68	396.28
PO0232	50mm	each	278.93	274.82	353.98	267.96
<b>Providing &amp; fixing C.I double unequal door junction including fittings</b>						
PO0240	100x75mm	each	482.83	470.91	513.20	463.94
PO0241	100x50mm	each	425.49	413.31	448.85	409.11
<b>Providing &amp; fixing C.I double unequal plain junction</b>						
PO0250	100x75mm	each	470.09	457.43	487.46	452.27
PO0251	100x50mm	each	406.37	409.63	429.55	390.45
<b>Providing &amp; fixing C.I single unequal door junction</b>						
PO0260	100x75mm	each	479.01	495.17	503.54	460.44
PO0261	100x50mm	each	450.98	455.29	474.59	316.95
PO0262	75x50mm	each	298.69	307.94	320.16	286.62
<b>Providing &amp; fixing C.I single unequal plain junction</b>						
PO0270	100x75mm	each	419.11	430.83	430.47	403.28
PO0271	100x50mm	each	361.77	378.08	383.89	347.28
PO0272	75x50mm	each	278.93	293.14	293.20	267.96
<b>Providing &amp; fixing C.I double equal Y-Junction</b>						
PO0280	100mm	each	704.57	635.45	457.86	677.42
PO0281	75mm	each	528.71	423.11	367.71	508.27
PO0282	50mm	each	380.88	345.90	260.93	365.95
<b>Providing &amp; fixing C.I single equal Y-Junction</b>						
PO0290	100mm	each	661.24	625.33	590.41	635.42
PO0291	75mm	each	479.01	451.30	320.16	460.44
PO0292	50mm	each	253.45	213.54	281.56	243.46

Code	Description	Units	PL	GP	SJ	TH
<b>Providing &amp; fixing single unequal plain inverted branch</b>						
PO0300	100x50mm	each	484.65	505.48	522.21	473.27
PO0301	75x50mm	each	358.43	371.64	388.37	344.95
<b>Providing &amp; fixing S.C.I offsets - 100mm Offsets</b>						
PO0310	75mm projection	each	399.70	396.15	415.88	384.61
PO0311	150mm projection	each	484.65	488.07	517.02	466.27
<b>Providing &amp; fixing S.C.I offsets - 75mm offset</b>						
PO0320	75mm projection	each	332.94	342.22	338.54	320.45
PO0321	150mm projection	each	466.45	467.23	415.88	448.77
<b>Providing &amp; fixing S.C.I offsets - 50 mm offset</b>						
PO0330	75mm projection	each	359.64	317.71	294.43	346.12
PO0331	150mm projection	each	493.15	502.78	519.62	474.44
<b>Providing &amp; fixing C.I terminal guard</b>						
PO0340	150mm	each	699.47	706.22	631.04	672.75
PO0341	100mm	each	400.01	397.38	396.64	384.61
PO0342	75mm	each	266.19	284.13	324.07	256.29
PO0343	50mm	each	164.24	172.18	236.09	158.30
<b>Providing &amp; fixing C.I collar</b>						
PO0350	100mm	each	286.82	306.72	346.73	276.13
PO0351	75mm	each	215.22	226.90	209.96	207.30
PO0352	50mm	each	161.81	204.35	215.22	155.97
<b>Providing &amp; fixing C.I P-Type Nahani trap</b>						
PO0360	100mm inlet & 75mm outlet	each	492.50	742.77	634.93	752.51
PO0361	100mm inlet & 50mm outlet	each	399.14	572.45	581.38	520.37
<b>PVC pipes and Fittings</b>						
<b>Providing &amp; fixing P.V.C soil waste and vent pipes, single or double socketed, including pipe clip complete (excluding the cost of PVC fittings)</b>						
PO0370	75mm dia	m	156.97	154.15	163.50	213.59
PO0371	90mm dia	m	240.24	214.16	250.04	302.73
PO0372	110mm dia	m	313.70	231.71	303.91	330.69
<b>Providing &amp; fixing P.V.C Pipe connector</b>						
PO0380	110mm dia	each	125.06	151.30	96.87	136.72
<b>Providing &amp; fixing P.V.C Coupler</b>						
PO0385	75mm dia	each	70.23	72.56	67.70	88.70
PO0386	90mm dia	each	82.48	113.41	83.26	113.97
PO0387	110mm dia	each	100.56	96.87	89.09	126.81

Code	Description	Units	PL	GP	SJ	TH
<b>Providing &amp; fixing P.V.C Reducer</b>						
PO0395	90x75mm	each	130.13	167.99	104.64	129.92
PO0396	110x75mm	each	140.92	167.64	124.09	144.69
PO0397	110x90mm	each	165.45	212.67	124.09	172.69
<b>Providing &amp; fixing P.V.C plain bend</b>						
PO0405	75mm dia	each	79.56	95.02	75.48	98.81
PO0406	90mm dia	each	104.06	145.59	106.98	137.69
PO0407	110mm dia	each	116.31	153.64	116.31	146.64
<b>Providing &amp; fixing P.V.C door bend</b>						
PO0415	75mm dia	each	115.14	127.74	91.03	138.08
PO0416	90mm dia	each	150.14	192.76	153.25	179.69
PO0417	110mm dia	each	158.30	189.33	176.58	191.74
<b>Providing &amp; fixing P.V.C Long arm bend with door</b>						
PO0425	75mm dia	each	217.64	229.78	237.12	190.19
PO0426	90mm dia	each	314.74	326.87	342.11	264.07
PO0427	110mm dia	each	423.97	423.97	434.98	349.62
<b>Providing &amp; fixing P.V.C Single Tee plain</b>						
PO0435	75mm dia	each	100.56	114.72	89.09	120.97
PO0436	90mm dia	each	157.72	149.96	129.92	162.97
PO0437	110mm dia	each	171.14	183.89	149.36	203.02
<b>Providing &amp; fixing P.V.C Single Tee with door</b>						
PO0445	75mm dia	each	120.97	124.64	103.09	143.92
PO0446	90mm dia	each	169.97	167.69	157.91	201.08
PO0447	110mm dia	each	190.38	204.32	186.30	232.19
<b>Providing &amp; fixing P.V.C Double Tee plain</b>						
PO0455	75mm dia	each	190.38	187.91	158.69	232.19
PO0456	90mm dia	each	273.21	266.19	231.02	323.18
PO0457	110mm dia	each	381.11	275.51	308.79	444.89
<b>Providing &amp; fixing P.V.C Double Tee with door</b>						
PO0465	75mm dia	each	277.88	274.47	197.97	317.73
PO0466	90mm dia	each	349.03	454.31	253.96	420.00
PO0467	110mm dia	each	392.39	369.67	326.68	459.86
<b>Providing &amp; fixing P.V.C Single Y, plain</b>						
PO0475	75mm dia	each	124.47	129.92	110.48	143.72
PO0476	90mm dia	each	185.72	165.30	158.69	215.85
PO0477	110mm dia	each	226.55	203.80	199.91	252.41
<b>Providing &amp; fixing P.V.C Single Y, with door</b>						
PO0485	75mm dia	each	146.64	186.30	154.29	178.52
PO0486	90mm dia	each	221.88	221.30	239.41	276.13
PO0487	110mm dia	each	296.54	259.21	275.19	351.17

Code	Description	Units	PL	GP	SJ	TH
<b>Providing &amp; fixing P.V.C Double Y, plain</b>						
PO0495	75mm dia	each	184.55	204.90	132.15	236.07
PO0496	90mm dia	each	260.38	297.12	250.74	320.07
PO0497	110mm dia	each	300.04	262.13	253.84	385.78
<b>Providing &amp; fixing P.V.C Double Y, with door</b>						
PO0505	75mm dia	each	233.55	246.95	200.88	332.12
PO0506	90mm dia	each	318.70	411.12	270.88	377.23
PO0507	110mm dia	each	357.20	330.54	313.75	466.27
<b>Providing &amp; fixing P.V.C Offset, 75mm dia</b>						
PO0515	With 75mm projection	each	308.79	254.05	284.99	348.45
PO0516	With 150mm projection	each	355.45	363.29	350.43	355.45
<b>Providing &amp; fixing P.V.C Offset, 90mm dia</b>						
PO0525	With 75mm projection	each	448.77	411.83	368.28	448.77
PO0526	With 150mm projection	each	550.26	508.93	546.76	550.26
<b>Providing &amp; fixing P.V.C Offset, 110mm dia</b>						
PO0535	With 75mm projection	each	558.92	464.65	427.78	558.92
PO0536	With 150mm projection	each	641.35	519.78	534.87	641.35
<b>Providing &amp; fixing P.V.C Terminal guard</b>						
PO0545	75mm dia	each	109.34	121.59	121.62	105.53
PO0546	90mm dia	each	121.59	139.97	133.88	117.31
PO0547	110mm dia	each	127.71	146.09	146.13	123.19
<b>Providing &amp; fixing P.V.C P-Trap, without air vent</b>						
PO0555	Big	each	311.61	349.60	302.96	348.91
PO0556	Small	each	279.82	326.30	309.37	298.66
<b>Providing &amp; fixing P.V.C Nahani Trap</b>						
PO0565	110mm inlet & 75mm outlet	each	172.65	213.20	211.58	260.58
<b>uPVC pipes</b>						
<b>Providing &amp; laying uPVC soil waste Pipes including fittings pressure class 4 kg/sq.cm (excluding trenching, refilling &amp; thrust block)</b>						
PO0720	110 mm	m	567.83	539.97	539.97	565.59
PO0721	160 mm	m	1050.06	1008.99	1008.99	1057.40
PO0722	180 mm	m	1137.02	1094.37	1094.37	1146.97
PO0723	200 mm	m	2396.62	2352.39	2352.39	2467.81
PO0724	225 mm	m	2545.92	2500.11	2500.11	2622.83
PO0725	250 mm	m	3255.66	3201.63	3201.63	3359.02
PO0726	280 mm	m	3443.89	3384.03	3384.03	3550.26
PO0727	315 mm	m	4679.44	4612.79	4612.79	4840.11
PO0728	400 mm	m	5440.35	5365.93	5365.93	5630.52
PO0729	450 mm	m	5571.41	5488.25	5488.25	5758.53
PO0730	560 mm	m	5892.50	5786.48	5786.48	6070.55

Code	Description	Units	PL	GP	SJ	TH
<b>Painting Pipes &amp; Fittings</b>						
<b>Painting G.I pipes and fittings including primer &amp; white coat, for new work</b>						
PO0570	15mm dia pipe	m	6.12	6.10	5.76	6.71
PO0571	20mm dia pipe	m	8.20	8.18	7.72	9.00
PO0572	25mm dia pipe	m	10.17	10.14	9.56	11.15
PO0573	32mm dia pipe	m	13.03	12.99	12.25	14.29
<b>Painting C.I spun soil waste vent pipes &amp; fittings including primer, top coat (any colour), for new work</b>						
PO0580	50mm	m	20.89	20.96	19.67	23.06
PO0581	75mm	m	28.81	29.88	33.34	32.52
PO0582	100mm	m	41.78	41.92	39.35	46.13
<b>Repainting C.I spun soil waste vent pipes &amp; fittings including paints of any colour</b>						
PO0590	50mm	m	10.30	10.10	9.31	11.31
PO0591	75mm	m	15.46	15.14	13.97	16.96
PO0592	100mm	m	20.61	20.19	18.63	22.61
<b>Soak - pits &amp; Septic Tanks</b>						
<b>Constructing Soak Pit</b>						
PO0600	Size 1200x1200x1200mm, filled with brick bats including 100mm SW drain pipe X 1200mm long	each	5807.19	5640.34	5862.17	6638.60
PO0601	Size 2500 dia. x 3000mm depth including 450x450mm dry brick honeycomb shaft and SW drain pipe X 1800mm long	each	42971.41	41787.69	43407.60	48341.60
<b>Constructing Septic Tanks, in R.R Masonry in cement mortar 1:6, including fittings, C.I cover with frame, 40mm thick concrete flooring (40mm aggregates) cement plaster concrete base in C.C 1:4:8 etc. complete as per standard design</b>						
PO0610	15 users	each	36375.41	36553.93	35688.25	41747.65
PO0611	25 users	each	44677.72	45122.28	43897.18	51204.12
PO0612	50 users	each	63974.56	64826.38	63789.56	73520.49
PO0613	75 users	each	74489.32	75638.37	74448.19	85358.84
PO0614	100 users	each	89321.62	90717.89	89176.30	101977.93
<b>Constructing Septic Tanks, in 2nd class brick masonry in cement mortar 1:4, including fittings, C.I cover with frame, 40mm thick concrete flooring (40mm aggregates) cement plaster concrete base in C.C 1:4:8 etc. complete as per standard design</b>						
PO0620	15 users	each	35196.63	34346.23	34238.77	43153.53
PO0621	25 users	each	43676.01	42717.24	42542.13	53838.43
PO0622	50 users	each	60210.41	58959.72	59484.16	74617.97
PO0623	75 users	each	72448.60	70907.44	71761.99	90686.01
PO0624	100 users	each	87200.59	85417.61	86278.24	107993.77
<b>Constructing Septic Tanks, in reinforced concrete 1:2:4 (20mm aggregates) including fittings, C.I cover with frame, 40mm thick concrete flooring (40mm aggregates) cement plaster concrete base in C.C 1:4:8 etc. complete as per standard design</b>						
PO0630	15 users	each	42733.29	42379.74	42252.48	47285.91
PO0631	25 users	each	55449.52	55228.72	55027.10	61101.29
PO0632	50 users	each	79532.99	79347.37	79824.71	87638.50
PO0633	75 users	each	99061.72	98915.46	99705.40	108947.15
PO0634	100 users	each	122238.59	122210.27	123105.00	133307.82

Code	Description	Units	PL	GP	SJ	TH
<b>Chapter 18: PLASTERING</b>						
<b>Mud Plaster</b>						
<b>Providing &amp; laying mud plaster including neat finish</b>						
PL0001	15mm	sq.m	129.90	129.88	129.88	129.88
PL0002	20mm	sq.m	138.25	138.22	138.22	138.22
<b>Cement Plaster</b>						
<b>Providing &amp; laying 6mm cement plaster (in ceilings)</b>						
PL0010	C.M 1:3	sq.m	157.89	159.24	159.60	169.60
PL0011	C.M 1:4	sq.m	150.73	151.81	151.82	160.79
PL0012	Extra for plaster to ceiling height > 5m .....per additional metre. ht	sq.m	4.96	4.96	4.96	4.96
<b>Providing &amp; laying 12mm cement plaster</b>						
PL0020	C.M 1:3	sq.m	205.19	207.89	208.61	228.62
PL0021	C.M 1:4	sq.m	190.74	192.89	192.90	210.85
PL0022	C.M 1:5	sq.m	182.93	184.79	184.42	201.25
PL0023	C.M 1:6	sq.m	176.28	177.90	177.20	193.07
<b>Providing &amp; laying 15mm cement plaster on rough side of single or half-brick wall</b>						
PL0030	C.M 1:3	sq.m	241.59	244.81	245.67	269.57
PL0031	C.M 1:4	sq.m	224.35	226.93	226.94	248.37
PL0032	C.M 1:5	sq.m	214.99	217.22	216.78	236.87
PL0033	C.M 1:6	sq.m	207.03	208.96	208.13	227.08
<b>Providing &amp; laying 20mm cement plaster</b>						
PL0040	C.M 1:3	sq.m	297.01	301.21	302.33	333.46
PL0041	C.M 1:4	sq.m	274.52	277.87	277.89	305.80
PL0042	C.M 1:5	sq.m	262.38	265.28	264.70	290.88
PL0043	C.M 1:6	sq.m	252.02	254.54	253.45	278.14
<b>Plaster Band</b>						
<b>Providing &amp; laying 12mm plain cement mortar band in C.M 1:4</b>						
PL0050	Flush band	sq.m	450.75	452.85	452.85	470.30
PL0051	Sunk band	sq.m	489.96	492.06	492.07	509.51
PL0052	Raised band	sq.m	555.07	557.16	557.17	574.62
<b>Providing &amp; laying 20mm plain cement mortar band in C.M 1:4</b>						
PL0060	Flush band	sq.m	554.50	557.50	557.51	582.44
PL0061	Sunk band	sq.m	600.89	603.89	603.90	628.82
PL0062	Raised band	sq.m	679.31	682.31	682.33	707.25



Code	Description	Units	PL	GP	SJ	TH
<b>Cement Plaster with Floating Coat</b>						
<b>Providing &amp; laying cement plaster, finished with floating coat of neat cement</b>						
PL0070	12mm plaster in C.M 1:3	sq.m	255.07	258.40	259.95	282.39
PL0071	15mm plaster in C.M 1:3	sq.m	291.46	295.32	297.01	323.34
PL0072	20mm plaster in C.M 1:3	sq.m	346.88	351.72	353.67	387.23
PL0073	12mm plaster in C.M 1:4	sq.m	240.61	243.40	244.24	264.62
PL0074	15mm plaster in C.M 1:4	sq.m	274.22	277.43	278.28	302.15
PL0075	20mm plaster in C.M 1:4	sq.m	324.39	328.38	329.23	359.57
PL0076	6mm cement plaster in C.M 1:3, including lime wash on top of wall when dry for bearing R.C slabs and beams	sq.m	218.26	220.80	222.79	235.34
<b>Decorative Plaster</b>						
<b>Rough cast plaster with a mixture of sand and gravel or crushed stone 2-12mm including plaster in 2 layers-12mm 1:4, &amp; 10mm 1:3 hydrated lime cement</b>						
PL0080	Grey cement	sq.m	467.18	475.13	484.95	522.82
PL0081	White cement	sq.m	665.50	672.01	693.17	725.10
<b>Pebble dash plaster with a mixture of washed pebble or crushed stone 6mm to 12mm nominal size dashed over fresh plaster in the layers, under layer 12mm cement plaster 1:4 and top layer 10mm cement plaster mixed with finally ground hydrated lime by volume of cement</b>						
PL0090	Grey cement	sq.m	474.55	482.50	492.31	530.19
<b>Cement Plaster in 2 coats</b>						
PL0091	18 mm cement plaster in two coats; under layer 12 mm C.P 1:5 (1 cement : 5 sand) and top layer 6 mm thick C.P 1:4 (1 cement : 6 sand) finished even and smooth and curing etc. complete	sq.m	203.27	203.29	203.29	203.47
PL0092	18 mm cement plaster in two coats; under layer 12 mm C.P 1:5 (1 cement : 5 sand) and top layer 6 mm thick C.P 1:3 (1 cement : 6 sand) finished even and smooth and curing etc. complete	sq.m	203.30	203.32	203.32	203.51
<b>Cement Lime Plaster</b>						
PL0095	12 mm cement lime plaster of mix on fair side of brick work - 1:1:6 ( 1 cement :1 lime : 6 sand) finished even and smooth and curing etc. complete	sq.m	263.57	285.92	260.22	299.19
PL0096	12 mm cement lime plaster of mix on rough side of brick work - 1:1:6 ( 1 cement :1 lime : 6 sand) finished even and smooth and curing etc. complete	sq.m	254.64	281.33	250.63	297.18

Code	Description	Units	PL	GP	SJ	TH
<b>Extra for cement plastering</b>						
<b>Extra for providing and mixing water-proofing materials in proportion recommended by the manufacturers</b>						
PL0100	12mm plaster in C.M 1:3	sq.m	25.30	23.93	32.10	30.37
PL0101	12mm plaster in C.M 1:4	sq.m	21.04	19.98	26.33	24.98
PL0102	15mm plaster in C.M 1:3	sq.m	27.43	25.91	34.99	33.07
PL0103	15mm plaster in C.M 1:4	sq.m	23.23	22.01	29.30	27.76
PL0104	20mm plaster in C.M 1:3	sq.m	32.56	30.67	41.95	39.57
PL0105	20mm plaster in C.M 1:4	sq.m	26.98	25.49	34.38	32.50
PL0110	Neat cement punning	sq.m	49.87	50.51	51.34	53.77
<b>Plaster of Paris</b>						
<b>Providing &amp; fixing 12mm Plaster of Paris (gypsum anhydrous) tiles, rendered smooth with Plaster of Paris</b>						
PL0120	Height above floor < 5m	sq.m	828.96	997.69	715.97	1116.64
PL0121	Extra for heights-above-floor > 5m.....per metre height	sq.m	58.91	58.91	58.91	58.91
<b>Putty finishes</b>						
PL0125	Providing & applying putty of thickness 2mm or more over plastered surface to prepare the surface even and smooth complete.	sq.m	192.89	191.39	165.39	213.69

Code	Description	Units	PL	GP	SJ	TH
<b>Chapter 19: PAINTING &amp; WALL PAPER</b>						
<b>Surface Preparation</b>						
<b>Surface preparation removing by scraping, sand papering, including scratch repairs</b>						
PT0001	White colour-wash	sq.m	8.02	8.02	8.02	8.02
PT0002	Dry oil bound distemper	sq.m	9.91	9.91	9.91	9.91
<b>Painting Items</b>						
<b>Providing &amp; applying one coat of primers</b>						
PT0010	Cement primer	sq.m	38.71	38.26	38.14	40.59
PT0011	Metal work - synthetic red oxide primer	sq.m	33.66	35.24	35.21	36.85
PT0012	Wood work - pink primer	sq.m	42.41	39.88	41.28	44.47
PT0013	Wood work - white primer	sq.m	35.40	35.24	36.31	38.30
PT0014	Red lead primer	sq.m	33.94	36.34	35.63	38.14
<b>Providing &amp; applying white or colour washing</b>						
PT0020	White washing with lime-new work-three coats	sq.m	27.81	31.63	27.02	31.28
PT0021	White washing with lime, old work, two coats	sq.m	16.23	17.35	18.93	19.17
PT0022	White washing with lime, old work, one coat	sq.m	9.38	9.93	10.73	10.84
PT0023	Colour washing\new work, two coats, including base coat of white-wash with lime	sq.m	27.29	28.96	31.34	31.69
PT0024	Colour washing with lime, old work, two coats	sq.m	16.23	17.35	18.93	19.17
PT0025	Colour washing with lime, old work, one coat	sq.m	9.38	9.93	10.73	10.84
<b>Finishing wall with Water-Proof Cement Paint</b>						
PT0030	New work, three coats	sq.m	69.87	69.29	76.46	94.54
PT0031	Old work, one coats	sq.m	35.13	34.90	37.79	45.06
<b>Providing and applying finishing coats</b>						
PT0040	Dry distemper, two coats on new work, including white priming coat	sq.m	71.68	73.84	71.57	73.00
PT0041	Dry distemper, one coat on old work	sq.m	31.76	32.83	30.79	31.66
PT0042	Acrylic washable distemper, two coats on new work, including cement primer coat	sq.m	92.82	93.54	91.45	96.38
PT0043	Acrylic washable distemper, one coat on old work	sq.m	31.32	32.10	30.79	32.44
PT0044	Bituminastic enamel, for steel work, two coats on new work	sq.m	86.12	88.17	103.27	97.36
PT0045	Bituminastic enamel, for steel work, one coat on old work	sq.m	55.41	56.65	65.70	62.16
PT0046	Synthetic enamel, for steel & wood work\one coat on old work	sq.m	54.10	57.49	56.94	60.59
PT0047	Synthetic enamel, for steel & wood work, two coats on new work	sq.m	84.38	90.02	89.11	95.19
PT0048	High gloss synthetic enamel\for steel & wood work, two coats on new work	sq.m	96.61	94.66	87.33	106.01
PT0049	High gloss synthetic enamel, for steel & wood work\one coat on old work	sq.m	64.41	63.10	58.22	70.67

Code	Description	Units	PL	GP	SJ	TH
PT0050	Red corrugal, ready mixed\on G.I. sheets, two coats on new work	sq.m	74.37	78.87	77.83	82.60
PT0051	Red corrugal, ready mixed, on G.I. sheets\one coat on old work	sq.m	48.02	50.61	50.01	52.75
PT0052	Vinyl plastic emulsion paint, for cement, masonry, plaster, two coats on new work	sq.m	100.88	94.65	104.56	117.56
PT0053	Acrylic emulsion, one coat	sq.m	49.30	45.69	51.51	59.73
PT0054	Aluminium paint, one coat on old work	sq.m	55.52	56.12	52.86	57.19
PT0055	Aluminium paint, two coats on new work	sq.m	88.36	89.39	83.83	91.20

**Providing and applying wood stains, varnishes & polishes**

PT0060	Wood stain (various colours), one coat	sq.m	84.55	88.18	81.01	95.71
PT0061	Synthetic varnish (clear) - one coat, on old work	sq.m	115.57	112.90	112.07	124.44
PT0062	Synthetic varnish (clear) - two coats, including coat of wood filler on new work	sq.m	211.55	207.19	205.84	226.00
PT0063	French polish - one coat, on old work	sq.m	119.60	120.40	123.74	127.04
PT0064	French polish - two coats, on new work	sq.m	218.12	219.41	224.86	230.25

**Wood Preservatives****Providing and applying wood preservatives**

PT0070	Brown, two coats on new work	sq.m	43.07	45.88	39.87	53.68
PT0071	Brown, one coat on old work	sq.m	33.65	35.92	31.06	42.24
PT0072	Coal tar, two coats on new work	sq.m	64.51	72.24	87.80	79.81
PT0073	Coal tar, one coat on old work	sq.m	34.94	38.27	44.95	41.45

**Wall Paper****Providing & fixing wall paper**

PT0080	Standard Quality	sq.m	334.18	436.73	427.32	428.91
PT0081	High Quality	sq.m	440.41	584.72	565.73	568.79

**Traditional Painting****Providing, preparing and applying Sumdang painting (Not washable)**

PT0090	Rab	sq.m	905.93	911.95	901.67	932.46
PT0091	Ding	sq.m	639.97	644.41	638.47	660.93
PT0092	Thamar	sq.m	463.94	468.38	462.44	484.89

**Providing, preparing and applying Dangtshon painting (Not washable)**

PT0100	Rab	sq.m	1258.00	1264.01	1253.73	1284.53
PT0101	Ding	sq.m	933.36	937.80	931.86	954.31
PT0102	Thamar	sq.m	639.97	644.41	638.47	660.93

**Providing, preparing and applying Sumdang washable painting**

PT0110	Rab	sq.m	1005.86	1010.70	1006.50	1021.62
PT0111	Ding	sq.m	757.50	760.77	760.91	767.68
PT0112	Thamar	sq.m	563.87	567.13	567.27	574.05

Code	Description	Units	PL	GP	SJ	TH
<b>Providing, preparing and applying Dangtshon washable painting</b>						
PT0120	Rab	sq.m	1281.65	1286.49	1282.28	1297.40
PT0121	Ding	sq.m	974.61	977.87	978.01	984.79
PT0122	Thamar	sq.m	704.69	707.96	708.10	714.87
<b>Providing, preparing and applying Yutshon painting (plain)</b>						
PT0130	Washable	sq.m	252.65	255.84	256.02	262.70
PT0131	Not Washable	sq.m	215.81	217.18	217.65	222.38
<b>Providing, preparing and applying flower natural painting for wall decoration design such as Tashitagey symbols, Tashi Zeegay, Za-Tshering, etc.</b>						
PT0140	Dangtshon - Rab	sq.m	163.54	186.13	164.30	198.79
PT0141	Sumdang - Rab	sq.m	154.74	177.33	155.50	189.98

Code	Description	Units	PL	GP	SJ	TH
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**Chapter 20: ADDITIONS, ALTERATIONS & REPAIRS**

**Repair to Plasters**

**Repair to plaster including cutting to shape, surface preparation, proving and applying cement plaster to the surface, disposal rubbish within 50m lead**

AA0001	Patch area <2.5sq.m	sq.m	260.90	263.60	263.61	286.04
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**Glass Panes**

**Providing & fixing glass panes with putty, nails including remaining. broken glass panes**

AA0005	3mm thick plain	sq.m	758.83	804.77	936.15	842.62
AA0006	4mm thick plain	sq.m	795.65	920.26	951.03	980.63
AA0007	5.5mm thick plain	sq.m	947.53	1061.41	1289.28	1342.90
AA0008	3mm thick frosted	sq.m	1046.48	984.42	967.07	1277.07
AA0009	5.5mm thick frosted	sq.m	1239.79	1125.57	1095.39	1343.28

**Cutting Walls**

AA0015	Cutting holes < 300x300mm in brick walls including repair wall	each	305.54	300.84	305.22	353.18
AA0016	Cutting holes < 150x150mm in R.C floors or roof including making leak proofing with concrete 1:2:4, 20mm aggregates	each	202.06	202.04	202.54	204.51
AA0017	Making chases < 75x75mm in walls including repair after fixing G.I pipe etc.	m	97.00	96.84	97.57	100.67

**Aluminium Strip Edging**

**Providing & fixing Aluminium strip edging to staircases including rawl plugs and screws, a thin layer of cement mortar 1:3**

AA0025	57mm x 12mm x 3mm	m	589.01	579.80	575.59	624.11
AA0026	38mm x 12mm x 3mm	m	239.80	216.09	214.96	278.40

Code	Description	Units	PL	GP	SJ	TH
Chapter 21: ROAD WORKS						
Excavation						
Earthwork in excavation over areas, exceeding 300mm in depth, 1.5 m in width as well as 10 sq.m on plan including disposal of excavated earth (disposed earth to be levelled and neatly dressed)						
RW0006	Ordinary Soil	cu.m		162.02	162.02	162.02
RW0007	Hard Soil	cu.m		209.56	209.56	209.56
RW0008	Ordinary Rock with or without blasting	cu.m		636.73	636.73	636.73
RW0009	Hard rock requiring blasting	cu.m		868.79	868.79	868.79
RW0010	Hard rock requiring chiselling (where blasting is prohibited)	cu.m		1393.71	1393.71	1393.71
Excavation of road formation/trace/box cutting, with excavator including separate deposition of soil, rocks and stones within 50m for reuse						
RW0013	All types of soil	cu.m		63.46	63.46	63.46
RW0014	All types of rock (With or Without blasting)	cu.m		240.35	240.35	240.35
Earthwork in Excavation in foundation trenches or drains including dressing of sides and ramming of bottom, disposal of surplus excavated soil within 50m lead						
RW0015	Ordinary Soil	cu.m		172.83	172.83	172.83
RW0016	Hard Soil	cu.m		221.50	221.50	221.50
RW0017	Ordinary Rock with or without blasting	cu.m		681.12	681.12	681.12
RW0018	Hard rock requiring blasting	cu.m		970.85	970.85	970.85
Transportation of Loose Soils						
Transport of loose spoil materials in designated locations including loading/unloading, dressing of dump sites and plantation of vegetation after completion of dumping						
RW0019	Beyond 50 m	cu.m		Same as Item EW0035 & EW0040 for lead upto 1 Km and beyond 1km used transportation Rate or Analysied as per LMC		
Embankments						
RW0030	Construction of embankment by laying dry earth in horizontal layers not exceeding 200mm in depth(compact), including watering,power rolling,dressing and preparation of site with selected excavated earth within 50mm lead	cu.m		157.26	157.26	157.26
Filling of Trenches						
RW0035	Providing and laying filter material (600mm wide) in trenches, sides of foundations, walls etc. with 100 to 200 mm stones wherever applicable.	cu.m		1319.78	1422.66	1341.00
						1539.14

Code	Description	Units	PL	GP	SJ	TH
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**Supply and Stacking****Supplying/collection and stacking of stone aggregate**

RW0044	100mm	cu.m	1269.75	1174.50	1226.32	1298.90
RW0045	75 mm	cu.m	1194.41	1099.16	1198.91	1223.56
RW0046	50 mm	cu.m	1213.24	1118.00	1257.27	1242.39
RW0047	63 - 40 mm	cu.m	1198.86	1115.72	1208.48	1312.87
RW0048	20 mm	cu.m	1297.80	1165.49	1349.88	1569.20
RW0049	12 - 6 mm	cu.m	1311.76	1146.31	1331.01	1548.70
RW0050	50 - 20 mm	cu.m	1239.11	1147.32	1265.36	1440.06

**Supplying/collection and stacking at site**

RW0055	Blinding materials	cu.m	322.59	321.61	321.78	321.78
RW0056	Gravel/Coarse sand	cu.m	728.42	728.42	728.42	728.78
RW0057	Boulder	cu.m	440.88	440.88	440.88	440.88

**Gabion Walls**

**Construction of gabion wall as per drawings with dry stone masonry ( hammer dressed facing) including excavation of foundation in all types of soils , sides and backfilling, delivery of machine woven gabion mesh (Hexagonal mesh of size 100mm x 120mm with a minimum of doubly twisted) with GI wire 2.70mm dia, fixing of selvedged wire 3.4 mm dia, binding/lacing wire 2.40 mm dia complete**

RW0065	Height up to 1.0m	m	3804.71	4240.80	3799.93	4551.13
RW0066	Height up to 2.0m	m	9055.62	10115.31	9046.97	10869.89
RW0067	Height up to 3.0m	m	16199.52	18092.27	16186.73	19437.91
RW0068	Height up to 4.0m	m	25137.31	28085.08	25119.37	30175.96
RW0069	Height up to 5.0m	m	35803.47	39968.72	35782.71	42924.02
RW0070	Height up to 6.0m	m	48292.52	53897.24	48267.95	57871.13
RW0071	Height up to 7.0m	m	62500.74	69707.36	62474.67	74819.03
RW0072	Height up to 8.0m	m	78206.92	87177.91	78181.69	93546.51
RW0073	Height up to 9.0m	m	96178.33	107195.18	96149.62	115009.93

**Construction of gabion wall as per drawings with dry stone masonry ( hammer dressed facing) including excavation of foundation in all types of soils , sides and backfilling, delivery of machine woven gabion mesh (Hexagonal mesh of size 90mm x 100mm with a minimum of doubly twisted) with GI wire 3.25mm(10 swg) dia, fixing of selvedged wire 4.06mm (8 swg) dia, binding/lacing wire 2.64mm (12 swg) dia complete**

RW0245	Height up to 1.0m	m	4095.40	4619.21	4085.73	4981.15
RW0246	Height up to 2.0m	m	9448.05	10626.17	9432.81	11450.41
RW0247	Height up to 3.0m	m	16900.29	19004.51	16875.72	20474.55
RW0248	Height up to 4.0m	m	26230.51	29508.18	26194.20	31793.12
RW0249	Height up to 5.0m	m	37345.16	41975.66	37298.49	45204.63
RW0250	Height up to 6.0m	m	50366.80	56597.48	50307.37	60939.59
RW0251	Height up to 7.0m	m	65163.66	73173.89	65092.85	78758.26
RW0252	Height up to 8.0m	m	81514.55	91483.69	81433.74	98439.45
RW0253	Height up to 9.0m	m	100242.78	112486.19	100145.78	121022.44



Code	Description	Units	PL	GP	SJ	TH
<b>Providing and Construction Light timber crib walls</b>						
RW0075	With timber section of 100 to 150 mm diameter including excavation in all types of soil and back filling	sq.m	1190.78	1169.70	1212.98	1287.35
RW0076	With timber section of 250 to 300 mm diameter including excavation in all types of soil and back filling	sq.m	1114.01	1102.11	1090.93	1180.04
<b>Barriers</b>						
RW0081	Providing and constructing boulder barrier, height not exceeding 1.5 m, max. inclination of 20 deg. to the road alignment and width not less than 900mm within 50m lead	m	1174.95	1277.83	1196.17	1394.31
<b>Drains</b>						
<b>Construction of French drain, including jungle clearance, earthwork in excavation, levelling of excavated earth to the sides, filling drain with 50-100 mm stones, complete as per design</b>						
RW0095	Drain Size 0.6m X 1.0m	m	982.84	935.54	985.07	997.32
RW0096	Drain Size 1.0m X 1.5m	m	1954.16	1842.65	1959.42	1988.28
RW0100	Construction of foundation drains of minimum size 200mm wide & 250 mm deep with stone fill of average size 50 - 100 mm as per drawing or as directed by the engineer including excavation and delivery of materials	m	311.97	308.58	312.12	313.00
<b>Construction of V-shaped stone pitched drain including excavation, levelling and disposal of surplus earth within 50m</b>						
RW0105	depth 300mm, width 600 mm	m	356.41	373.77	359.99	393.43
RW0106	depth 300 mm and width 450 mm	m	240.21	250.50	242.33	262.14
<b>Construction of V-shaped earthen drain including excavation, levelling and disposal of surplus excavated earth within 50m</b>						
RW0107	depth 500 mm and width 600 mm	m	25.48	25.48	25.48	25.48
RW0108	Construction of Lined V Shaped drain 600 X 300 with	m	697.92	718.67	711.36	809.14
RW0120	Providing and laying Hammer dressed stone edging 150 x 250 mm with stones including excavation, refilling and disposal of surplus earth within 30 m lead	m	110.96	115.69	111.94	121.05
<b>Subgrade</b>						
<b>Preparation of sub grade with proper camber by excavating earth to depth equal to pavement thickness, consolidation with roller, disposal of surplus earth up to 50m</b>						
RW0121	All kinds of soil	cu.m	76.17	76.17	76.17	76.17
RW0122	Blasted Rock	cu.m	213.14	213.14	213.14	213.14
RW0123	Consolidation of sub-grade with roller, and making good the undulation with earth and re-rolling the sub grade	sq.m	7.36	7.36	7.36	7.36
RW0124	Extra for compaction of earth in embankments under suitable moisture conditions to give at least 95% of the proctor density	cu.m	18.82	18.82	18.82	18.82

Code	Description	Units	PL	GP	SJ	TH
<b>Granular Sub-base</b>						
RW0130	Providing and laying Granular sub-base course (GSB) to required degree of compaction with proper formation of cross fall using motor grader for laying and compacted to required density as per material gradation and aggregate quality specified	cu.m	1597.56	1611.10	1577.05	1848.59
<b>Wet Mix Macadam</b>						
RW0131	Providing and laying wet mix macadam graded aggregate base course to required degree of compaction with proper formation of cross fall by using well graded crushed aggregates premixed with OMC using suitable mixer, motor grader as per material gradation and a aggregates quality specified	cu.m	2244.03	2169.83	2261.60	2445.29
<b>Dense Bituminous Macadam</b>						
<b>Providing and Laying Dense Bituminous Macadam ( DBM) to required degree of compaction based on mixture design ( job mix formula) approved by the supervising engineer including preparation of surface with road broom, application of prime coat @ 0.75 kg/sq.m by mechanized method using asphalt plant, paver, steel roller, tyre roller etc. complete</b>						
RW0132	50 mm	sq.m	462.14	458.18	461.22	567.47
RW0133	60 mm	sq.m	534.75	530.00	533.65	659.46
RW0134	70 mm	sq.m	606.53	600.98	605.25	750.62
RW0135	75 mm	sq.m	642.73	636.78	641.35	796.50
RW0136	80 mm	sq.m	678.66	672.31	677.19	842.12
<b>Asphalt/Bituminous Concrete</b>						
<b>Providing and Laying Asphalt/Bituminous Concrete to required degree of compaction based on the job mixture design approved by the supervising engineer using asphalt plant, paver, steel roller, tyre roller etc. as per material gradation and aggregate quality specified</b>						
RW0139	25 mm	sq.m	272.63	270.97	271.63	332.48
RW0140	30 mm	sq.m	314.28	312.28	313.07	385.42
RW0141	35 mm	sq.m	355.96	353.63	354.55	438.39
RW0142	40 mm	sq.m	396.94	394.28	395.34	490.60
RW0143	50 mm	sq.m	480.82	477.49	478.81	597.02
<b>Scarifying</b>						
RW0145	Scarifying metalled (water bound) road surface disposal of rubbish up to 50m and consolidation of the aggregate received from scarifying	sq.m	36.41	36.41	36.41	36.41
<b>Repair of Roads</b>						
<b>Cutting and repairing of roads, including supply of required quantities of aggregates complete</b>						
RW0146	Water bound macadam road	sq.m	268.96	266.56	270.05	269.68

Code	Description	Units	PL	GP	SJ	TH
<b>Wearing Course</b>						
<b>Laying wearing course including screening, sorting, spreading to template and consolidation (measurement of wearing course to be taken equal to the quantity of aggregate used, excluding blinding materials)- With stone aggregates and blinding materials</b>						
RW0147	With stone aggregates and blinding materials	cu.m	822.99	822.99	822.99	822.99
<b>Using Bitumen Emulsion</b>						
<b>Cutting &amp; repairing bituminous road including supply of required quantity of aggregate &amp; bitumen emulsion</b>						
RW0150	Manually	sq.m	688.20	686.65	686.64	730.69
<b>Cutting bituminous road along with W.B.M layer &amp; soling and making good the same including supply of extra quantities of aggregate, grit &amp; bitumen emulsion required complete</b>						
RW0151	Manually	sq.m	1307.25	1300.00	1302.72	1379.00
<b>Painting two coats with bitumen emulsion (coat 1 - 12 kg emulsion and 0.1 cu.m, 12 mm aggregates per 10 sq.m, coat 2 - 1.6 kg emulsion 0.06 cu.m, 10 mm aggregates per 10 sq.m) complete</b>						
RW0152	Mechanized	sq.m	157.66	155.01	157.97	192.97
<b>Repainting one coat with bitumen emulsion @ 2.3 kg of emulsion and 0.002 cu.m of 10 mm nominal size stone chips per sq.m of surface area complete</b>						
RW0153	Mechanized	sq.m	115.88	115.55	115.92	142.25
<b>Premix consolidated carpet surfacing including a tack coat @ 0.75 kg bitumen emulsion per sq.m of road surface</b>						
RW0154	50mm thick with 6.0 cu.m of aggregate 10mm nominal size per 100 sq.m using 96 kg of emulsion of approved quality per cu.m of stone aggregate (Mechanized)	sq.m	324.53	321.40	322.58	406.75
RW0155	25 mm thick with 2.7 cu.m of stone aggregate, 10 mm nominal size per 100 sq.m using 149 kg of bitumen emulsion per cu.m of stone aggregate (Mechanized)	sq.m	244.50	239.54	245.08	305.32
RW0156	20 mm thick with 2.10 cu.m of stone aggregate, 10 mm nominal size per 100 sq.m using 147 kg of bitumen emulsion per cu.m of stone aggregate (Mechanized)	sq.m	200.81	196.84	201.27	249.62
<b>Providing seal coat with bitumen emulsion</b>						
RW0157	Using 1.3 kg of emulsion and 0.80 cu.m stone aggregate of 10mm per 10 sq.m of road surface complete	sq.m	79.36	78.04	79.51	95.89
<b>Providing seal coat of premixed sand with bitumen emulsion</b>						
RW0158	Using 5.3 kg of emulsion and 0.045 cu.m coarse sand per 10 sq.m of road surface complete	sq.m	48.53	48.70	48.10	57.54

Code	Description	Units	PL	GP	SJ	TH
<b>Using Bitumen 80/100</b>						
<b>Cutting and repairing of roads, including supply of required quantities of aggregate, grit and bitumen</b>						
RW0160	Bituminous road	sq.m	745.80	739.02	746.84	789.84
<b>Cutting bituminous road and making good the same including supply of extra quantities of aggregate, grit &amp; bitumen required complete</b>						
RW0161	Bituminous road along with W.B.M layer & soling (mechanized)	sq.m	1321.49	1313.79	1317.28	1393.92
<b>Painting two coats of bitumen 80\100 (coat 1 - 2 kg of bitumen, 0.015 cu.m, 12.5mm aggregate per sq.m; coat 2 - 1 kg of bitumen, 0.009 cu.m, 10 mm aggregates, per sq.m complete)</b>						
RW0165	Mechanized	sq.m	175.84	171.87	176.30	215.30
RW0166	Manually	sq.m	230.43	226.01	231.21	270.58
<b>Premix carpet surfacing including a tack coat @ 0.75 kg bitumen per sq.m of road surface</b>						
RW0167	50mm thick with 6 cu.m of aggregate 10mm nominal size per 100 sq.m using 51.5 kg of bitumen 80/100 grade per cu.m of stone aggregate (Mechanized)	sq.m	282.87	272.94	284.02	340.32
RW0168	25mm thick with 3 cu.m of stone aggregate per 100 sq.m and 51.5 kg of bitumen 80/100 grade per cu.m of stone aggregate (Mechanized)	sq.m	186.93	181.97	187.51	224.10
RW0169	20mm thick with 2.40 cu.m of stone aggregate 10mm nominal size per 100 sq.m and 51.5 kg of bitumen 80/100 grade per cu.m of stone aggregate (Mechanized)	sq.m	149.65	148.26	148.78	179.14
<b>Premix Carpeting with 64 kg of bitumen 80\100 per cu.m of aggregates including a tack coat with bitumen of same quality @ 0.75 kg per sq.m of road surface</b>						
RW0170	20 mm thick with 2.4 cu.m, 10mm aggregate per 100 sq.m (Manually)	sq.m	186.50	182.18	187.21	218.61
RW0171	25 mm thick with 3.0 cu.m, 10mm aggregate per 100 sq.m (Manually)	sq.m	216.65	211.28	217.51	254.43
<b>Repainting, one coat of bitumen 80\100 @ 1 kg of bitumen; 0.009 cu.m, 10mm aggregate per sq.m of road surface</b>						
RW0175	Manually	sq.m	81.93	80.29	82.21	95.55
RW0176	Mechanised	sq.m	59.99	58.50	60.17	73.39
<b>Providing seal coat with bitumen 80/100 grade of approved quality using 1.12 cu.m of stone aggregate 10mm size per 100 sq.m and 56 kg of bitumen 80/100 grade per cu.m of stone aggregate with a tack coat of 0.75 kg of bitumen per sq.m of road surface complete</b>						
RW0177	Mechanized	sq.m	89.89	88.04	90.10	108.08

Code	Description	Units	PL	GP	SJ	TH
<b>Providing seal coat with bitumen 80\100 using 1.5 kg of bitumen per sq.m with 1.05 cu.m, 10mm aggregate per 100 sq.m of road surface</b>						
RW0178	Manually	sq.m	105.13	103.17	105.49	124.85
<b>Providing seal coat of premixed sand with bitumen 80\100 using 128 kg of bitumen per cu.m of sand and 0.75 cu.m of coarse sand per 100 sq.m of road surface</b>						
RW0179	Manually	sq.m	71.78	71.92	71.16	87.88
<b>Providing &amp; fixing RC name board including primer and white zinc paint</b>						
RW0180	Rectangular with post	each	2488.91	2467.15	2471.11	2655.49
RW0181	Flat without post for one direction only	each	3598.01	3589.40	3631.36	3883.44
RW0182	Flat without post for two directions only	each	3834.16	3822.97	3869.08	4148.28
<b>R o a d S i g n s</b>						
RW0183	Engraving letters on hard stone.....per letter per centimetre height	each	7.02	7.02	7.02	7.02
<b>Providing &amp; fixing precast boundary stone of RC 1:2:4 (20mm aggregate) including finishing with mortar 1:3 (cost of excavation, refilling etc to be paid separately)</b>						
RW0185	150mm dia x 900mm high	each	507.90	509.55	518.08	556.76
<b>Providing &amp; fixing precast kilometre stone of RC 1:2:4 (20mm aggregate) including finishing with mortar 1:3 complete as per standard design (cost of excavation, concreting, painting etc. shall be paid separately)</b>						
RW0186	35cm x 111cm x 25cm	each	1567.17	1562.84	1589.80	1764.13
RW0187	50cm x 152.5cm x 25cm	each	2718.62	2705.33	2751.58	3085.30
RW0188	35cm x 93.5cm x 18cm	each	1022.07	1021.91	1040.36	1144.79
<b>Letterings</b>						
RW0189	Lettering with paint of approved brand and manufacture.....per letter per centimetre ht	each	2.13	2.15	2.15	2.17
RW0190	Relettering with paint of approved brand and manufacture.....per letter per centimetre ht	each	1.62	1.63	1.63	1.65
<b>F e n c i n g</b>						
<b>Supplying posts &amp; struts</b>						
RW0195	Local ballies, 250 mm min. girth	m	83.82	83.79	83.12	88.64
RW0196	Local ballies 250 mm min girth , 1.8m long	each	218.68	218.64	217.42	227.35
RW0197	Precast R.C posts, 1.8 m long	each	1043.09	1040.32	1053.01	1146.99
RW0198	Precast R.C struts 2.0 m long	each	806.87	808.67	820.46	877.12
RW0199	RCC posts & struts, 1.8m long	m	1400.10	1394.60	1417.62	1557.73
RW0200	RCC posts & struts, 2m long	m	887.82	889.24	902.50	965.73

Code	Description	Units	PL	GP	SJ	TH
<b>Providing &amp; fixing G.I barbed Wire Netting including fixing of post or struts, G.I staples, coal tarring in case of ballies complete (posts/struts, earthwork, concrete paid separately)</b>						
RW0202	2.5mm , (12 SWG), 4 barbs form by twisting two point wires, each two turns, pitch of barbs 75mm	m	22.00	23.30	21.32	23.62
<b>Providing &amp; fixing G.I double knotted mesh including fixing of post or struts, G.I staples, coal tarring in case of ballies complete (excluding the cost of posts/struts, earthwork, concrete)</b>						
RW0205	4mm (8 SWG) x 100mm	sq.m	299.18	372.24	334.05	430.05
RW0206	2.5mm (12 SWG) x 100mm	sq.m	297.49	311.27	344.55	360.43
RW0207	4mm (8 SWG) x 150mm	sq.m	280.76	257.89	322.39	368.62
RW0208	2.5mm (12 SWG) x 150mm	sq.m	247.86	232.82	252.39	348.14
<b>Providing &amp; fixing G.I chain-link mesh including fixing of post or struts, G.I staples (excluding the cost of posts/struts, earthwork, concrete etc.)</b>						
RW0209	4mm (8 SWG) x 50mm	sq.m	393.19	442.35	421.56	443.32
RW0210	2.5mm (12 SWG) x 50mm	sq.m	270.33	365.38	348.48	375.74
RW0211	4mm (8 SWG) x 75mm	sq.m	280.81	334.09	318.77	394.17
RW0212	2.5mm (12 SWG) x 75mm	sq.m	238.08	280.71	268.09	348.10
RW0213	4mm (8 SWG) x 100mm	sq.m	264.18	311.97	297.76	378.81
RW0214	2.5mm (12 SWG) x 100mm	sq.m	297.49	311.27	344.55	360.43
<b>Providing and Fixing Barbed Wire ( Min. 10kg/100m) fencing</b>						
RW0215	1.2 m high fencing with 1.8 m R.C.C posts of standard design placed every 3 m apart, embedded in cement concrete blocks, every 15th post, last but one end post and corner post shall be strutted on both sides and end post one side only, provided with nine horizontal lines and two diagonals of barbed wire between two posts fitted and fixed with GI staples on wooden plugs or GI binding wire tied to 6mm bars nibs fixed while casting the post (cost of RCC posts, struts, earthwork and concrete to be paid for separately)	m	227.88	242.35	220.26	246.01
RW0216	1.2 m high fencing with 1.8 m balli posts 250 mm girth ( min) placed every 2.5 m apart, embedded in cement concrete blocks, every 15th post, last but one end post and corner post shall be strutted on both sides and end post one side only, provided with six horizontal lines and two diagonals of barbed wire between two posts fitted and fixed with GI staples driven into the posts complete (cost of RCC posts, struts, earthwork and concrete to be paid for separately)	m	193.70	206.29	194.24	210.94
RW0217	2.4 m high fencing with 3.3 m balli posts 250 mm girth ( min) placed every 2.5 m apart, embedded in cement concrete blocks, every 15th post, last but one end post and corner post shall be strutted on both sides and end post one side only, provided with twelve horizontal lines and two diagonals of barbed wire between two post fitted and fixed with GI staples driven into the posts complete (cost of RCC posts, struts, earthwork and concrete to be paid for separately)	m	336.36	358.80	336.82	366.99

Code	Description	Units	PL	GP	SJ	TH
RW0218	1.3 m high concrete rail and pale fencing with 1.8 m R.C.C posts 2.2 m rails and 1.25 m pales placed every 2.5 m apart, embedded in cement concrete blocks (450 mm x 450 mm x 700 mm), of mix 1:5:10 (1 cement : 5 sand : 10 graded crushed rock 40 mm nominal size) (cost of earthwork in excavation, concrete work, posts, rails and pales to be paid for separately)	m	182.21	182.21	182.21	182.21
RW0219	1.2 m high fencing with 1.2 m angle posts ( 40mm x 40 mm x 6 mm) placed every 3 m apart, embedded in cement concrete blocks, every 15th post, last but one end post and corner post shall be strutted on both sides and end post one side only, provided with nine horizontal lines and two diagonals of barbed wire between two post fitted and fixed with GI staples, turn buckles complete ( cost of , posts, struts, earthwork and concrete to be paid for separately)	m	224.15	238.53	216.57	242.16
RW0220	1.8 m high fencing with 1.8 m angle posts ( 50mm x 50 mm x 6 mm) placed every 3 m apart, embedded in cement concrete blocks, every 15th post, last but one end post and corner post shall be strutted on both sides and end post one side only, provided with nine horizontal lines and two diagonals of barbed wire between two post fitted and fixed with GI staples, turn buckles complete ( cost of , posts, struts, earthwork and concrete to be paid for separately)	m	295.06	313.55	285.32	318.23
<b>Bioengineering</b>						
<b>Seeds Collection, treatment and storage</b>						
RW0230	Grass and pioneer plant seed collection, including separation, drying in the sun & storing	kg	579.59	581.68	581.68	582.85
<b>Broadcasting</b>						
RW0231	Broadcasting of grass/pioneer plants seeds on slopes; seeding rate 25 gm per m <sup>2</sup>	sq.m	64.04	64.04	64.04	64.04
<b>Direct Seeding</b>						
RW0232	Direct seeding of shrubs or tree seeds at 30 cm spacing including digging holes up to 5cm depth and covering with soil, with two seeds per planting hole	sq.m	64.04	64.04	64.04	64.04
<b>Live Stacking/Palisade</b>						
RW0233	Preparation of materials (woody cuttings 2-4 cm diameter and 50 cm length) and staking them $\frac{3}{4}$ of the cuttings in the soil	m	77.01	77.01	77.04	77.14
<b>Brush layer/Hedge Brush Layer</b>						
RW0234	Collection and preparation of materials (woody cuttings 2-4 cm diameter and 60 cm length) and staking them $\frac{3}{4}$ of the cuttings in the soil	m	88.94	88.94	89.06	89.41

Code	Description	Units	PL	GP	SJ	TH
<b>Planting of seedlings/wildlings</b>						
RW0235	Planting of seedlings or wildlings (including the collection of wildlings from the wild) and planting them in a pit size 30 cm x 30 cm	no	195.70	200.14	200.95	201.65
<b>Sodding/Turfing</b>						
RW0236	Sodding of slopes with sods, eg lemon grass (30 cms centre to centre), titepati (1metre centre to centre) in contour lines. The sods should be placed even closer to each other if the slope is greater than 25 degree	sq.m	65.78	65.31	65.31	66.53
RW0237	Turfing of embankment with 30 x 30 cm, natural grass turfs and fixed to the ground with wooden pegs, if slope is greater than 25°	sq.m	114.21	114.62	115.40	115.40
<b>Grass Slips Planting</b>						
RW0238	Grass slips planting on slopes (random or in line) at 10 cm apart and 5 cm deep.	sq.m	29.33	29.33	29.54	29.33
<b>Fog Sealing</b>						
RW0239	Providing and laying fog sealing as per technical specification and drawing.	sq.m	26.07	26.18	25.80	34.74
<b>Rock Anchorage</b>						
RW0240	Providing and laying of Rock Anchorage including TMT rebar (25mm dia) and cement slurry to fill the gap. The hole diameter should at least 32mm and 1m length as provided in the drawing.	sq.m	1504.92	1414.29	1363.59	1772.54
<b>Road Marking</b>						
RW0241	Providing and apply permanent road marking on the road surface as per technical specification,(manually)	sq.m	84.38	90.02	89.11	95.19
RW0242	Providing and apply Road marking with hot applied thermoplastic compound with reflectorising glass beads on Bituminuous surface as per IRC:35 and technical specifications. The finished surface to be level and free from streaks and holes	sq.m	482.25	487.78	484.99	486.52
<b>Paver Pavement with interlocking Paver Blocks, Blocks &amp; Tiles</b>						
<b>Providing and laying factory made Cement Concrete paver blocks in footpath, parks, lawns, drive ways or light traffic parking etc, of required strength, thickness &amp; size/ shape, laid in required colour &amp; pattern over 50mm thick compacted bed of sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand. complete all as per direction of Engineer-in-Charge.</b>						
RW0300	Interlocking Paver Block (Zig Zag) 80mm Thk. Colour	Sq.m	767.35	883.52	874.80	997.83
RW0301	Interlocking Paver Block (Zig Zag) 80mm Thk. Ash Grey	Sq.m	731.18	847.09	838.38	961.40



Code	Description	Units	PL	GP	SJ	TH
RW0302	Interlocking Paver Block (Zig Zag, Tri-Hex, Brook, Cosmic) 60mm Thk. Colour	Sq.m	695.02	810.67	801.95	924.98
RW0303	Interlocking Paver Block (Zig Zag, Tri-Hex, Brook, Cosmic) 60mm Thk. Ash Grey	Sq.m	552.70	774.24	765.53	997.83
RW0304	Interlocking Paver Block (Tri-Hex, Brook, Cosmic) 40mm Thk. Colour	Sq.m	640.19	701.39	692.68	815.70
RW0305	Interlocking Paver Block (Tri-Hex, Brook, Cosmic) 40mm Thk. Ash Grey	Sq.m	595.86	664.97	656.25	779.28
RW0306	Rectangular Paver Block 60mm Thk Colour	Sq.m	581.86	651.31	642.59	745.01
RW0307	Rectangular Paver Block 60mm Thk Ash Grey	Sq.m	555.03	625.19	616.47	718.89
RW0308	Rectangular Paver Block 40mm Thk Colour	Sq.m	528.20	625.19	616.47	718.89
RW0309	Rectangular Paver Block 40mm Thk Ash Grey	Sq.m	501.37	599.07	590.35	692.77
RW0310	Coral Stone Finished 60mm Thk. Colour	Sq.m	600.53	713.34	704.63	813.58
RW0311	Coral Stone Finished 60mm Thk. Ash Grey	Sq.m	572.53	683.96	675.24	784.19
RW0312	Coral Stone Finished 40mm Thk. Colour	Sq.m	528.20	683.96	675.24	784.19
RW0313	Coral Stone Finished 40mm Thk. Ash Grey	Sq.m	516.54	654.57	645.86	754.81

**Providing and laying Chequered precast cement concrete tiles 22 mm thick in footpath & courtyard, jointed with neat cement slurry mixed with pigment to match the shade of tiles, including rubbing and cleaning etc. complete, on 20 mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand).**

RW0320	Chequered tiles, Paver tiles. 25mm Thk. Colour	Sq.m	678.66	656.16	656.17	712.32
RW0321	Chequered tiles, Paver tiles. 25mm Thk. Ash Grey	Sq.m	647.87	627.42	627.44	683.58

**Providing and laying factory made kerb stone (Edging) in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (Length & Depth/height of finished kerb edging shall be measured for payment)**

RW0330	100mm thick	Sq.m	761.61	845.47	845.53	873.00
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Code	Description	Units	PL	GP	SJ	TH
<b>Chapter 22: Occupational Health and Safety (OHS)</b>						
<b>OHS at construction site</b>						
OHS001	Incorporation of Occupational Health and Safety measures at construction sites as per the attached requirements list. The standards and specifications for the Insurance, OHS materials and (or) equipment shall be in compliance with the Labour and Employment Act - 2007, Regulation on Occupational Health, Safety and Welfare - 2012, and other relevant national documents. All OHS items will remain as the property of the bidder upon completion of the project.	L/S		Calculated as per the "Guideline for Occupational Health and Safety Cost"		
<b>Temporary Living Accommodation</b>						
OHS002	Providing temporary living accommodation which includes bed room, kitchen, and toilet cum bathroom including proper water supply and electricity as per the drawing and temporary living accommodation standards. The accommodation facilities must be dismantled and cleaned upon the completion of project. All reusable materials of the accommodation facilities will remain as the property of the bidder upon completion of the project.	L/S		Calculated as per the "Guideline for Estimating Cost of Temporary Living Accommodation"		

## **4. COST INDICES**

#### 4.1 GUIDELINE FOR COST INDICES

Bhutan Schedule of Rate (BSR) is a guiding document for projecting/estimating cost of construction. To derive the approximate rate at any location, the BSR rates of the base town shall be enhanced by the cost index.

Cost index (CI) will vary from project to project, based on distance, availability of local materials, road connectivity, etc. Therefore, every mega or complex project shall have unique cost index.

The sample Cost Indices in the BSR are for the purpose of guidance and applicable for similar nature of work at any location. However, engineers are encouraged to calculate cost indices on their own for the complex or any other important project which are not covered by these samples.

Cost index shall not be applicable for any works where only labour is involved such as dismantling & demolishing work and earth work. For such works actual labour requirement shall be worked out and additional amount added for any increase in labour rates.

Any rates calculated adding cost index shall not be used for making payment to contractors or parties. Payment to contractors shall be strictly as per the contract agreement only.

**Table 4.1.1 Sample Calculation of Cost Index (CI)**

Sl. No.	Description	Unit	Cost at base Town	Cost at Project Location	% Increase	Weightage	Cost Index	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Cement	MT	4770.00	5689.00	19.27	17.00	3.28	
2	Steel Reinforcement	MT	31500.00	33500.00	6.35	14.00	0.89	
3	Rolled Steel	MT	32300.00	34400.00	6.50	3.00	0.20	
4	C.G.I Sheet	MT	44000.00	50600.00	15.00	5.00	0.75	
5	Brick /ICEB	Nos	4650.00	6830.00	46.88	9.50	4.45	
6	Stone Boulders	cu.m	180.00	530.00	194.44	1.50	2.92	
7	Rough Sawn Timber	cu.m	7800.66	8122.45	4.13	17.00	0.70	
8	Stone Aggregates	cu.m	618.00	883.00	42.88	4.50	1.93	
9	Sand	cu.m	180.00	534.00	196.67	2.00	3.93	
10	Labour : Average							
	Cat. I to IV	each	350.00	350.00	0.00	11.50	0.00	
	Cat. V	each	215.00	215.00	0.00	15.00	0.00	

100.00

**Cost Index = 19.04%**

**Note:**

Col.(4) = Basic rates at base town

Col.(7) = Weightage

Col.(5) = Rates at the project location

Col.(8) = {Col.(6)xCol.(7)}/100

Col.(6) = [{col.5/col.4} - 1]x100

**Procedure for calculation of cost Index:**

a. Basic rates at base town:

Basic rates of base town should be same for the estimation and cost index calculation.

**Table 4.1.2 Base town reference**

Sl. No	Base Town	Dzongkhag
1	Phuentsholing (PL)	Chukha, Haa, Paro, Gasa, Punakha, Wangduephodrang and Samtse
2	Gelephu (GP)	Bumthang, Dagana, Tsirang, Trongsa, Sarpang and Zhemgang
3	Samdrupjongkahr (SJ)	Samdrupjongkahr, Pemagatshel, Tashigang, Tashiyangtse, Lhuntse and Mongar
4	Thimphu (TH)	Only Thimphu

b. Collection of Rates.(Rates at the project location)

- Identify the nearest source of materials.
- Collect the current market rates from agencies, production units, suppliers, hiring agents etc. (The rates at project location will include price at the source + transportation charge + handling charges up to construction site store)
- Tender committee should ascertain and approve labour and material rates.

c. Weightage.

- Weightage used in the CI are value weights not quantity weights.
- Weightage of a particular material is the percentage of its cost from the total cost of the BML (basic labour, machineries and materials). Weightage shall remain fixed for the six samples given in BSR.
- In case of complex and mega project where BSR cost index samples are not applicable, the concerned agency may follow the sample below to calculate the weightage.

**Table 4.1.3 Sample Calculation of Materials weightage (Building Work –Framed Building)**

1	2	3	4	5	6	7	8	9	10
Sl. No	BML Code	Description	Quantity	Unit	Basic Rate (Nu.)	Amount (Nu.) (Col 4 x Col 6)	BML % (Col 7/Total Cost)	Main BMLs	Convert to 100%
1	LB0021	Carpenter Gd.1	109.15	day	350.47	38,253.80	1.21	1.21	
2	LB0032	Blacksmith (metal-worker)	188.31	day	309.82	58,342.20	1.84	1.84	
3	LB0033	Carpenter Gd.2	423.77	day	309.82	131,292.42	4.14	4.14	
4	LB0036	Mason Gd.1	267.78	day	309.82	82,963.60	2.62	2.62	
5	LB0038	Plumber Gd.1	10.68	day	309.82	3,308.88	0.10		
6	LB0039	Work Supervisor (Lajab)	53.59	day	309.82	16,603.25	0.52		
7	LB0051	Mason Gd.2	161.01	day	275.64	44,380.80	1.40	1.40	
8	LB0052	Painter Gd.1	154.50	day	275.64	42,586.38	1.34	1.34	
9	LB0053	Plant Operator Gd.3	7.44	day	275.64	2,050.76	0.06		
10	LB0054	Plumber Gd.2	1.24	day	275.64	341.79	0.01		
11	LB0067	Painter Gd.2	87.46	day	254.29	22,240.20	0.70		
12	LB0076	Labourer (Female)	125.86	day	232.93	29,316.57	0.92		
13	LB0077	Labour	1568.38	day	232.93	365,322.75	11.52	11.52	
14	MP0202	Welder - Electric arc	16.26	day	183.75	2,987.78	0.09		
Total Amount (Labour)						839,991.19	26.48	24.07	28.00
1	MP0205	Concrete Mixer(7/10Cft)	7.44	day	1,280.00	9,523.20	0.30		
2	MP0206	Concrete Vibrator(M/C5)	7.44	day	800.00	5,952.00	0.19		
Total Amount (Machinery)						15,475.20			
Sl. No	BML Code	Description	Qty	Unit	Rate (Nu.)	Amount (Nu.)			-
1	MT0042	Mud dry	23.67	cu.m	86.39	2,044.85	0.06		-
2	MT0043	Sand	93.19	cu.m	337.03	31,407.83	0.99		-
3	MT0060	Boulder	93.44	cu.m	861.81	80,527.53	2.54	2.54	3.00
4	MT0068	Crushed Rock-40mm	17.22	cu.m	952.56	16,403.08	0.52		-
5	MT0070	Crushed Rock-20mm	61.82	cu.m	1,058.40	65,430.29	2.06	2.06	2.00
6	MT0071	Crushed Rock-12.5 - 6mm	16.92	cu.m	1,023.12	17,311.19	0.55		-
7	MT0125	Bricks 2nd class	0.39	1000#	11,075.00	4,319.25	0.14		-
8	MT0126	Brick aggregate	1.73	cu.m	2,051.60	3,549.27	0.11		-
9	MT0131	Concrete block bricks - Solid Brick 240	28.39	1000#	12,000.00	340,680.00	10.74	10.74	13.00

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		x 115 x 80mm							
10	MT0145	Cement (OPC/PSC)	51.99	tonne	5,800.00	301,542.00	9.50	9.50	11.00
11	MT0156	Plastic Sheet -100 micro-metre	44.48	sq.m	29.00	1,289.92	0.04		-
12	MT0157	Plastic Sheet -200 micro-metre	28.05	sq.m	67.00	1,879.35	0.06		-
13	MT0180	Steel Materials(Rolled sections (250 MPa)) - Angles	280.04	kg	56.50	15,822.26	0.50		-
14	MT0181	Steel Materials(Rolled sections (250 MPa)) -Channels	554.40	kg	56.50	31,323.60	0.99		-
15	MT0182	Steel Materials(Rolled sections (250 MPa)) -Flats	325.97	kg	54.00	17,602.38	0.55		-
16	MT0184	Steel Materials(Rolled sections (250 MPa)) -Plates	496.35	kg	60.00	29,781.00	0.94		-
17	MT0200	Welded Tube (250 MPa) - 50mm dia	170.76	m	273.00	46,617.48	1.47	1.47	2.00
18	MT0201	Welded Tube (250 MPa) - 40mm dia	98.24	m	179.00	17,584.96	0.55		-
19	MT0208	(Reinforcing Bars)Thermo - Mechanically Treated ( TMT ) bars (yield strength 500 MPa)	10328.87	kg	40.88	422,244.21	13.31	13.31	16.00
20	MT0220	Fasteners - M.S. Rivets	2.69	kg	100.57	270.53	0.01		-
21	MT0221	Fasteners - M.S. Bolts & Nuts, Screws etc	9.22	kg	97.00	894.34	0.03		-
22	MT0250	Plain G.I Sheet, 24-gauge (0.63mm)	0.16	tonne	68,750.00	11,000.00	0.35		-
23	MT0252	Pre Painted Steel sheets 25g (0.50mm)	0.16	tonne	95,295.84	15,247.33	0.48		-
24	MT0278	Pre Painted Steel Corrugated Roofing Sheets 25g	1.19	tonne	102,430.02	121,891.72	3.84	3.84	5.00
25	MT0325	Timber-Ballies 75 to 125mm dia	983.72	m	30.43	29,934.60	0.94		-
26	MT0330	Rough-sawn timber (urban rate)-Class 'B', (Mixed Conifer)	32.99	cu.m	10,826.37	357,161.95	11.26	11.26	13.00
27	MT0342	Plywood-6mm, commercial ply	115.71	sq.m	208.00	24,067.68	0.76		-
28	MT0685	Plaster of Paris	5873.54	kg	22.03	129,394.09	4.08	4.08	5.00
29	MT0691	Acrylic washable distemper	129.93	kg	50.50	6,561.47	0.21		-
30	MT0695	Mud Paint for Bhutanese traditional painting	15.17	kg	33.50	508.20	0.02		-
31	MT0697	Cloth for Bhutanese painting	0.11	sq.m	35.00	3.85	0.00		-
32	MT0698	Paper for Bhutanese painting	0.45	sq.m	20.00	9.00	0.00		-
33	MT0710	Cement primer	67.19	litre	106.33	7,144.31	0.23		-
34	MT0711	Synthetic red lead primer	3.05	litre	132.00	402.60	0.01		-
35	MT0714	Pink primer, for wood	11.33	litre	151.00	1,710.83	0.05		-

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36	MT0722	Synthetic enamel paint	3.77	litre	172.50	650.33	0.02		-
37	MT0723	High gloss synthetic enamel	29.60	litre	255.00	7,548.00	0.24		-
38	MT0735	Wood preservative -Brown	7.25	litre	248.12	1,798.87	0.06		-
39	MT0751	C.I. manhole cover with frame (light duty) internal dimension 455 x 610mm Total weight of Cover and frame not less than 38 kg.	4.00	each	2,390.12	9,560.48	0.30		-
40	MT0795	Stoneware pipes 60 cm long - 100mm dia	2.00	each	132.18	264.36	0.01		-
41	MT0796	Stoneware pipes 60 cm long - 150mm dia	5.01	each	294.40	1,474.94	0.05		-
42	MT0940	Wheel valve - 32mm nom-bore	1.00	each	620.00	620.00	0.02		-
43	MT0977	Cast Iron Pipes, Single Socketted, 1.83m long - 100mm	1.24	each	926.07	1,148.33	0.04		-
44	MT1033	Single equal junction, door - 150mm	2.00	each	344.12	688.24	0.02		-
45	MT1132	Terminal Guard - 100mm	1.00	each	333.19	333.19	0.01		-
46	MT1151	Pipes, Single Socketed 1.83 m long - 90mm	13.38	each	357.00	4,776.66	0.15		-
47	MT1152	Pipes, Single Socketed 1.83 m long - 110mm	14.00	each	441.00	6,174.00	0.19		-
48	MT1216	Plain bend - 90mm	12.00	each	84.00	1,008.00	0.03		-
49	MT1217	Plain bend - 110mm	8.00	each	90.00	720.00	0.02		-
50	MT1226	Door bend - 90mm	6.00	each	113.00	678.00	0.02		-
51	MT1227	Door bend - 110mm	4.00	each	122.00	488.00	0.02		-
52	MT1246	Single Tee, Plain - 90mm	3.00	each	116.00	348.00	0.01		-
53	MT1247	Single Tee, Plain - 110mm	2.00	each	129.00	258.00	0.01		-
54	MT1335	110mm dia. Offset With 75mm projection	4.00	each	465.00	1,860.00	0.06		-
55	MT1342	Terminal Guard -110mm	1.00	each	98.84	98.84	0.00		-
56	MT1345	Nahani Trap - 100mm inlet & 75mm outlet	6.00	each	190.40	1,142.40	0.04		-
57	MT1382	Stainless Steel Kitchen Sinks - single bowl & drain-board, 940 x 460 x 160mm	2.00	each	1,703.40	3,406.80	0.11		-
58	MT1400	W.C. P a n s - Vitreous China European - white	4.00	each	1,100.00	4,400.00	0.14		-
59	MT1405	W.C. P a n s - Plastic seat & lid for European pan	4.00	each	753.53	3,014.12	0.10		-
60	MT1430	Vitreous China cistern - low level, incl.	4.00	each	1,586.10	6,344.40	0.20		-



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		fittings & flush-bend - 10 litres, white							
61	MT1440	15mm ball valve with plastic float	2.00	each	344.25	688.50	0.02		-
62	MT1464	15mm bib cock, vert, c.p knob	4.00	each	445.40	1,781.60	0.06		-
63	MT1469	20mm stop cock, c.p knob	6.00	each	459.00	2,754.00	0.09		-
64	MT1513	C.p Brass Shower fittings for 15 to 20mm inlet - shower, revolving joint	4.00	each	572.22	2,288.88	0.07		-
65	MT1530	basin, single-hole, casted spout, 15mm	6.00	each	1,976.76	11,860.56	0.37		-
66	MT1534	wall, non-telephonic type, 15mm	4.00	each	2,225.07	8,900.28	0.28		-
67	MT1585	R.S. or C.I.Brackets	4.00	pair	114.44	457.76	0.01		-
68	MT1605	Soap Containers - c.p brass with bracket	4.00	each	371.59	1,486.36	0.05		-
69	MT1615	C.p Towel Rails - 20mm x 450mm	4.00	each	456.45	1,825.80	0.06		-
70	MT1631	Mirror (Bevelled edge) 600mm x 450mm	4.00	each	475.00	1,900.00	0.06		-
71	MT1635	Toilet paper holders - C.P. brass	4.00	each	423.02	1,692.08	0.05		-
72	MT1649	Electric Water Heaters -50 litres, vertical	4.00	each	12,780.00	51,120.00	1.61	1.61	2.00
73	MT1667	H.D.P.E water storage tank - 1000 litres	2.00	each	8,953.38	17,906.76	0.56		-
Total Amount (Materials)						2,317,029.47			
<b>Total Amount of Basic Labour, Machineries, Materials Nu.</b>						<b>3,172,495.86</b>			
Total weightage of the major BML								84.48	100.00

**Table 4.1.4 Example: Cost Index tabulation and calculation based on above sample**

Sl.No.	Description	Unit	Cost at base Town	Cost at Project Location	% Increase	Weightage	Cost Index	Remarks
1	Stone Boulders	cu.m	861.81	530.00	-38.50	3.00	-1.16	
2	Crushed Rock-20mm	cu.m	1,058.40	950.00	-10.24	2.00	-0.20	
3	Concrete block bricks - Solid Brick 240 x 115 x 80mm	1000#	12,000.00	11000.00	-8.33	13.00	-1.08	
4	Cement	MT	5,800.00	6100.00	5.17	11.00	0.57	
5	Welded Tube (250 MPa) - 50mm dia	M	273.00	280.00	2.56	2.00	0.05	
6	(Reinforcing Bars & Mesh)Thermo - Mechanically Treated ( TMT ) bars (yield strength 500 MPa)	kg	40.88	41.00	0.29	16.00	0.05	
7	Pre Painted Galvanised Steel Corrugated Roofing Sheets 24g	MT	102,430.02	105000.00	2.51	5.00	0.13	
8	Rough-sawn timber (urban rate)-Class 'B', (Mixed Conifer)	cu.m	10,826.37	9500.00	-12.25	13.00	-1.59	
9	Plaster of Paris	kg	22.03	25.00	13.48	5.00	0.67	
10	Electric Water Heaters -50 litres, vertical	each	12,780.00	15000.00	17.37	2.00	0.35	
11	Labour : Average							
	Cat. I to V	each	262.60	262.60	0.00	28.00	0.00	
							100.00	
							Cost Index	(2.22)%

**Table 4.1.5 Procedure for calculation of BML weightage:**

Column 1	Basic Material, Machinery and Labour Code. (Based on detailed Estimate)
Column 2	BML Description
Column 3	BML Quantities for that particular project (with the institution of Construction Manager Software, BML quantity can easily quantified from the estimates)
Column 4	BML Unit
Column 5	BML rates of Base town (Based on Estimates)
Column 6	Individual BML cost for that particular project
Column 7	BML % based on its cost (Particular Item cost divided by the Total cost of BML multiply by 100) * { BML Cost/Total BML Cost) x 100}
Column 8	Choose Main BMLs. Select the BML which holds major (2 % and higher) or with greater weightage The total weightage of the major BML should be equal to or greater than 80%. In case the total weightage is less than 80%, other BML should be considered in the order of their contribution to the total cost.
Column 9	Convert the weightage of main BML in Column 8 to 100%

*Note: Dzongkhag/Dungkhag could have one cost index for the nearby project or gewog project, however, for the gewog which are far away from Dzongkhag/Dungkhag could have individual cost index.*

## 4.2 Sample Calculation of Cost Indices

### 4.2.1 Building works with brick infill walls and steel trusses

Sl. No.	Description	Unit	Cost at a base Town	Cost at Project Location	% Increase	Weightage	Cost Index	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Cement	MT	4770.00	5689.00	19.27	15.81	3.05	
2	Steel Reinforcement	MT	31500.00	33500.00	6.35	12.90	0.82	
3	Rolled Steel	MT	32300.00	34400.00	6.50	2.42	0.16	
4	C.G.I Sheet	MT	44000.00	50600.00	15.00	4.55	0.68	
5	Brick /ICEB	Nos	4650.00	6830.00	46.88	8.44	3.96	
6	Stone Boulders	cu.m	180.00	530.00	194.44	1.30	2.52	
7	Rough Sawn Timber	cu.m	7800.66	8122.45	4.13	18.03	0.74	
8	Stone Aggregates (20mm)	cu.m	618.00	883.00	42.88	3.89	1.67	
9	Sand	cu.m	180.00	534.00	196.67	1.93	3.80	
10	Labour : Average							
	Cat. I to IV	each	616.96	616.96	0.00	14.16	0.00	
	Cat. V	each	460.00	460.00	0.00	16.58	0.00	

**100.00**  
Cost Index =17.39%

### 4.2.2 Building works with brick infill walls and timber trusses

Sl.No.	Description	Unit	Cost at a base Town	Cost at Project Location	% Increase	Weightage	Cost Index	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Cement	MT	4770.00	5689.00	19.27	15.71	3.03	
2	Steel Reinforcement	MT	31500.00	33500.00	6.35	12.82	0.81	
3	C.G.I Sheet	MT	46000.00	50600.00	10.00	4.52	0.45	
4	Brick /ICEB	Nos	4630.00	6830.00	47.52	9.27	4.41	
5	Stone Boulders	cu.m	180.00	530.00	194.44	1.29	2.51	
6	Rough Sawn Timber	cu.m	7800.66	8122.45	4.13	20.04	0.83	
7	Stone Aggregates (20mm)	cu.m	618.00	883.00	42.88	3.86	1.66	
8	Sand	cu.m	180.00	534.00	196.67	1.92	3.77	
9	Labour : Average							
	Cat. I to IV	each	616.96	616.96	0.00	14.08	0.00	
	Cat. V	each	460.00	460.00	0.00	16.49	0.00	

**100**  
Cost Index =17.46 %

### 4.2.3 Building works with stone masonry wall

Sl.No.	Description	Unit	Cost at base town	Cost at Project Location	% Increase	Weightage	Cost Index	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Cement	MT	4770.00	5689.00	19.27	15.18	2.92	
2	Steel Reinforcement	MT	31500.00	33500.00	6.35	4.35	0.28	
3	C.G.I Sheet	MT	46000.00	50600.00	10.00	6.99	0.70	
4	Stone boulders	cu.m	180.00	534.00	196.67	4.98	9.79	
5	Bricks/ICEB	1000#	4650.00	6830.00	46.88	0.85	0.40	
6	Rough Sawn Timber	cu.m	7800.66	8122.45	4.13	22.80	0.94	
7	Stone Aggregates (20mm)	cu.m	618.00	883.00	42.88	2.49	1.07	
8	Sand	cu.m	180.00	530.00	194.44	2.78	5.41	
9	Labour : Average							
	Cat. I to IV	each	616.96	616.96	0.00	23.65	0.00	
	Cat. V	each	460.00	460.00	0.00	15.93	0.00	

**100.00**  
Cost Index = 21.51%

#### 4.2.4 Bitumen sealing works

Sl. No	Description	Unit	Cost at a base town	Cost at Project Location	% Increase	Weightage	Cost Index	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Bitumen***	MT	32189.00	34389.00	6.83	58.76	4.02	
2	Road Roller (8-10T)	day	3928.00	3928.00	0.00	9.24	0.00	
3	Fire wood**	cu.m	535.00	650.00	21.50	3.10	0.67	
3	Stone Aggregates . 20mm	cu.m	618.00	635.70	2.86	14.37	0.41	
4	Labour : Average							
	Cat. I to IV	each	616.96	616.96	0.00	0.73	0.00	
	Cat. V	each	460.00	460.00	0.00	13.80	0.00	

**100.00**

Cost Index = 5.09%

\*\*\* Bitumen 80/100 or Emulsion as appropriate

Fire wood measured in stacked

\*\* volume

#### 4.2.5 Road permanent works – retaining walls, culvert and other similar works

Sl.No.	Description	Unit	Cost at a base town	Cost at Project Location	% Increase	Weightage	Cost Index	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Cement	MT	4770.00	5689.00	19.27	27.61	5.32	
2	Stone boulder	cu.m	180.00	205.00	13.89	17.10	2.38	
3	Stone Aggregates (20mm)	cu.m	618.00	700.00	13.27	2.56	0.34	
4	Sand	cu.m	180.00	534.00	196.67	4.78	9.39	
5	Labour : Average							
	Cat. I to IV	each	616.96	616.96	0.00	19.50	0.00	
	Cat. V	each	460.00	460.00	0.00	28.45	0.00	

**100.00**

Cost Index = 17.43%

#### 4.2.6 Road works – Base course

Sl. No.	Description	Unit	Cost at a base town	Cost at Project Location	% Increase	Weightage	Cost Index	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Stone Boulder	cu.m	180.00	205.00	13.89	4.77	0.66	
2	Road Roller (8-10T)	day	3440.00	3440.00	0.00	30.52	0.00	
3	Blinding materials	cu.m	70.00	70.00	0.00	3.58	0.00	
4	Stone Aggregates 20 mm	cu.m	618.00	700.00	13.27	40.05	5.31	
5	Labour : Average							
	Cat. I to IV	each	616.96	616.96	0.00	0.34	0.00	
	Cat. V	each	460.00	460.00	0.00	20.75	0.00	

**100.00**

Cost Index = 5.98%

## **5. RATE ANALYSIS GUIDELINE**

## **5. GUIDELINE FOR RATE ANALYSIS**

Bhutan Schedule of Rates (BSR) is the guiding document for projecting the approximate cost of construction. For estimating costs of the construction works, items' rate in BSR, enhanced with or without cost index can be applied.

For the purpose of payment and filling of tenders, the individual agencies/engineers should analyse the item rate using basic labour, machinery & material coefficients with current market rate. This is because market rates fluctuate frequently and by the time the BSR is published; many rates would have already changed.

### **5.1 Procedure for Rate Analysis**

#### **5.1.1 Identify BML code and description**

- i. Obtain BML coefficients for the appropriate item code from the LMC Book.
- ii. The BML coefficients should not be changed for the items reflected in the BSR.

- iii. For new materials or items that are not covered in the BSR, refer any other relevant national, regional or international standards/practices/codes.

#### **5.1.2 Collection of Rates.**

- i. Identify the most appropriate source of materials.
- ii. Collect the current market rates from relevant agencies/production units/suppliers/ hiring agents etc. (The rates at project location will include price at source + transportation charges + handling charges up to construction site store)
- iii. Tender committee should ascertain and approve the labour and material rates.

#### **5.1.3 Constants:**

- i. A fixed 5% for hand tools & equipment on labour cost, lubrication & corrective maintenance on machinery cost and wastages & unaccounted on materials cost.
- ii. A fixed 1 % for water charges (sanitation, mixing of mortar, drinking, curing, etc.)
- iii. 10% for contractor's profit and overhead charges when rate analysis is carried out by the procuring agencies. For rate analysis submitted by contractors for the tendered work, it can vary up to a maximum of 10%.

#### **5.1.4 Total/Item Rate**

- i. Rate for the particular item is derived by adding the above constants cumulatively on total of BML rates as given in the example.

**Table 5.1 Rate Analysis**

<b>RC0001</b> - Providing & laying in position reinforced cement concrete 1:1:2 (1 cement : 1 sand : 2 graded crushed rock 20 mm nominal size) excluding the cost of centering, shuttering and reinforcement - all work up to plinth level					
Code	Coefficient for per cu.m				Total Amount
	Description	Quantity	Units	Rate	
LB0036	Mason Gd.1	0.07583	day	632.50	47.96
LB0039	Work Supervisor (Lajab)	0.07077	day	632.50	44.76
LB0051	Mason Gd.2	0.07583	day	575.00	43.60
LB0053	Plant Operator Gd.3	0.07077	day	575.00	40.69
LB0077	labourer	1.18125	day	460.00	543.38
MP0205	Concrete Mixer(7/5 cu.ft)	0.07000	day	1832.00	128.24
MP0206	Concrete Vibrator(M/C5)	0.07000	day	1136.00	79.52
MT0043	Sand	0.45000	cu.m	473.33	213.00
MT0070	Crushed Rock - 20mm	0.67500	cu.m	967.20	652.86
MT0071	Crushed Rock - 12.5mm - 6 mm	0.22500	cu.m	963.02	216.68
MT0145	Cement (OPC / PSC)	0.61000	tonne	6627.50	4042.78
Total (A)					6053.46 (A)
Add 5% on Total A					302.67
Total (B)					6356.13 (B)
Add 1% on Total B					63.56
Total (C)					6419.70 (C)
Add 10% on Total C					641.97
Item Rate per unit (Nu.)					7061.66

## **6. QUICK COST GUIDE**



### Quick Cost Guide

#### Explanatory Notes:

1. The rates listed are in units of square meter of plinth per meter clear height of floor to ceiling.
2. Rates do not include major site development, or special items
3. Tabulated rates should be adjusted by the room size factor
4. Average Room Size (Av) shall be calculated from the expression:
5. The rates and room size factors are based on detailed estimates for the various projects described
6. They are approximations for projects of similar description
7. Any intermediate values of room size factors may be worked out by interpolation
8. Calculation of Average room size and rate adjustment factors floor wise shall give better results
9. The cost of building can be calculated from following expression:

$$Av = \sqrt[3]{\{pa * h\}/r}$$

Where: Av= Average room size (m)

Pa= Plinth area (sq.m)

h= clear height of floor to ceiling (m)

r=No. of rooms

$$\text{Building Cost} = Pa \times \text{room size factor} \times \text{plinth area rate}$$

Average Room Size (m)	Room Size Factor
2.500	1.180
2.540	1.170
2.570	1.160
2.600	1.150
2.650	1.140
2.670	1.130
2.720	1.120
2.740	1.110
2.790	1.100
2.820	1.090
2.860	1.080
2.900	1.070
2.970	1.060
3.000	1.055
3.050	1.050
3.125	1.040
3.210	1.030
3.320	1.020
3.430	1.010
3.500	1.000
3.680	0.990
3.860	0.980
4.000	0.970
4.220	0.960

Average Room Size (m)	Room Size Factor
4.430	0.950
4.500	0.947
4.720	0.940
5.000	0.930
5.380	0.920
5.500	0.917
5.780	0.910
6.000	0.904
6.200	0.900
6.500	0.894
6.710	0.890
7.000	0.885
7.380	0.880
8.000	0.872
8.200	0.870
8.750	0.860
9.000	0.858
10.000	0.850
11.000	0.838
12.000	0.832
13.000	0.825
14.000	0.820
15.000	0.810

## QUICK COST GUIDE 2021

Sl.no	Description	Rates (Nu)			
		PL	GP	SJ	TH
Non-Residential					
1	Class room G+1, RCC framed structure,bricks wall in super structure with cement mortar, terrozo/ marbles /tiles/timber flooring, timber doors / windows frames/ shutters and ceilings , celings, PPGI sheet roofing on steel truss, RCC cornices, standard electrical works, plumbing & sanitation, drainage and plinth protection	5,921.29	5,947.90	5,965.35	6,717.59
2	Kitchen block ,single storey RCC framed structure, RRM wall foundation and brick walls in super structure with cement mortar , terrazzo/marbles /tiles/ timber flooring, timber doors / windows frames/ shutters and ceilings, PPGI/CGI sheet roofing on steel truss, RCC cornices, standard electrical works, plumbing & sanitation, drainage and plinth protection.	6,146.54	6,238.77	6,018.18	6,968.10
3	Office Block - 2 story RCC framed structure, RRM wall foundation and bricks wall in super structure with cement mortar. Terrazzo/marble/ tiles/timber flooring. timber windows, and doors, PPGI sheet roofing on steel truss, RCC cornices, standard eletrical works, plumbing & sanitation, drainage and plinth protection.	6,340.09	6,400.02	6,470.96	7,084.58
4	Auditorium block single story <b>Load bearing</b> structure, RRM wall foundation and wall,terrazzo/granite/timber flooring. Brick wall partition with cement mortar, aluminium windows,timber doors, CGI/PPGI sheet roofing on steel truss, RCC cornices, detail eletrical works, drainage and plinth protection, standard plumbing and sanitation	5,732.56	6,036.19	5,809.43	7,027.26
5	Hall/classroom -Single storey <b>Load bearing</b> structure, RRM wall foundation in mud mortar,RRM wall in super structure in mud mortar,timber doors and windows, cement concrete/ timber flooring , wooden truss over CGI sheets/shinglep roofing , drainage and plinth protection	4,766.24	4,880.39	4,913.86	5,075.25

## QUICK COST GUIDE 2021

Sl.no	Description	Rates (Nu)			
		PL	GP	SJ	TH
Residential					
6	Hostel 2 story, <b>RCC framed structure</b> , RRM wall foundation and brick walls in super structure with cement mortar. Terrazzo/marble /tiles/timber flooring. timber windows, doors, PPGI sheet roofing on steel truss, GRC cornices, standard eletrical works, plumbing & sanitation, drainage and plinth protection.	6,242.32	6,336.31	6,378.75	7,110.49
7	Residential-single storey <b>Load bearing</b> structure RMM in foundation & ekra wall in superstructure with mud Plaster both sides, timber/ mud flooring. timber windows & doors, CGI sheet roofing on timber truss, standard eletrical works, drainage and plinth protection, standard plumbing and sanitation	5,466.80	5,623.09	5,681.82	5,910.19
8	Residential-single storey <b>Load bearing</b> structure, RRM wall in foundation, Rammed Earth wall in superstructure, timber flooring, windows & doors, CGI sheet roofing on timber truss, standard eletrical works, drainage, plumbing and sanitation.	5,346.58	5,490.07	5,550.00	5,640.34
9	Residential-double storey <b>Load bearing</b> structure, RRM wall in foundation, Rammed Earth wall in superstructure, timber flooring, windows & doors, CGI sheet roofing on timber truss, standard eletrical works, drainage, plumbing and sanitation.	4,270.49	4,408.78	4,480.17	4,484.66
10	Residential- single storey <b>Load bearing</b> structure,RRM wall in foundation, RRM wall in super structure with mud mortar, wooden/mud flooring. timber windows & doors, CGI sheet roofing on timber truss/shinglep roofing, standard eletrical works, drainage and plinth protection, standard plumbing and sanitation.	7,097.68	7,295.50	7,343.23	7,525.53
11	Residential-single storey <b>Load bearing</b> structure,RRM wall in foundation, RRM wall in superstructure with cement mortar, concrete /tiles/ timber flooring. Timbers windows and doors. CGI sheet roofing on timber truss, standard eletrical works, plumbing and sanitation.	8,196.51	8,376.67	8,459.13	8,924.11

## QUICK COST GUIDE 2021

Sl.no	Description	Rates (Nu)			
		PL	GP	SJ	TH
12	Residential-single storey <b>Load bearing</b> structure,RRM wall in foundation, bricks wall in superstructure with cement mortar,terrazzo/marbles /tiles/ timber flooring. timber windows & doors, CGI sheet roofing on timber truss, RCC cornices, standard electrical works, plumbing & sanitation, drainage and plinth protection.	6,470.50	6,566.09	6,687.71	7,248.89
13	Residential-single story RCC framed structure, RRM wall foundation and brick walls in super structure with cement mortar , terrazzo/marbles /tiles/ timber flooring, timber windows, doors & ceiling, PPGI sheet roofing on steel truss,GRC cornices, standard electrical works, plumbing & sanitation, drainage and plinth protection.	8,414.31	8,577.00	8,557.28	9,432.87
14	Residential-double storey, RCC framed structure, Brick walls in super structure with cement mortar, terrozo/ marbles /tiles/timber flooring, timber windows, doors and celings,PPGI sheet roofing on steel truss, RCC cornices, standard electrical works, plumbing & sanitation, drainage and plinth protection.	5,963.67	6,111.56	6,185.24	6,847.60
15	Residential-double storey, RCC framed structure, RMM walls in super structure with cement mortar, terrozo/ marbles /tiles/timber flooring, timber windows, doors and celings,PPGI sheet roofing on steel truss, RCC cornices, standard electrical works, plumbing & sanitation, drainage and plinth protection.	8,209.50	8,217.25	8,262.15	9,356.00
16	Residential House, Multi Storey RCC Framed structure, RRM Wall Footing & RC Column & Footing, Bricks in Wall & Partition with cement mortar. Floor-RC Slab with Terrazo/timber/marble/Tiles Finishing. Timber Doors/Windows Frames/Shutter. PPI Sheet Roofing on Timber/Steel Truss. RC Cornice, Standard Plumbing/Electrical & Finishings.	6,368.25	6,277.46	6,325.28	7,404.52

## **7. OCCUPATIONAL HEALTH AND SAFETY**

## 7. Guideline for Occupational Health and Safety Cost

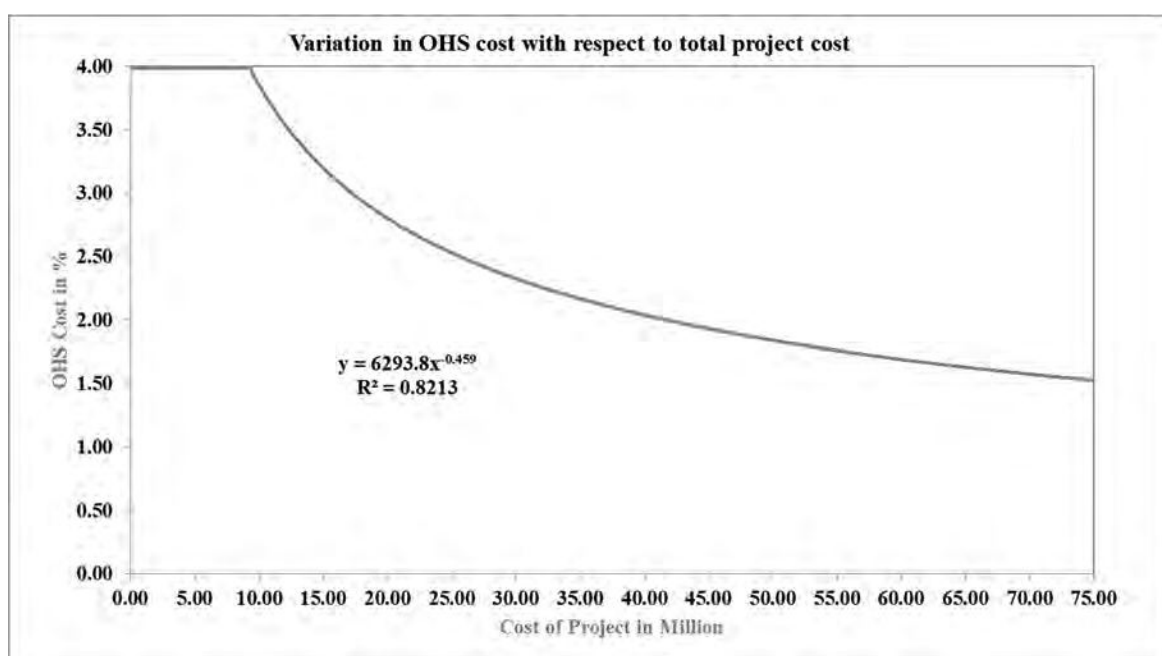
For the purpose of estimation of overall project cost, the cost for Occupational Health and Safety (OHS) may be derived using one of the two equations below, generated from the line of best fit plotted for cost of project versus the percentage of OHS cost. The OHS cost shall be calculated as the percentage of the estimated project cost.

### 7.1 Selection of the Best Fit Curve

Given the varying nature of the work, it is very challenging to get a best fit curve for every type of construction work. The following curves have been developed for the most common type of construction works in the country. For types of work not covered, the procuring agency may select the curve most suitable to their work from the two curves.

However, the procuring agencies are encouraged to design and analyze their OHS cost depending on the complexity of their project and also if their project requires additional OHS inputs beyond the minimal mandatory requirements specified in Section 2 of this guideline.

### 7.2 For Buildings and Bridges



$$y = 6293.8 x^{-0.459} \quad ^1 \text{ (Up to a maximum of 4 percent)}$$

Where; y = OHS Cost in %

<sup>1</sup> **Important Note:** For projects where the equation yields a percentage of OHS cost higher than 4 percent, the procuring agencies should limit the OHS cost to a maximum of 4 percent.

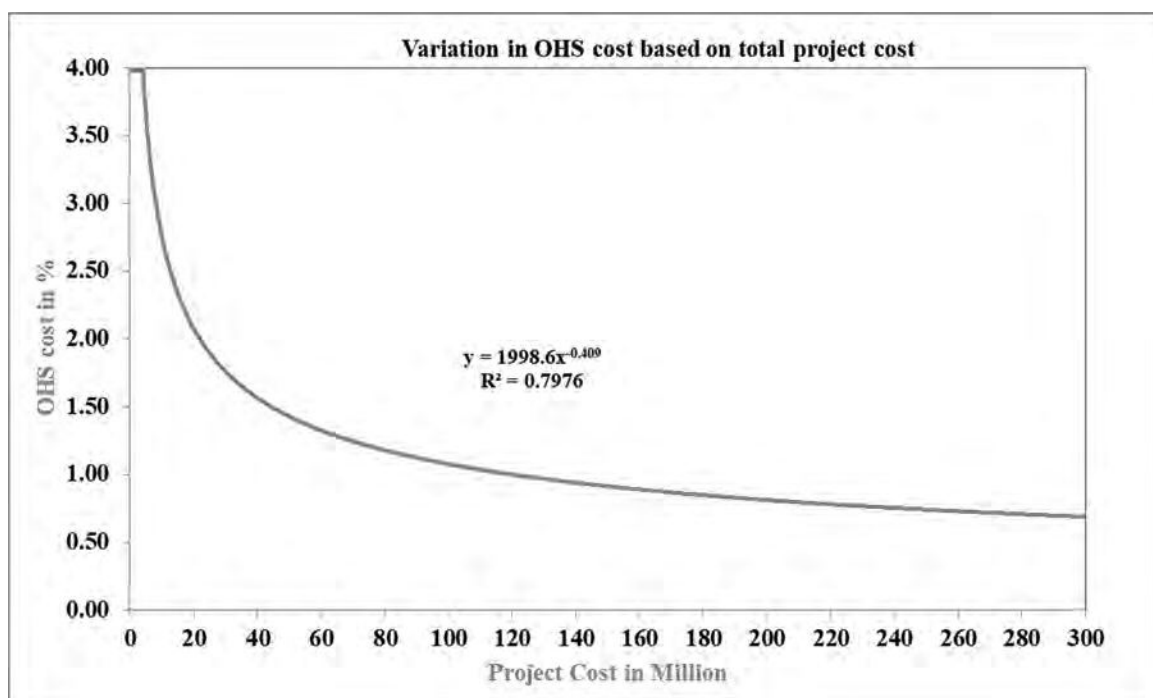
x = estimated project cost

For example, if the estimated project cost is Nu. 30 Million, the cost of OHS would be:

$$\begin{aligned}\text{OHS Cost in \%} &= 6293.8 * (30,000,000)^{-0.459} \\ &= 2.33 \%\end{aligned}$$

Therefore, the OHS cost will be: 2.33 % \* 30,000,000 = Nu. 699,000.00

### 7.3 For Road and Irrigation Works



$$y = 1998.6 x^{-0.409^2} \quad (\text{Up to a maximum of 4\%})$$

Where; y = OHS Cost in %

x = estimated project cost

For example, if the estimated project cost is Nu.100 Million, the cost of OHS would be:

$$\begin{aligned}\text{OHS Cost in \%} &= 1998.6 * (100,000,000)^{-0.409} \\ &= 1.07 \%\end{aligned}$$

Therefore, the OHS cost will be: 1.07 % \* 100,000,000.00 = Nu. 1,070,000.00

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<sup>2</sup> **Important Note:** For projects where the equation yields a percentage of OHS cost higher than 4 percent, the procuring agencies should limit the OHS cost to a maximum of 4 percent.

**7.4** The following list of OHS inputs are the minimal mandatory requirements at a construction site. These requirements had been derived in consensus with the Department of Labour (DoL), Ministry of Labour and Human Resources (MoLHR).

**7.4.1 Insurance**

Every worker shall be insured for the entire period of construction. The capital sum to be insured shall be as per the requirements of Labour and Employment Act of Bhutan - 2007 and its regulations.

**7.4.2 Personal Protective Equipment (PPE)**

Every worker shall be provided with minimal PPE to minimize exposure to hazard and to ensure safety at the construction sites “at all times”. The PPE could be grouped and provided as below:

- ❑ To be provided to all:
  - Safety helmet
  - Safety shoes
  - Protective gloves
  - High visibility Vest
  - Dust mask
- ❑ To be provided to specific workers:<sup>3</sup>
  - Safety belt
  - Safety harness
  - Safety goggle and spectacle
  - Ear muffs
  - Ear plugs
  - Welding shield/glass

**7.4.3 Common Protection Measures (CPMs)**

- First Aid tool box with aid kits
- Medical examination and records
- Adequate safety signs and signboards
- Boundary fence/barricade
- Fire and electrical safety
- Fall protection
- Trained OHS Officer/ Safety Supervisor/Safety Representative<sup>4</sup>
- Trained first aider<sup>5</sup>
- Safety and health orientation to new workers and safety training
- Housekeeping
- Traffic management at construction site
- Trenching and excavation safety

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<sup>3</sup> Specific workers includes (but not limited to) those workers working at height, welders, workers engaged in works with high noise level, etc.

<sup>4</sup> This requirement will only come into effect after the DoL and CDB starts the required training. The site engineer/project manager of the contractor can be OHS officer after getting trained.

<sup>5</sup> The site supervisor or one of the workers can be the first aider after getting trained.



**7.5** The standards and specifications for the OHS materials and (or) equipment shall be in compliance with the Labour and Employment Act - 2007, Regulation on Occupational Health, Safety and Welfare - 2012, and other relevant national documents.

**7.6** The list of the OHS requirements as per the above list with additional list (if any) shall be attached along the Bill of Quantities (BoQ) along with an appropriate item description to allow the bidder to quote reasonably against the item, and to enable strict compliance and ease the monitoring during the project implementation time.

**7.7** The procuring agency may allow the reuse of OHS items so long as these reused items serve the intended purpose. Furthermore, all OHS items will remain as the property of the bidder upon completion of the project. This is to encourage the bidders to conscientiously assess the OHS cost and quote reasonably keeping in view the reusability of such items in later projects.

Procuring agencies may also include the OHS officer and the first aider as ‘key personnel’ required by Labour and Employment Act – 2007 and its regulations depending on the complexity of the project.

**7.8** Monitoring: Once OHS is integrated into the project cost and the work awarded, the contractor will have to mandatorily mobilize the resources. The site engineers and the respective Procuring Agencies will have to monitor and ensure that the OHS requirements are provided by the contractor at site and used appropriately “at all times”. Besides this regular monitoring, a Third Party monitoring of OHS will also be carried out by the Construction Development Board and the Ministry of Labour from time to time.

**7.9** Mode of Payment: It is recommended that the payment mode be designed to suit the procuring agency. Before making the payment, the project engineer/site engineer and the project manager should verify and confirm that the OHS input requirements have been mobilized and implemented at site. It is also recommended that the payment be made in phases depending on the nature and duration of the project.

No additional payment for OHS shall be made for Variations (Change of rate, time extension, deviation, price adjustment, additional works, etc.)

**7.10** General Note: The guideline is prepared fundamentally for the purpose of estimation of the cost of OHS in the project. For the purpose of the payment, it shall be based on the contractor’s quoted amount/contract agreement.

In case of works executed departmentally, the agencies have to insure the workers and procure the PPE/CPM following proper procuring procedures. The items must be properly stored for future use and inventory of the same must be maintained.

## **8. TEMPORARY LIVING ACCOMMODATION**

### **8.1 Guideline for Estimating Cost of Temporary Living Accommodation**

For the estimation purpose, the project estimator can use table – I. However, the payment for the same shall be made based on the contractor's bid. The following steps shall be followed for estimating the cost of accommodation facility for a project.

- 8.1.1 Although a proper accommodation is encouraged to be provided, its need for a particular project shall be decided by the procuring agency. Some works such as minor maintenance, community contracting, projects with very short project duration, etc., may not require the provision of accommodation. Therefore, the decision on this shall be taken by the procuring agencies diligently.
- 8.1.2 If it is decided to provide accommodation, then the project estimator shall firstly estimate the average daily number of workers that will be engaged for the project. It is preferred that the daily number of workers be worked out using methods of project planning and management. However, in the absence of required skills and competency to compute the number of workers, project estimators can use the approximate number of workers with practical experience of similar projects. Locate the estimated number of workers for the project in the table - I.
- 8.1.3 Locate the project duration in the table - I.
- 8.1.4 The cell corresponding to the number of workers and the project duration will be the cost of accommodation for the particular project.

For example; Let the number of workers be:  $8 < N \leq 12$

The project duration be: **12 months**

Then the cost of accommodation will be: **Nu. 95,196.00**

8.1.5 If the project duration is in between consecutive project durations in the table, the cost of accommodation can be computed by interpolating the value ahead of and the following value of the particular project duration.

For example; let the number of workers be:  $8 < N \leq 12$

The project duration be: **14 months** (*this lies between 12 and 18 months*)

Then the cost of accommodation (AC) will be:

$$AC = \left[ \frac{AC1 - ACo}{T1 - To} \right] \times (T - To) + ACo$$

Where, AC: Accommodation cost for 14 months

ACo: Accommodation cost for 12 months

AC1: Accommodation cost for 18 months

T: Project duration for AC (*14 in this case*)

To: Project duration for ACo (*12 in this case*)

T1: Project duration for ACo (*18 in this case*)

Therefore, the cost of accommodation with number of workers  $8 < N \leq 12$  and project duration of 14 months will be:

$$AC = \left[ \frac{108,796 - 95,196}{18 - 12} \right] \times (14 - 12) + 95,196$$

$$AC = \text{Nu. } 99,729.33$$

- 8.1.6 Use the same description as specified in OHS 002 of Bhutan schedule of Rates. It is recommended to clearly state in the description that after the completion of the project, the facilities provided for the accommodation be dismantled and the site be cleaned. The materials used for the temporary accommodation shall be the property of the contractor. This is to enable the bidders to quote conscientiously.

*A drawing with details, and the ‘temporary living accommodation standards’ for accommodation facility shall be attached with the BoQ. The drawing should be prepared as per this standard and the prototype drawing. However, the sizes shall be determined depending on the number of labours estimated in 8.1.2.*

- 8.1.7 In case the contractor fails to provide specified temporary accommodation, then the procuring agencies can construct accommodation facilities as specified in ‘temporary living accommodation standards’. The actual cost of construction can be recovered from the first running bill with the condition that the useful materials of the accommodation facilities can be taken ownership by the contractor. A clause on this may be specified in the Special Conditions of Contract (GCC 16.1) of the bidding document.
- 8.1.8 No additional payment for accommodation shall be made for variations (Change of rate, time extension, deviation, price adjustment, additional works, etc.).
- 8.1.9 In case of works executed departmentally, the agencies have to construct accommodation facilities if decided as per step – 1 of this guide. The items must be properly stored for future use and inventory of the same must be maintained.

Note:

*If the procuring agencies need additional facilities other than the ones specified, then the procuring agencies can analyse the cost for estimating. The payment shall be based on the bidders quoted rate.*

**Table 8.1.1 Cost of Accommodation for construction projects**

No of Labours (N)	Project Duration, T (months)					
	T≤6	12	18	24	30	36 ≤ T
N ≤ 4	42,245	47,525	54,315	63,367	76,040	95,051
4 < N ≤ 8	58,187	65,461	74,812	87,281	104,737	130,922
8 < N ≤ 12	84,619	95,196	108,796	126,928	152,314	190,393
12 < N ≤ 16	111,050	124,932	142,779	166,576	199,891	249,864
16 < N ≤ 20	137,482	154,667	176,763	206,223	247,468	309,335
20 < N ≤ 24	169,238	190,393	217,592	253,857	304,628	380,785
24 < N ≤ 28	195,669	220,128	251,575	293,504	352,205	440,256
28 < N ≤ 32	222,101	249,864	285,558	333,151	399,782	499,727
32 < N ≤ 36	238,044	267,799	306,056	357,065	428,479	535,598
36 < N ≤ 40	264,475	297,535	340,040	396,713	476,055	595,069
40 < N ≤ 44	306,720	345,060	394,354	460,080	552,096	690,120
44 < N ≤ 48	322,663	362,995	414,852	483,994	580,793	725,991
48 < N ≤ 52	349,094	392,731	448,835	523,641	628,369	785,462
52 < N ≤ 56	365,037	410,666	469,333	547,555	657,066	821,333
56 < N ≤ 60	391,468	440,402	503,316	587,202	704,643	880,804
60 ≤ N	For increase in every 4 - labours, add following values for respective project duration, T (months)					
	26,098	29,360	33,554	39,147	46,976	58,720

## 8.2 Temporary Living Accommodation Standards

When providing living accommodation to workers at construction sites, the objective should be to ensure adequate and decent accommodation and a suitable living environment for workers. The provision of accommodation to workers shall align with the objectives of Occupational Health and Safety. Therefore, it shall meet certain minimum specifications in respect of the nature and standard of the accommodation, and facilities to be made available.

The following specifications are drawn for the provision of accommodation to workers in Bhutanese construction industry based on international labour standards.

### 8.2.1 Location

The temporary living accommodation for employees should be constructed at the safest place where there is no risk of flooding, landslide, collapse hazards, falling boulders and other elements.

### 8.2.2 Accommodation

- a) A gender friendly living accommodation should be provided.
- b) Accommodation should be constructed where workers are protected against the elements (such as wind, cold, rain, heat, etc.)
- c) There should be one room for every 4 employees. Adequate headroom and movement space shall be provided. The size of the room shall be at least 3.5 square meter per person (*refer drawing*).
- d) A separate kitchen shall be provided if employees cook by themselves. However, if the meals are provided by the employer, a common dining room, canteen or mess room, located away from the sleeping areas should be provided.
- e) A separate pour-flush toilet cum bathroom, washing facilities for male and female shall be provided. There shall be one toilet cum bathroom for every six users. The size of the toilet shall comply with the Building Code of Bhutan/ the attached drawing.
- f) The floors of each room shall be constructed of wood or concrete. Floor shall be provided with good finishes. All wooden floors shall be elevated not less than 1 foot above the ground level at all points to prevent dampness and to permit free circulation of air beneath.
- g) The walls of the bed room and the kitchen must be constructed preferably with ply boards of at least 10 mm thickness (or equivalent) and CGI/ PPI Sheet for roofing. For toilets, both walls and roof shall be constructed with CGI/ PPI sheets (or equivalent).
- h) There should be adequate natural light during the daytime and adequate artificial light (*refer drawing*).
- i) Adequate ventilation to ensure sufficient movement of air in all conditions of weather and climate.

### 8.2.3 Health and Hygiene

- a) An adequate and convenient water supply shall be provided for drinking, cooking, bathing, and laundry purposes.

- b) The accommodation should maintain good sanitation and hygiene (proper drainage system, proper waste management, good housekeeping, etc.).
- c) Measures should be taken to prevent the spread of diseases, especially communicable diseases.

**8.2.4 Safety at temporary accommodation site**

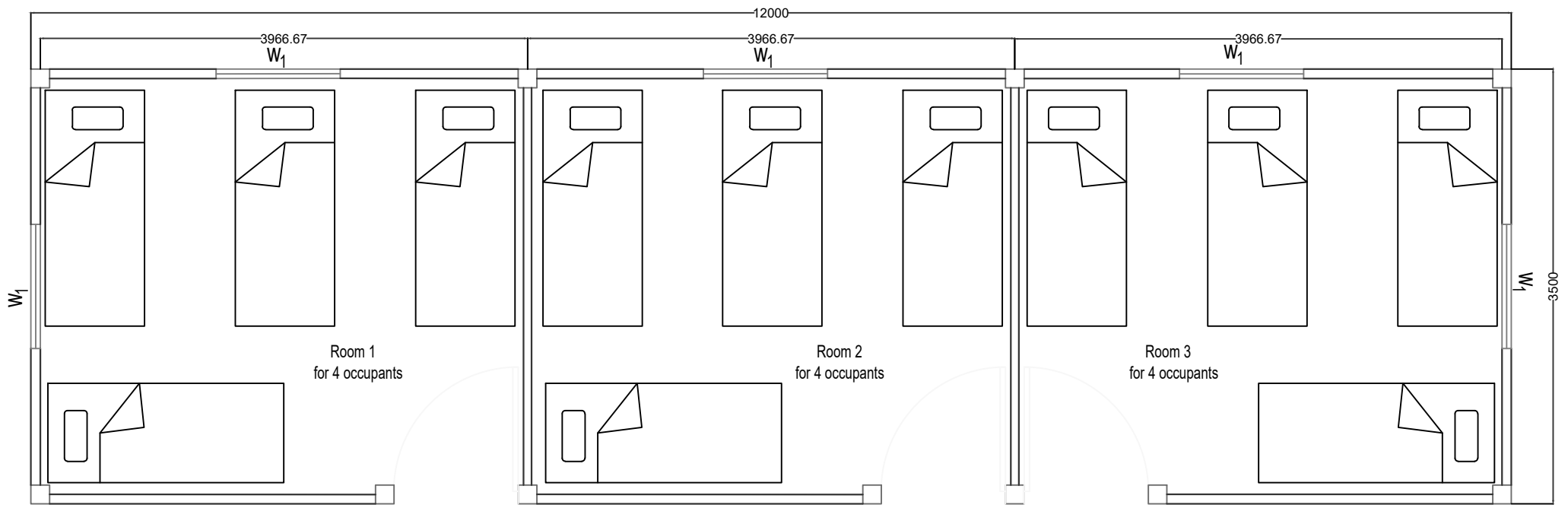
- a) Any electricity supplied for the accommodation should abide by the Electricity Act of Bhutan, 2001.
- b) There should not be any exposed live wire or unattended electrical switches & sockets in the living accommodation.
- c) Every cable used for any purpose should have a plug at one end.
- d) Combustible, explosive, and highly flammable materials should not be stored in the living accommodation.
- e) Fire safety measures should be taken, including installing and maintaining fire equipment.
- f) As far as possible, floors, walls, ceilings and equipment should be constructed to minimize health risks.

The accommodation shall be provided and maintained for the entire contract period including the time extension if any or the delays. The complete work of providing temporary living accommodation to workers at construction sites shall be treated as an item of work under Occupational Health and Safety.

The construction shall be durable taking into account local conditions, such as liability to earthquakes, flood and landslide. The materials used for accommodation will remain as the property of the bidder upon completion of the project. The reuse of the materials may be permitted as long as these reused items serve the intended purpose or as approved by the procuring agency.

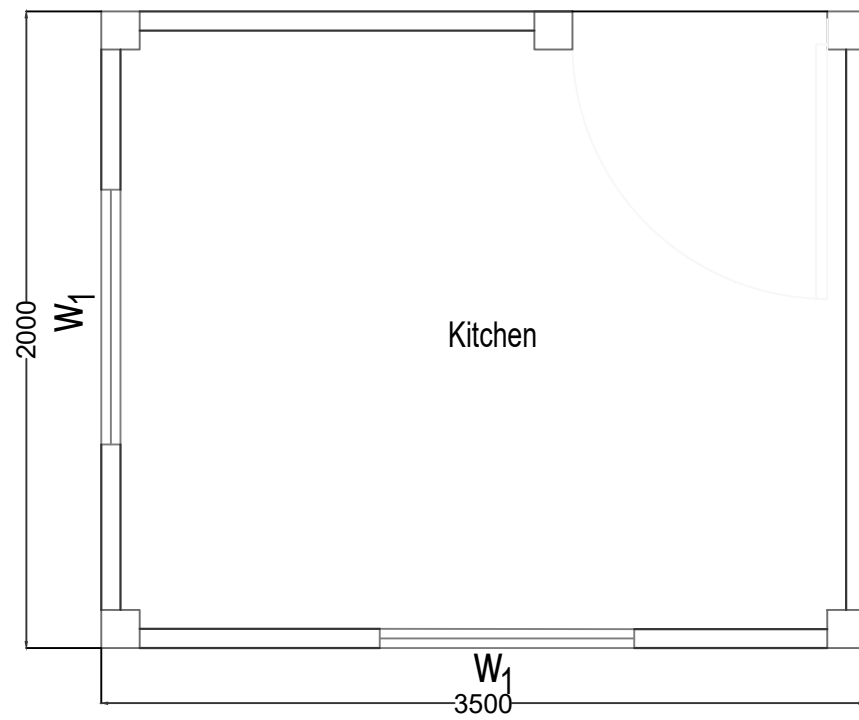
**Notes:**

1. *In case the contractor fails to provide specified temporary living accommodation, then the procuring agencies will construct accommodation facilities as specified above. The actual cost of construction will be recovered from the first running bill with the condition that the useful materials of the accommodation facilities can be taken ownership by the contractor.*
2. *No additional payment for accommodation shall be made for variations (Change of rate, time extension, deviation, price adjustment, additional works, etc.).*
3. *The quoted rate shall be inclusive of shifting and rebuilding cost of the accommodation facilities if required.*

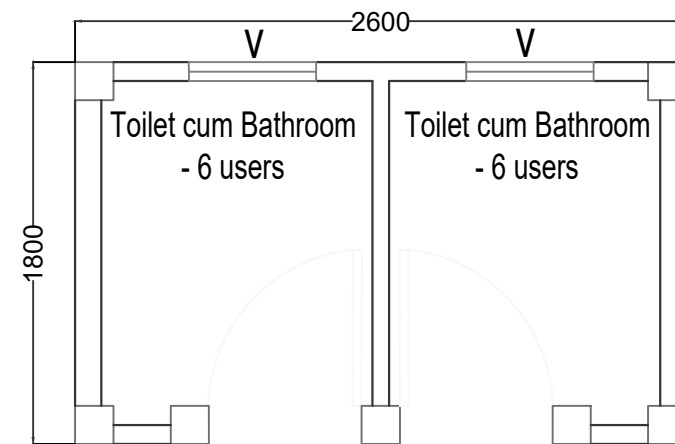


Bed Room

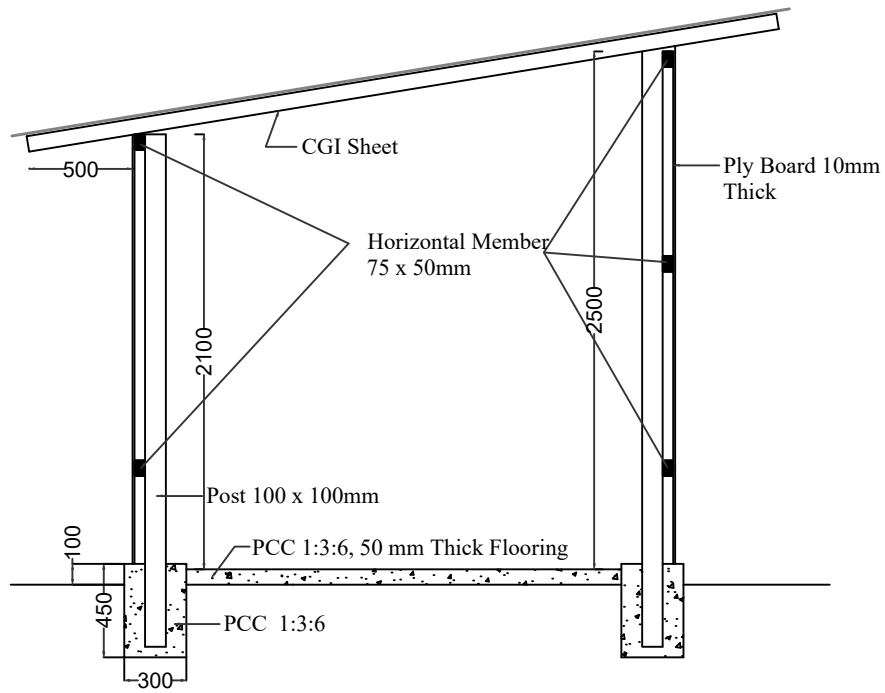




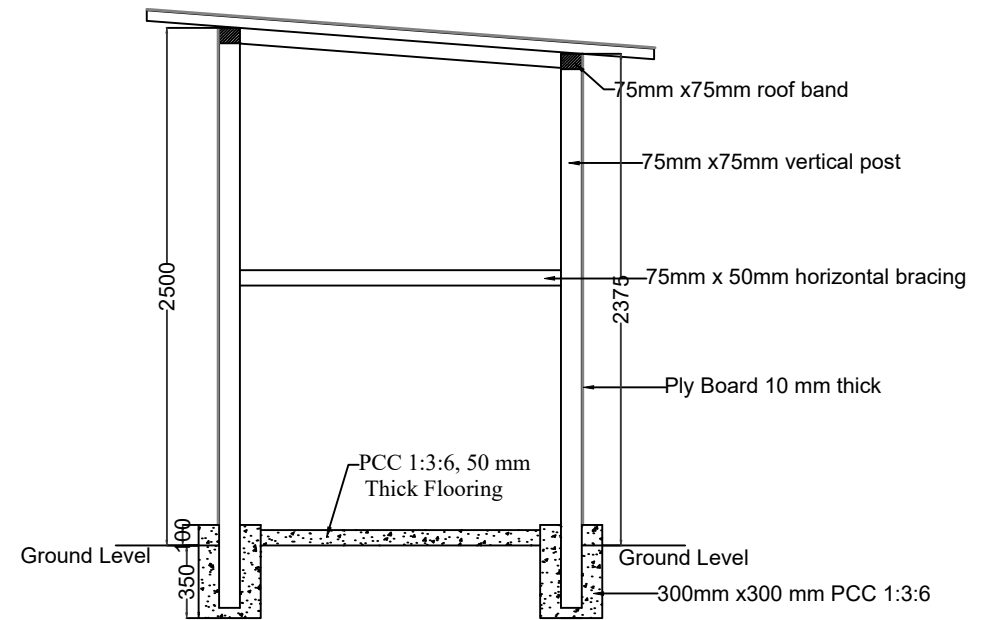
Kitchen



Toilet and Bathroom

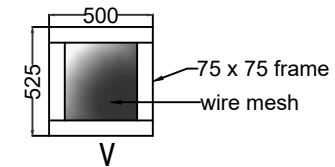
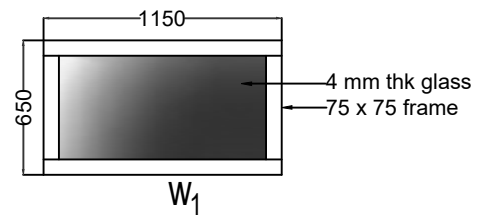







Section for Bed Room and Kitchen

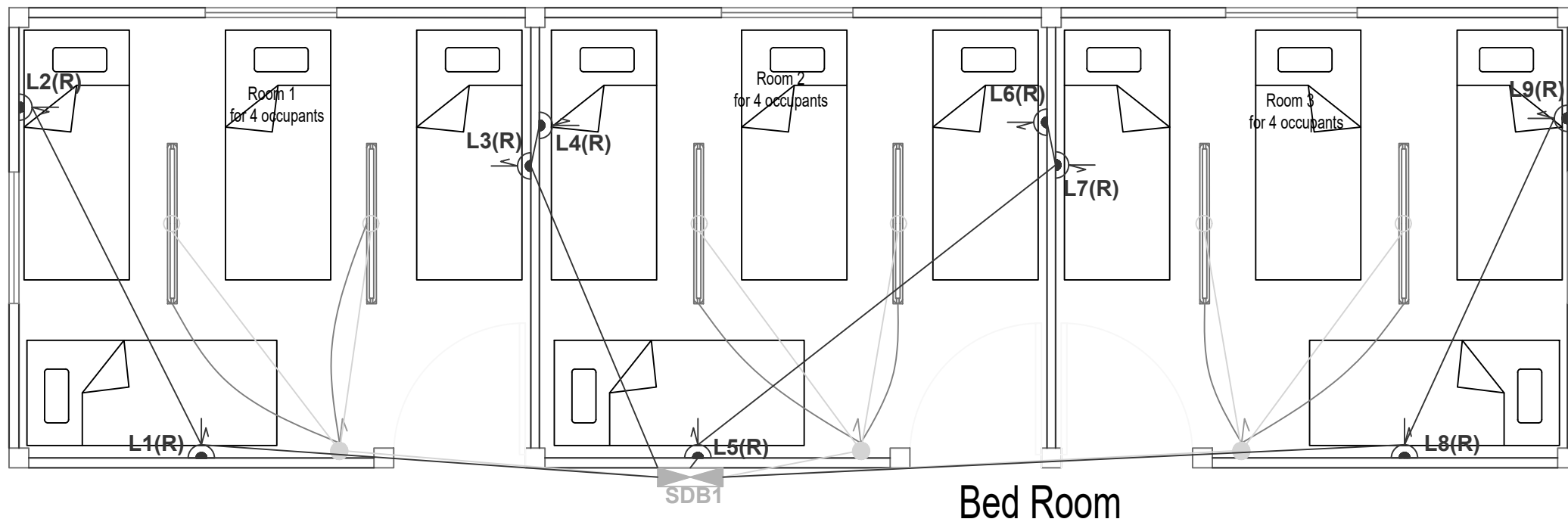


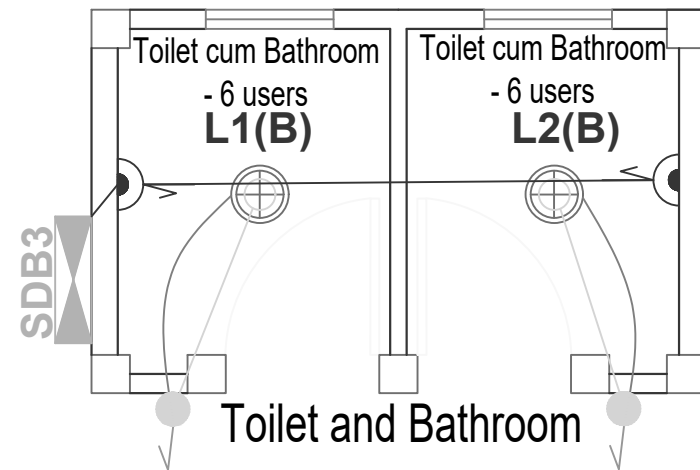
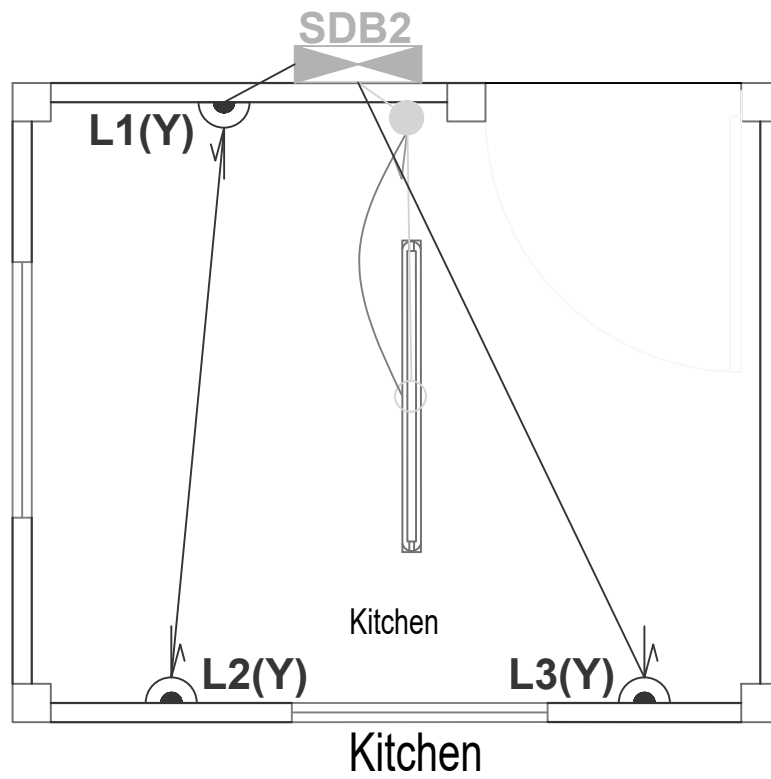
Section for Toilet

**Note:** Door size: 750mm x 1900mm

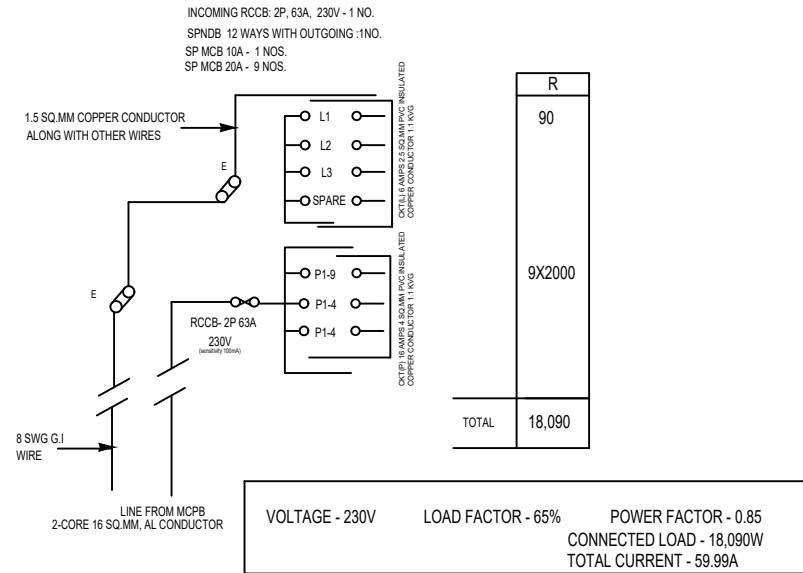


SL.NO.	<div>LEGENDS</div> <div>DESCRIPTION</div>	SYMBOL
1	INDOOR SURFACE/RECESS IN NORMAL TUBE FRAME WITH LED LAMP OF 1X15W	
2	SURFACE/RECESSED CEILING FOR OUTDOOR WITH LED LAMP OF - 1X12 W	
3	MODULAR POWER SOCKET OUTLET WITH 16A SWITCH FOR 2000W	
4	6A 1-WAY & 2-WAY SWITCH AT 1.5M HEIGHT	
5	WALL MOUNTED MAIN DISTRIBUTION BOARD AT 1.8 M HEIGHT IN GROUND FLOOR	
6	SUB DISTRIBUTION BOARD AT 1.8M HEIGHT FROM FINISHED FLOOR LEVEL	
7	SWITCH BOARD INDICATION IN CONDUIT LAYOUT	

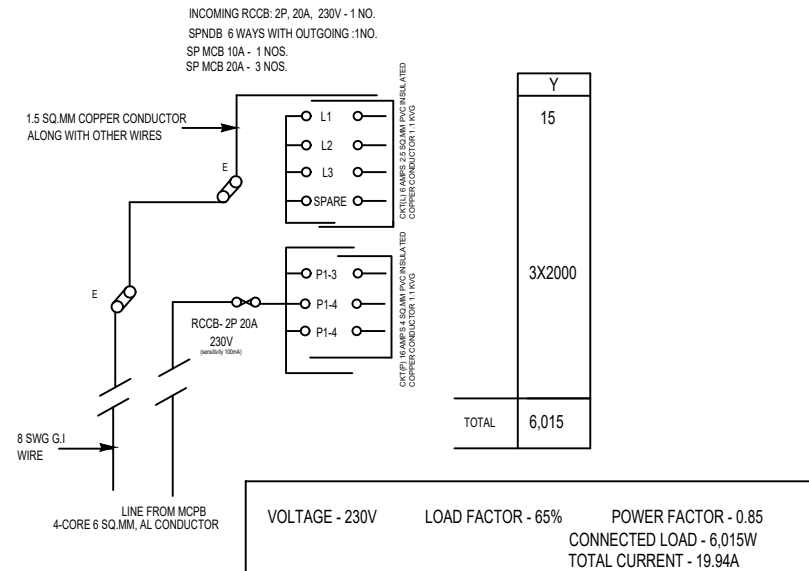




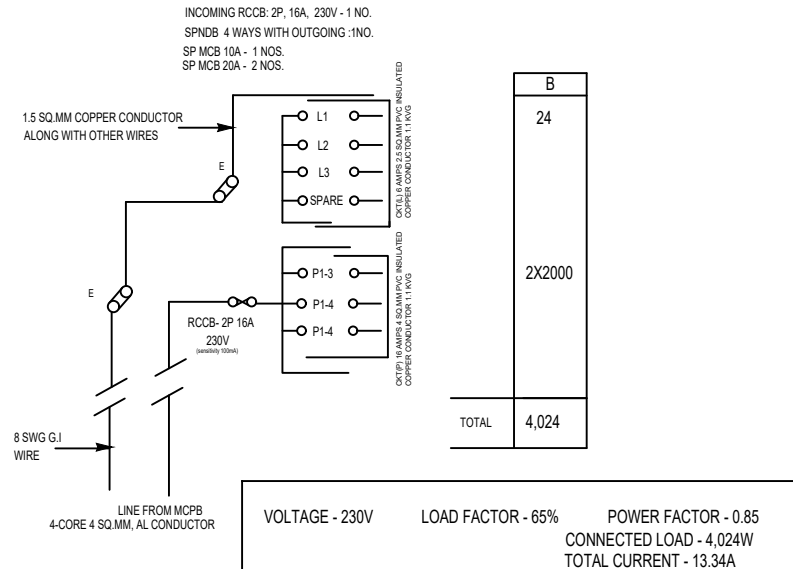
### DETAIL DIAGRAM FOR SUB DISTRIBUTION BOARD-1





### DETAIL DIAGRAM FOR SUB DISTRIBUTION BOARD-2

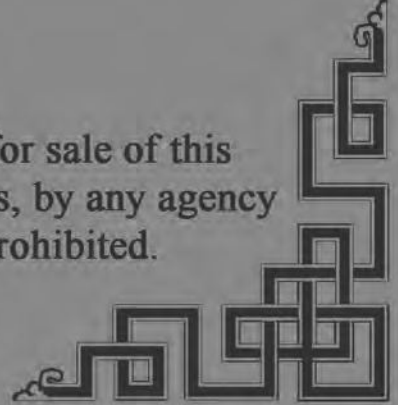
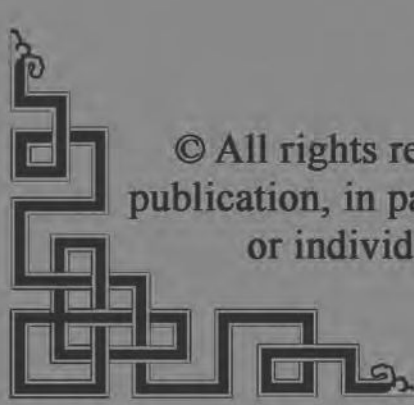


### DETAIL DIAGRAM FOR SUB DISTRIBUTION BOARD-3





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