

# Model Estimates Index

Page No.

## 100 Plantations

100	JICA Models	1
101	South Bengal Hybrid Clones Pltn. JICA	2
102	South Bengal TFF Pltn 70% JICA	4
103	South Bengal TFF Pltn 30% JICA	6
104	South Bengal Sal & Associates JICA	8

## 110 Directorate South Bengal Rate of Plantation (2016-17)

111	South Bengal Sal Plantation	11
112	South Bengal QGS block plantation	12
113	South Bengal Bamboo Pltn	16
114	South Bengal Strip Plantation	18
115	Mangrove Plantation	20
116	Medicinal Plantation Advance & Creation	21

## 120 North Bengal Models

121	North Bengal Sal & Asso. JICA	23
122	North Bengal Misc. Plantation JICA	27
123	North Bengal Bamboo Under planting JICA	29
124	North Bengal Grass & Fodder Pltn JICA	30
125	North Bengal Hills Removal of Malling Bamboo JICA	31
126	North Bengal Plains Misc. Pltn	32
127	WB Sal Plantation	33
128	North Bengal Strip Plantations	34

## 130 North Bengal Hills

131	Hills Sal Pltn	35
132 A	Hills Misc Pltn Creation (Malling Dominated Area)	37
132 B	Hills Misc Pltn Creation (Non Malling Area)	39

133	Hills Bamboo Pltn Creation	41
134	Hills Misc. Pltn- JICA	42
<b>200 Nurseries</b>		
202	DPN Nursery	44
203	Ramet Production	45
204	Seed Collection	47
205	South Bengal Production of Quality Planting Material	48
206	S.B. Production of Quality Planting Material 2 Season	49
207	S.B. Production of Clones – Eucalyptus	50
<b>300 Regeneration of Degraded Forests / CFC-South Bengal</b>		
301	South Bengal RDF	51
302	South Bengal Ms cutting	52
303	Mechanical Thinning	53
<b>400 Soil Conservation Operations</b>		
411	South Bengal Contour Trench	54
412	South Bengal Earthen Dams	55
413	South Bengal Gully Plugging	57
414	South Bengal Irrigation Channel	58
<b>420 North Bengal</b>		
421	Boulder Sausage Work (Hills)	59
422	North Bengal Box Drain	60
423	Hills Hand packed Wall	61
425	Stone Masonry wall (Hill)	62
426	North Bengal Breast Stone Wall	63
427	North Bengal Belly Benching	64
<b>500 CFC Operations</b>		
511	CFC in North Bengal Plains Firewood Operation	65

512	CFC in North Bengal Plains (Timber Operatrions)	66
513	CFC In North Bengal Hills Timber Operations	67
514	South Bengal Timber Operation – Rates	68
515	CFC South Bengal	69
<b>600 Buildings</b>		
<b>610</b>	<b>South Bengal</b>	
611	RO/HC/UDC & Account Officers Quarter (Type-III)	70
612	South Bengal Group C Single	74
613	Estimate for Construction of Forest Guard Quarter (Type-I)	76
614	South Bengal Group D Qrt. Single	79
615	Forest Barrack – South Bengal	82
616	Estimate for Construction of Community Hall	87
617 A	Estimate of Jetty (45Mtr X2Mtr) & approach path 15 M x 2.50 M)	92
617 B	Estimate of “Jetty (20.00M)” ,Sundarban Area	94
618	Estimate of “Two Stored Satellite Camp”,STR,	97
<b>620</b>	<b>North Bengal Plains</b>	
622	Estimate Group “C” Quarter	110
623	North Bengal GR D Qtr Single	114
<b>630</b>	<b>North Hills</b>	
631	Model Estimate for Group ‘D’ Quarter (Hill)	118
632	Model Estimate for Group ‘C’ Quarter (Hill)	125
633	Staff Barracks-Single Unit	133
<b>700 FPC support Activities</b>		
711	South Bengal Ring well	138
712	South Bengal – Estimate of Submersible Pump	139
<b>800 Miscellaneous</b>		
811	Growing Stock Survey Plot 20Mt*20Mt	140

812	Growing Stock Survey Plot: 20Mt* 20Mt. (per Unit)	140
813	Estimate for Elephant proof trench	141
814	Estimate for Elephant Proof Trench with boulders	141
815	Power Fencing	142
816	Estimate for CSB (Jhaw) for South Bengal	143
818	Boundary RCC Pillars Plains	144
819	Boundary Pillars (Hills)	145

## **900 Survey Monitoring**

901	1 <sup>st</sup> year Plantation (S.I 7.5%) Per Plot of 20 ha (JICA)	147
902	1 <sup>st</sup> year Plantation (S.I 7.5%) Per Plot of 20 ha (State Plan)	148
903	3 <sup>rd</sup> & 5 <sup>th</sup> year Plantation (S.I 5%) Per Plot of 30 ha (State Plan)	149
904	Older Plantation (10,15,20 years old) (S.I 5%) (In hills for all plantations irrespective of distances) (Plot size 50m x 50m) Per Plot of 30 ha (State Plan)	150
905	Older Plantation (10,15,20 years old) (S.I 5%) (In Plains & where plantations are far off) (Plot size 50m x 50m) Per Plot of 30 ha	151
906	Older Plantation (10,15,20 years old) (S.I 5%) (In Plains & where plantations are nearby) (Plot size 50m x 50m) Per Plot of 30 ha	152



100

## RATES OF PLANTATION DURING 2016-17

Sl. No.	Model	Zone	Spacing	No of plants per ha.	Rate per ha (Rs.)							TOTAL
					Advance (15-16) *	Fencing	Creation	Maint. 1st Year	Maint. 2nd Year	Maint. 3rd Year	Maint. 4th Year	
1	Plantation Misc. Spps.	SB	2.5 m x 2.5 m	1600	14300		32000	9500	6500			62300
		Hills	2.5 m x 2.5 m	1600	15100		32000	16800	14700	6000	3200	87800
		NB	2 m x 2 m	2500	15100		32000	16800	14700	6000	3200	87800
2	Coastal Shelter-Belt Plantation	SB	2.5 m x 2.5 m	1600	14300	11200	35000	9000	5100			74600
3	Strip Plantation	SB	2.5 m x 2.5 m	1600	15100	11200	53000	24000	17800	15771		136871
		NB	2.5 m x 2.5 m	1600	15100	11200	53000	24000	17800	15100		136200
4	Mangrove Plantation	SBR	2 m x 1 m	5000	2000		34500	4600	3300			44400
		WC	2 m x 1 m	5000	2000	11200	34500	4600	3300			55600
5	Sal Plantation	SB	2.5 m x 2.5 m	1600	23000	11200	33000	19900	16100	6000		109200
		NB	2 m x 2 m	2500	8600		35500	9100	6600	4800	3200	67800
6	Bamboo Plantation	SB & NB	4 m x 4 m	625	7000		22000	2400	1700	1200		34300
7	Fodder	SB & NB			13200		53700	12400	7300			86600
8	DPN	SB & NB		1600	4200		4200					8400

\* Advance for 2016-17 to be revised later

101 SOUTH BENGAL HYBRID CLONES PLTN JICA		
1	Spacing Prescribed as per Working	2.5m X 2.5m
2	Pit Size /Planting Model	(0.60+0.45)/2x0.45x0.45 m <sup>3</sup>
3	Species	Khijure/Akashmoni/Babla etc.
4	No of seedlings to be planted per Ha	1600
5	Planting Pattern	1. Survey and demarcation of the plantation area including GPS Survey by Technical Person. 2. Alignment of Planting Lines. 3. Advance soil works by digging planting pits of size (0.60+0.45)/2x0.45x0.45 m <sup>3</sup> at 2.5m x 2.5m spacing. 4. Cleaning the plantation site. 5. Filling up of planting pits with dug up pulverized soil. 6. Transplanting of potted seedlings in pits, including carriage of Root Trainers to Planting site and collection and recarriage of Root. 7. Carriage of seedlings from Central Nursery to Planting site including loading and unloading and return of stand and root trainers to central nursery. 8. Vacancy infilling. 9. 1 <sup>st</sup> mulching, weeding, cleaning and application of fertilizer. 10. 2 <sup>nd</sup> mulching, weeding, cleaning and application of fertilizer. 11. Cutting fire lines 3.0m wide. 12. Watch and ward (1 md per 10 ha) for 6 month. Planting pattern method: as per working plan (Staggered/Parallel)

Category	SI No	Item	Quantity	Unit	Type	Output per Mandays	Required Mandays	Rate	Amount (Rs)
Advanced	1	Survey and demarcation of the plantation area including GPS Survey by Technical person	1	ha	Labour	1	1	224.58	224.58
Advanced	2	Alignment of planting lines and ataking the pit positions	1600	nos	Labour	1600	1	224.58	224.58
Advanced	3	Advance Soil works by digging planting pits of size (0.60+0.45)/2 x0.45x0.45 m3 at 2.5 x2.5 m spacing (1600 nos)	1600	nos	Labour	35	46	224.58	10330.68
Advanced	4	Cleaning of the pltn site and making inspection pah	1	ha	Labour	0.17	6	224.58	1347.48
Creation	5	Filling up of planting pits with dug up pulverized soil	1600	nos	Labour	100	16	224.58	3593.28
Creation	6	Transplanting of potted seedlings in pits, including carriage of Root Trainers to Planting site and collection and recarriage of Root Trainers to local store site	1600	nos	Labour	80	20	224.58	4491.60
Creation	7	Carriage of seedlings from Central Nursery to Planting site including loading and unloading and return of Stand and Root Trainers to Central Nursry	1600	nos	Material			L.S	1200.00
Creation	8	Vacancy infilling	110	nos	Labour	55	2	224.58	449.16

### Estimate of A1 1st year Maintenance

### Estimate for High Yielding Eucalyptus Hybrid Clones Plantation : A1 Model

### Estimate of A1 2nd year Maintenance

[illegible]

## SOUTH BENGAL TFF PLTN 70% JICA

## Advance cum Creation

Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate (Rs.)	Amount (Rs.)
Advance	1	Survey and demarcation of the plantation area including GPS Survey by Technical person	1.00	ha	Labour	1.00	1.00	224.58	224.58
Advance	2	Alignment of planting lines and staking the pit position	1600.00	nos	Labour	1600.00	1.00	224.58	224.58
Advance	3	Advance Soil works by digging planting pits of size (0.60x0.45)/2x0.45x0.45cum at 2.5x2.5 m spacing (1600 nos.)	1600.00	nos	Labour	35.00	46.00	224.58	10330.68
Advance	4	Cleaning of the pltn site and making inspection path	1.00	ha	Labour	0.17	6.00	224.58	1347.48
Creation	5	Filling up of planting pits with dug up pulverized soil	1600.00	ha	Labour	100.00	16.00	224.58	3593.28
Creation	6	Transplanting of potted seedlings in pits, including carriage of Root Trainers to planting site and collection and recarriage of Root Trainers to local store site	1600.00	nos	Labour	80.00	20.00	224.58	4491.60
Creation	7	Carriage of seedlings from Central Nursery to Planting site including loading and unloading and return of Stand and Root Trainers to Central Nursery	1600.00	nos	Material			LS	1200.00
Creation	8	Vacancy infilling	110.00	nos	Labour	55.00	2.00	224.58	449.16
Creation	9	1st mulching, weeding, cleaning and application of fertilizer	1600.00	nos	Labour	100.00	16.00	224.58	3593.28
Creation	10	2nd mulching, weeding, cleaning and application of fertilizer	1600.00	nos	Labour	133.00	12.00	224.58	2694.96
Creation	11	Cutting firelines 3.0 m wide	250.00	rmt	Labour	125.00	2.00	224.58	449.16
Creation	12	Carriage of fertilizer, insecticide etc.	LS		Material			LS	250.00
Creation	13	Cost of fertilizer, insecticides etc.	LS		Material			LS	2000.00
Creation	14	Watch & Ward (1 md per 10 ha) for 6 months	LS		Labour		18.00	224.58	4042.44
Creation	15	Sowing Khijure/Akashmoni/Babla on boundary including supply and carriage of all materials	LS		Labour		1.00	224.58	224.58
Advance	16	Contingencies - Labour	LS		Labour			LS	136.00
Advance	17	Contingencies -Material	LS		Material			LS	200.00
Creation	18	Contingencies - Labour	LS		Labour			LS	108.00
Creation	19	Contingencies - Material	LS		Material			LS	150.00
<b>Total</b>							<b>129.50</b>		<b>35710.00</b>

## SOUTH BENGAL TFF PLTN 70% JICA

**Estimate for Quick Growing Small Timber, Fuel & Fodder Plantation : A-3 Model****1st Year Maintenance**

Hills									
Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate (Rs.)	Amount (Rs.)
Maint. Y1	1	Vacancy infilling	80.00	nos	Labour	80.00	1.00	224.58	224.58
Maint. Y1	2	1st weeding, cleaning, mulching with application of fertilizer	1600.00	nos	Labour	100.00	16.00	224.58	3593.28
Maint. Y1	3	2nd weeding, cleaning	1600.00	nos	Labour	133.00	12.00	224.58	2694.96
Maint. Y1	4	Cutting of firelines 3.0 m wide	500.00	rmt.	Labour	250.00	2.00	224.58	449.16
Maint. Y1	5	Cost of fertilizer and insecticide etc. including carriage & application	LS		Material			LS	250.00
Maint. Y1	6	Contingency - Material							54.00
<b>Total</b>							<b>31.00</b>		<b>7266.00</b>

**Quick Growing Small Timber, Fuel & Fodder Plantation****2nd Year Maintenance**

Hills									
Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate (Rs.)	Amount (Rs.)
Maint. Y2	1	Vacancy infilling	80.00	nos	Labour	80.00	1.00	224.58	224.58
Maint. Y2	2	1st weeding, cleaning, mulching	1600.00	nos	Labour	100.00	16.00	224.58	3593.28
Maint. Y2	3	Cutting of firelines 3.0 m wide	1000.00	rmt.	Labour	250.00	4.00	224.58	898.32
Maint. Y2	4	Contingency							64.00
<b>Total</b>							<b>21.00</b>		<b>4780.00</b>

**Quick Growing Small Timber, Fuel & Fodder Plantation****3rd Year Maintenance**

Hills									
Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate (Rs.)	Amount (Rs.)
Maint. Y3	1	Cutting of firelines 3.0 m wide	1250.00	rmt.	Labour	250.00	5.00	224.58	1122.90
Maint. Y3	2	Contingency							20.00
<b>Total</b>							<b>5.00</b>		<b>1143.00</b>



**Estimate for Quick Growing Small Timber, Fuel and Fodder Plantation: A3 Model: 30% - Maint. Year 2**

**Estimate for Quick Growing Small Timber, Fuel and Fodder Plantation: A3 Model: 30% - Maint. Year 3**

[illegible]

1	Spacing Prescribed as per Working Plan	Spacing for 0 yr-2.5m X 2.5m
		Spacing for 1 <sup>st</sup> yr- Nil
		Spacing for 2nd Yr Nil
		Spacing for 3 <sup>rd</sup> yr- Nil
		Spacing for 5 <sup>th</sup> yr-2.5m X 2.5m
		Spacing for 15 <sup>th</sup> yr-uniform
		Spacing for 30 <sup>th</sup> yr-uniform
		Spacing for 40 <sup>th</sup> yr-uniform
2	Pit Size /Planting Model	(0.60+0.45)/2x0.45x0.45m <sup>3</sup> pit
3	Species	Usual associates are Terminalia belerica, Anogeisuslatifolia, Lagerstroem-
		Other species are shrubs, herbs, climbe-rs etc.
4	No of seedlings to be planted per Ha	Creation 0 year-1600
		Creation 1st year- Nil
		Creation 2nd year- Nil
		Creation 3rd year- Nil
		Creation 5th year- 800
		Creation 15th year- 600
		Creation 30th year- 400
		Creation 40th year- 250
5	Planting Pattern	0 year-Weeding and cleaning three times.
		1 <sup>st</sup> year-Weeding and cleaning two times per year. Infilling to be done with one year old seedling. Mulching if required shall be done as per filed moisture condition. Infilling one time by miscellaneous species (not Teak) with one year good seedling to be done.
		2 <sup>nd</sup> year-Weeding and cleaning one time per year, mulching one time per year. Beating of casualties with same species shall be done one time with one to two years old seedling.
		3 <sup>rd</sup> year-Weeding and cleaning one time per year.
		5 <sup>th</sup> year-B grade mechanical thinning(Remo-val of alternate diagonosis), Climber cutting may be done.
		15 <sup>th</sup> year-B grade silvicultural low grade thinning by way of removing the suppressed and defective trees from lower crown class.
		30 <sup>th</sup> year-C grade silvicultural crown thinning.
		40 <sup>th</sup> year-B grade silvicultural crown thinning.
		Planting pattern method: as per working plan(staggered/parallel).



Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate (Rs.)	Amount (Rs.)
Advance	1	Survey and demarcation of the plantation area including GPS Survey by Technical person	1.00	ha	Labour	1.00	1.00	224.58	224.58
Advance	2	Alignment of planting lines and staking the pit positions	1600.00	nos	Labour	1600.00	1.00	224.58	224.58
Advance	3	Advance Soil works by digging planting pits of size (o.60+0.45)/2x0.45x0.45m <sup>3</sup> at 2.5x2.5 m spacing (1600 nos.)	1600.00	nos	Labour	40.00	40.00	224.58	8983.20
Advance	4	Cleaning of the pltn site and making inspection path	1.00	ha	Labour	0.13	8.00	224.58	1796.64
Creation	5	Filling up of planting pits with dug up pulverized soil	1600.00	ha	Labour	100.00	16.00	224.58	3593.28
Creation	6	Transplanting of potted seedlings in pits, including carriage of Root Trainers to planting site and collection and recarriage of Root Trainers to local store site	1600.00	nos	Labour	80.00	20.00	224.58	4491.60
Creation	7	Carriage of seedlings from Central Nursery to Planting site including loading and unloading and return of Stand and Root Trainers to Central Nursery	1600.00	nos	Material			LS	1600.00
Creation	8	Vacancy infilling	165.00	nos	Labour	55.00	3.00	224.58	673.74
Creation	9	Sowing Arhar seeds for raising nurse crop	500.00	rmt	Labour	250.00	2.00	224.58	449.16
Creation	10	Supply of Arhar seeds	5.00	kg.	Material			LS	500.00
Creation	11	1st mulching, weeding, cleaning and application of fertilizer	1600.00	nos	Labour	80.00	20.00	224.58	4491.60
Creation	12	2nd mulching, weeding, cleaning and application of fertilizer	1600.00	nos	Labour	100.00	14.00	224.58	3144.12
Creation	13	3rd mulching, cleaning, weeding	1600.00	nos	Labour	115.00	16.00	224.58	3593.28
Creation	14	Cutting firelines 3.0 m wide	500.00	rmt	Labour	125.00	4.00	224.58	898.32
Creation	15	Erection of life hedge (ipomea, vitex, thorny spp.) fencing with bamboo/bamboo posts including local carriage of all material	400.00	rmt	Labour	100.00	4.00	224.58	898.32
Creation	16	Material for live fencing including carriage up-to site	LS		Labour			LS	2000.00
Creation	17	Watering the seedlings in the field during dry spell with 15 days interval, for 3 months i.e. for about 6 days	1600.00	nos	Labour	400.00	24.00	224.58	5389.92
Creation	18	Digging dug well/shallow tube well - labour	LS		Labour		30.00	224.58	6737.40
Creation	19	Digging dug well/shallow tube well - Material			Material			LS	3520.00
Creation	20	Carriage of manure, including cowdung manure, insecticide etc.	LS		Material				500.00
Creation	21	Cost of manure including cowdung manure, fertilizer and insecticides etc.	LS		Material			LS	4000.00
Creation	22	Watch & Ward (1 md per 10 ha) for 6 months	LS		Material		18.00	224.58	4042.44
Creation	23	Planting/sowing Bamboo/Khijure/Akashmoni/Babla on boundary including supply and carriage of all materials	LS		Labour		4.00	224.58	898.32
Advance	24	Contingencies - Labour	LS		Labour			LS	100.00
Advance	25	Contingencies - Material	LS		Material			LS	100.00
Creation	26	Contingencies - Labour	LS		Labour			LS	30.00
Creation	27	Contingencies - Material	LS		Material			LS	50.00
<b>Total</b>							<b>225.00</b>		<b>62930.00</b>

### 1st Year Maintenance

## 2nd Year Maintenance

### 3rd Year Maintenance

5th Year Maintenance									
Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate (Rs.)	Amount (Rs.)
Maint. Y3	1	1st weeding, cleaning	1600.00	nos	Labour	115.00	14.00	224.58	3144.12
Maint. Y3	2	2nd weeding, cleaning	1600.00	nos	Labour	160.00	10.00	224.58	2245.80
Maint. Y3	3	Cutting of firelines 3.0 m wide	750.00	rmt.	Labour	250.00	3.00	224.58	673.74
Maint. Y3	4	Contingency							68.00
<b>Total</b>									<b>6132.00</b>

## Nature of Work :- Raising Sal Pltn. Creation Work .

Sl.	Particulars of Work	No.of MD	Mat.in unit	Rate in Rs.	Amount in Rs.
<b>A</b>	<b>Creation Works.</b>				
1	Weeding, cleaning, pricking out and application of oil cake / insecticides / growth promoting hormone etc.	6		224.58	1347.48
2	Sorting, shifting of nursery seedlings, grading and arranging according to height growth.	4		224.58	898.32
3	Watering of nursery seedling from April to June.	6		224.58	1347.48
<b>B</b>	<b>Creation : Soil &amp; plant. Work .</b>				
1	Cutting planting pits of size ( 0.60 + 0.45 / 2 x 0.45 x 0.45 ) mt.over 640 nos./ ha.	14		224.58	3144.12
2	Filling up planting pits with dug up earth & neem oil cake, cowdung / FY M	12		224.58	2694.96
3	Transplanting of potted seedlings including carriage by manual labour	14		224.58	3144.12
4	Vacancy filling with potted seedling including application of insecticides	2		224.58	449.16
5	1st time weeding cleaning & mulching with application of fertilizer	14		224.58	3144.12
6	2nd time weeding cleaning & mulching without application of fertilizer	10		224.58	2245.80
7	Sowing of Arahah seeds as nurse crop on the ridges of dug up soil along the continous trenches.	1		224.58	224.58
8	Collection of fencing post : 100 Nos.		100	5	500.00
9	Fixing post including digging hole : 100 Nos.		100	3	300.00
10	Cost of barbed wire 2 ply : 40 kg		40	70	2800.00
11	Straining of barbed wire 3 to 4 strain	5		224.58	1122.90
12	Carriage of seedlings from central nursery to plantation site	LS			1500.00
13	Making fire lines 1.50 mt. wide all along the periphery and 1.20 mt. with inside pltn.	8		224.58	1796.64
14	Watering to planted seedlings during dry spell for establishment	12		224.58	2694.96
15	Contingencies including the cost of Arahah seeds, coir rope etc.	LS			294.44
16	supply of neemcake, organic fertilizer , insecticide and hormone	LS			3352.00
<b>TOTAL (1.0 ha)</b>		<b>108</b>			<b>33001.00</b>

1	Spacing Prescribed as per Working Plan		2.5m X 2.5m.
2	Pit Size /Planting Model		60c.m.x45c.m.x45c.m Pit.
3	Species	<div><div>A. Eucalyptus Plantations</div><div>1. 60-70% Eucalyptus and Eucalyptus clone etc.</div><div>2. Balance to be planted by Misc. sp. like Sissoo, Siris, Gamar, Haldu, Mahul etc., with NTFP species like Neem, Haritaki, Bahera, Amloki, Karanj etc.</div><div>3. Local Spp as suggested by FPC Members.</div><div>4. Along the boundary line Tal, Khejur to be planted and Babla seeds to be sown.</div><div>5. After 3rd Coppice rotation the Eucalyptus areas shall be planted afresh, preferably with NTFP sp. and if not possible with Akashmoni</div></div> <div><div>B. Akashmoni Plantations</div><div>1. 60-70% Akashmoni / Minjiri etc.</div><div>2. Balance to be planted by misc. timber sp. such as Sissoo, Siris, Gamar, Haldu, Mahuletc and with NTFP sp. like Neem, Haritaki, Bahera, Amloki, Karanj etc.</div><div>3. Local Spp as suggested by FPC Members.</div><div>4. Along the boundary line Tal, Khejur to be planted and Babla seeds to be sown.</div></div>	
4	No of seedlings to be planted per Ha		1600
5	Planting Pattern	<div><div>A. Eucalyptus Plantations</div><div>1. Planting pattern should be such that NTFP spp planted get maximum protection from grazing etc and hence pattern should be decided on local factors. The territorial DFO in Consultation with CF/CCF shall decide the planting pattern.</div><div>2. Eucalyptus and Akashmoni Plantations shall be taken up only in Lateritic areas with poor soil quality. If the soil quality is stony and lateritic and not fit for miscellaneous species then the miscellaneous species may be shifted to some other place with good soil quality that is fit for regeneration.</div><div>3. Minimum 10% of QGS plantation should be planted with NTFP species like Am, Bel, Jam etc. as per the Working plan prescriptions. 4. If condition is not congenial then pure patch can be raised with 10% misc species.</div></div> <div><div>B. Akashmoni Plantations</div><div>1. Cleaning the nursery area including cutting jungles.</div><div>2.Making mother bed of size 1.8x0.30x1.3x0.49</div><div>3.Making Tube bed of size 4mt.X1.2mX0.15m</div><div>4. Supply of polytube 1.5 kg.</div><div>5. Supply of cowdung manure.</div><div>6.Supply of Good Earth.</div><div>7.Felling up of poly plot. Including mixing cowdung and placing in proper position in bed .</div><div>8.Making shed including supply of straw bamboo.</div><div>9.supply straw for covering the bed.</div><div>10.Making nursery fencing all around the nursery.</div><div>11.Supply of fencing material.</div><div>12.MakingNursey hut with thatch roofing and mud wall.</div><div>13.Supply nursery hut materials.</div><div>14.Supply of nursery materials emptytin,watercan,rope etc.</div><div>15.Dibbling seeds into the polypot and supplying of tube to mother bed.</div><div>16.Watering,weeding,cleaning including application of insecticide.</div><div>Planting pattern method:as per working plan(staggered/parallel).</div></div> <td></td>	

1. Seedlings to be Raised : 1800 nos.
2. Seedlings to be Planted : 1600 nos.
3. Spacing to be provided : 2.5 mt. x 2.5 mt.
4. Size of Planting Pits : 60 cm. x 45 cm. x 45 cm.
5. Wage Rate : Rs. 224.58 / Majdoor (As per labour commission Circular)

**Unit : 1 hectare**

Sl. No.	Particular of Works	Mandays(md)/ Qty.	Rate	Labour Cost	Material Cost	Total Cost
<b>A.</b>	<b><u>Advance Nursery Works : (Seedling to be raised 1800 nos.)</u></b>					
1	Cleaning the Nursery area including cutting jungles	1 /md	224.58 /md	224.58		224.58
2	Making Mother bed of size 1.8X0.30X1.3X0.49	1 /md	224.58 /md	224.58		224.58
3	Making Tube bed of size 4mt X 1.20X0.15	1 /md	224.58 /md	224.58		224.58
4	Supply of Poly tube 1.5kg				300.00	300.00
5	Supply of Cowdung manure				450.00	450.00
6	Supply of Good Earth				300.00	300.00
7	Felling up poly plot.including mixing cowdung & placing in proper position in bed 1800 nos @ 360 Nos. per D.L.	6 /md	224.58 /md	1347.48		1347.48
8	Making Shed including supply of straw bamboo etc. 2nos. @ 100.00				200.00	200.00
9	Supply of Straw for converging the bed 1/4 pan				30.00	30.00
10	Making Nursery fencing all around the Nursery	3 /md	224.58 /md	673.74		673.74
11	Supply of Fencing materials				150.00	150.00
12	Making Nursery hut with thatch roofing & mud wall	1 /md	224.58 /md	224.58		224.58
13	Supply of Nursery hut materials				200.00	200.00
14	Supply of Nursery materials empty tin, water can, rope etc. (Part)				250.00	250.00
15	Price of different seeds				200.00	200.00
16	Dibbling seeds into the poly pot & supplying of tube to mother bed 900 nos./DL	2 /md	224.58 /md	449.16		449.16
17	Watering, weeding, cleaning including application of insecticide up to 31st March	5 /md	224.58 /md	1122.90		1122.90
18	Supply of insecticides				250.00	250.00
19	Contingency				168.00	168.00
	<b>A. Advance Work Total :</b>	<b>20.00 /md</b>	<b>206.00</b>	<b>4491.60</b>	<b>2498.00</b>	<b>6989.00</b>
<b>B.</b>	<b><u>Advance Soil Work :</u></b>					
1	Cleaning the Pltn. area (100%) including cutting jungles & uprooting bushes etc.	5 /md	224.58 /md	1122.90		1122.90
2	Survey and demarcation of Plantation Area (100%)	2 /md	224.58 /md	449.16		449.16
3	Alignment and Staking of Planting pits (40%)	1 /md	224.58 /md	224.58		224.58
4	Digging 770 numbers of Planting pit of size 60cm. x 45cm. x 45cm. at a spacing of 2.5mt. x 2.5mt. Over 1600 pits / hectre @ 46md. Per ha.	24 /md	224.58 /md	5389.92		5389.92
6	Supply of Treasing paper for map prepration, rope, lime, bamboo peg etc.	L.S.			123.00	123.00
	<b>B. Creation Work Total :</b>	<b>32.00 /md</b>		<b>7186.56</b>	<b>123.00</b>	<b>7309.56</b>
	<b>Grand Total A+B =</b>	<b>52.00 /md</b>		<b>11678.16</b>	<b>2621.00</b>	<b>14299.00</b>

## QGS PLANTATION-South Bengal

## QGS-Block Plyn. Creation

1. Seedlings to be Raised : 1800 nos.
2. Seedlings to be Planted : 1600 nos.
3. Spacing to be provided : 2.5 mt. x 2.5 mt.
4. Size of Planting Pits : 60 cm. x 45 cm. x 45 cm.
5. Wage Rate : Rs. 224.58

Unit : 1

Sl. No.	Particular of Works	Mandays(md )/ Qnty.	Rate	Labour Cost	Material Cost	Total Cost
	Creation Works :					
1)	<b>Plantation Nursery Maint. work like Watering, weeding, clean</b>	12 md	224.58 /md	2694.96		2694.96
2)	Cleaning the Pltn. area (60%) including cutting jungles & uprooting bushes etc.	1.5 md	224.58 /md	336.87		336.87
3)	Survey and demarcation of Plantation Area (60%)	1.5 md	224.58 /md	336.87		336.87
4)	Alignment and Staking of Planting pits (60%)	1.5 md	224.58 /md	336.87		336.87
5)	Digging 60% of Planting pit of size 60cm. x 45cm. x 45cm. at a spacing of 2.5mt. x 2.5mt. Over 1600 pits / hectqre @ 40md. Per ha.	24.0 md	224.58 /md	5389.92		5389.92
6)	Filling up the planting pits with the mixture of dugup Soil, cowdung manure and insecticide	10.0 md	224.58 /md	2245.80		2245.80
7)	Application of insecticide (2 times) after planting	5.0 md	224.58 /md	1122.90		1122.90
8)	Transplanting of seedling including carriage from nursery to planting site and loading unloading complete	14.0 md	224.58 /md	3144.12		3144.12
9)	Filling up the vacancies	2.0 md	224.58 /md	449.16		449.16
10)	Mulching, weeding, cleaning and application of fertiliser (2 times)	32.0 md	224.58 /md	7186.56		7186.56
11)	Hoeing the souring line along the boundary of the plantation	2.0 md	224.58 /md	449.16		449.16
12)	Cost of cutting box trench of 45 cm. wide and 30 cm. deep through out the plantation area along the counter line at a regular interval to lonsene the soil and moisture over 50 rtm.	10.0 md	224.58 /md	2245.80		2245.80
13)	Cutting of fire line against accidental fire	8.0 md	224.58 /md	1796.64		1796.64
14)	Making fencing around the planting area	5.0 md	224.58 /md	1122.90		1122.90
15)	<b>Supply of Organic manure, Chemical fertilizer, hormone &amp; insecticides</b>	L.S.			<b>3142.75</b>	<b>3142.75</b>
	Total Creation :	128.5 md	206	28858.53	3142.75	<b>32001.00</b>

**QGS Plantation Maintenance - Year-1**  
**AREA 1 (ONE) HECTARE.**

Sl. No.	Particulars Of Works	MD/Qtty.	Rates	Amount (Rs.)
	Cost of doing the following works in connection with 1st year maintenance of plantation over 1 ha.			
1	Price of nursery raised seedlings 10%	160 nos.	3.5	560.00
2	Planting seedlings by dig & plant method.1600 seedlings .	5 nos.	224.58	1122.90
3	Mulching around the seedlings with chemical manure over 1 ha.one time.	20 nos.	224.58	4491.60
4	Cleaning the plantation area by cutting climber & bushes thorn etc.	5 nos.	224.58	1122.90
5	Digging fire line 2 mt wide inside the plantation area over 200 mt.during dry season.	5 nos.	224.58	1122.90
6	Cost of fertilizer & insecticide etc.	L.S.		850.00
7	Contingency etc.			230.00
	<b>TOTAL</b>			<b>9500.00</b>

**Block / QGS Plantation Maintenance - Year-2**  
**AREA 1 (ONE) HECTARE.**

Sl. No.	Particulars Of Works	Md/Qtty.	Rates	Amount (Rs.)
	Cost of doing the following works in connection with 1st year maintenance along of plantation over 1 ha.			
1	Price of nursery raised seedlings 05%	80 nos.	3.5	280.00
2	Planting seedlings by dig & plant method.80 seedlings .	2.5 md	224.58	561.45
3	Mulching around the seedlings with chemical manure over 1 ha.one time	14 md	224.58	3144.12
4	Cleaning the plantation area by cutting climber & bushes thorn etc.	5 md	224.58	1122.90
5	Digging fire line 2 mt wide inside the plantation area over 200 mt.during dry season.	4 md	224.58	898.32
6	Price of chemical fertilizer / manure	L.S.		300.00
7	Contingency (Price of chemical manure) etc.	L.S.		193.00
	<b>TOTAL</b>			<b>6500.00</b>

1	Spacing Prescribed as per Working Plan	5m X 5m
2	Pit Size /Planting Model	As per working plan
3	Species	Bamboo sp.
4	No of seedlings to be planted per Ha	400
5	Planting Pattern	<p>1. Only mature culms may be felled. (The colour of a mature culm is uniform throughout and it can also be recognized by the absence of its sheaths. An immature culm is covered with mealy powder all over it).</p> <p>2. Bamboo should be cut at least two nodes above the ground so as to prevent the rhizomes from drying up.</p> <p>3. Congestion in the clumps shall be removed by cutting across the middle of the clumps so that the mature bamboo from the center may be extracted. Usually the outer culms are young.</p> <p>4. The exploitation shall proceed systematically from one end of a block.</p> <p>5. Sufficient number of culms should be retained in each clump.</p> <p>6. Tops and branches of cut bamboo shall be removed from the clumps.</p> <p>7. Every clump of bamboo shall be given a three years period of rest after each felling.</p> <p>8. As far as practicable earth may be put in the bamboo clumps to cover up the roots and rhizomes in March.</p> <p>9. Planting of bamboo may be undertaken in the forests and in plantations.</p> <p>Planting pattern method: as per working plan (staggered/parallel).</p>

Nature of Work :- Bamboo Pltn. Advance

Unit :: 1.0 ha

Sl No	Details of works.	Man-days.		Total/ M.D.	Rate	T/Cost of M.D.	Material comp.			Total. (Rs.)
		M	F				Inputs. /ors.	Rate	Total Material s	
1	Thorough cleaning of plantation site by cutting jungles, bushes, abnoxious weeds and their removal	3	0	3	224.58	673.74				673.74
2	Surveying & demarcation of plantation site/s, including preparation of Map.	2	0	2	224.58	449.16				449.16
3	Alignment of planting pits as per planting pattern in staggered fashion .	3	0	3	224.58	673.74				673.74
4	Digging planting pits of size (0.60x 0.45 x 0.45)m, at a spacement of 6.00m x 4.00m, pit to pit and line to line apart @ 416 nos planting pits /ha. (.60+.40)/2 x .45 x .45	4		4	224.58	898.32				898.32
5	Erection of brushwood /Livehedge fencing including collection of all materials.	3		3	224.58	673.74				673.74
Total				15	224.58					
6	Cost of Fencing materials								200.00	200.00
7	Cost of supply of nodes/rhizomes including carriage for 580 single node.								2500.00	2500.00
8	Cost of supply hormone and fungicide								500.00	500.00
7	Cost of supply of cowdung manure, sand & good earth.								300.00	300.00
8	contingency								131.30	131.30
Total cost for 1.00 ha.		15	0	15		3368.70			3631.30	7000.00



## SOUTH BENGAL BAMBOO WORK CREATION

A	NURSERY WORK	MD		
1	Watering, cleaing weeds, application of insecticides etc over 110 days	26	224.58	5839.08
	Sub Total	26	224.58	5839.08
B	PLANTATION WORK			
1	Cost of digging planting Pits[(0.6m+0.4m)/2x0.45mx0.45m @416 Nos of spacing 6.0x4.0 mt (balance pits)	4	224.58	898.32
2	Cost of filling planting pit with cowdung mannure	4	224.58	898.32
3	Cost of carriage of bamboo rhizome from nursery to planting site	2	224.58	449.16
4	Erecting brush wood fencing around the plantation as and where necessary	6	224.58	1347.48
5	Cost of planting bamboo rhizome/single noddod cutting in plantation site over 417 numbers	5	224.58	1122.9
6	Cost of 1st mulching including application of fertilizer	5	224.58	1122.9
7	Cost of 2nd mulching	4	224.58	898.32
8	Cutting fireline	2	224.58	449.16
	Sub Total	58	224.58	13025.64
C	MATERIALS			
1	Cowdung mannure	LS	1000	
2	Fertilizer @ 50gm/pit	LS	500	
3	Insecticides	LS	186	
4	Carriage of single node cutting/ rhizome	LS	1000	
5	Carriage of fertilizer, etc	LS	200	
6	Cost of fencing materials	LS	250	
	Sub Total			3136
	Total			22000.72
	Grand Total			22001.00

## Maint of Bamboo Plantation Y-1 UNIT 1.00 ha.

## Nature of Work :- Bamboo Pltn. Maintenance-Y1.

16pacing : for Bamboo( 5.00 x 5.00)m pit to pit and line to line apart in blocks in staggered fashion. 416 Seedlings/ha.

Sl No	Details of works.	Man-days.		Total/ M.D.	Rate	Total Cost of M.D.	Material comp.			Total (Rs.)
		M	F				Inputs./ ors.	Rate	Total Materials	
1	Cost of doing infilling, and putting earth at the base of the culm with fertilizer	3		3	224.58	673.74				673.74
2	Repairing of fencing	2		2	224.58	449.16				449.16
3	Watering of the stock								300.00	300.00
4	Cost of supply ferilizer and insecticides								600.00	600.00
5	Supply of seedlings for infilling								350.00	350.00
6	Contingency.								27.00	27.00
Total cost for 1.00 ha.		5	0	5	224.58	1122.90			1277.00	2400.00

## Maint of Bamboo Plantation Y-2 UNIT 1.00 ha.

Spacing : for Bamboo( 5.00 x 5.00)m pit to pit and line to line apart in blocks in staggered fashion. 416 Seedlings/ha.

## Nature of Work :- Bamboo Pltn. Maintenance-Y2.

Sl No	Details of works.	Man-days.		Total/ M.D.	Rate	Total Cost of M.D.	Material comp.			Total (Rs.)
		M	F				Inputs./ ors.	Rate	Total Materials	
1	Cost of doing infilling, and putting earth at the base of the culm	3		3	224.58	673.74				673.74
2	Repairing of fencing	2		2	224.58	449.16				449.16
4	Cost of supply ferilizer and insecticides								220	220.00
5	Supply of seedlings for infilling								300	300.00
6	contingency								57.1	57.10
Total cost for 1.00 ha.		5	0	5	224.58	1122.90			577.10	1700.00

1	Spacing Prescribed as per Working Plan	2.5m X 2.5m
2	Pit Size /Planting Model	(0.6+0.45)/2x0.45x0.45 m <sup>3</sup> Trench
3	Species	Terminalia belerica (Bahera), Emblicaofficinates(Amloki), Terminalia chebula(Haritaki), Azadirachta indica(Neem), Terminalia arjuna(Arjun), Terminalia tomentosa(Asan) & other species as Rauvolfia serpentine (Sarpagandha), Ocimum sanctum(Tulsi), Adrographis paniculata(Kalmegh), Hemidesmus indicus(Anantamul) etc.
4	No of seedlings to be planted per Ha	As per working plan
5	Planting Pattern	<p>1. Digging of pits size (0.6+0.45)/2x0.45x0.45</p> <p>2. Filling up of planting pits with dug up pulverized soil.</p> <p>3. Transplanting of potted seedlings including carriage from field nursery to planting site and stacking.</p> <p>4. Application of insecticide to the planted seedlings.</p> <p>5. Pricking out and sorting and shifting of the seedlings in the field nursery.</p> <p>6. Infilling of vacancy created due to field mortality including carriage.</p> <p>7. 1<sup>st</sup> mulching by digging earth around pits and cleaning, weeding and application of fertilizers.</p> <p>8. 2<sup>nd</sup> mulching, cleaning, weeding including application of 2<sup>nd</sup> dose of fertilizers.</p> <p>9. 3<sup>rd</sup> mulching, cleaning, weeding.</p> <p>10. 4<sup>th</sup> mulching, cleaning and weeding</p> <p>11. Cutting firelines 3m wide to prevent accidental fire</p> <p>12. Cutting trenches of size 0.60mx0.45m inside the plantation area and boundary.</p> <p>13. Watering of seedlings and watch and ward.</p> <p>14. Making live hedge fencing.</p> <p><b>IN-SITU CONSERVATION:-</b></p> <p>Conservation through the protection and assistant natural regeneration activities of natural areas should be the main focus for in situ conservation. Some of the other points are as follows.</p> <p>1. Natural regeneration through renewal of degraded forest and augmentation of NTFP resources through supplemental planting shall be taken up.</p> <p>2. The Forest department staff as well the communities should be jointly trained and motivated through reorientation of ecological and economic importance of the NTFP species.</p> <p><b>EX-SITU CONSERVATION:-</b></p> <p>Species listed in CITES listed and Negative listed shall not be allowed to be extracted from the forest area. However the Divisional forest Officer shall try to promote the Ex-Situ conservation of these species outside Forest areas in order to sensitize the local population about the benefits and marketing opportunities of NTFP species.</p> <p>Domestication and cultivation of NTFP species shall be promoted by offering technical and material inputs to the farmers/villagers.</p> <p>Planting pattern method: as per working plan (staggered/parallel).</p>

	Description	Unit	Quantity		Unit Price		Cost (Rs.)		
			Labour	Material	Labour	Material	Labour	Material	Total(Rs.)
I. ADVANCE WORKS - (Strip Plantation)									
	1. Survey & demarcation of the field nursery area	man-day	1	0	224.58		224.58	0	224.58
	2. Cleaning the field nursery site by bush cutting/burning and removing debris	man-day	1	0	224.58		224.58	0	224.58
	3. Preparation of mother beds	man-day	4	0	224.58		898.32	0	898.32
	4. Preparation of Polypot beds	man-day	3	0	224.58		673.74	0	673.74
	5. Collection of seeds	man-day	2	0	224.58	0	449.16	0	449.16
	6. Filling of polythene tubes	man-day	7	0	224.58		1572.06		1122.9
	7. Sowing of seeds in mother beds	man-day	4	0	224.58		898.32	0	898.32
	8. Pricking out the sprouted seedlings and transplanting to polypot beds	man-day	3	0	224.58		673.74	0	673.74
	9. Watering the seedlings	man-day	2	0	224.58		449.16	0	449.16
	10. Digging of Kuccha well for water source	man-day	2	0	224.58	0	449.16	0	449.16
	11. Making a temporary field nursery hut of Bamboo, Thatch mudwall etc.	man-day	2	0	224.58		449.16	0	449.16
	12. Survey & demarcation of the plantation area	man-day	1	0	224.58		224.58	0	224.58
	13. Advance Soil works by digging, planting pits of size (0.60+0.45)/2x0.45x0.45 m3 including site cleaning (part)	man-day	20	0	224.58		4491.6	0	4491.6
	14. Cost of insecticide, fertilizer including carriage	LS	0	1	0	300	0	300	300
	15. Cost of Polybags	LS	0	1	0	400	0	400	400
	16. Cost of transported good earth and cow dung manure for applicationn in the field and nursery	LS	0	1	0	500	0	500	500
	17. Cost of Rope/tin/watering can/bamboo/thatch etc.	LS	0	1	0	425	0	425	425
	18. Cleaning the plantation site	man-day	10	0	224.58		2245.8	0	2245.8
	Sub Total of I		62				13924	1625	15100
II. CREATION WORKS - (Strip Plantation)									
	19. Digging of pits of size (0.6+0.45)/2 x 0.45 x 0.45(balance)	man-day	28	0	224.58		6288.24	0	6288.24
	20. Filling up of planting pits with dug up pulverized soil	man-day	12	0	224.58		2694.96	0	2694.96
	21. Cleaning the plantation area before planting	man-day	6	0	224.58		1347.48	0	1347.48
	22. Transplanting of potted seedlings including carriage from field nursery to planting site and staking	man-day	26	0	224.58	0	5839.08	0	5839.08
	23. Application of insecticide to the planted seedlings	man-day	2	0	224.58	0	449.16	0	449.16
	24. Pricking out and sorting & shifting of the seedlings in the field nursery	man-day	4	0	224.58	0	898.32	0	898.32
	25. Infilling of vacancy created due to field mortality including carriage	man-day	4	0	224.58		898.32	0	898.32
	26. 1st mulching by digging earth around pits and cleaning, weeding and application of fertilizers	man-day	16	0	224.58	0	3593.28	0	3593.28
	27. 2nd mulching, cleaning, weeding including application of 2nd dose of fertilizer	man-day	14	0	224.58	0	3144.12	0	3144.12
	28. 3rd mulching, cleaning, weeding	man-day	10	0	224.58	0	2245.8	0	2245.8
	29. 4th mulching, cleaning, weeding	man-day	10	0	224.58	0	2245.8	0	2245.8
	30. Cutting firelines 3 m wide to prevent accidental fire	man-day	8	0	224.58	0	1796.64	0	1796.64
	31. Cutting trenches of size 0.60m x 0.45m inside the plantation area and boundary where necessary @ 100 m per hectare	man-day	16	0	224.58	0	3593.28	0	3593.28
	32. Watering of seedlings and watch and ward	man-day	8	0	224.58	0	1796.64	0	1796.64
	33. Sorting & Shifting of seedlings two times	man-day	2	0	224.58		449.16	0	449.16
	34. Making live hedge fencing	man-day	12	0	224.58	0	2694.96	0	2694.96
	35. Cost of insecticide, fertilizer including carriage	LS	0	1	0	2000	0	2000	2000
	36. Cost of materials like Ipomoea for live hedge fence	LS	0	1	0	1000	0	1000	1000
	37. Cost of Bamboo for live hedge fencing - 8 nos.	nos.	0	8	0	100	0	740	740
	38. Contingencies Rope/tin/watering can/thatch etc.	LS	0	1	0	300	0	300	300
	39. Watch & ward from cattle, fire etc. mandays	man-day	40	0	224.58	0	8983.2	0	8983.2
	Sub Total of II		218				48958.4	4040	52998
III. 1st YEAR MAINTENANCE- of B1 & B2 (Strip & Block Plantation)									
	40. Vacancy filling/Beating up operation	man-day	3	0	224.58		673.74	0	673.74
	41. Mulching with fertilizers including weeding and cleaning over the entire area - three times	man-day	35	0	224.58		7860.3	0	7860.3
	42. Maintenance of the fire lines by cutting grasses/bushes	man-day	5	0	224.58		1123	0	1122.9
	43. Repairing of live hedge fencing	man-day	7	0	224.58	0	1572.06	0	1572.06
	44. Watch & ward for protection of plantation.	man-day	46	0	224.58	0	10330.7	0	10330.68
	45. Cost of fertilizers, fencing materials etc.	LS	0	1	0	2440	0	2440	2440
	Sub Total of III		96				21559.7	2440	24000
IV. 2nd YEAR MAINTENANCE- of B1 & B2 (Strip & Block Plantation)									
	46. Mulching without fertilizers including hoeing the base over the entire area - two times	man-day	23	0	224.58	0	5165.34	0	5165.34
	47. Repairing of live hedge fencing	man-day	7	0	224.58	0	1572.06	0	1572.06
	48 Watch & ward from cattle, fire etc. mandays	man-day	48	0	224.58	0	10779.8	0	10779.84
	49. Cost of fencing materials including repairs etc.	LS	0	1	0	200	0	283	283
	Sub Total of IV		78				17517.2	283	17800
V. 3RD YEAR MAINTENANCE- of B1 & B2 (Strip & Block Plantation)									
	50. Mulching without fertilizers including hoeing the base over the entire area - one time	man-day	14	0	224.58	0	3144.12	0	3144.12
	51. Watch & ward for protection of plantation.	man-day	54	0	224.58	0	12127.3	0	12127.32
	52. Cost of fencing materials including repairs etc.	LS	0	1	0	500	0	500	500
	Sub Total of IV		68				15271.4	500	15771

115

## Unit= 1 hec.

[illegible]

1	Spacing Prescribed as per Working Plan	2.5m X 2.5m
2	Pit Size /Planting Model	(0.60+0.40)/2X0.45X0.45 m <sup>3</sup> pit
3	Species	Abelmoschusmoschatus / Latakasturi; Aphanamixispolystachya / Royena, Pithraj; Asparagus racemosus / Satamul;;Celastruspaniculatus / Malkanjri, Peng;Desimodiummotorium /Banchandal; Ipomoea mauritiana / Giant potato(Bhumikumra);Rauvolfiaserpentina / Sarpangandha;Tylophoraindica / Antamul;Viscumarticulatum / Mandala; Ipomoea paniculata / Bhuikumra; etc.
4	No of seedlings to be planted per Ha	1600
5	Planting Pattern	<p>Territorial Divisional Forest Officers should develop strategies for raising of nursery seedlings of medicinal plants in selected areas.</p> <p>A.Seedling should be raised in Nursery (preferbly to nearest Beat office location) and treatment of nursery seedlings to be followed as standard Silviculture system. Seedlings would be planted both in Development &amp; Sal working circle areas. In case of shrubs species which have medicinal value such species should be planted as intercropping in both type of working circles. The standards for planting NTFP and Medicinal plants species should be developed by the Silvicultural division or help may be taken up from Forest Research Institute, Dehradun and should be utilized for imparting benefit to local FPC members in form of extraction of fruit, roots etc. A marketing chain should be brought into operation for fetching proper price for these products. FPC members should be involved for planting maintenance and harvesting works of such species.</p> <p>B.From the Resource Enumeration data, it is observed that Thankuni (Canscora decussate), Amada (Cureumaamada) and Kutla (Croton oblongifolius) has been threatened in all the divisions and a special need is felt for taking up the conservation of this herb in the area. It must, therefore be assured that extraction of this species is not allowed by anyone in this division during this plan period. Also special efforts to be taken up to raise this herb in nurseries and plant with the regular plantations to boost its stock.</p> <p>In-situ conservation of medicinal plants by way of introduction of indigenously occurring species with medicinal value will be taken up.</p> <p>Planting pattern method:as per working plan(staggered/parallel).</p>

Item of works	Particulars of expenditure	Unit/Rate/MDs	Unit Cost / Rate	Amount (in Rs.)
<b>Cost of doing the following works in c/w creation of Medicinal pltn</b>				
<b>A.</b>	<b>Advance Works</b>			
1	Cost of Survey demarcation of proposed pltn. area including preparation of operational map.	2	224.58	449.16
2	Cleaning plantation site by cutting bushes, jungles throughly including removal the same.	16	224.58	3593.28
3	Stacking and alignment of planting pits. 1600 per ha.	2	224.58	449.16
4	Digging planting pits size (0.60 + 0.40)/ 2 x 0.45 x 0.45 mtr. = 1600 Nos. (2.50 x 2.50) mtr. Apart.	46	224.58	10330.68
5	Contingency	L.S.		516.00
	<b>Total in Rs.</b>			<b>15338.00</b>
<b>B.</b>	<b>Creation works</b>			
1	Filling up planting pits with dug up earth and neem oil cake, cowdung, FYM.	14	224.58	3144.12
2	Cost of transporting seedlings to field including loading and unloading.	6	224.58	1347.48
3	Transplanting of potted seedlings including carriage by manual labour including infilling.	22	224.58	4940.76
4	1st time weeding clearing & mulching with application of fertilizer.	16	224.58	3593.28
5	2nd time weeding clearing & mulching with fertilizer.	14	224.58	3144.12
6	3rd time weeding cleaning & mulching with fertilizer.	12	224.58	2694.96
7	Spraying of weedicides as and when required and cutting of swarnalata and watering.	4	224.58	898.32
8	Making fire line 3.0 mtr. Wide all along the periphery and 1.20 mt. width inside plantation. By Mazdoors - 06	6	224.58	1347.48
9	Watch & word over the plantation area.	L.S.		4000.00
10	Cost of supply of cowdung manure, organic manure, neem oil cake, DAP (2 times)	L.S.		4000.00
11	Contingency	L.S.		444.00
	<b>Total in Rs.</b>			<b>29554.00</b>
<b>Estimate for erecting of Barbed wire fencing around the Medicinal Tree Species Plantation</b>				
<b>C.</b>	<b>Erecting of barbed wire fencing.</b>			
1	Purchase of Fencing post of 6' height 31 to 40 cm girth including local carriage, loading (138 Nos.)	138	50.00	6900.00
2	Cost of purchase of Barbed wire 2 ply 700 kg. (6 stands x 250 RMT = 1500 RMT, 175 Kgs. considering for fencing of plantations.	175	70.00	12250.00
3	Fitting fixing and tightening post by digging hole 550 nos. over the 250 RMT including 9 MD	9	224.58	2021.22
4	Straining barbed wire over 250 RMT x 6 stands (9 MD)	9	224.58	2021.22
5	Supply of U pins 138 x 6 Nos.+ 10% extra = 3630 Nos. (911 Nos.)	911	0.80	729.00
6	Contingency (purchase of coalter etc.)	L.S.		1233.00
	<b>Total in Rs. For 1 ha.</b>			<b>25154.00</b>

1	Spacing Prescribed as per Working Plan	2m X 2m
2	Pit size or planting order	Pit:(0.45X0.45X0.30m)
3	Species	Sal plantations mostly have Kawla ( <i>Machilus</i> sp.), <i>Alpanamixis polystachya</i> , <i>Premna</i> spp and <i>Dillenia</i> species as principal associates in order of abundance. Valuable species that come next are Odal ( <i>Sterculia villosa</i> ), Gamar ( <i>Gmelina arborea</i> ), Bahera ( <i>Terminalia belerica</i> ), Dabdabe ( <i>Garuga pinnata</i> ), Chiloune ( <i>Schima wallichii</i> ), Champ ( <i>Michelia champaca</i> ) and Sidha ( <i>Lagerstroemia parviflora</i> ), Pakasaj ( <i>Terminalia tomentosa</i> ), Lali ( <i>Amoora wallichii</i> ), Chiloune ( <i>Schima wallichii</i> ) also occur at a lesser percentage.
4	No of seedlings to be planted per Ha	1250
5	Planting Pattern	<p>The following planting pattern is prescribed:-</p> <ol style="list-style-type: none"> <li>1<sup>st</sup> line – 8<sup>th</sup> Sal line: Each line shall have 3 rows 15cm apart. In each row, Sal seed is to be sown. In the middle row, one year old Sal seedling is to be planted at 2m spacing as insurance crop.</li> <li>9<sup>th</sup> Line – 16<sup>th</sup> line: Lahasune, Sidha, Kanchan and Sonalu to be planted in alternate strip of 13.5m long.</li> <li>17<sup>th</sup> – 24<sup>th</sup> Sal line: Each line shall have 3 rows 15cm apart. In each row, Sal seed is to be sown. In the middle row, one year old Sal seedling is to be planted at 2m spacing as insurance crop.</li> <li>25<sup>th</sup> - 32<sup>nd</sup> line: Lali, Pakasaj, Bahera/Amloki and Totola to be planted in alternate strip of 13.5m long.</li> <li>33<sup>rd</sup> – 40<sup>th</sup> Sal line: Each line shall have 3 rows 15cm apart. In each row, Sal seed is to be sown. In the middle row, one year old Sal seedling is to be planted at 2m spacing as insurance crop.</li> <li>41<sup>st</sup> to 48<sup>th</sup> Line: Chikrasi, Toon, Champ and Chiloune to be planted in alternate strip of 13.5m long.</li> </ol> <p>Felling is prescribed during this plan period. Clear felling followed by artificial regeneration and intercropping in between the lines is prescribed. In the plantation 1st – 8th lines, 17th – 24th line and 33rd to 40th line should be sown by Sal seeds in 3 rows 15 cm apart. In the middle of each row Sal seedling one year old should be planted as insurance against any failure of Sal seed germination. Rest of the lines shall have miscellaneous species other than Sal at 2m X 2m spacing. No Teak is to be planted or infilled in Sal Working Circle. For bad Sal seed year, Sal sowing may be replaced by lines of Champ, Chiloune, Pakasaj, Garjan and Behera but it should be permitted by the respective Conservator of Forests. The same should invariably be stated in the plantation journal and should also be brought to the knowledge of the Working Plan Wing. Nursery provision is to be made for raising Sal seedling. During bad Sal seed year collection of Sal seedling is to be done from elsewhere of North Bengal. Infilling should be preferably done with Sal seedlings one year old. Infilling with miscellaneous species should be done for miscellaneous lines. If Sal seedlings are not available due to bad Sal seed year infilling may be done by miscellaneous species but preference should be given first for Sal seedling. Reason as to why Sal seedling could not be planted or infilled should invariably be stated in the plantation journal. <i>Acacia auriculiformis</i> and other fast growing species which are totally alien to the region shall not at all be planted.</p>

Category	Sl No	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate	Amount (Rs.)
Advance	1	Survey and demarcation of the plantation area including GPS Survey by Technical person	1	ha	Labour	1.00	1	224.58	224.58
Advance	2	Alignment of Planting lines (50% area) and staking the pit positions	1250 pit +sal lines	nos	Labour	1250 + Sallines	1.50	224.58	336.87
Advance	3	Advance of Soil works by digging planting pits of size (0.40x0.30/2x0.30x0.30m <sup>3</sup> at 2.0x2.0 m spacing (1250 nos. over 50% area for mise .Spps only)	1,250.00	nos	Labour	125.00	10.00	224.58	2245.8
Advance	4	Cleaning of the pltn site and making inspection path	1	ha	Labour	0.05	20.00	224.58	4491.6
Advance	5	Preparation of sal lines by hoeing	0.50ha	ha	Labour	0.05	10.00	224.58	2245.8
Advance	6	Preparation of Sal lines by hoeing	1	ha	Labour	0.16	6.00	224.58	1347.48
Advance	7	Carriage of seedlings from Central Nursery to Planting site including loading and unloading and return of Stand and Root Trainers to Central Nursery	1250.00	nos	Material				750.00
Advance	8	Transplanting of potted seedlings in pits, including filling up of planting pits with dug up pulverized soil, carriage of Root Trainers to planting site and collection and recarriage of Root Trainers to local store site	1250.00	nos	Labour	125	10.00	224.58	2245.8
Advance	9	Vacancy infilling including planting in sal lines against failure of sowing	500.00	nos	Labour	60	8.00	224.58	1796.64
Advance	10	Supply of sal seeds including carriage upto the site	100.00	kg	Material				4000.00
Advance	11	Sowing sal seeds in 3 rows in each line (sowing to be done in one row at a time )	0.50	ha	Labour	0.08	6.00	224.58	1347.48
Advance	12	1st weeding and hand cleaning of sal lines	0.50	ha	Labour	0.05	10.00	224.58	2245.8
Advance	13	1st mulching, weeding, cleaning for mise. Lines and Sal seedlings planted against failure of sowing.	0.50	ha	Labour	0.05	10.00	224.58	2245.8
Advance	14	2nd weeding including hand cleaning of sal lines and application of fertilizer	0.50	ha	Labour	0.06	8.00	224.58	1796.64
Advance	15	2nd mulching, weeding, cleaning of mise. Lines and sal seedlings planted against failure of sowing including application of fertilizer	0.50	ha	Labour	0.06	8.00	224.58	1796.64
Creation	16	3rd weeding including hand cleaning of Sal lines	0.50		Labour	0.07	7.00	224.58	1572.06
	17	3rd mulching, weeding, cleaning of mise. Lines and Sal seedlings Planted against failure of sowing	0.50		Labour	0.07	7.00	224.58	1572.06
	18	4th Weeding cleaning for whole plantation area	1.00		Labour	0.1	10.00	224.58	2245.8
	19	5th Weeding cleaning for whole plantation area	1.00		Labour	0.12	8.00	224.58	1796.64
	20	Cutting fire lines 3.0 m wide	400.00		Labour	125	3.00	224.58	673.74
	21	Erection of live hedge /(ipomea, vitex, thorny spp.) fencing with bamboo/bamboo posts including local carriage of all material	400.00		Labour	100	4.00	224.58	898.32
	22	Material for live fencing including carriage up to site			Material			LS	1200.00
	23	Carriage for fertilizer , insecticide etc.			Material			LS	600.00
	24	Cost of fertilizer, oil cakes and insecticides ets. Including carriage upto site			Material			LS	3000.00
	25	Watch & Ward (1md per 10ha)for 6 months	LS		Labour		18.00	224.58	4042.44
	26	Cutting trenches for drainage as required	LS		Labour		10.00	224.58	2245.8
	27	Contingencies - Labour			Labour			LS	180
	28	Contingencies - Material			Material			LS	100
	29	Contingencies- Material			Labour			LS	112
	30	Contingencies - Material			Material			LS	150
		<b>Total</b>							<b>49505</b>



## Estimate for Plantation of Sal and Associates Species: A6 Model- Maint. Year 1

Estimate of A6 1st Year Maintenance									
Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate	Amount (Rs.)
Maint. Y1	1	Vacancy infilling including planting in Sal lines against failure of sowing	500.00	nos	Labour	80.00	6.00	224.58	1347.48
Maint. Y1	2	1st weeding, cleaning, hand cleaning and mulching of Sal lines with application of fertilizer	0.50	ha	Labour	0.06	8.00	224.58	1796.64
Maint. Y1	3	1st mulching, weeding, cleaning and application of fertilizer for misc. lines and Sal seedlings planted against failure of sowing	0.50	ha	Labour	0.06	8.00	224.58	1796.64
Maint. Y1	4	2nd weeding and hand cleaning of Sal lines	0.50	ha	Labour	0.07	7.00	224.58	1572.06
Maint. Y2	5	2nd mulching, weeding, cleaning of misc. lines and Sal seedlings planted against failure of sowing	0.50	ha	Labour	0.08	6.00	224.58	1347.48
Maint. Y3	6	3rd weeding cleaning for whole plantation area	0.50	ha	Labour	0.08	12.00	224.58	2694.96
Maint. Y4	7	4th weeding cleaning for whole plantation area	1.00	ha	Labour	0.10	10.00	224.58	2245.80
Maint. Y5	8	Cutting of firelines 3.0m wide	400.00	rmt	Labour	125.00	3.00	224.58	673.74
Maint. Y6	9	Repair of live hedge (ipomea, vitex, thorny spp.) fencing with bamboo/bamboo posts including local carriage of all material	400.00	rmt	Labour	200.00	2.00	224.58	449.16
Maint. Y7	10	Material for live fencing including carriage upto site	LS		Material			LS	100.00
Maint. Y1	11	Watch & Ward for 12 months	1.00	ha	Labour		25.00	224.58	5614.50
Maint. Y1	12	Cost of fertilizer and insecticide including carriage	LS		Material			LS	1000.00
Maint. Y1	13	Contingency - Labour							58.00
Maint. Y1	14	Contingency - Material							50.00
Total							87.00		20746.00

## Estimate for Plantation of Sal and Associates Species: A6 Model- Maint. Year 2

Estimate of A6 2nd Year Maintenance									
Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate	Amount (Rs.)
Maint. Y2	1	Vacancy infilling	250.00	nos	Labour	80.00	3.00	224.58	673.74
Maint. Y2	2	1st weeding, cleaning	1.00	ha	Labour	0.06	16.00	224.58	3593.28
Maint. Y2	3	2nd weeding, cleaning	1.00	ha	Labour	0.08	12.00	224.58	2694.96
Maint. Y2	4	3rd weeding, cleaning	1.00	ha	Labour	0.10	10.00	224.58	2245.80
Maint. Y3	5	Cutting and maintenance of firelines 3.0m wide	500.00	rmt		250.00	2.00	224.58	449.16
Maint. Y2	6	Watch & Ward for 12 months	1.00	ha	Labour		25.00	224.58	5614.50
Maint. Y2	7	Contingency - Labour							62.00
Maint. Y2	8	Contingency - Material							50.00
Total							68.00		15383.00

## Estimate for Plantation of Sal and Associates Species: A6 Model- Maint. Year 3

Estimate of A6 3rd Year Maintenance									
Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate	Amount (Rs.)
Maint. Y3	1	1st weeding, cleaning	2500	nos	Labour	180	14	224.58	3144.12
Maint. Y3	2	2nd weeding, cleaning	2500	nos	Labour	100	12	224.58	2694.96
Maint. Y3	3	Contingency - Labour							34.00
Maint. Y3	4	Contingency - Material							50.00
Total							26.00		5923.00

## Estimate for Plantation of Sal and Associates Species: A6 Model- Maint. Year 4

<u>Estimate of A6 4th Year Maintenance</u>									
Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate	Amount (Rs.)
Maint. Y4	1	1st weeding, cleaning	2500	nos	Labour	180	14	224.58	3144.12
Maint. Y4	2	Contingency - Labour							26.00
Maint. Y4	3	Contingency - Material							50.00
<b>Total</b>							<b>14.00</b>		<b>3220.00</b>

1	Spacing Prescribed as per Working Plan	2m X 2m
2	Pit size or planting order	(0.40+0.30)/2X0.30X0.30m <sup>3</sup>
3	Species	The Sal forest had a mixture of Chilaune (Schima wallichii), Toon (Toona ciliata), Lampate (Duabanga grandiflora), Moina (Tetrameles nudiflora) Chiloune (Schima wallichii), Chikrasi (Chukrassia tabularis), Champ (Michelia champaca) and Simul (Bombax ceiba) .
4	No of seedlings to be planted per Ha	2500
5	Planting Pattern	<p>1. 1<sup>st</sup> line – 24<sup>th</sup> Teak line: Stumps planting of Teak at 2m X 2m spacing with bamboo in central Teak line 8m apart. .</p> <p>2. 25<sup>th</sup> – 32<sup>nd</sup> line: Lahasune, Panisaj, Gokul and Sidha in alternate strips of 27m long.</p> <p>3. 33<sup>rd</sup> -40<sup>th</sup> line: Lali, Kanchan, Lampatey and Gamar in alternate strip of 27m long with Simul or Kainjal in central line 27m apart.</p> <p>4. 41<sup>st</sup> – 48<sup>th</sup> line: Champ, Chiloune, Chikrasi and Baheera/Amloki in alternate strip of 27m long.</p>

Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate	Amount (Rs.)
Advance	1	Survey and demarcation of the plantation area including GPS Survey by Technical person	1.00	ha	Labour	1.00	1.00	224.58	224.58
Advance	2	Alignment of planting lines and staking the pit positions	2500.00	nos	Labour	1600.00	1.50	224.58	336.87
Advance	3	Advance Soil works by digging planting pits of size (0.40+0.30)/2 x 0.30 x0.30 m <sup>3</sup> at 2.0.x 2.0 m spacing (2500 nos)	2500.00	nos	Labour	125.00	20.00	224.58	4491.60
Advance	4	Cleaning of the pltn site and making inspection path	1.00	ha	Labour	0.05	20.00	224.58	4491.60
	5	Preplanting cleaning of plantation area	1.00	ha	Labour	0.16	6.00	224.58	1347.48
Creation	6	Carriage of Seedlings from Central Nursery to Planting site including loading and unloading and return of Stand and Root Trainers to Central Nursery	2500.00	nos	Material			LS	1500.00
Creation	7	Transplanting of potted seedlings in pits, including filling up of planting pits with dug up pulverized soil, carriage of Root Trainers to planting site and collection and recarriage of Root Trainers to local store site	2500.00	nos	Labour	125.00	20.00	224.58	4491.60
Creation	8	Vacancy infilling	250.00	nos	Labour	60.00	4.00	224.58	898.32
Creation	9	1st mulching, weeding, cleaning and application of fertilizer	2500.00	nos	Labour	180.00	14.00	224.58	3144.12
Creation	10	2nd mulching, weeding, cleaning and application of fertilizer	2500.00	nos	Labour	215.00	12.00	224.58	2694.96
Creation	11	3rd cleaning, weeding	2500.00	nos	Labour	250.00	10.00	224.58	2245.80
Creation	12	4th cleaning, weeding	2500.00	nos	Labour	250.00	10.00	224.58	2245.80
Creation	13	Cutting firelines 3.0 m wide	500.00	rmt	Labour	125.00	4.00	224.58	898.32
Creation	14	Material for live fencing including carriage upto site	LS		Material			LS	1200.00
Creation	15	Erection of live hedge (ipomea, vitex, thorny spp.) fencing with bamboo/bamboo posts including local carriage of all material	400.00	rmt	Labour	100.00	4.00	224.58	898.32
Creation	16	Carriage of fertiliser, insecticide etc.	LS		Material			LS	250.00
Creation	17	Cost of fertilizer, insecticides etc.	LS		Material			LS	1500.00
Creation	18	Watch & Ward (1 md per 10 ha) for 6 months	LS		Labour		18.00	224.58	4042.44
Advance	19	Contingencies - Labour	LS		Labour			LS	120.00
Advance	20	Contingencies - Material	LS		Material			LS	200.00
Creation	21	Contingencies - Labour	LS		Labour			LS	118.00
Creation	22	Contingencies - Material	LS		Material			LS	200.00
		<b>Total</b>					<b>144.50</b>		<b>37540.00</b>

## Estimate for Miscellaneous Plantation in North Bengal : Maint. Year 1

Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate	Amount (Rs.)
Maint. Y1	1	Vacancy infilling	250	nos	Labour	125	2	224.58	449.16
Maint. Y1	2	1st weeding, cleaning, mulching, with application of fertilizer	2500	nos	Labour	155	16	224.58	3593.28
Maint. Y1	3	2nd weeding, cleaning, mulching	2500	nos	Labour	180	14	224.58	3144.12
Maint. Y1	4	3rd weeding, cleaning	2500	nos	Labour	250	10	224.58	2245.80
Maint. Y1	5	Cutting of firelines 3.0 m wide	500	rmt	Labour	125	4	224.58	898.32
Maint. Y1	6	Material for repair of live fencing including carriage upto site	LS		Material			LS	100.00
Maint. Y1	7	Watch & Ward for 12 months	1	Ha	Labour		25	224.58	5614.50
Maint. Y1	8	Cost of fertilizer and insecticide etc. including carriage	LS		Material			LS	600.00
Maint. Y1	9	Contingency - Labour							14.00
Maint. Y1	10	Contingency - Material							150.00
		<b>Total</b>					<b>71</b>		<b>16809.00</b>

## Estimate for Miscellaneous Plantation in North Bengal : Plains - Maint. Year 2

Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate	Amount (Rs.)
Maint. Y2	1	Vacancy infilling	250	nos	Labour	80	2	224.58	449.16
Maint. Y2	2	1st weeding, cleaning	2500	nos	Labour	160	16	224.58	3593.28
Maint. Y2	3	2nd weeding, cleaning	2500	nos	Labour	200	12	224.58	2694.96
Maint. Y2	4	3rd weeding, cleaning	2500	nos	Labour	250	10	224.58	2245.80
Maint. Y2	5	Watch & Ward for 12 months	1	Ha	Labour		25	224.58	5614.50
Maint. Y2	6	Contingency - Labour							10.00
Maint. Y2	7	Contingency - Material							50.00
		<b>Total</b>					<b>65</b>		<b>14658.00</b>

## Estimate for Miscellaneous Plantation in North Bengal : Plains - Maint. Year 3

Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate	Amount (Rs.)
Maint. Y3	1	1st weeding, cleaning	2500	nos	Labour	180	14	224.58	3144.12
Maint. Y3	2	2nd weeding, cleaning	2500	nos	Labour	100	12	224.58	2694.96
Maint. Y3	3	Contingency - Labour							34.00
Maint. Y3	4	Contingency - Material							50.00
		<b>Total</b>					<b>26.00</b>		<b>5923.00</b>

## Estimate for Miscellaneous Plantation in North Bengal : Plains - Maint. Year 4

Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate	Amount (Rs.)
Maint. Y4	1	1st weeding, cleaning	2500	nos	Labour	180	14	224.58	3144.12
Maint. Y4	2	Contingency - Labour							26.00
Maint. Y4	3	Contingency - Material							50.00
		<b>Total</b>					<b>14.00</b>		<b>3220.00</b>

1	Spacing Prescribed as per Working Plan	7m X 7m
2	Pit size or planting order	Pit
3	Species	Choya bans ( <i>Dendrocalamus hamiltonii</i> ) occur in the foot hill forests of Rethi forest of this Division. In addition various other types of bamboo e.g. Makla bans ( <i>Bambusa nutans</i> ), Betua bans ( <i>Bambusa polymorpha</i> ), Barabans ( <i>Bambusa gigantia</i> ) and Muli bans ( <i>Malocana bambusoides</i> )
4	No of seedlings to be planted per Ha	
5	Planting Pattern	<p>i. Only mature culms may be felled. (The colour of a mature culm is uniform throughout and it can also be recognized by the absence of its sheaths. An immature culm is covered with mealy powder all over it).</p> <p>ii. Bamboo should be cut at least two nodes above the ground so as to prevent the rhizomes from drying up.</p> <p>iii. Congestion in the clumps shall be removed by cutting across the middle of the clumps so that the mature bamboo from the center may be extracted. Usually the outer culms are young.</p> <p>iv. The exploitation shall proceed systematically from one end of a block.</p> <p>v. Sufficient number of culms should be retained in each clump.</p> <p>vi. Tops and branches of cut bamboo shall be removed from the clumps.</p> <p>vii. Every clump of bamboo shall be given a three years period of rest after each felling.</p> <p>viii. As far as practicable earth may be put in the bamboo clumps to cover up the roots and rhizomes in March.</p> <p>ix. Planting of bamboo may be undertaken in the forests and in plantations.</p>

Estimate of Bamboo underplanting						
Category	Sl. No.	Item	Type	Required Mandays	Rate	Amount (Rs.)
Advance	1	Preparation of nursery beds	Labour	6	224.58	1,347.48
Advance	2	Collection of bamboo offsets and planting in mother beds	Labour	8	224.58	1,796.64
Advance	3	Cost of bamboo offsets	Material		LS	2,800.00
Advance	4	Shifting of culms to other beds	Labour	10	224.58	2,245.80
Advance	5	Making of sheds for beds (cost of covering with thatch)	Labour	2	224.58	449.16
Advance	6	Material for making temporary sheds	Material		LS	600.00
Advance	7	Weeding / cleaning of beds	Labour	8	224.58	1,796.64
Advance	8	Watering of beds	Labour	9	224.58	2,021.22
Advance	9	Manuring / application of organic pesticide / fungicides	Labour	4	224.58	898.32
Advance	10	Cost of Manure / organic pesticide / fungicides	Material		LS	1,000.00
Advance	11	Cost of implements like measuring tape, ropes, axe, lime	Material		LS	600.00
Advance	12	Labour for power fencing (with existing energizer) of Nursery	Labour	2	224.58	449.16
Advance	13	Materials for Power fencing of Nursery	Material		LS	1,500.00
Creation	14	Survey and demarcation of area including alignment of lines	Labour	4	224.58	898.32
Creation	15	Cleaning and control burning of the area	Labour	12	224.58	2,694.96
Creation	16	Collection of bamboo seedling from nursery	Labour	10	224.58	2,245.80
Creation	17	Transportation of bamboo seedling from nursery	Material		LS	2,000.00
Creation	18	Digging of pits, manuring and planting bamboo seedlings	Labour	25	224.58	5,614.50
Creation	19	Gap filling and three times weed cleaning and mulching	Labour	50	224.58	11,229.00
Creation	20	Watching the plantation against grazing and applying fertiliser	Labour	16	224.58	3,593.28
Creation	21	Energised fence	Material		LS	20,000.00
Creation	22	Removal of woody weeds and climbers and energised fencing	Labour	30	224.58	6,737.40
Maint Yr 1	23	Cleaning of weeds two times and gap filling	Labour	40	224.58	8,983.20
Maint Yr 1	24	Watching the plantation against grazing and other damage	Labour	10	224.58	2,245.80
Maint Yr 1	25	Supply of misc. items	Material		LS	1,000.00
Maint Yr 2	26	Cleaning of weeds two times and gap filling	Labour	20	224.58	4,491.60
Maint Yr 2	27	Watching the plantation against and other damage	Labour	10	224.58	2,245.80
Maint Yr 2	28	Supply of misc. items	Material		LS	400
Advance	29	Contingencies - Labour	Labour		LS	16
Advance	30	Contingencies- Material	Labour		LS	100
Creation	31	Contingencies- Labour	Labour		LS	48
Creation	32	Contingencies- Material	Labour		LS	100
Maint Yr 1	33	Contingencies- Labour	Labour		LS	50
Maint Yr 1	34	Contingencies- Material	Labour		LS	50
Maint Yr 2	35	Contingencies- Labour	Labour		LS	20
Maint Yr 2	36	Contingencies- Material	Labour		LS	100
		Total		276		92,368.00

Category	Sl No.	Item	Type	Required Mandays	Rate	Amount (Rs.)
Advance	1	Preparation of mother beds	Labour	6	224.58	1,347.48
Advance	2	Collection of grass seeds / slips & processing	Labour	8	224.58	1,796.64
Advance	3	shifting of slips to different beds	Labour	5	224.58	1,122.90
Advance	4	Making of sheds for beds (cost of covering with thatch)	Labour	2	224.58	449.16
Advance	5	Material for making temporary sheds	Material		LS	600.00
Advance	6	Weeding / cleaning of beds	Labour	8	224.58	1,796.64
Advance	7	Watering of beds	Labour	9	224.58	2,021.22
Advance	8	Manuring / application of organic pesticide / fungicides	Labour	4	224.58	898.32
Advance	9	Cost of Manure / Organic pesticide / fungicides	Material		LS	500.00
Advance	10	Cost of implements like measuring tape, ropes, axe, lime powder, sickle spade etc.	Material		LS	600.00
Advance	11	Labour for Power fencing (with existing energizer) of Nursery	Labour	2	224.58	449.16
Advance	12	Materials for Power fencing of Nursery	Material		LS	1,500.00
Creation	13	Survey and demarcation of area of plantation including alignment of lines	Labour	4	224.58	898.32
Creation	14	Cleaning and control burning of the area	Labour	12	224.58	2,694.96
Creation	15	Collection of grass slips and seedlings from nursery	Labour	5	224.58	1,122.90
Creation	16	Transportation of grass slips and seedlings from nursery	Material		LS	500.00
Creation	17	Digging of trenches and pits and planting of grass slips and seedlings	Labour	30	224.58	6,737.40
Creation	18	Gap filling and three times weeding cleaning	Labour	50	224.58	11,229.00
Creation	19	Watching the plantation against grazing and applying fertiliser	Labour	16	224.58	3,593.28
Creation	20	Energised fence	Material		LS	20,000.00
Creation	21	Removal of woody weeds and climbers from energised fencing	Labour	30	224.58	6,737.40
Maint Yr 1	22	Cleaning of weeds two times and gap filling	Labour	40	224.58	8,983.20
Maint Yr 1	23	Watching the plantation against grazing and other damage	Labour	10	224.58	2,245.80
Maint Yr 1	24	Supply of misc. items	Material		LS	1,000.00
Maint Yr 2	25	Cleaning of weeds two times and gap filling.	Labour	20	224.58	4,491.60
Maint Yr 2	26	Watching the plantation against grazing and other damage	Labour	10	224.58	2,245.80
Maint Yr 2	27	Supply of misc. items	Material		LS	400.00
Advance	28	Contingencies- Labour			LS	46.00
Advance	29	Contingencies- Material			LS	50.00
Creation	30	Contingencies- Labour			LS	48.00
Creation	31	Contingencies- Material			LS	100.00
Maint Yr 1	32	Contingencies- Labour			LS	50.00
Maint Yr 1	33	Contingencies- Material			LS	50.00
Maint Yr 2	34	Contingencies- Labour			LS	20.00
Maint Yr 2	35	Contingencies- Material			LS	100.00
				<b>271</b>		<b>86,425.00</b>

Area = 1 ha									
Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate	Amount (Rs)
Advance	1	Survey and demarcation of the plantation area including GPS Survey by Technical person	1.00	ha	Labour	0.5	2.00	224.58	449.16
Advance	2	Alignment of planting lines and staking the pit positions (0.40+0.30)/2 X 0.30X0.30 m3 at 2.5 X 2.5 m spacing	1,600.00	nos	Labour	1,000.00	1.50	224.58	336.87
Advance	3	(1600 nos)	1,600.00	nos	Labour	80	20.00	224.58	4491.6
Advance	4	Cleaning of the pltn site and making inspection path	1.00	ha	Labour	0.02	50.00	224.58	11229
Creation	5	Preplanting cleaning of plantation area	1.00	ha	Labour	0.1	10.00	224.58	2245.8
Creation	6	Carriage of Seedlings from Central Nursery to Planting site including loading and unloading and return of Stand and Root Trainers to Central Nursery	1,600.00	nos	Material			LS	1,200.00
Creation	7	Transplanting of potted seedlings in pits, including filling up of planting pits with dug up pulverized soil, carriage of Root Trainers to planting site and collection and recarriage of Root Trainers to local store site.	1,600.00	nos	Labour	80	20.00	224.58	4491.6
Creation	8	Vacancy infilling	160.00	nos	Labour	40	4.00	224.58	898.32
Creation	9	1st mulching, weeding, cleaning and application of fertilizer	1.00	ha	Labour	0.05	20.00	224.58	4491.6
Creation	10	2nd mulching, weeding, cleaning and application of fertilizer	1.00	ha	Labour	0.06	16.00	224.58	3593.28
Creation	11	3rd cleaning, weeding	1.00	ha	Labour	0.07	14.00	224.58	3144.12
Creation	12	Carriage of fertiliser, insecticide etc.	LS		Material			LS	250
Creation	13	Cost of fertilizer, insecticides etc.	LS		Material			LS	1,200.00
Creation	14	Watch & Ward (1 md per 10 ha) for 6 months	LS		Labour		18.00	224.58	4042.44
Advance	15	Contingencies- Labour	LS		Labour			LS	124
Advance	16	Contingencies- Material	LS		Material			LS	100
Creation	17	Contingencies- Labour	LS		Labour			LS	118
Creation	18	Contingencies- Material	LS		Material			LS	100
		Total					175.50		42,505.00

Estimate of Plantation after removal of Maling bamboo- 1st Year Maintenance (for Hill area)									
Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate	Amount (Rs.)
Maint. Y1	1	Vacancy infilling	160	nos	Labour	80	2	224.58	449.16
Maint. Y1	2	1st weeding, cleaning, mulching with application of fertilizer	1	ha	Labour	0.04	25	224.58	5614.5
Maint. Y1	3	2nd weeding, cleaning	1	ha	Labour	0.06	16	224.58	3593.28
Maint. Y1	4	3rd weeding, cleaning	1	ha	Labour	0.07	14	224.58	3144.12
Maint. Y1	5	Cost of fertilizer and insecticide etc. including carriage & application	LS		Material			LS	600.00
Maint. Y1	6	Watch & Ward for 12 months	1	Ha	Labour		20	224.58	4491.6
Maint. Y1	7	Contingency- Labour							68.00
Maint. Y1	8	Contingency-Material							100.00
		Total					77		18,061.00

Estimate of Plantation after removal of Maling bamboo - 2nd Year Maintenance (for Hill area)									
Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate	Amount (Rs.)
Maint. Y2	1	Vacancy infilling	160	nos	Labour	80	2	224.58	449.16
Maint. Y2	2	1st weeding, cleaning, mulching, with application of fertilizer	1	ha	Labour	0.05	20	224.58	4491.6
Maint. Y2	3	2nd weeding, cleaning	1	ha	Labour	0.07	14	224.58	3144.12
Maint. Y2	4	Cost of fertilizer and insecticide etc. including carriage	LS		Material			LS	600
Maint. Y2	5	Watch & Ward for 12 months	1	Ha	Labour		20	224.58	4491.6
Maint. Y2	6	Contingency- Labour							54
Maint. Y2	7	Contingency- Material							50
		Total					56		13280.00

Estimate of Plantation after removal of Maling bamboo - 3rd Year Maintenance (for Hill area)									
Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate	Amount (Rs.)
Maint. Y3	1	1st weeding, cleaning	1	ha	Labour	0.05	20	224.58	4,491.60
Maint. Y3	2	2nd weeding, cleaning	1	ha	Labour	0.07	14	224.58	3,144.12
Maint. Y3	3	Contingency-Labour							6
Maint. Y3	4	Contingency-Material							50
		Total					34		7,692.00

**126 Estimate for Creation of Misc. Pltn. for North Bengal & Hills**

Type of Pltn. : Misc. Plantation

Creation of Plantation over 1.0 ha

Labour rate Rs. 224.58/-

**(Unit 1.0 ha area)**

Sl. No.	Particulars of Work	No. of MD	Mat. in unit	Rate in Rs.	Amount in Rs.
A	<b>Creation Work.</b>				
1	Pricking out seedlings from mother bed.	3		224.58	673.74
2	Weeding & cleaning by 3 times.	2		224.58	449.16
3	Sorting, shifting of seedlings for 3 times.	4		224.58	898.32
4	Watering seedlings in nursery.	6		224.58	780.00
5	Cleaning & cutting jungles in plantation site/sites.	5		224.58	1122.90
6	Digging planting pits of size (0.6+0.45)/2m x 0.45m x 0.45m i.e. 1600 pits/ha	32		224.58	7186.56
7	Filling planting pits by core manuring.	14		224.58	3144.12
8	Transplanting seedlings including carriage upto pltn. site.	18		224.58	4042.44
9	Vacancy filling, including application of insecticides.	4		224.58	898.32
10	Weeding, cleaning & application of manures :-				
a)	1st time.	15		224.58	3368.70
b)	2nd time.	11		224.58	2470.38
11	Creation of fireline.	6		224.58	1347.48
12	Cost of insecticides, fertilizer and hormone		L.S.		5619.02
<b>TOTAL (1.0 ha)</b>		<b>120</b>			<b>32001.00</b>

**(Rupees thirty two thousand only)**



Sl No	Item of Work	Quantity	Unit	Rate	Amount (Rs.)
1	Weeding, cleaning and cutting of climber for the 1 <sup>st</sup> time	15	DL	224.58	3368.7
2	Weeding, cleaning and cutting of climber for the 2 <sup>nd</sup> time	13	DL	224.58	2919.54
3	Weeding, cleaning and cutting of climber for the 3 <sup>rd</sup> time	11	DL	224.58	2470.38
4	Weeding, cleaning and cutting of climber for the 4 <sup>th</sup> time	10	DL	224.58	2245.8
5	Beating up including carriage of seedlings	8	DL	224.58	1796.64
6	Creation & maintenance of fire line	4	DL	224.58	898.32
7	Contingencies	LS			301.23
<b>TOTAL</b>					<b>14000.00</b>

**Estimate for 2<sup>nd</sup> Year Maintenance of Sal plantation (per Ha) in North Bengal**

Sl No	Item of Work	Quantity	Unit	Rate	Amount (Rs.)
1	Weeding, cleaning and cutting of climber for the 1 <sup>st</sup> time	15	DL	224.58	3368.7
2	Weeding, cleaning and cutting of climber for the 2 <sup>nd</sup> time	13	DL	224.58	2919.54
3	Weeding, cleaning and cutting of climber for the 3 <sup>rd</sup> time	11	DL	224.58	2470.38
4	Creation and maintenance of fireline	4	DL	224.58	898.32
5	Contingencies	LS			343.49
<b>TOTAL</b>					<b>10000.00</b>

**Estimate for 3<sup>rd</sup> Year Maintenance of Sal plantation (per Ha) in North Bengal**

Sl No	Item of Work	Quantity	Unit	Rate	Amount (Rs.)
1	Weeding, cleaning and cutting of climber for the 1 <sup>st</sup> time	13	DL	224.58	2919.54
2	Weeding, cleaning and cutting of climber for the 2 <sup>nd</sup> time	11	DL	224.58	2470.38
3	Creation & maintenance of fire line	2	DL	224.58	449.16
4	Contingencies	LS			161.18
<b>TOTAL</b>					<b>6000.00</b>

**Estimate for 4<sup>th</sup> Year Maintenance of Sal plantation (per Ha) in North Bengal**

Sl No	Item of Work	Quantity	Unit	Rate	Amount (Rs.)
1	Weeding, cleaning and cutting of climber for the 1 <sup>st</sup> time	13	DL	224.58	2919.54
2	Creation & maintenance of fire line	4	DL	224.58	898.32
3	Contingencies	LS			182.31
<b>TOTAL</b>					<b>4000.00</b>

## NORTH BENGAL STRIP PLANTATIONS

1	Spacing Prescribed as per Working Plan	As per working plan
2	Pit size or planting order	As per working plan
3	Species	As per working plan
4	No of seedlings to be planted per Ha	As per working plan
5	Planting Pattern	<p>Species listed in CITES listed and Negative listed shall not be allowed to be extracted from the forest area. However, the Divisional forest Officer shall try to promote the ex-situ conservation of these species outside forest areas in order to sensitize the local population about the benefits and marketing opportunities of NTFP species. Information and strategies for other NTFP and medicinal plants shall be developed over a period of time involving local people and the drug industries if possible by the Divisional Forest Officer for Ex-Situ conservation. The following points needs to be considered for ex-situ conservation of the NTFPs.</p> <p>1. Plant genetic resource management (Germplasm collection, characterization and evaluation) of priority species needs to be developed by the research wing.</p> <p>2. Herbal garden with genetic diversity for conservation and need based use shall be developed during the Plan.</p> <p>3. Domestication and cultivation of NTFP species shall be promoted by offering technical and material inputs to the farmers/villagers.</p>

## Estimate for Advance Work for Strip plantation - Advance work 1.0 ha

Sl.	Description	Unit	Quantity	Rate (Rs.)	Amount (Rs.)
(1)	(2)	(3)	(5)	(4)	(6)
1)	Laying out area for nursery & cleaning	md	7	224.58	Rs. 1,572.06
2)	Preparation of Mother bed with good earth & cow dung manure.	md	6	224.58	Rs. 1,347.48
3)	Preparation of poly pot bed with bamboo structure for making shade .	md	10	224.58	Rs. 2,245.80
4)	Cost of filling poly pot mixing with good earth & cow dung	md	12	224.58	Rs. 2,694.96
5)	Pricking out seedlings from mother bed and planting to poly pot bed.	md	7	224.58	Rs. 1,572.06
6)	Supply of Good earth	m <sup>3</sup>	1.0	200.00	Rs. 200.00
7)	Supply of cow dung	m <sup>3</sup>	1.0	311.00	Rs. 311.00
8)	Supply of poly pot	LS		400.00	Rs. 400.00
9)	Supply misc article bamboo, tin etc.	LS		500.00	Rs. 500.00
10)	Watering of mother bed and tube bed up to 31st March	md	12	224.58	Rs. 2,694.96
11)	Contingency	LS		1,562.00	Rs. 1,562.00
				<b>Grand Total</b>	<b>Rs. 15,100.00</b>

## NORTH BENGAL STRIP PLANTATIONS - Creation

Sl No,	Item of Work	Q.nty. / Volume / mandays	Rate (in Rs.)	Amount (Rs.)
1	Survey & demarcation of the plantaiton area and making regeneration map thereof.	7 md	224.58	1,572.06
2	Through cleaning & burning of the area by cutting & removing debris	28 md	224.58	6,288.24
3	Alignment & stacking of pits	10 md	224.58	2,245.80
4	Pit cutting of size : (60+45)/2 x 45 cm x 45 cm	20 md	224.58	4,491.60
5	Carriage of potted seedlings from nursery up to the site by man carriage	14 md	224.58	3,144.12
6	Transplanting potted seedlings	23 md	224.58	5,165.34
7	Application of insecticides	2 md	224.58	449.16
8	Infilling of vacancy withPotted seedlings	2 md	224.58	449.16
9	1st cleaning, cutting jungles/ bushes	20 md	224.58	4,491.60
10	2nd cleaning & mulching with fertilizers	14 md	224.58	3,144.12
11	3rd cleaning by cutting jungles/ bushes etc	12 md	224.58	2,694.96
12	4th cleaning by cutting jungles, bushes etc.	10 md	224.58	2,245.80
13	Supply of fertilizer / manure	LS		2,174.00
14	Watch & ward for protection of Plantation by engaging mazdoor from Aug. to March	60 md	224.58	13,474.80
15	Cost of making display / Sign board	LS		970.00
	<b>Total</b>			<b>53,001.00</b>

1	Spacing Prescribed as per Working Plan	2mx2m
2	Pit Size /Planting Model	(40+37.5)X37.5X37.5 trench
3	Species	Sal,Champ,panisaj,Chilaune,Chikrase,Teak,Tun,Jarul,etc.
4	No of seedlings to be planted per Ha	2500
5	Planting Pattern	<p>1.Cleaning plantation area 40% broad leaves and cleaning sal area(chichiling of sal-line, break,removing debris etc. for preparing sal line sowing bed by hoeing.</p> <p>2. Allgment making of Inspection path.</p> <p>3.Staking of planting pits with alignment and collection of stakes.</p> <p>4.Digging of planting hoeing sal line breaking clods pits over size (40+37.5)X37.5X37.5</p> <p>5.Carriage of seedlings.</p> <p>28</p> <p>7.cleaning weeding 1st time(3rd week of planting).</p> <p>8.Infilling vacancies.</p> <p>9.Cleaning weeding 2nd time.</p> <p>10.Cleaning weeding 3rd time.</p> <p><b>Method of Regeneration:</b></p> <p>1. No clear felling shall be undertake if the area so clear-felled cannot be restocked during the rains.</p> <p>2. Clear-felling areas shall be cleared and burning of debris completed before 15th of March each year.</p> <p>3. The area clear-felled shall be artificially regenerated by sowing,planting or stumping according to species used.</p> <p>4. The plantations should be raised with agricultural cropsand two successiveyears' cultivation by the forest villagersshould be Insisted upon.</p> <p>Planting pattern method:as per working plan(staggered/parallel)</p>

**Estimate for Creation of Sal Plantation along with Braod Leaf (6 line sal 4 line broad leaf spacing 2m x 2m)**

Sl.No.	Particulars of work		Unit	Rate	Amount (Rs.)
<b>A</b>	<b>Nursery Maintenance before planting seedlings</b>				
1	Shorting shifting of tubes (Nursery) 3 times	Md	3	224.58	673.74
2	Weeding cleaning 3 times	Md	3	224.58	673.74
3	Watering over Nursery seedling (April to July) 2 times/ day	md	8	224.58	1,796.64
4	Contengency				30.00
	<b>Total A</b>				<b>3,174.12</b>
<b>B</b>	<b>Plantation creation works</b>				
1	Cleaning Plantation area 40% broad leaves & cleaning sal area (chichilling of sal line, break , removing debris etc for preparing sal line sowing bed by hoeing (100mt x 6 lines x 0.75 x 10 block = 0.45 ha)				
	60 % Sal area	md	26		
2	Allgment making of Inspection path	md	3		
3	Staking of planting pits with alignment & collection of stakes	md	5		
4	Digging of planting hoeing sal line breaking clods pits over Size { 40 + 37.5 } x 37.5 x 37.5, . 2 2500pits/ha	md	25		
5	Carriage of seedlings (man carriage including loading unloding in trucks) over 2500/ha	md	15		
6	Planting of potted seedling 2500/ha and sowing of sal seeds at a spacing of 2m x 2m & in block (20m x 8m)	md	23		
7	cleaning weeding 1st time (3rd week of planting)	md	18		
8	Infilling Vacancies	md	4		
9	Cleaning weeding 2nd time	md	12		
10	Cleaning weeding 3rd time	md	8		
	total Md		139	224.58	31,216.62
11	Carriage of seedling by truck	L5			600.00
	<b>Total B</b>				<b>31,816.62</b>
<b>C</b>	<b>Purchase of sal seeds 100 kg/ha</b>				<b>3,024.00</b>
	<b>Total C</b>				<b>3,024.00</b>
	<b>Total A+B+C</b>				<b>38,015.00</b>
	<b>Grand total</b>				<b>38,015.00</b>

**HILLS SAL.PLTN**  
**Estimate for Sal Plantation in North Bengal : Hills - Maint. Year 1**  
**1st Year Maintenance (for Hill area)**

SI No.	Particulars of works	Unit (DL)	Rate (Rs.)	Amount (Rs.)
1	Cleaning of bushes, jungles etc along the miscellaneous line and interspaces between sal lines.	10	224.58	2245.80
2	Hand weeding of Sal Line	23	224.58	5165.34
3	Carriage Jungle and bushes out of plantation area	5	224.58	1122.90
4	Control burning of bushes	2	224.58	449.16
5	Contingency			33.60
	<b>Total</b>	<b>40</b>		<b>9016.00</b>

(Rupees Nine Thousand Sixteen only.)

**Estimate for Sal Plantation in North Bengal : Hills - Maint. Year 2**  
**2nd Year Maintenance (for Hill area)**

SI No.	Particulars of works	Unit (DL)	Rate (Rs.)	Amount (Rs.)
1	Cleaning of bushes, jungles etc along the miscellaneous line and interspaces between sal lines.	7	224.58	1572.06
2	Hand weeding of Sal Line	16	224.58	3593.28
3	Carriage Jungle and bushes out of plantation area	4	224.58	898.32
4	Control burning of bushes	2	224.58	449.16
5	Contingency			49.36
	<b>Total</b>	<b>29</b>		<b>6562.00</b>

(Rupees Six Thousand Five Hundred Sixty two ) only.

**Estimate for Sal Plantation in North Bengal : Hills - Maint. Year3**  
**3rd Year Maintenance (for Hill area)**

SI No.	Particulars of works	Unit (DL)	Rate (Rs.)	Amount (Rs.)
1	Cleaning of bushes, jungles etc along the miscellaneous line and interspaces between sal lines.	5	224.58	1122.90
2	Hand weeding of Sal Line	11	224.58	2470.38
3	Carriage Jungle and bushes out of plantation area	4	224.58	898.32
4	Control burning of bushes	1	224.58	224.58
5	Contingency			42.64
	<b>Total</b>	<b>21</b>		<b>4759.00</b>

(Rupees Four Thousand Seven Hundred Fifty Nine ) only.

**Estimate for Sal Plantation in North Bengal : Hills - Maint. Year4**  
**4th Year Maintenance (for Hill area)**

SI No.	Particulars of works	Unit (DL)	Rate (Rs.)	Amount (Rs.)
1	Cleaning of bushes, jungles etc along the miscellaneous line and interspaces between sal lines.	5	224.58	1122.90
2	Hand weeding of Sal Line	6	224.58	1347.48
3	Carriage Jungle and bushes out of plantation area	2	224.58	449.16
4	Control burning of bushes	1	224.58	224.58
5	Contingency			61.76
	<b>Total</b>			<b>3206.00</b>

(Rupees Three Thousand Two Hundred Six ) only.

132 A

## HILLS MISC PLTN CREATION (MALING DOMINATED AREA)

1	Spacing Prescribed as per Working Plan	2.5mx2.5 m
2	Pit Size /Planting Model	(0.6+0.45)/2x0.45x0.45
3	Species	<p><b>Rimbick Range:</b> Abies, Hemlock, Quarcus, Champ, Cupressus, Katus, Guras, Tsupa, Okhar, Kowlo, Dhupi etc.</p> <p><b>Dhodrey &amp; Tonglu:</b> Quarcus, Maya, Hemlock, Cupressus, Kafal, Katus, Kaulo, Okhar.</p> <p><b>Ghoom Simana &amp; Darjeeling Range:-</b> Maya, Pipli, Okhar, Katus, Kafal, Champ, Kowlo, Hill Chandan, Lakchilaune, Utis, Rani &amp; Tite Champ, Paiyu etc.</p>
4	No of seedlings to be planted per Ha	1600
5	Planting Pattern	<p>1. Survey and demarcation of the plantation area including GPS Survey by Technical Person.</p> <p>2. Alignment of planting lines and staking the pit positions.</p> <p>3. Advance soil works by digging planting pits of size as mentioned above at 2.5 mx 2.5 m spacing.</p> <p>4. Cleaning of plantation site and making inspection path including cleaning of malling etc.</p> <p>5. Preplanting cleaning of plantation area including removal of maling bamboo from plantation site.</p> <p>6. carriage of seedling (Man Carriage only 1800 seedlings by head loading &amp; by horse (in Rimbick) from Central Nursery to planting site and return of stand and root trainers to central nursery.</p> <p>7. Transplanting of potted seedlings in pits, including filling up of planting pits with dug up pulverized soil, carriage of root trainers to planting site and collection and recarriage of root trainers to local store.</p> <p>8. Vacancy infilling.</p> <p>9. 1st mulching, weeding cleaning and application of fertilizer.</p> <p>10. 2nd mulching, weeding cleaning and application of fertilizer.</p> <p>11. 3rd cleaning, weeding.</p> <p>12. Carriage of fertilizer, insecticides etc.</p> <p>13. Cost of fertilizer, insecticides etc.</p> <p><b>Method of Regeneration:</b></p> <p>Blank &amp; degraded areas shall be planted with misc species at 2.50mx 2.50m spacing. Block plantation shall be carried out.</p>

No of seedlings to be raised per ha  
No of seedling to be planted per ha  
Specing

2000  
1600  
2.5m x 2.5m

S.No.	Particulars	Unit	Rate	Man Days/ Cum	Amount (Rs.)
<b>A</b>	<b>Nursery Maintenance before planting including 2 year maintenance.</b>				
1	Cleaning of site including chilchaling around the nursery bed 12m2	MD	224.58	1.5	336.87
2	Preparation of mother bed	MD	224.58	1.5	336.87
3	Supply of:				0
	a) Compost=	CUM	1750	0.83	1452.5
	b) Sand=	CUM	0.325	2800	910
4	Mixing compost, filling hycopot including sieving 2000nos of seedlings 2md/500 seedling	MD	224.58	8	1796.64
5	Pricking out of seedlings 2000 nos @ 1mds/500 seedling=	MD	224.58	5	1122.9
6	Weeding cleaning sorting shifting 3 times	MD	224.58	6	1347.48
7	Watering over Nursery seedling (Nov to March) 2 times/ day	MD	224.58	10	2245.8
8	Contingencies				164.38
	<b>Total cost nursery work over 1 ha. for 2000 seedling</b>				<b>9713.00</b>
<b>B</b>	<b>Plantation Works - Creation /ha</b>				
1	Cleaning burning of plantation area including removal of maling etc.			50	
2	Making of inspection over plantation area (75 cm to 90 cm wide as per requirement)			3	
3	Stacking of planting pits with alignment & collection of stakes (length not less then 75 cm)			5	
4	Digging of planting pits of size (0.6+0.45)/2x0.45x0.45			25	
5	Carriage of seedling (Man Carriage only 1800 seedlings by head loading & by hourse			18	
6	Planting potted seedling 1600 seedlings including filling of pits.			16	
7	1st Cleaning of plantation area (between 3rd to 5th week of planting by end of July)			14	
8	Infilling Vacancy			4	
9	2nd time cleaning of plantation area including Mulching & Manuring by end of August			18	
10	3rd cleaning of plantation area by end of Sept			10	
11	Aplication of fertilizer & carriage from road site to paltation site.			6	
		MD	224.58	169	37954
	<b>Sub Total</b>				<b>37954</b>
12	i) Supply of fertilizer Manure Transportation, contingencies ect. Rs. 2300.00 ii) Cost of Rope/tin/watering can/bamboo/thatch etc. Rs. 400.00 iii) Contengincies etc Rs. 486.00	L.S			3186
	<b>Total B</b>				<b>41140</b>
	<b>Total A+ B</b>				<b>50853</b>

132 B	HILLS MISC PLTN CREATION (NON MALLING AREA)
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1	Spacing Prescribed as per Working Plan	2.5mx2.5 m
2	Pit Size /Planting Model	(0.6+0.45)/2x0.45x0.45
3	Species	Takdah Range: Champ, Katus, Pipli, Maya, Kawlo, Okhar, Utis, Kapasi etc.
4	No of seedlings to be planted per Ha	1600
5	Planting Pattern	<p>1. Survey and demarcation of the plantation area including GPS Survey by Technical Person.</p> <p>2. Alignment of planting lines and staking the pit positions.</p> <p>3. Advance soil works by digging planting pits of size as mentioned above at 2.5 mx 2.5 m spacing.</p> <p>4. Cleaning of plantation site and making inspection path.</p> <p>5. Preplanting cleaning of plantation area.</p> <p>6. Carriage of seedling (Man Carriage only 1800 seedlings by head loading from Central Nursery to planting site and return of stand and root trainers to central nursery.</p> <p>7. Transplanting of potted seedlings in pits, including filling up of planting pits with dug up pulverized soil, carriage of root trainers to planting site and collection and recarriage of root trainers to local store.</p> <p>8. Vacancy infilling.</p> <p>9. 1st mulching, weeding cleaning and application of fertilizer.</p> <p>10. 2nd mulching, weeding cleaning and application of fertilizer.</p> <p>11. 3rd cleaning, weeding.</p> <p>12. Carriage of fertilizer, insecticides etc.</p> <p>13. Cost of fertilizer, insecticides etc.</p> <p><b>Method of Regeneration:</b></p> <p>Blank &amp; degraded areas shall be planted with misc species at 2.50mx 2.50m spacing. Block plantation shall be carried out.</p>

No of seedlings to be raised perha  
No of seedling to be planted per ha  
Specing

2000  
1600  
2.5m x 2.5m

Sl. No.	Particulars	Unit	Rate	Man Days/ Cum	Amount (Rs.)
<b>A</b>	<b>Nursery Maintenance before planting including 2 year maintenance.</b>				
1	Cleaning of site including chilchaling of around the nursery bed 12m2	MD	224.58	1.5	336.87
2	Preparation of mother bed	MD	224.58	1.5	336.87
3	Supply of:				0
	a) Compost=	CUM	1750	0.83	1452.5
	b) Sand=	CUM	0.325	2800	910
4	Mixing compost, filling hycopot including sieving 2000nos of seedlings 2md/500 seedling	MD	224.58	8	1796.64
5	Pnicking out of seedlings 2000 nos @ 1mds/500 seedling=	MD	224.58	5	1122.9
6	Weeding cleaning sorting shifting 3 times	MD	224.58	6	1347.48
7	Watering over Nursery seedling (Nov to March) 2 times/ day	MD	224.58	10	2245.8
8	Contingencies				164.38
	<b>Total cost nursery work over 1 ha. for 2000 seedling</b>				<b>9713</b>
<b>B</b>	<b>Plantation Works - Creation /ha</b>				
1	Cleaning burning of plantation area etc.			20	
2	Making of inspection over plantation area (75 cm to 90 cm wide as per requirement)			3	
3	Stacking of planting pits with alignment & collection of stakes (length not less then 75 cm)			5	
4	Digging of planting pits of size (0.6+0.45)/2x0.45x0.45			25	
5	Carriage of seedling (Man Carriage only 1800 seedlings by head loading & by hourse			18	
6	Planting potted seedling 1600 seedlings including filling of pits.			16	
7	1st Cleaning of plantation area (between 3rd to 5th week of planting by end of July)			14	
8	Infilling Vacancy			4	
9	2nd time cleaning of plantation area including Mulching & Manuring by end of August			18	
10	3rd cleaning of plantation area by end of Sept			10	
11	Aplication of fertilizer & carriage from road site to paltation site.			6	
			224.58	139	31217
	<b>Total B</b>				<b>31217</b>
	<b>Total A+ B</b>				<b>40930</b>



1	Spacing Prescribed as per Working Plan	4mx4m		
2	Pit Size /Planting Model	(60+45)/2x45 c.mx30 c.m.		
3	Species	Bamboo sp.		
4	No of seedlings to be planted per Ha	625		
5	Planting Pattern	1. Survey and demarcation of plantation site and preparation.		
		2. Initial cleaning and burning.		
		3. Alignment of pit.		
		4. Stacking of sticks.		
		5. Making of inspection path.		
		6. Digging of pits of size(60+45)/2x45 c.mx30 c.m		
		7. Planting of potted seedlings in pits.		
		8. Carriage of seedlings up to pit.		
		9. Maintenance a.1st cleaning including infilling b.2nd cleaning c.3rd cleaning d.4th cleaning		
		Planting pattern method as per working plan (staggered/parallel)		

SI No	Particulars of Works	Mandays	Rate	Total (Rs.)
1	Survey and demarcation of plantation site & preparation of regeneration plan	1	224.58	224.58
2	Initial Cleaning & Burning	15	224.58	3368.7
3	Alignment of pit	4	224.58	898.32
4	Stacking of sticks	3	224.58	673.74
5	Making inspection path	3	224.58	673.74
6	Digging of pits of size (60+45)/2 x 45 cm x 30 cm	15	224.58	3368.7
7	Planting of potted seedlings in pits	10	224.58	2245.8
8	carriage of seedling up to pit	4	224.58	898.32
9	Maintenance			
	a) 1st cleaning including infilling	16	224.58	3593.28
	b) 2nd Cleaning	14	224.58	3144.12
	c) 3rd Cleaning	12	224.58	2694.96
	d) 4th Cleaning	10	224.58	2245.8
10	Contingencies			26
				<b>24056.00</b>

Hills									
Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate (Rs.)	Amount (Rs.)
Advance	1	Survey and demarcation of the plantation area including GPS Survey by Technical person	1.00	ha	Labour	0.50	2.00	224.58	449.16
Advance	2	Alignment of planting lines and staking the pit positions	1600.00	nos	Labour	1000.00	1.50	224.58	336.87
Advance	3	Advance Soil works by digging planting pits of size (o.40x0.30)/2x0.30x0.30 m3 at 2.5x2.5 m spacing (1600 nos.)	1600.00	nos	Labour	80.00	20.00	224.58	4491.60
Advance	4	Cleaning of the pltn site and making inspection path	1.00	ha	Labour	0.05	22.00	224.58	4940.76
	5	Preplanting cleaning of plantation area	1.00	ha	Labour	0.16	6.00	224.58	1347.48
Creation	6	Carriage of seedlings from Central Nursery to Planting site including loading and unloading and return of Stand and Root Trainers to Central Nursery	1600.00	nos	Material			LS	1200.00
Creation	7	Transplanting of potted seedlings in pits, including filling up of planting pits with dug up pulverized soil, carriage of Root Trainers to planting site and collection and recarriage of Root Trainers to local store site	1600.00	nos	Labour	80.00	20.00	224.58	4491.60
Creation	8	Vacancy infilling	160.00	nos	Labour	40.00	4.00	224.58	898.32
Creation	9	1st mulching, weeding, cleaning and application of fertilizer	1600.00	nos	Labour	115.00	14.00	224.58	3144.12
Creation	10	2nd mulching, weeding, cleaning and application of fertilizer	1600.00	nos	Labour	133.00	12.00	224.58	2694.96
Creation	11	3rd cleaning, weeding	1600.00	nos	Labour	160.00	10.00	224.58	2245.80
Creation	12	Carriage of fertilizer, insecticide etc.	LS		Material			LS	250.00
Creation	13	Cost of fertilizer, insecticides etc.	LS		Material			LS	1200.00
Creation	14	Watch & Ward (1 md per 10 ha) for 6 months	LS		Labour		18.00	224.58	4042.44
Advance	15	Contingencies - Labour	LS		Labour			LS	122.00
Advance	16	Contingencies - Material	LS		Material			LS	250.00
Creation	17	Contingencies - Labour	LS		Labour			LS	106.00
Creation	18	Contingencies - Material	LS		Material			LS	200.00
<b>Total</b>							<b>129.50</b>		<b>32411.00</b>

**Estimate for Miscellaneous Plantation in North Bengal : Hills - Maint. Year 1**  
**1st Year Maintenance (for Hill area)**

Hills									
Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate (Rs.)	Amount (Rs.)
Maint. Y1	1	Vacancy infilling	160.00	nos	Labour	80.00	2.00	224.58	449.16
Maint. Y1	2	1st weeding, cleaning, mulching with application of fertilizer	1600.00	nos	Labour	100.00	16.00	224.58	3593.28
Maint. Y1	3	2nd weeding, cleaning	1600.00	nos	Labour	114.00	14.00	224.58	3144.12
Maint. Y1	4	3rd weeding, cleaning	1600.00	nos	Labour	160.00	10.00	224.58	2245.80
Maint. Y1	5	Cost of fertilizer and insecticide etc. including carriage	LS	ha	Material			LS	600.00
Maint. Y1	6	Watch & Ward for 12 months (1 md for 10 ha)	1.00	Ha	Labour		25.00	224.58	5614.50
Maint. Y1	7	Contingency - Labour							28.00
Maint. Y1	8	Contingency - Material							100.00
<b>Total</b>							<b>67.00</b>		<b>15775.00</b>

**Estimate for Miscellaneous Plantation in North Bengal : Hills - Maint. Year 2**

**2nd Year Maintenance (for Hill area)**

Hills									
Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate (Rs.)	Amount (Rs.)
Maint. Y2	1	Vacancy infilling	1600.00	nos	Labour	80.00	2.00	224.58	449.16
Maint. Y2	2	1st weeding, cleaning, mulching with application of fertilizer	1600.00	nos	Labour	114.00	14.00	224.58	3144.12
Maint. Y2	3	2nd weeding, cleaning	1600.00	nos	Labour	133.00	12.00	224.58	2694.96
Maint. Y2	4	Cost of fertilizer and insecticide etc. including carriage	LS	ha	Material			LS	600.00
Maint. Y2	5	Watch & Ward for 12 months	1.00	Ha	Labour		25.00	224.58	5614.50
Maint. Y2	6	Contingency - Labour							52.00
Maint. Y1	7	Contingency - Material							100.00
<b>Total</b>							<b>53.00</b>		<b>12655.00</b>

**Estimate for Miscellaneous Plantation in North Bengal : Hills - Maint. Year3**

**3rd Year Maintenance (for Hill area)**

Hills									
Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate (Rs.)	Amount (Rs.)
Maint. Y3	1	1st weeding, cleaning	1600.00	nos	Labour	114.00	14.00	224.58	3144.12
Maint. Y3	2	2nd weeding, cleaning	1600.00	nos	Labour	133.00	12.00	224.58	2694.96
Maint. Y3	3	Contingency - Labour							34.00
Maint. Y3	4	Contingency - Material							50.00
<b>Total</b>							<b>26.00</b>		<b>5923.00</b>

**Estimate for Miscellaneous Plantation in North Bengal : Hills - Maint. Year4**

**4th Year Maintenance (for Hill area)**

Hills									
Category	Sl. No.	Item	Quantity	Unit	Type	Output per manday	Required Mandays	Rate (Rs.)	Amount (Rs.)
Maint. Y4	1	1st weeding, cleaning	1600.00	nos	Labour	114.00	14.00	224.58	3144.12
Maint. Y4	2	Contingency - Labour							26.00
Maint. Y4	3	Contingency - Material							50.00
<b>Total</b>							<b>14.00</b>		<b>3220.00</b>

**DPN NURSER**  
**Advance work**

Unit 2000 seedlings/Ha

1 Cooice of Speice

:: sel with its associates, Eucalyptus, Akashmoni  
and Mise. Species-Bahera, Karanj, Neem,  
Peasal, Haritaki, Mahul Etc.

<b>A</b>	<b>NURSERY WORK:-</b>					
1	Cleaning and leveling of Nursery site	::	0.50	DL	224.58	Rs. 112.29
2	preparation of mother beds and tube beds of size 1.20 mt*5 mt.	::	1.00	DL	224.58	Rs. 224.58
3	Sowing seeds in mother bed	::	0.50	DL	224.58	Rs. 112.29
4	Filling of polythene tube with mixture of good earth and Cowdung / FYM (3:1)	::	5.00	DL	224.58	Rs. 1122.90
5	Dibbling Seeds.	::	1		224.58	224.58
6	Pricking out of seedlings and dibbling of seeds in tube	::	1.00	DL	224.58	Rs. 224.58
7	Weeding cleaning forking, application of bio fertilizer, insecticide etc	::	1.00	DL	224.58	Rs. 224.58
8	Watering seedling	::	4.00	DL	224.58	Rs. 898.32
	<b>Total</b>	::	<b>14.00</b>	<b>DL</b>	<b>224.58</b>	<b>Rs. 2,919.00</b>
<b>B</b>	<b>NURSERY WORK MATERIAL COMPONENT:-</b>					
1	Price of watering can, rope , Bucket etc.	::				Rs. 118.00
2	Price of seed of different species	::				Rs. 175.00
3	Price of cowdung 1m3.	::				Rs. 400.00
4	Price of insecticide etc.	::				Rs. 100.00
5	Cost of collection of goods earth for filling polythene tube cowdung	::				Rs. 200.00
6	Cost of polypot(1.5 kg)	::				Rs. 287.00
	<b>Total</b>					<b>Rs. 1280.00</b>
	<b>Total Advance Work</b>	::				<b>Rs. 4,199.00</b>

**D.P.Nursery - Creation. (Unit 1.0 ha area).**

Sl. No.	Particulars of Work	No.of MD	Mat.in unit	Rate in Rs.	Amount in Rs.
<b>A</b>	<b>DPN - Creation.</b>				
1	Filling polythene tube with good earth& FYM (3:1)	5		224.58	1122.9
2	Dibbling Seeds.	1		224.58	224.58
3	Pricking out seedlings from mother bed & transplanting in poly pots.	0.5		224.58	112.29
4	Making shed for poly beds with thatch & bamboo,etc.	1		224.58	224.58
5	Making nursery hut.	1		224.58	224.58
6	Erection of fencing around nursery.	1		224.58	224.58
7	Sinking dug well.	2		224.58	449.16
8	Watering, weeding, cleaning, sorting, shifting & culling as and when required including application insecticides (three) times.	3		224.58	673.74
9	Digging of trench in periphery of Nursery site over 60cm x 45 cm x 110 mt, in order to remove excess water.	1		224.58	224.58
10	Contingency for Signboard, etc.		LS		719.16
	<b>GRAND TOTAL (1.0 ha)</b>	<b>15.50</b>			<b>4200.00</b>

SL. No.	Item of Work	No./Mandays (MDs) allowed	Unit Cost/ Wages in Rs.	Amount in Rs.
<b>A.</b>	<b>Cost of doing the following works in c/w ramets production nos.</b>			
1	Cleaning inside the mist chamber by rubbing floors and application of fungicides 4 times x 2 nos. chamber.	93	224.58	20885.94
2	Properly fixing and setting of misters, LD pipe etc. for 2 Nos. chamber	32	224.58	7186.56
3	Filling hycopots over - 50000 Nos. sterilized sand/vermiculite after clearing the post with application of fungicides	312	224.58	70068.96
4	Cutting of shoots with knife including application of fungicides to prevent fungus attack	134	224.58	30093.72
5	Cutting ramets (shoots) in 2 pieces into proper size including the treatment of hycopots with water and root promoting hormone over - 50000 Nos.	288	224.58	64679.04
6	Misting and looking after clones including sorting culling over - 50000 Nos. for 45 days.	134	224.58	30093.72
	<b>Total in Rs.</b>			<b>223008.00</b>
<b>B.</b>	<b>Cost of electrical maintenance by engaging technician of internal and external electrical system at Modern Nursery from July - 15 to Dec-15 = 6th months</b>	6	6500	39000.00
	<b>Total in Rs.</b>			<b>39000.00</b>
<b>C.</b>	<b>Cost of supply of the following materials for use in Modern Nursery</b>			
1	Supply of medicine, vitamin, fungicides, root promoting hormone etc.		L.S.	6024.00
2	Supply of coarse sand	6	1000	6000.00
	<b>Total in Rs.</b>			<b>12024.00</b>
	<b>Grand Total (Group A+B+C)</b>			<b>274032.00</b>

Cost of creation is Rs.5.30 per ramet.

SL. No.	Item of Work	No./Mandays (MDs) allowed	Unit Cost/ Wages in Rs.	Amount in Rs.
<b>A.</b>	<b>Cost of doing the following works in c/w maintenance of ramets</b>			
1	Watering and watching over 50000 seedlings 3 (Three) times daily to upgrade the quality ramets including removal of dead one from 01.04.2015 to 30.06.2016, Total = 91 days.	228	224.58	51204.24
2	Application of fungicides, hormone time to time and where necessary and cleaning the areas.	48	224.58	10779.84
3	Contingent expenditure, if any	L.S.	L.S.	384.00
	<b>Total in Rs. For 1 ha.</b>			<b>62368.00</b>

Cost per seeding for maintenance is Rs.1.20

**COST FOR CREATION AND PRODUCTION LOF RAMETS FROM CMA**  
(For production of 60000 No. of Ramets)

<b>A. CREATION OF MA @ 10000 NO., OF PLANTS PER HECTARE WITH BARBED WIRE FENCING ETC., FOR AN AREA OF 1 HECTARE WITH AN ESPACEMENT OF 1MX1M</b>		
<b>SL. NO</b>	<b>Item of works</b>	<b>Cost in Rs.</b>
1	Cost of special cleaning by cuttin havey bush, Lantana camera, thorn thorn Assamlota etc.,1Ha, 25MD @ Rs.71.08	1777
2	Cost of servey & demarcation & alignment of pits 1 ha (Spacing 1m*1m=10000 Nos),19MD @ Rs.71.08 per MD	1350.52
3	Cost of Digging pits of size 1/2(60+45)45*45, 1 MD pit 40Nos.=250 Nos. Md @Rs.71.08	17770
4	Cost of filling up planting pits and applied neem oil cake, 1 MD pit filling=100 Nos. @Rs-71.08	7108
5	Cost of carring ramets from site of Modem Nursery to CMA as 80 Nos. =1 MD@Rs-71.08	5686.4
6	Cost of planting of ramets over 10000 Nos. in filled up pits=75 Nos. per 1 MD, 133 MD, 133MD @Rs. 71.08	9453.64
7	Cost of 1st mulching, hoeing the base of plant and clering the weeds and unwanted growth(15MDs for 1600No.), 94 MD @Rs.71.08	6681.52
8	Cost of 2nd mulching, hoeing the base of plant and cleaning the weeds, unwanted growth and application of fertilizer and termiticides, 94 No. MDs @Rs.71.08	6681.52
9	Cost of supply of neem oil cake per pits 50 grams at the time of pit filling over 10000 pits, 5Qtl @ Rs.1000 per Qtl.	5000
10	cost of supply of DAP at time of 1st and 2nd mulching over 1 ha, 10000 Nos. per plant 20gm*2times*10000No.=400Kg @Rs.10 per bag including carriage	4400
11	cost of supply phorate 10grams at the time of 1st & 2nd mulching applied 5 grams per plant*10000Nos*2times=100Kg @Rs.45 per Kg including carriage	4500
12	Cost of supply of chlogerand liters @Rs.190.00 per liter	950
13	Cost of erecting the fencing around the cma (50% common fencing) by fitting, fitting, fixing the fencing post by hole and coal tarring the base over 100 Nos. post on central @ Rs.11.50 each over 1Ha or say 19 No. MD @Rs 71.08	1350.52
14	Cost of stretching barbed wir over 200 Rmt*6 stand=1200 Rmt@0.80 per Rmt or say 16 No. MD.	1137.28
15	Supply of stapple etc., oOver 660 Nos. @Rs.0.65 each	429
16	Cost of supply barbed wire for erecting of fencing over 172 Kgs @Rs.45.00 per Kg (1 Kg=7mtr approx), 58 Kg including carriage	9976
17	Contingency	748.6
<b>Total for 1 Ha Creation works</b>		<b>85000</b>
<b>Total for 0.2 Ha Creation works</b>		<b>17000</b>

**COST OF MAINTENANCE OF 1 HECTARE CM**  
(Cleaning, mulchinf with fertilizer, pruning of unwanted shoots, watering, spray of insecticides etc.) @ 10000No plants per Hectare

<b>S.NO</b>	<b>Item of works</b>	<b>Cost in Rs.</b>
1	Weeding and cleaning the site 50 No.s, MD @ 71.08	3554
2	Forking the base including application of the fertilizer over 10000 Nos., 100 No.s, MD @Rs.71.08	7108
3	Application of insecticides, termiticides etc., 20No.s, MD @Rs.71.08	1421.6
4	Cost of supply of DAP fertilizer @ 20grams per plant * 10000 No.s, Plant=200 Kg @Rs.10.00 per kg	2000
5	Cost of Supply of termiticides like phorate 10G etc., @ 5 hrams per grams	2250
6	Watering wnen required (15 days interval*3 times)*75 MDS @Rs.71.08	5331
7	Puring and throwing away the unwanted shoots etc. from CMA,40 MDS @Rs.71.08	2843.02
8	Contingency	492.38
<b>Total for 1 Hectare</b>		<b>25000</b>
<b>Total for 0.2 Hectare</b>		<b>5000</b>

<b>C. INFRASTRUCTURE DEVELOPMENT FOR PROPAGATION OF EDCALYPTUS RAMETS</b>		
a.	Supply of hycopot 60cc,60,000 No., @ Rs.1.50 each	90000.00
b.	supply of trays 960 No., @ Rs.45.00 each	43200.00
c.	supply of Iron Stand 160 No. @ Rs. 250.00 each	40000.00
d.	Agro shed net 75% or 50% LS	6800.00
<b>TOTAL</b>		<b>180,000.00</b>

<b>a</b>	Cost of purchase of polythene sheet, ropes, bamboo stick, poly bags etc.	L.S.	40/- per Kg.	40.00
<b>b</b>	Cost of collection and local transportation	L.S.		125.00
<b>c</b>	Cost of Drying and processing	L.S.		45.00
<b>d</b>	Cost of packing and labeling	L.S.		15.00
	<b>Total in Rs.</b>			<b>225.00</b>

150cc Root Trainers	1 Root Trainer (cc)	2000 Root trainers (m3)	10000 Root Trainers (m3)
Requirement of Compost	50	0.1	0.5
Requirement of Coarse Sand	50	0.1	0.5
Requirement of Burnt Rice Husk	50	0.1	0.5

## For 10,000 Seedlings

Category	Sl No	Items	Quantity	Unit	Type	Output per Manday	Required Mandays	Rate	Amount(Rs)
Creation	1	Supply of Compost	0.5	m3	Material			LS	1,500.00
Creation	2	Preparation of potting mixture(Mixing through hand driven Mixture machine)	1.5	m3	Labour	0.75	2	224.58	449.16
Creation	3	Supply of Coarse sand including collection and carriage	0.5	m3	Material			LS	300.00
Creation	4	Drying and sieving Sand	0.5	m3	Labour	1	0.5	224.58	112.29
Creation	5	Supply of Burnt Rice Husk including Collection and carriage	0.5	m3	Material			LS	300.00
Creation	6	Drying and sieving Burnt Rice husk	0.5	m3	Labour	2	0.25	224.58	56.15
Creation	7	Filling of Root trainers and keeping filled root trainers on stands	10000	no	Labour	800	12.5	224.58	2,807.25
Creation	8	Collection of Quality seeds including collection and carriage	LS		Material			LS	500.00
Creation	9	Drying , Sorting and pretreatment of seeds and sowing in hyglopits	5	Kg	Labour	5	1	224.58	224.58
Creation	10	Pricking out the transplanting of seedinlings in Root Trainers	10000	No	Labour	500	20	224.58	4,491.60
Creation	11	Supply of insecticides	LS		Material			LS	500.00
Creation	12	Watering for 90 days(January to march) including Watering in Hygropits and spraying of insecticides	10000	No	Labour	20000	45	224.58	10,106.10
Creation	13	Sorting and Weeding-2 times	20000	No	Labour	10000	4	224.58	898.32
Maint	14	Watering for 120 days( April to July) including Spraying of insecticides	10000	No	Labour	15000	80	224.58	17,966.40
Maint	15	Sorting and Weeding-2 times	20000	No	Labour	10000	4	224.58	898.32
		Contingencies- Advance						LS	100.00
Creation	16	Contingencies- Creation	LS					LS	286.00
Maint	17	Contingencies- Maintenance	LS					LS	56.00
<b>Total</b>							<b>169.25</b>		<b>41,552.00</b>



## S.B PRODUCTION OF QUALITY PLANTING MATERIAL 2 SEASONS

**For 10000 seedlings**

[illegible]





UNIT :1.00 HA				
Sl. No.	Particulars of Works	No of MD	Rate (Rs.)	Amount (Rs.)
1	Suravey and demarcation the area including clearing bushes along boundary	2	224.58	449.16
2	Coaltaring the leading shoots to be retained 2-3 in Nos. per stump	3	224.58	673.74
3	Cutting dead, dying , moribund trees retaining 2-3 Nos. per stump to produce healthy and better quality crops	15	224.58	3368.70
4	Contingencies, i.e price of coal tar etc.			112.00
		1 Ha	TOTAL	4604.00

303

**Mechanical thinning**

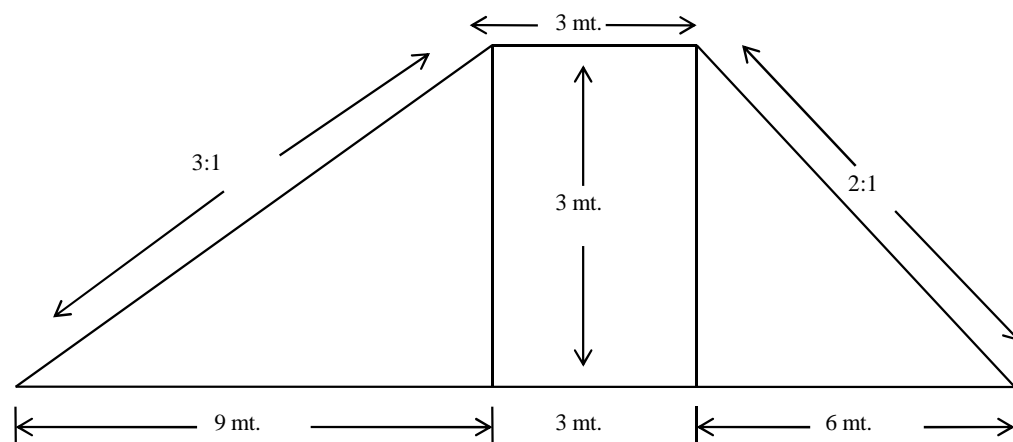
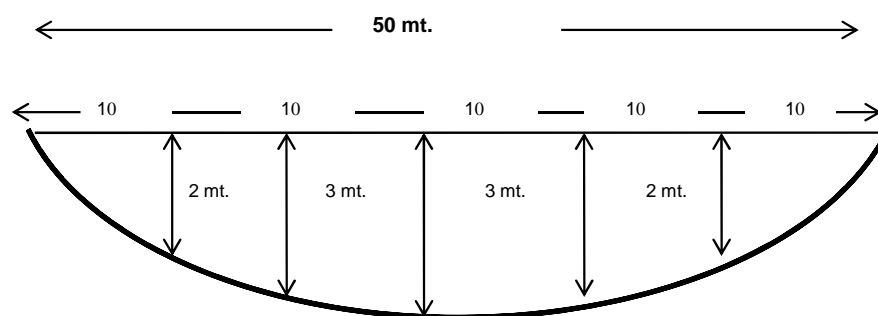
<b>Item no</b>	<b>Particulars of Work</b>	<b>Units</b>	<b>Rate</b>	<b>Amount (Rs)</b>
	Cost of doing the following works in connection with thinning of Plantation			
<b>1</b>	Marking of trees for felling including supply of paint+ labour works per hectre	1	224.58	224.58
<b>2</b>	Cutting of Marked trees in a thinning plot over 1 Hectre area labour works	4	224.58	898.32
<b>3</b>	Cutting of firewood @ 5 Stacks per hectre and stacking over 1 hectre Labour	4	224.58	898.32
<b>4</b>	Carriage of Firewood to depot from field and stacking in depot per stack	5	224.58	1122.90
	<b>Total per Hectre expenses</b>			<b>3144.00</b>

Unit = 1 km.

SL. No.	Particulars Of Works	Unit	Qty.	Rate	Amount (Rs.)
1	Cost of Surveying	No.	1	224.58	224.58
2	Supply of bamboo peg, rope, lime etc for necessary alignment	LS			49.90
3	Cost of excavation of earth for making/digging contour trench around 1 KM where necessary over 5.00mtx0.45mtx0.30mt=0.675m3x60nos=40.5m3	m <sup>3</sup>	40.5	92.2	3734.10
<b>TOTAL(Rs)</b>					<b>4008.00</b>

**Specification of Earthen Dam :**

1) Length of Embankment of E.D.	50 mt.
2) Top Width	3 mt.
3) Bottom Width	18 mt.
4) Average Width	10.5 mt.
5) Inner Slope	3 : 1
6) Outer Slope	2 : 1
7) Height of the E.D.	3 mt.
8) Sectional Area	$(9\text{mt.} + 3\text{mt.} + 6\text{mt.} + 3\text{mt.}) \times 3\text{mt.}$ $= 10.5\text{mt.} \times 3\text{mt.} = 31.5 \text{ m}^2$

**Design for Digging of Earth Layer by Layer :****Calculation of volume of Earth for the Earthen Dam :**

Point	Height	Sec.Area (m <sup>2</sup> )	Sum	Mean	Dist.	Volume (m <sup>3</sup> )
0.00	0.00	0.00	0.00	0.00	0.00	0.00
10.00	2.00	16.00	16.00	8.00	10.00	80.00
20.00	3.00	31.50	47.50	23.75	10.00	237.50
30.00	3.00	31.50	63.00	31.50	10.00	315.00
40.00	2.00	16.00	47.50	23.75	10.00	237.50
50.00	0.00	0.00	16.00	8.00	10.00	80.00
						950 m <sup>3</sup>

Estimate for Construction of Earthen Dam as Soil & Moisture Conservation

Sl. No.	Particular of Works	Mandays (md) /	Rate	Labour Cost	Material Cost	Total Cost
	Cost of doing the following works in connection with construction of an E.D. in forest area as follows :					
1	Survey, demarcation & cleaning of the site	5 md	224.58 /md			1122.90
2	Digging key trench in mixed medium hard soil with morrum over : - Length - 50mt.; Top width - 2.5mt.; Bottom width - 2mt.; Depth - 90cm. = $(2.5+2.0)/2 \times 0.9\text{mt.} \times 50\text{mt.} = 101.25 \text{ m}^3 = 3543.75\text{cft.}$ Or say 3544cft. by engaging daily labour	70 md	224.58 /md	14420.00		15720.60
3	Making core wall of mud and placing layer after layer (layer not excluding 30cm. Height) by ordinary mixed soil to be excavated over : 1) $(2.5+2.0)/2 \times 0.9\text{mt.} \times 50\text{mt.} = 101.25 \text{ m}^3$ 2) $(2.0+0.6)/2 \times 1.5 \text{ mt.} \times 50\text{mt.} = 97.50 \text{ m}^3 = 198.75 \text{ m}^3$	75 md	224.58 /md	15450.00		16843.50
4	Digging earth and depositing the same layer after layer not excluding 15cm. Including breaking of clodes and rough dressing in mixed medium hard soil with morrum over : $950 \text{ m}^3 + (\text{add}) 10\% \text{ for settlement i.e. } 95 \text{ m}^3 = 1045 \text{ m}^3 - (\text{less volume of earth excavation for spill way and core wall}) 112.25 \text{ m}^3 = 932.75 \text{ m}^3$ (a) Spill way - $30\text{mt.} \times 0.90\text{cm.} \times (2.0+1.5)/2$ and (b) Core wall $47.25 \text{ m}^3 + 65.00 \text{ m}^3 = 32646 \text{ cft.}$  Lead upto 80 ft. and lift upto 3 ft., 55% of earth = 17955 cft. by engaging daily labour	245 md	224.58 /md	50470.00		55022.10
	Lead upto 80 ft. and lift from 3 ft. to 6 ft. 45% of earth = 14691 cft. by engaging daily labour	190 md	224.58 /md	39140.00		42670.20
5	Digging spill way to drain out excess water over $47.25 \text{ m}^3 = 1654 \text{ cft.}$ by engaging daily labour	21 md	224.58 /md	4326.00		4716.18
	<b>Total :</b>	<b>606 md</b>	<b>224.58 /md</b>	<b>123806.00</b>	<b>0.00</b>	<b>136095.48</b>
7	Overhead Expenditure		L.S.		104.00	104.00
	<b>Estimate for 50 mt. length</b>					<b>136199</b>
	<b>Estimate for 300 mt length of E.D</b>					<b>817,197.00</b>



Sl. No.	Item of work	UNIT = 1 M <sup>3</sup>		Rate (in Rs.)	Amount (in Rs.)
		Man days in Nos.	Material in unit.		
	Cost of doing the following works in connection with treatment of gully for protection of gully & soil and moisture conservation works over 1 m <sup>3</sup> . (Size 1mt. X 1m. X 1mt.)				
1	Making structural works for protection of gully by using of morrum blocks, fitting fixing including foundation trench & supplying of all materials over 1 mt.	6.5		224.58	1459.77
2	Cost of morrum blocks (1mt. X 1mt. X 1mt. = 1m <sup>3</sup> ), Bamboo Posts, Bushes etc. including carriage		L.S.	796	796
	<b>Total</b>				<b>2256.00</b>

Sl. No.	Particulars of Work		Unit	Quantity	Rate (in Rs.)	Amount (Rs)
1	Earth work in excavation of foundation trenches or drains in all soils including lateritor sand - soil.....etc. for irrigation purpose					
	a) Depth of excavation not exceeding 1.5 mtr.					
	1.0 x 0.45X.45 =	0.202	m3	0.202m3	92.21	18.62
2	Sand Filling in foundation -					
	1.0X0.45X0.10= .045	0.045	m3	0.045m3	505.64	22.75
3	Brick flat soling in foundation -					
	1.0x0.30m	0.3	m2	0.30m2	321.3	96.39
4	Cement Concrete (1:2:4) in foundation - 1x0.30x0.075					
		0.0225	m3	0.0225	4718.11	106.16
5	Brick Work 3" with (6:1) cement mortar					
	1x2x0.45	0.9	m2	0.90m2	400	360
6	Plastering 20mm thick					
	1x1.35	1.35	m2	1.350m2	129.37	174.65
7	Neat Cement Punning over					
	1.35m2	1.35	m2	1.35m2	31.36	42.33
Total -						779.53
Cost per 1 mtr						780
Cost per 1 Km						780,000

Item No.	Particular of works	Md	Labour (Rs.)	Material (Rs.)	Total (Rs.)
	<b>Making Boulder Sausage wall (@ 1m3)</b>				
1	Mazdoors engaged for making Hand packed wall with Sausage wire net :				
	a) Collection of stones boulders, carriage up to road site & stacking	3.00			
	b) Carriage of stones boulders from road site to Work site.	4.00			
	c) Excavation of earth in all sorts of soil.	1.00			
	d) Cutting of sausage wire netting to required size rollin g the same & making bundles.	1.50			
	e) Carriage of sausage from road side to working site by head load	2.00			
	f) Making sausage wall with stone boulders by way of handpacking including laying with G.I. wire stretching and tightening complete				
	Skilled mazdoor - 2.00 no.	1.00			
	Mason - 1.00 no.	1.00			
	Ordinary - 2.00 nos.	2.00			
	g) Filling the gap with stone boulders including collection & carriage of stone boulders, dressing etc.	2.00			
	Abstract of mazdoor m3				
	Mason - 1 nos. @ Rs.400.00 each = Rs. 400.00				
	Skilled - 2 nos. @ Rs.235.00 each = Rs. 470.00				
	Ordinary - 15.50 nos. @ Rs.224.58 each = Rs.3480.99		4350.99		
	h) Supplying of 8 gauge sausage wire netting mesh of 15 cm x 15 cm gap including carriage up to road site. (4.50m2 per/m3) @Rs.120.00 per m2 including Vat			540.00	
	i) Supplying of 8 gauge G.I. Wire for ties 0.5 kg/per m3 @ Rs.80.00/kg including Vat			40.00	
	j) Contingencies for threads, etc.			50.52	
	<b>Cost per m3</b>		<b>4350.99</b>	<b>630.52</b>	<b>4982.00</b>

422

**BOX DRAIN(HILL)**

Making catch water drain of inside dimension 300mmx300mm with 400mm thick rubblemasonry in cement mortar(1:6) including earthwork in excavation and filling, 150mm thick handpacked stone soiling and cement concrete(1:4:8) in base, cement concrete(1:2:4) in haunch filling

SI no	Items of works	Unit	Quantity	Rate(Rs)	Amount(Rs)
1	Page no. 1-2 Item No. 2(a).				
	Earth work in excavation of drains, in all sorts of soil (including mixed soil but excluding laterite or sandstone) including removing, spreading or stacking the soil/earth within a lead of 75 m. as required. Depth of excavation not exceeding 1500 mm.	% M3	0.55	12047	66.26
	1x1.00x1.10x0.50= 0.55 m3				
2	Attached : Analysis of Rate-1				
	cost of supplying stone boulders minimum 150 mm of local variety and labour for laying soiling including rough dressing, hand packing, and ramming down small pieces in the intersticks without rolling and preparing the bed to proper level and filling up all joints with sandy clay or earth.	M2	1.1	196.52	216.17
	1x1.00x1.10=1.10m2				
3	Page 11 Item No.5 PWD current schedule of rate (b) River bazree				
	Ordinary Cement concrete (mix 1:2:4) with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement, if any, in ground floor as per relevant IS codes	M3	0.05	7116	355.80
	1x1.00x1.10x0.05=0.05m3				
4	Page No. 83-84 Items No. 53(a).				
	Rubble masonry in cement (1:6) with hard dressed stones collected locally and clean, coarse and washed sand including carriage of all materials to site.	M3	0.24	2906.62	697.59
	2x1.00x0.40x0.30=0.24m2				
5	Page 11 Item No.5 PWD current schedule of rate (b) River bazree				
	Ordinary Cement concrete (mix 1:2:4) with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement, if any, in ground floor as per relevant IS codes	M3	0.01	7116	71.16
	1x1.00x0.30x0.05(Ave.th)=0.01m3				
Total				Rs	<b>1406.98</b>
Contingency				Rs	23.02
<b>Cost of 1 RMT</b>					<b>1430.00</b>

423

## HILLS HANDPACKED WALL

Length - 1 mt

Sl. No	Particulars	Labour		Contingency	Amount (Rs.)
	Cost of doing the following works in connection with making Hand Packed Wall with boulder.	Skilled (in MD)	Un-skilled (in MD)		
1	Breaking & Collection of Stone Boulders 150 mm and above.		1		
2	Carriage of Stone Boulders upto work site and stacking.		4		
3	Excavation of Foundation.		0.5		
4	Hand Packed Masonry Wall with boulders obtained from nearby stacks.	1	2		
5	Back Filling with small stones and earth obtained from excavation of foundation.		1		
	Total	1	8.5		
	Rate (Rs.)	350.00	224.58		
	<b>Cost for 1 M3 (Rs.)</b>	<b>350.00</b>	<b>1,908.93</b>	<b>44.64</b>	<b>2,304.00</b>

## STONE MASONRY WALL(HILL)

Sl. No	Particulars	Unit ( Cu.M)	Quantity	Rate	Amount (Rs.)
1	Earth work in excavation of drains, in all sorts of soil.	Unskilled M.D	0.4	224.58	89.83
2	Cost of supplying stone boulders minimum 150mm of local variety	„	1.5	224.58	336.87
3	Collection and carriage of Sand.	„	1	224.58	224.58
	P-14 I-8				
4	Plum cement Concrete work with 30mm down graded stone Chips (40%) and stone boulder of size 150 mm and above size (60%), placed in position as directed excluding shuttering if any (1:4:8)	Cu.Mt	1	2843.72	2843.72
	<b>Total</b>				<b>3495.00</b>

426

## NORTH BENGAL BREAST STONE WALL

Sl no	Particulars	Unit	Quantity	Rate	Amount (Rs.)
	Cost of Doing the following works in connection with making Rubble Masonry with breast stone (1:6)				
	PWD(Buildings) Schedule of rates-2010				
	Page No. 83-84 Item No. 53(a)				
1	Rubble masonry in cement (1:6) with hard dressed stones from approved quarries and clean, coarse and washed sand including carriage of all materials to site	Cu.M	1	3419.55	3419.55
	Cost of 1 Cu. M			Rs	3419.55
	Or say			Rs	3410.00

427 B

## BREAST STONE WALL(HILL)

Sl no	Particulars	Unit	Quantity	Rate	Amount (Rs.)
	Cost of Doing the following works in connection with making Rubble Masonry with breast stone (1:6)				
	PWD(Buildings) Schedule of rates 2014-15				
	Page No. 36 Item No. 53(a)				
1	Rubble masonry in cement (1:6) with hard dressed stones from approved quarries and clean, coarse and washed sand including carriage of all materials to site	Cu.M	1	4728	4728
	Cost of 1 Cu. M			Rs	4728
	Or say			Rs	4728

Particulars	Materials		Labour Unskilled (md)	Amount(Rs)
	G.I Wire 16 Gauge(Kg)	Wire nail 4"(Kg)		
Cost of Mazdoors engaged for doing the following works in connection with making Belly benching (Bamboo pallisade).				
1) Preparation of Site by cutting weeds & earth and levelling			0.5	
2) Cost of Collection of Poles & Bamboos and carriage upto the landslip area.			1	
3) Piling poles 100mm dia 150 Cm long upto 75 cm below G.L. @ 50 Cm apart, fitting & fixing splitted bamboo horizontally with nails & wires including lining with brush wood and filling with earth, complete.			1.5	
4) Supply of G.I Wire 16 Gauge.	0.4			
5) Supply of G.I Wire Nail 4"		0.3		
For 1 RMT	0.40	0.30	3.00	
Rate(Rs)	78.00	66.00	183.00	
<b>Cost of 1 RMT</b>	<b>31.20</b>	<b>19.80</b>	<b>549.00</b>	<b>600.00</b>



511

**CFC in North Bengal Plains  
Firewood Operation**

SI No	Particulars	Rate per Stack ( in Rs.)
1	Cutting of Firewood, collection and Stacking the same at CFC	150.00
2	Carrying of Firewood up to depot including the cost of loading and un-loading the same, hiring of vehicle, fuel etc.	200.00
3	Stacking the firewood at depot	40.00
	<b>TOTAL Per Stack. ( Rs. Three hundred ninety ) only</b>	<b>390.00</b>

**CFC in North Bengal Plains  
TIMBER OPERATION**

<b>Sl No</b>	<b>Particulars</b>	<b>Rate per Cubic Mts ( in Rs.)</b>
1	Checking of CFC Marked Trees	2.00
2	Felling & Logging of marked trees including supply of felling equipments etc.	420.00
3	Ring Cutting in the middle of logs	40.00
4	Debarking of Sal Logs	50.00
5	Digiting & Painting of logs	35.00
6	Rolling & Dragging of logs up to loading points at CFC	350.00
7	Making temporary extraction path including supply of Boulders, RBM etc. at CFC	100.00
8	Watch & Ward of CFC Produce including the cost of making temporary Watcher's Hut by engaging Daily Laborers for 90 days X 4 DLs = 360 M.Days @ Rs.230/- per day per M.Days = Rs 82,600/- for about 1000 Cubic Mts (Approx.)	83.00
9	Carriage of Timber logs up to depots including the cost of Loading, Un-Loading at Depot, Fuel Cost, Hiring of Trucks, JCB Loaders etc.	700.00
10	Stacking of logs at Depot	160.00
11	Formation of lots and writing of depot serial no, lot no etc including supply of paints.	60.00
	<b>TOTAL Per Cubic Mts. ( Rs. Two Thousand ) only</b>	<b>2,000.00</b>

		Particulars of Work	Quantity	Unit	Rate	Amount (Rs.)
		Cost of Doing following work in connection with the collection of firewood & extraction of timber from different Range Location under this division				
		<b>Range</b>	<b>Vol.(in m3)</b>			
		Tista Valley	45.00			
		Darjeeling	25.00			
		<b>Total</b>	<b>70.00</b>			
<b>Timber Operation</b>						
1		Felling	1	m3	140.00	140.00
2		Sectioning & rolling	1	m3	160.00	160.00
3		Numbering & digiting	1	m3	30.00	30.00
4		Rolling of logs upto 150mt	1	m3	400.00	400.00
5		Hand Sawing into block size for man carriage	1	m3	550.00	550.00
6		Carriage of timber upto depot	1	m3	625.00	625.00
7		stacking in log	1	m3	125.00	125.00
8		Writing Depot Serial	1	m3	50.00	50.00
9		Making saw bench	1	m3	120.00	120.00
		<b>Cost of one CUM timber</b>	<b>1</b>			<b>2200.00</b>
		<b>Total Cost of 1 stacks firewood</b>	<b>1</b>	Stacks	350.00	350.00

Item & Measurement	Unit	Proposed cost per unit 2014-15
<b>A. INCIDENTAL COSTS</b>	Ha	
Coup Marking	Ha	850.00
Extraction Path	Ha	1800.00
Watch & Ward (coup)	Ha	900.00
Watch & Ward (depot)	Ha	200.00
Maintenance of Depot	56	3200.00
<b>FELLING, LOGGING &amp; CARRIAGE COSTS POLE</b>		
Upto 40 cm any length	No.	36.00
41-50 cm up to 12'	No.	40.00
41-50 cm up to 12'-14'	No.	43.00
41-50 cm above 14'	No.	45.00
51-60 cm up to 12'	No.	43.00
51-60 cm up to 14'-16'	No.	58.00
51-60 cm up to 18'-20'	No.	80.00
51-60 cm up to 20'	No.	105.00
61 cm above up to 12'	No.	65.00
61 cm above up to 14'-16'	No.	110.00
61 cm above up to 18'-20'	No.	165.00
61 cm above up to 22'-24'	No.	190.00
61 cm above 24'	No.	280.00
<b>COGGING SLEEPER</b>		
5'x5"x5"	No.	20.00
4'x4"x4"	No.	15.00
<b>FIREWOOD</b>		
Sal	Cum	345.00
Eucalyptus	Cum	345.00
Akashmoni	Cum	360.00
<b>PULP WOOD</b>		
Sal billets	Cum	540.00
EUC billets	Cum	540.00
Akas billets	Cum	600.00
<b>TIMBER</b>		
Sal	Cum	1600.00
Eucalyptus	Cum	1600.00
Akashmoni	Cum	1700.00

SL. No	Particulars	HARVESTING RATE															
		Fixed Charges				Distance upto 10 km			Distance 11-20 km			Distance 21-30 km			Distance more than 30 km		
		Helping Passing	Stacking	Stacking Contingency	Total Fixed Charges	Felling Logging etc	Carriage	Total	Felling Logging etc	Carriage	Total	Felling Logging etc	Carriage	Total	Felling Logging etc	Carriage	Total
1	Coupe Making, Survey etc.	Sal - Rs. 750 per ha; Plantation - Rs. 450 per ha															
2	Watch & Ward	Rs. 900 per ha															
3	Extraction Path	To be decided on Individual coupe basis															
4	Sal & Euc Poles																
a)	Girth upto 40 cm., any length	1	2.5	0.5	4.00	13.5	13.5	31.00	13.5	14.5	32.00	13.5	16.5	34.00	13.5	18.5	36.00
b)	41-50 cm, upto 12' length	1.5	3	0.5	5.00	14	14	33.00	14	16	35.00	14	18	37.00	14	21	40.00
c)	41-50 cm, 14' & 16'	1.75	3	0.5	5.25	14.75	16	36.00	14.75	18	38.00	14.75	20	40.00	14.75	23	43.00
d)	41-50 cm, length 20'	2	3.75	0.5	6.25	15.75	18	40.00	15.75	19	41.00	15.75	20	42.00	15.75	23	45.00
e)	51-60 cm, upto 12' length	1.75	3	0.5	5.25	14.25	16	35.50	14.25	18	37.50	14.25	20	39.50	14.25	23.5	43.00
f)	51-60 cm, length 14' & 16'	2	4.5	0.5	7.00	18	22	47.00	18	24	49.00	18	28	53.00	18	33	58.00
g)	51-60 cm, length 18' & 20'	2.5	5.75	0.75	9.00	23	30	62.00	23	35	67.00	23	42	74.00	23	48	80.00
h)	51-60 cm, length>20'	3.75	8.5	0.75	13.00	31	39	83.00	31	47	91.00	31	54	98.00	31	61	105.00
i)	Girth>60cm, upto 12' length	3	7	1	11.00	21	22	54.00	21	25	57.00	21	29	61.00	21	33	65.00
j)	Girth>60 cm, 14' & 16' length	5	10	1	16.00	31	39	86.00	31	46	93.00	31	53	100.00	31	63	110.00
k)	Girth>60 cm, 18' & 20' length	6	15	1	22.00	42	71	135.00	42	81	145.00	42	92	156.00	42	101	165.00
l)	Girth> 60 cm, length > 20'	7	20	1	28.00	51	76	155.00	51	83	162.00	51	96	175.00	51	111	190.00
5	Cogging																
a)	4' x 4" x 4" (NO)	0.4	1.7	0.4	2.50	5	4	11.50	5	4.5	12.00	5	5.5	13.00	5	7.5	15.00
b)	5' x 5" x 5" (NO)	0.4	2.2	0.4	3.00	7.5	5.5	16.00	7.5	6.5	17.00	7.5	7.5	18.00	7.5	9.5	20.00
6	Post																
7	Sal Timber (per cum)	18	138	14	17	470	710	1350	470	760	1400	470	860	1500	470	960	1600
8	Euc timber (per cum)	18	138	14	170	470	710	1350	470	760	1400	470	860	1500	470	960	1600
9	Aks timber (per cum)	18	138	14	170	600	700	1470	600	730	1500	600	830	1600	600	930	1700
10	Sal Pulpwood (per cum)	5	30	5	40	200	190	430	200	200	440	200	250	490	200	300	540
11	Euc Pulpwood (per cum)	5	30	5	40	200	190	430	200	200	440	200	250	490	200	300	540
12	Aks Pulpwood (per cum)	5	30	5	40	240	190	470	260	200	500	260	250	550	260	300	600
13	Sal Firewood (per cum)	3	24	3	30	140	125	295	140	130	300	140	140	310	140	175	345
14	Euc Firewood (per cum)	3	24	3	30	140	125	295	140	130	300	140	140	310	140	175	345
15	Aks Firewood (per cum)	3	24	3	30	155	125	310	155	130	315	155	140	325	155	175	360

Sl. No.	Item	Unit	Quantity	Rate	Amount (Rs.)
1.00 P1 2	Earth work in excavation of foundation trenches or drains, in all sorts of soils (including mixed soil but excluding laterite or sandstone) i/c. removing, spreading or stacking the spoils within a lead of 75 m. as directed. The item includes necessary trimming the sides of trenches. Levelling, dressing and ramming the bottom, bailing out water etc. as required complete				
	a) Depth of excavation not exceeding 1500 mm.	cum.	17.275	92.21	1592.93
2.00 P3 3	Earth work in filling in foundation trenches or plinth with good earth in layers not exceeding 150 mm. including water and raming etc. layer by layer complete. (Payment to be made on basis of measurment of finished quantity of work).				
	a) With earth obtained from excavation of foundation	cum.	3.455	59.50	205.57
3.00 P5 4	A. Filling in foundation or plinth by silver sand in layers not exceeding 150 mm. as directed and cosolidating same by thorough saturation with water raming complete including the cost of supply of sand. (Payment will be made on profile measurment before and after work)	cum.	17.894	728.81	13041.33
4.00 P33 1	Single brick flat soling of picked jhama bricks i/c. ramming and dressing bed to proper level and filling joints with powdered earth or local sandsqm. 45.928 340.00 15615.52				
5.00 P59 10. I	Cement concrete with graded stone blast ( 40 mm size excluding shuttring) A) Pakur Variety a) 1:3:6 proportion	cum.	5.906	4376.78	25849.26
6.00 P39 7	OrdinaryCement Concrete M20 (mix 3:1.5:1) with graded stone chips (20 mm down) excluding shuttring and reinforcement if any, in ground floor. As per relevant IS coads. a) Pakur Variety i) In Gr. floor	cum.	19.225	5959.09	114563.51
7.00 P63 12	Hire and labour charges for shuttering with centering and necessary staging upto 4 m. using approved stout props and thick hard wood planks of approved thickness with required bracing for concretes slabs, beams, columns, lintels curved or straight i/c. fitting, fixing and striking out after completion of works (In all floor) a)25mm.to 30 mm. thick wooden shuttering asper decision & direction of the engineer incharge i) In ground floor	sqm.	180.956	286.99	51932.56
8.00 P65 15	Reinforcement for reinforced concrete work in all sorts of structures i/c. distribution bars, stirrups, binders etc. including supply of rods, straightening and removal of loose rust (if necessary) cutting to requisite length, hooking and bending to correct shape,placing in proper position and binding with 16 gauge black annealed wire at every intersection, complete as per drawing and direction (For all floors) i) Tor steel/Mild steel i) In ground floor	M.T.	1.509	69334.00	104625.01
9.00 P69 22	Brick work with 1st class bricks in cement mortar(1:6) a) In foundation and plinth	cum.	20.504	4999.00	102499.50
10.00 P73 29	125 mm. thickbrick work with 1st class bricks in cement mortar (4:1) i) In Gr. floor	sqm.	48.455	677.00	32804.04

Sl. No.	Item	Unit	Quantity	Rate	Amount (Rs.)
11.00 P91 3	Artificial stone in floor, dado, staircase etc. with cement concrete (1:2:4) with stone chips, laid in panels as directed with topping made with ordinary or white cement (as necessary) and marble dust in proportion (1:2) including smooth finishing and rounding off corners and including raking out joints or roughening of concrete surface and application of cement slurry before flooring works, using cement @ 1.75 kg/sq.m. all complete including all materials and labour. In ground floor 3 mm thick topping (High polishing grinding on this item is not permitted with ordinary cement. Using grey cement ii) 25 mm thick	sqm.	42.103	236.56	9959.89
12.00 P111 30.B. (a) (ii)	Supplying, fitting and fixing 1st quality porcelain tiles of any size in walls & floors I/c borders to match with the existing work, set in sand cement mortar (4:1) including backing concrete (1:2:4) & 4 nos. of key stone (10mm.) fixed with araldite at the back of each tile & finishing the joints with colouring oxide (if requested) to match the colour of tile. ii) other than white in ground floor	sqm.	35.120	674.93	23703.54
13.00 P155 10.a)	M.S. or W.I. ornamental grill or approved design joint continuously welded with M.S., W.I. flates and bars for windows, railing etc. fitted and fixed with necessary screws and lugs in ground floor. a) Grill weighing above 10 kg./sqm. Upto 16 kg./sqm.	kg	168.857	67.01	11315.11
14.00 P299 154	Supplying, fitting and fixing in position approved P.V.C. door frame (matt finish) made from extruded P.V.C. multicavity hollow section having dimensions 60 mm. x 50 mm. x 2mm (+0.2mm) horizontal section will be joined with vertical section by galvanised steel screws after inserting two number steel brackets as reinforcement making suitable space for placing hinges, one steel tube 40 mm. x 20 mm. x 1.20mm will be inserted on one full vertical side of the frame (hinge side) as reinforcement, the frame will then be fixed in the opening with the help of P.V.C. expandable fastener and steel screws including cost of all materials and labour hire charges of tools and appliances, carriage of all materials, taxes & all other incidental charges complete.	Mtr.	10.800	252.70	2729.16
15.00 P301 155(B)	PVC Door Shutter <b>30mm thick</b> . Supplying, fitting and fixing P.V.C. door shutter of approved quality and shade in position, the style and rail of the P.V.C. door shutter will be made of rigid P.V.C. multicavity hollow chamber of 59mm x 30mm section with 2.0mm (+0.2mm) wall thickness suitable size and section will 2.5mm. wall thickness Horizontal & Vertical section shall be fixed to each other by self tapping screws and one solid polymetric/M.S. galvanised tubular L shaped bracket 100mmx200mm in each corner of the shutter frame for placing hinges. Polymer based multicavity hollow section of 120mm x 30mm with 2.0mm (+0.2mm) wall thickness will be placed in the middle, reinforced by solid polymer bar of 200mm long at both ends and screws from both sides as lock rail. The section frame will then be fitted in by PVC panels of size 100mmx25mm with wall thickness 1.2mm (0.2mm) and 2 nos. of 6mm dia bright rod will be inserted horizontally with both side check and nut system and stretches where fixing of hinges / hasp bolt/tower bolt/door ring are required to be strong enough to withstand wear and tear. The rate is inclusive of cost of all materials, labour and hire of tools and plants and appliances. Carriage of all materials, taxes & all other incidental charges complete. The rate is exclusive of cost of hinges, hasp bolt, tower bolt, door ring etc.	per sqm.	2.381	1892.31	4505.59

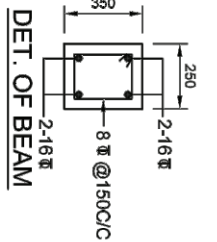
Sl. No.	Item	Unit	Quantity	Rate	Amount (Rs.)
16.00 P319 2	Plaster (to wall, floor, ceiling etc.) with sand and cement mortar i/c. rounding off or chamfering corners as directed and ranking out joints or roughening of concrete surface, i/c. throating, nosing and drip course where necessary etc. [All Floors]				
	(i) b) 15 mm. thick plaster with 6:1 cement mortar	sqm.	108.540	116.29	12622.12
	(i) c) 20 mm. thick plaster with 6:1 cement mortar	sqm.	166.685	137.23	22874.18
	(ii) c) 10 mm. thick plaster with 4:1 cement mortar	sqm.	54.163	105.36	5706.61
17.00 P179 1	Wood work in door and window frame fitted and fixed complete including a protective coat of painting at the contact surface of the frame. e) Sal : Malayasian	cum.	0.457	69527.00	31773.84
18.00 P227 84	Panel shutters of door and window, as per design (each panel consisting of single plank without joint), i/c. fitting and fixing the same in position but excluding the cost of hinge and other fittings (In case of nonsupply of single plank, panel rate of reduction to a maximum of 20% will be made) iv) 25mm thick shutter with 12mm thick panel of size 30 to 45 cm. b) Sisu, Gamar, Champ, Badam, Bhola, Mogra, Hallak	sqm.	14.182	1835.06	26024.82
19.00 P333 10	Acrylic Distemper to interior wall, ceiling with a coat of solvent based interior grade acrylic primer (as per manufacturer's specification) including cleaning and smoothening of surface. Two coats	sqm.	208.788	62.13	12972.00
20.00 P335 16	Applying decorative cement based paint of approved quality after preparing the surface including scraping the same thoroughly (plastered or concrete surface) as per manufacturer's specification. <b>In ground floor</b> a) Two Coats	sqm.	120.600	42.92	5176.15
21.00 P343 7. a	Priming one coat on timber or plasterd surface with synthetic oil bound primer of approved quality including smoothening surfaces by sand papering etc.	sqm.	34.830	30.65	1067.54
22.00 P343 7. b	Priming one coat on Steel or other metal surface with synthetic oil bound primer of approved quality including smoothening surfaces by sand papering etc.	sqm.	12.061	24.98	301.28
23.00 P343 8. A	Painting with best quality synthetic enamel paint of approved make and brand i/c. smoothening surface by sand papering etc. i/c. using of approved putty etc. on the surfaces, if necessary : a) On timber or plastered surface with super gloss (Hi gloss): iv) Two coats (with any shade except white) b) For Steel or Metal Surface iv) Two coats (With any shade except white)	sqm.	34.830	67.63	2355.55
		sqm.	12.061	64.79	781.43
				<b>TOTAL</b>	<b>636598.03</b>
24.00	Water Supply & Sanitary Works (5% of Total cost)		L.S.		31829.90
25.00	Electrical installation (5% of Total cost)		L.S.		31829.90
			<b>GRAND TOTAL</b>		<b>700258.00</b>



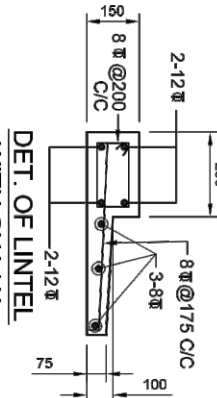
DOOR & WINDOW SCHEDULE

MKD.	SIZE	NOS.
L	B	
D1	900	1950
D2	750	1950
D3	1200	1200
D4	1200	1200
D5	900	1200
D6	600	600

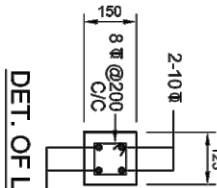
DET. OF BEAM



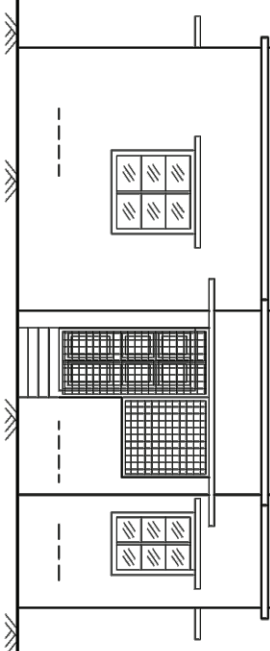
DET. OF LINTEL WITH CHAJJA



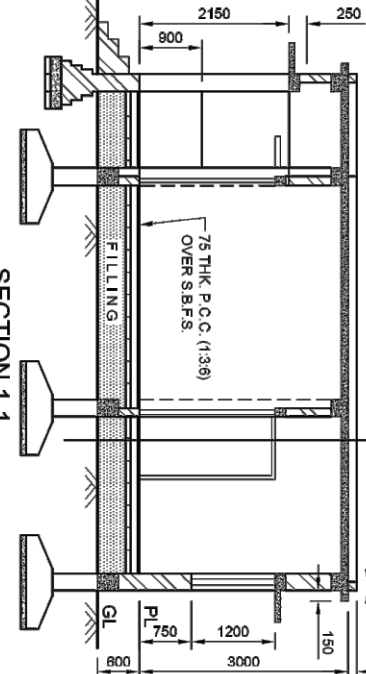
DET. OF LINTEL WITHOUT CHAJJA



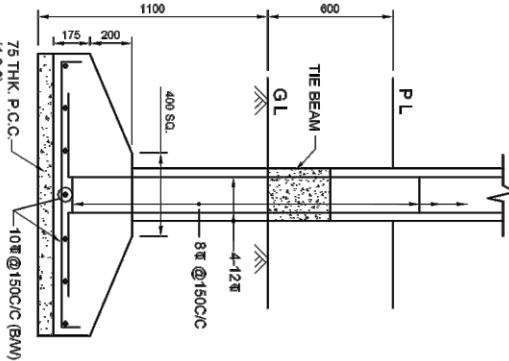
FRONT ELEVATION



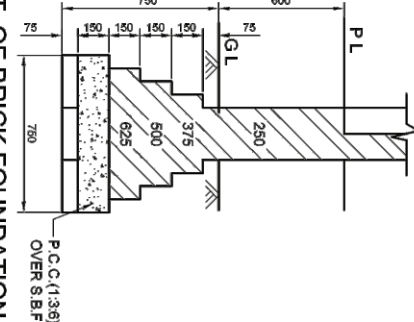
SECTION 1-1



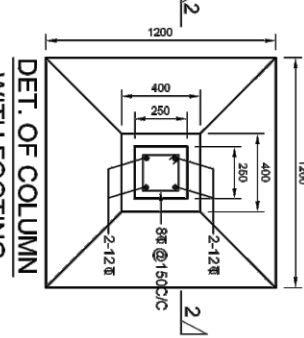
SECTION 2-2



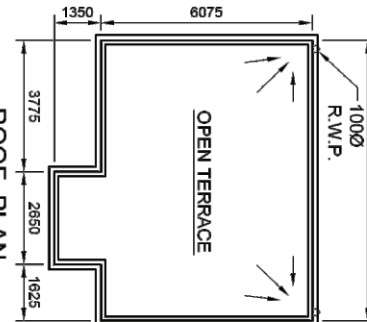
DET. OF BRICK FOUNDATION



DET. OF COLUMN WITH FOOTING

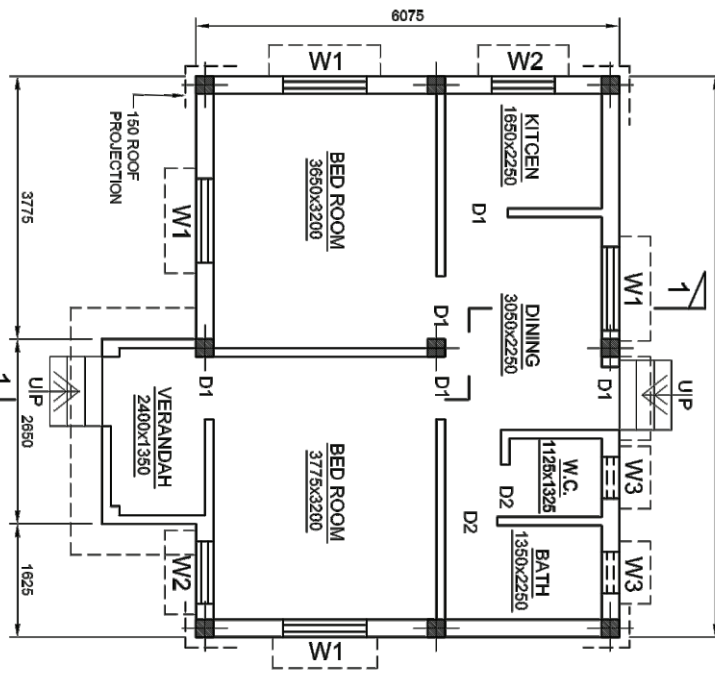


ROOF PLAN

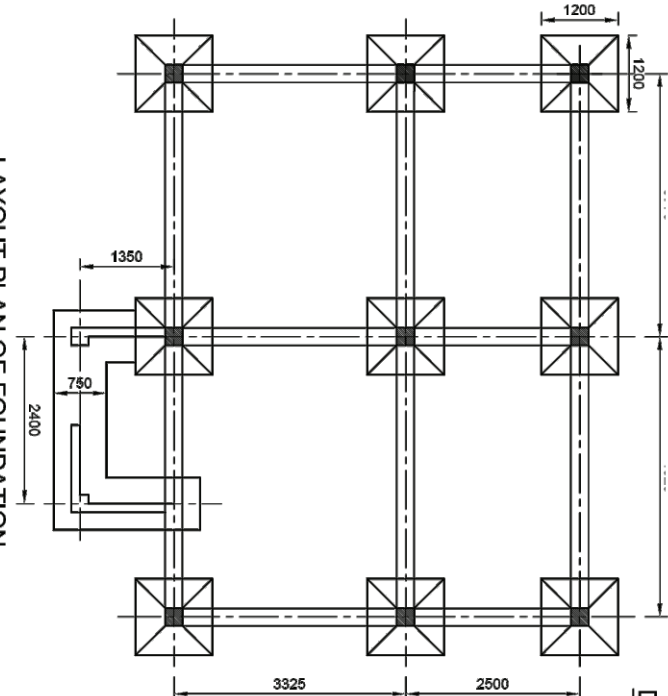


PLINTH AREA

52.481 SQM. ( 565 SQFT. )



LAYOUT PLAN OF FOUNDATION



OWNER: WEST BENGAL ZOO AUTHORITY

2, Allipore Road, Kolkata-700 027

PROJECT: PROPOSED RO / HC / UDC / ACCOUNTANT QUARTER ( TYPE-III ) AT

TITLE: PLAN, FRONT ELEVATION AND SECTIONAL DETAILS

APPROVED BY / DRAWN BY	DRG. NO.	DATE	SHEET	REV
Sk.Md. S. Haque	A.K.	WBZA / DE / T-III	1 OF 1	0

PLINTH AREA OF QUAARTE- 475 SQ. FT.				
SL. No.	Description	Quantity	Rate	Amount (Rs.)
1	Earth Work in excavation of foundation trenches or drains in all sorts of soil (including mixed soil part excluding laterite or sandstone) including removing, spreading or stacking the spoils within a lead of 75M as directed. The item includes necessary trimming the sides of trenches levelling dressing and ramming the bottom bailing out water as required complete depth of excavation not exceeding 1500mm.	40.69M <sup>3</sup>	9161.59/M <sup>3</sup>	Rs. 3,728
2	Filling or plinth by silver sand in layers not exceeding 150mm. As directed and consolidating same by thorough saturation with water ramming complete including the costs of supply of sand(payment to be made on basis of measurement of finished quantity of work) Foundation 5.81 M <sup>3</sup> For Floor 19.66 M <sup>3</sup>	Total 25.47M <sup>3</sup>	Rs. 43106.75/%M <sup>3</sup> @ Rs. /M <sup>3</sup>	Rs. 10,979.00
3	Single BFS of picked Jhame bricks including ramming and dressing bed to proper level and filling joints with powdered earth or local sand For Foundation- 38.16 M2 For Flooring- 33.62 M2	Total 71.78	Rs. 276.00/M2	Rs. 19,811.00
4	25mm thick damp proof course with cement concrete with stone chips (1:1:5:3) and ad mixture of water proofing compound as per manufactures specification followed by two coat of polymer based paint (cost of water proofing compound and polymer based paint).	9.86m2	Rs. 256.55/M2	Rs. 2,529.00
5	Cement concrete with graded stone ballast (40mm size) excluding shuttering (6:3:1) proportion in foundation	5.81/M <sup>3</sup>	Rs. 4052.36/M <sup>3</sup>	Rs. 23,544.00
6	Ordinary cement concrete (Mix 3:1:5:1) M-20 with graded stone chips (20mm down excluding shuttering and reinforcement if any in ground floor as per IS-456-2000) Pakur Variety.	15.9M <sup>3</sup>	Rs. 5525.25/M <sup>3</sup>	Rs. 87,851
7	Hire and labour charges for shuttering with centering and necessary staggering upto 4m using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete slabs beams columns lintels curved or straight including fitting fixing and striking out after completion of works (upto roof of ground floor) 25mm to 30mm thick wooden shuttering.	38.08 M2	Rs. 272.27/M2	Rs. 10,368
8	Reinforcement for reinforced concrete work in all sorts of structures including distribution bard striups binders etc including supply of rods initial straightening & removal of loose rust (necessary) cutting to requisite length, hooking & bending to correct shape placing in proper position & binding with 16 gauge black annexed wire at every inter section complete as per drawing & direction for works in foundation basement and upto roof of ground floor / upto 4m (toe steel / Mild steel)	0.58 MT	Rs. 59696/MT	Rs. 34,624
9	Brick work 1st class brick in cement mortar (6:1)	29.20M <sup>3</sup> 26.63M <sup>3</sup>	Rs. 4467.75/M <sup>3</sup> Rs. 4622.10/M <sup>3</sup>	Rs.130458 Rs.123087
10	M.S. or W.I ornamental grill of approved dessign joints continuously welded with M.S or W.I flats and bars for windows rallings etc fitted and fixed with necessary screws and lugs in ground floor	1.04 Qnt.	Rs 6674.79/Quintal	Rs. 6,942

11	Iron butt hinges of approved quality fitted and fixed with steel screws with IST mark	D-36 Nos W-124 NOS	Rs. 41.12/each (100mmX50mmX1.2m m)	Rs. 1480 Rs. 3176
12	Iron socket bolt of approved quality fitted and fixed complete door.	Door-150mm X 10 mm dia bolt 6 Nos Window- 75 mm X 10	Rs. 58.33/each Rs. 32.15/each	Rs. 350 Rs. 321
13	Iron Door ring of approved quality fitted fixed with not and waster complete	(50 mm ) 10 Nos	Rs. 16.99 / each	Rs. 170 Rs. 459418
14	Alluminium D type A and E of approved quality with continuous plate base ( hexa genal/Round rod)	100 grip X 10 mm dia rod 6 Nos	Rs. 72.20/each	Rs. 433
15	Iron hasp bolt	16mm dia rod 200 mm long 6 Nos	Rs. 143.84/each	Rs. 863
16	Plaster (to wall floor, ceiling etc) with sand & cement mortar including rounding off or chamfering corners as directed and racking out joints includings throatings nosing and drief corse scaffolding / staggering where necessary ground floor (excluding cost of chipping over concrete surface	i) 20mm thick (1:6) inside wall 163.87m2 ii) 10mm (1:4) for ceiling 33.62 m2 iii) 15mm thick (1:6) outside wall 133.03 m2	Rs. 107.31/m2 Rs.	Rs. 14,275
17	Wood work in door and window frames including fitted & fixed in position complete including a protective coat of painting at the contract surface of the frame excluding cost of concrete iron butt hinges and M.S. clamps (the quantum should be corrected upto three decimal)	Local Sal Wood 0.55/M³	Rs. 58109/M³	Rs. 31,960
18	Penal shutter of Door and window as per design (each) penal consisting of single plank without joint including fitting and fixing the same in position but excluding the cost of hinges and other fittings.	35 mm thick shutter with 19 mm thick panel Gamari wood 20.22m2	Rs. 2422.07 m2	Rs. 48,974
19	Priming one coal of timber, or on steel or other metal surface with synthetic oil bound primer of approved quality including smoothening surface by sand papering etc.	Timber surface 40.44 m2	Rs. 30.43/m2	Rs. 1,231
20	Painting with best quality synthetic enamel paint of approved make and brand including smoothening surface by sand papering etc including using of approved putty etc in the surface if necessary	Timber surface, steel surface 40.44 m2	Rs. 61.30 m2	Rs. 2,479
21	25mm Artificial stone in floor (4:2:1)	30.08 m2	Rs. 227.51/m2	Rs. 6,842
22	Colour washing with any shade with strainers as required including cleaning and smoothening surface thoroughly.	(Internal surface (two coats) 197.49m2	Rs. 1502.03/%m2	Rs. 2,966
23	Applying decorative cement based paint of approved quality after preparing the surface including scraping the same throughly	(Two coat) 133.03 m2	Rs. 42.64/m2	Rs. 5,672

	Rs.	599014
Adding 3% Contingency (+)	Rs.	17970
	Rs.	616984
<b>GRAND TOTAL</b>	Rs.	<b>620,000.00</b>

## Estimate for construction of Forest Guard Quarter (Typel)

Sl. No.	Item	Unit	Quantity	Rate	Amount (Rs.)
1.00 P1 2	Earth work in excavation of foundation trenches or drains, in all sorts of soils (including mixed soil but excluding laterite or sandstone) i/c. removing, spreading or stacking the spoils within a lead of 75 m. as directed. The item includes necessary trimming the sides of trenches. Levelling, dressing and ramming the bottom, bailing out water etc. as required complete a) Depth of excavation not exceeding 1500 mm.	cum.	14.252	92.21	1314.18
2.00 P3 3	Earth work in filling in foundation trenches or plinth with good earth in layers not exceeding 150 mm. including water and raming etc. layer by layer complete. (Payment to be made on basis of measurment of finished quantity of work). a) With earth obtained from excavation of foundation	cum.	2.850	59.50	169.58
3.00 P5 4	A. Filling in foundation or plinth by silver sand in layers not exceeding 150 mm. as directed and cosolidating same by thorough saturation with water raming complete including the cost of supply of sand. (Payment will be made on profile measurment before and after work)	cum.	11.655	728.81	8494.28
4.00 P33 1	Single brick flat soling of picked jhama bricks i/c. ramming and dressing bed to proper level and filling joints with powdered earth or local sand	sqm.	30.255	340.00	10286.70
5.00 P59 10.1	Cement concrete with graded stone bllast ( 40 mm size excluding shuttring) A) Pakur Variety a) 1:3:6 proportion	cum.	4.134	4376.78	18093.61
6.00 P39 7	OrdinaryCement Concrete M20 (mix 3:1.5:1) with graded stone chips (20 mm down) excluding shuttring and reinforcement if any, in ground floor. As per relevant IS coads. a) Pakur Variety i) In Gr. floor	cum.	14.510	5959.09	86466.40
7.00 P63 12	Hire and labour charges for shuttering with centering and necessary staging upto 4 m. using approved stout props and thick hard wood planks of approved thickness with required bracing for concretes slabs, beams, columns, lintels curved or straight i/c. fitting, fixing and striking out after completion of works (In all floor) a)25mm.to 30 mm. thick wooden shuttering as per decision & direction of the engineer incharg e i) In ground floor	sqm.	142.199	286.99	40809.69
8.00 P65 15	Reinforcement for reinforced concrete work in all sorts of structures i/c. distribution bars, stirrups, binders etc. including supply of rods, straightening and removal of loose rust (if necessary) cutting to requisite length, hooking and bending to correct shape, placing in proper position and binding with 16 gauge black annealed wire at every intersection, complete as per drawing and direction (For all floors) i) Tor steel/Mild steel i) In ground floor	M.T.	1.139	69334.00	78971.43
9.00 P69 22	Brick work with 1st class bricks in cement mortar(1:6) a) In foundation and plinth	cum.	16.771	4999.00	83838.23
10.00 P73 29	125 mm. thick brick work with 1st class bricks in cement mortar (4:1) i) In Gr. floor	sqm.	33.060	677.00	22381.62
11.00 P91 3	Artificial stone in floor, dado, staircase etc. with cement concrete (1:2:4) with stone chips, laid in panels as directed with topping made with ordinary or white cement (as necessary)and marble dust in proportion (1:2) including smooth finishing and rouding off corners and including raking out joints or roughening of concrete surface and application of cement slurry before flooring works, using cement @ 1.75 kg/sq.m. all complete including all materials and labour. In ground floor 3 mm thick topping (High polishing grinding on this item is not permitted with ordinary cement. Using grey cement ii) 25 mm thick	sqm.	27.424	236.56	6487.42

Sl. No.	Item	Unit	Quantity	Rate	Amount (Rs.)
12.00 P111 30.B. (a) (ii)	Supplying, fitting and fixing 1st quality porcelain tiles of any size in walls & floors i/c borders to match with the existing work, set in sand cement mortar (4:1) including backing concrete (1:2:4) & 4 nos. of key stone (10mm.) fixed with araldite at the back of each tile & finishing the joints with colouring oxide (if requested) to match the colour of tile. ii) other than white in ground floor	sqm.	23.583	674.93	15916.87
13.00 P155 10.a)	M.S. or W.I. ornamental grill or approved design joint continuously welded with M.S., W.I. flates and bars for windows, railing etc. fitted and fixed with necessary screws and lugs in ground floor. a) Grill weighing above 10 kg./sqm. Up to 16 kg./sqm.	kg	138.919	67.01	9308.96
14.00 P299 154	Supplying, fitting and fixing in position approved P.V.C. door frame (matt finish) made from extruded P.V.C. multicamber hollow section having dimensions 60 mm. x 50 mm. x 2mm (+0.2mm) horizontal section will be joined with vertical section by galvanised steel screws after inserting two number steel brackets as reinforcement making suitable space for placing hinges, one steel tube 40 mm. x 20 mm. x 1.20mm will be inserted on one full vertical side of the frame (hinge side) as reinforcement, the frame will then be fixed in the opening with the help of P.V.C. expandable fastener and steel screws including cost of all materials and labour hire charges of tools and appliances, carriage of all materials, taxes & all other incidental charges complete.	Mtr.	5.400	252.70	1364.58
15.00 P301 155(B)	PVC Door Shutter <b>30mm thick</b> . Supplying, fitting and fixing P.V.C. door shutter of approved quality and shade in position, the style and rail of the P.V.C. door shutter will be made of rigid P.V.C. multicavity hollow chamber of 59mm x 30mm section with 2.0mm (+0.2mm) wall thickness suitable size and section will 2.5 mm. wall thickness Horizontal & Vertical section shall be fixed to each other by self tapping screws and one solid polymetric/M.S. galvanised tubular L shaped bracket 100mmx200mm in each corner of the shutter frame for placing hinges. Polymer based multicavity hollow section of 120mm x 30mm with 2.0mm (+0.2mm) wall thickness will be placed in the middle, reinforced by solid polymer bar of 200mm long at both ends and screws from both sides as lock rail. The section frame will then fitted in by PVC panels of size 100mmx25mm with wall thickness 1.2mm (0.2mm) and 2 nos. of 6mm dia bright rod will be inserted horizontally with both side check and nut system and stretches where fixing of hinges / hasp bolt/tower bolt/door ring are required to be strong enough to with stand wear and tear. The rate is inclusive of cost of all materials, labour and hire of tools and plants and appliances. Carriage of all materials, taxes & all other incidental charges complete. The rate is exclusive of cost of hinges, hasp bolt, tower bolt, door ring etc.	per sqm.	1.191	1892.31	2253.74
16.00 P319 2	Plaster (to wall, floor, ceiling etc.) with sand and cement mortar i/c. rounding off or chamfering corners as directed and ranking out joints or roughening of concrete surface, i/c. throating, nosing and drip course where necessary etc. [All Floors]  (i) b) 15 mm. thick plaster with 6:1 cement mortar (i) c) 20 mm. thick plaster with 6:1 cement mortar (ii) c) 10 mm. thick plaster with 4:1 cement mortar	sqm. sqm. sqm.	92.880 124.538 38.314	116.29 137.23 105.36	10801.02 17090.35 4036.76
17.00 P179 1	Wood work in door and window frame fitted and fixed complete including a protective coat of painting at the contact surface of the frame. e) Sal : Malayasian	cum.	0.430	69527.00	29896.61
18.00 P227 84	Panel shutters of door and window, as per design (each panel consisting of single plank without joint), i/c. fitting and fixing the same in position but excluding the cost of hinge and other fittings (In case of nonsupply of single plank, panel rate of reduction to a maximum of 20% will be made) iv) 25mm thick shutter with 12mm thick panel of size 30 to 45 cm. b) Sisu, Gamar, Champ, Badam, Bhola, Mogra, Hallak	sqm.	13.304	1835.06	24413.64

Sl. No.	Item	Unit	Quantity	Rate	Amount (Rs.)
19.00 P333 10	Acrylic Distemper to interior wall, ceiling with a coat of solvent based interior grade acrylic primer (as per manufacturer's specification) including cleaning and smoothening of surface.  Two coats	sqm.	151.961	62.13	9441.34
20.00 P335 16	Applying decorative cement based paint of approved quality after preparing the surface including scraping the same thoroughly (plastered or concrete surface) as per manufacturer's specification. <b>In ground floor</b> a) Two Coats	sqm.	103.770	42.92	4453.81
21.00 P343 7. a	Priming one coat on timber or plasterd surface with synthetic oil bound primer of approved quality including smoothening surfaces by sand papering etc.	sqm.	32.670	30.65	1001.34
22.00 P343 7. b	Priming one coat on Steel or other metal surface with synthetic oil bound primer of approved quality including smoothening surfaces by sand papering etc.	sqm.	9.923	24.98	247.88
23.00 P343 8. A	Painting with best quality synthetic enamel paint of approved make and brand i/c. smoothening surface by sand papering etc. i/c. using of approved putty etc. on the surfaces, if necessary :  a) On timber or plastered surface with super gloss (Hi gloss): iv)Two coats (with any shade except white)  b) For Steel or Metal Surface iv)Two coats (With any shade except white)	sqm.	32.670	67.63	2209.47
		sqm.	9.923	64.79	642.91
				<b>TOTAL</b>	<b>490392.40</b>
24.00	Water Supply & Sanitary Works (5% of Total cost)		L.S.		24519.62
25.00	Electrical installation (5% of Total cost)		L.S.		24519.62
			<b>GRAND TOTAL</b>		<b>539432.00</b>

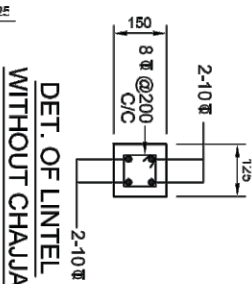
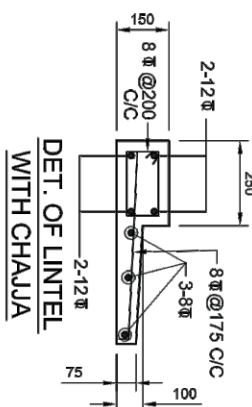
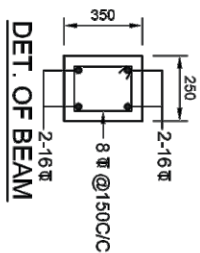
SI No.	Description	Quantity	Unit	Rate per unit	Amount (Rs.)
1	Earth work in excavation of foundation trenches or drains, in all sorts of soil (including mixed soil but excluding laterite or sandstone) including removing, spreading or stacking the soils within a lead of 75 m. as directed. The item includes necessary trimming the sides of trenches, levelling, dressing and ramming the bottom, bailing out water as required complete. In ground floor. PWD sch. page no-1 slno-2(a)	29.25	m3	120.47	3,523.75
2	Filling the foundation of plinth by fine sand in layer only for column foundation as directed and consolidating same by through saturation with water ramming completed including the cost of supply of sand for ground floor only. PWD sch. page no-2 slno-4(a)	4.17	m3	390.29	1,627.51
3	Single brick flat soling of picked jhama brick including ramming and dressing bed to proper level and filling joint with powdered earth or local sand for column ground floor only PWD sch. Page no 11, slno-1	25	m2	308	7,700.00
4	Cement concrete with graded stone ballast (40MM size excluding shuttering (6:3:1) proportion in foundation. PWD sch. Page no-24 slno-10(a)	4.16	m3	5314	22,106.24
5	Brick work with 1st class bricks in cement mortar (6:1)				
	I) Plinth. PWDsch. Page no-29 slno-22(a)	30	m3	4835	145,050.00
	II) In superstructure PWD sch. Page no-29 slno-22 (b)	20	m3	5060	101,200.00
6	25 mm thick damp proof with cement concrete (4:2:1) (with graded stone aggregate 10 mm Normal size) and painting the top surface with a coat of bitumen using 1.7 kg per sqm including heating the bitumen and cost and carriage of all materials complete PWD sch page no-45 slno-12	8	m2	297	2,376.00
7	Nominal Max M-20 cement concrete with graded stone chips (20 mm size) excluding shuttering and reinforcement if any in ground floor (1:1:5:3) prog. PWD sch page no-14 slno-7(iv)	6.9	m3	6500.71	44,854.90
8	Hire and labour charges for shuttering with centreing and necessary staging upto 4m using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete slabs, beams, columns, lintels curved or straight including fitting, fixing and striking out after completion of works. (upto roof of ground floor)  (a) 25 mm to 30mm thick wooden shuttering as per decision & direction of Engineer -in-charge PWD sch. Page no. 26 slno-12(a)	45	m2	343	15,435.00
9	Reinforcement for reinforced concrete work in all sorts of structures including distribution bars, stirrups, binders etc. including supply of rods, initial straightening and removal of loose rust (if necessary) cutting to requisite length, hooking and bending to correct shape, placing in proper position and binding with 16 gauge annealed wire at every intersection, complete as per drawing and direction @ 1.0% of m20 concrete entire part of 1st floor and extension part of gr. floor PWD sch page no- 27 slno-15(a) (i)	0.44	MT	68359	30,077.96
10	Plaster (to a wall floor ceiling with sand and cement mortar including rounding off corners as directed and ranking out joints or roughening of concrete surface including throating nosing and drip course where necessary (first floor) excluding cost of chipping over concrete surface for extension part of gr. floor and entire part of 1st floor (a) 10mm thick plaster (1:4) to ceiling PWD sch page no- 151 slno-2(c)(i)	25	m2	131	3,275.00
	(b) 15mm thick plaster (1:6) to outside wall. PWD sch page no 151 slno- 2@ (i)	90	m2	143	12,870.00
	(c) 20 mm thick plaster to inside wall PWD sch page no- 151 slno 2(b) (i)	115	m2	164	18,860.00

SI No.	Description	Quantity	Unit	Rate per unit	Amount (Rs.)
11	Artificial stone in floor, dado, staircase etc. with cement concrete (4:2:1) with stone chips, laid in panels as directed with topping made with ordinary or white cement (as necessary) and marble dust in proportion (2:1) including application of cement slurry before flooring works, using cement @ 1.75 kg./sq.m all complete including all materials and labour. I) 35mm thick gr. floor PWD sch. page no-40 s/no 3 (III)	23	m2	355	8,165.00
12	Wood work in door and window frame fitted and fixed complete including a protective coat of painting at the contact surface of the frame excluding cost of concrete, iron butt hinges and M.S. clamps. [The quantum should be corrected upto three decimals]. (a) sal (Local) PWD sch. page no- 85 s/no 1(d)	0.425	m3	83652	35,552.10
13	Z-batten shutters of door and window as per design having tongued and groove-half lap jointed as per direction of the Engineer-in-charge including fitting and fixing shutter in position, but excluding the cost of hinges and other fittings in ground floor. PWD sch. page no- 112v s/no 94A(I)	14	m2	3413	47,782.00
14	M.s or W.I ornamental grill of approved design joint continuously welded with M.S/W.I flats and bars for windows fitted and fixed with necessary screws and lugs in ground floor. (Grill weighting above 10kg up to 16 kg per sqm. PWD sch. Page no- 76, s/no-10 (II)	1.14	qut	8857	10,096.98
15	Iron butt hinges of approved quality fitted and fixed with steel screws with ISI marks. Door 100 mm X 50 mm X 1.25mm. PWD sch. Page no 91, s/no-20(vi)	24	each	48	1,152.00
	Windows size 75mmX40mmX1.20mm PWD sch. Page no 91, s/no- 20(iii)	96	each	31	2,976.00
16	Iron socket bolt of approved quality fitted and fixed complete Door size 100 mm long X 10mm. Dia bobt. PWD sch. Page no 93, s/no-25(b)	6	each	45	270.00
	Windows size 75 mm long X 10mm dia best PWD sch. Page no 93 s/no-25(a)	6	each	38	228.00
17	Iron door ring of approved quality fitted and fixing with nut and washer complete (A) window 50mm dia PWD sch page no 98 s/no 59(I)	10	each	19	190.00
18	Aluminium D type handle of approved quality with continuous plate base (hexagonal / round rod) 100mm grip X 10mm diameter PWD sch. Page no- 100, s/no-65(ii)	5	each	79	395.00
19	Iron haps bolt with 16mm dia rod 300 mm long. PWD sch. Page no- 93, s/no- 27 (i) ©	5	each	193	965
20	Priming one coat on timber, surface with synthetic enamel oil bound primer of approved quality including smoothening surface by sand papering etc. PWD sch. Page no- 162, s/no-7(a)	30	m2	41	1,230.00
21	Painting with best quality synthetic enamel paint of approved make and brand including smoothening surface by sand papering etc. including using of approved putty etc. on the surface of necessary timber surface. Two coats other High gloss of approved quality. PWD sch. Page no- 162, s/no-8(a) (II) (III)	30	m2	76	
22	Color washing with any shed strainer as require including cleaning smoothening surface thoroughly internal surface two coat. Yellow / Pink. PWD sch. Page no- 155, s/no- 5(b)II	153.36	m2	21.57	3,307.98
23	Septic Tank with soakwell				25,000.00
				Total Cost	548,546.41
				Contingency	1,454.00
				<b>Grand Total</b>	<b>550,000.41</b>
				<b>Round Off</b>	<b>550,000.00</b>



MKD.	SIZE		NOS.
	L	B	
D1	900	1950	5
D2	750	1950	2
W1	1200	1200	4
W2	900	1200	2
W3	600	600	2

MKD.	SIZE		NOS.
	L	B	
D1	900	1950	5
D2	750	1950	2
W1	1200	1200	4
W2	900	1200	2
W3	600	600	2



OWNER:		WEST BENGAL ZOO AUTHORITY 2, Alipore Road, Kolkata- 700 027			
PROJECT:		PROPOSED RO / HC / UDC / ACCOUNTANT QUARTER (TYPE-III) AT			
TITLE:		PLAN, FRONT ELEVATION AND SECTIONAL DETAILS			
APPROVED BY	DRAWN BY	DRG. NO.	SHEET		
St. Md. S. Haque	A.K.	WBZA / DE / T-III	1 OF 1	0	REV
		SCALE	1:150, 1:75 1:20	DATE	
				30.06.14	

Details estimated cost of Barrack at Nayagram, Hijli, Bardanga Beat of Kharagpur Division		
This estimate follow as [er P.W.D. Schedule 2010 with corrigendum upto 2012]		
1. Surface dressing of ground in any kind of soil including removing vegetation inequalities not exceeding 15 cm depth and disposal of the rubbish within a lead upto 75 m as directed. @ 6.45/m2 [Page No. 1, item No. 1]	55.76 m2	360
2. Earth work in excavation of foundation trenches or drains, in all sorts (including mixed soil but excluding laterite or sand stone) including removing spreading or stacking the spoils within a lead of 75 m as directed. The item includes necessary trimming the side of trenches, leveling, dressing and ramming the bottom, bailing out water as required complete. a. Depth of excavation not exceeding 1.5m i. For column foundation 12 Nos x 1.3 x 1.3 x 1.2 @ 9221.30% m3	24.33 m3	2244
3. Filling in foundation or plinth by fine sand and in layers not exceeding 150 mm as directed and consolidating the same by thorough saturation with water ramming complete including the cost of supply of sand. i. Column foundation- 175th total. ii. Hall- 3.66 x 7.679 x .425 iii. Kit & Ver- 2.525 x 2.525 x .425 iv. W.C.- 2 No. x 1.2 x 1.5 x .425 @ 46856.38 % m3 [Page No. 5, Item No. B]	4.866 m3 11.912m3 2.709 m3 1.530 m3	9848
	21.018 m3	
4. Cement concrete with graded stone ballast (40 mm site excluding shuttering) (1:3:6) Pakur Variety i. Column- 12 x 1.3 x 1.3 x 10 ii. Hall Room- 365 x 7.679 x .075 iii. Kit- 1.5 x 2.525 x .075 iv. Passage- .90 x 2.525 x .075 v. WC- 2 x 1.2 x 1.5 x .075	2.03 m3 2.10 m3 0.28 m3 0.170 m3 0.270 m3	Rs. 12.452.00
	4.85 m3	
@ 4188.85/m3 [Page No. 59, Item No. 10(A)(a)]		20316
5. Supplying the laying polythene sheet (150 gm/ESQ) over damp proof course or below flooring	20.28 m2	
	107.67 m2	
@ 18.95 m2 [Page No. 99, Item No. 13]		2040
5. Supplying the laying polythene sheet (150 gm/ESQ) over damp proof course or below flooring or roof terracing on in foundation trenches 1. Column- 12 No. x 1.3 x 1.3 ii. Floor- 3.65 x .674 iii. Kit- 1.5 x 2.525 iv. Passage- .90 x 2.525 v. WC- 2 Nos. x 1.2 x 1.5 vi. Roof- 4.35 x 7.904 Do- 4.75 x 3.225	20.28 m2 28.03 m2 3.79 m2 2.27 m2 3.60 m2 34.38 m2 15.32 m2	
Total	107.67 m2	
@ 18.95 m2 [Page No. 99, Item No. 13]		2040
6. Ordinary cement concrete (Mix 1:1.5:3) with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement if any in ground floor as per relevant IS code i. Pakur Variety: i. Column footing- 12 No. x 1.3 x 1.3 x .15 Do- 12 x .60 x .60 x .30 ii. column- 12 Nos. x 3.75 x .25 x .25 iii. tie band- 36.13 x .30 x .25 iv. Partition beam (Near Kitchen) 3.025 x .25 x .25 v. Lintel= 29.458 x .25 x .15 Do- 9.9 x .125 x .15 vi. Wall beam- 43.433 x .25 x .25 vii. Roof- 4.35 x 7.90 x .10 4.75 x 3.225 x .10 viii. chajja= 13.65 x .50 x .075	3.042 m3 1.296 m3 2.813 m3 2.710 m3 0.189 m3 1.105 m3 0.186 m3 2.715 m3 3.437 m3 1.532 m3 0.512 m3	
Total	19.537 m3	
@ 5679.82/m3 [Page No. 39, Item No. (7)(1)]		110967

7. Hire and labour charges for shuttering with centering and necessary staging upto 4 m using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete slab, beams and columns, lintels, curved or straight including fitting, fixing and striking out after completion of works (upto roof of ground floor). a) 25 mm to 30 mm thick wooden shuttering as per decision & direction of Engineer-in-charge. 1. Roof Slab- 4.35 x 7.904 Do- 4.75 x 3.225 Side of Roof- 30.95 x .10 Beam- 3 x 2 x 3.65 x .15 Do- 2 x 2 x 10.829 x .15 Do- 2 x 2 x 4.65 x .15 Lintel- 2 x 10.829 x .15 x 2 3.65 x .15 x 2 2 x 4.65 x .15 x 2 Chajja 13.65 x .50 Window Bottom W-6No. .25 x 1 W2- 4 No. x .25 x .9 D- 1.4 x .25 D1- 4 x .25	34.38 m2 15.32 m2 3.10 m2 3.29 m2 6.50 m2 2.79 m2 6.50 m2 1.095 m2 2.790 m2 6.825 m2 1.500 m2 0.900 m2 0.350 m2 1.00 m2	
Total	86.340 m2	
@ 274.31 / m3 [Page No. 61, Item No. 12(a)]		23684
b. .25 mm to 3mm shuttering without staging in foundation Tie band- 36.13 x .30 x 2 side Beam- 2.525 x .25 x 2 side	21.678 m2 1.263 m2	
	22.941 m2	
@ 173.37/m2 [Page No. 61, Item No. 12(f)]		3977
8. Reinforcement for reinforced concrete work in all sorts of structures including distribution bars, stirrups, binders etc., initial straightening and removal of loose rust (if necessary) cutting to requisite length, hooking and bending to correct shape, placing in proper position and binding with 16 gauge black annealed wire at every intersection complete as per drawing and direction. a. For works in foundation, basement and upto roof of ground floor/upto 4 m. i) Tor steel / mild steel ii. For base iii. Column iv. Tie band v. Wall beam vi. Lintel & Chajja vi. Roof	175 kg. 600 kg. 400 kg. 350 kg. 120 kg. 350 kg.	
	1.995 MT	
@ 59762 / MT [Page 65, Item No. 15(a)(i)]		119225
9. Brick work with 1st class bricks in cement mortar (1:6) a. In foundation & Plinth Long wall- 2 Nos. x 10.829 x .25 x .20 Short Wall- 1 No. x 3.65 x .15 x .20 Do- 2 Nos. x 4.15 x .25 x .20 Portion wall- 1 No. x 2.525 x .25 x .20 Deduction for column 12 Nos. x .25 x .25 x .20	1.083 m3 0.110 m2 0.415 m3 0.126 m3 1.734 m3 (-) 0.150 m3	
	1.584 m3	
@ 5127.15/m3 [Page No. 69, Item No. 22(a)]		8121=00
b. In super structure. Gr. Floor Long Wall- 2 Nos. x 10.829 x .25 x 3.3 Short wall- 1 No. x 3.65 x .25 x 3.3 Do- 1 No. x 4.15 x .25 x 3.3	17.87 m3 3.01 m3 3.42 m3	
	24.30 m3	
Deduction i) Column- 11 x 3.3 x .25 x .25 Window(W) - 6 x .90 x 1.20 x .25 Do W 4 x .75 x 1.20 x .25 D- 1 x 2.00 x .25 D1- .90 x 2.0 x .25 V- 3 x .50 x .60 x .25 Lintel- 29.458 x .15 x .25 Beam- 29.458 x .25 x .25	2.269 m3 1.620 m3 0.900 m3 0.500 m3 .450 m3 0.225 m3 1.105 m3 1.841 m3	
	15.390 m3	
@ 5282.55/M [Page No. 69, Item No. 22(b)]		81298

84	10. 125 mm thick brick work with 1st class bricks in cement mortar (1:4) in ground floor 9.99 x 3.00 Deduction: D- .90 x 2 D2- 3 x .75 x 2	29.7 m2  1.80 m2 4.50 m2	
	@ 697.20/m2 [Page No. 73, Item No. 29]	(-) 6.30 m2	23.40 m2
	11. 25mm damp proof course with cement concrete with stone chips (1:1.5:3) 36.133 x .25	9.033 m2	9.033 m2
	@ 171.89/Sqm [Page No. 99, Item No. (11)]		1553
	12. Wood work in door and window frame fitted and fixed in position complete including a protective coat of painting at the contract surface of the frame excluding cost of concrete, iron Butt hinges and M.S. clamp (the quantum should be corrected upto three decimals) Sal(Local) Door 5.9 x .075 x .10 W- 6 nos. x 4.2 x .075 x .10 W1- 4 Nos. x 3.9 x .075 x .10 V- 3 Nos. x 2.2 x .075 x .10	0.044 m3 0.189 m3 0.117 m3 0.050 m3	
		0.400 m3	
	@ 58283.00/m3 [Page No. 179, Item No. 1(d)]		23313=00
	13. a) Iron butt hinges of approved quality fitted & fixed with steel screw with I.S.I. mark ix) 100 mm x 75mm x 3.50 mm	9 Nos	
	@ 68.74/each [Page No. 191, item No. 20(VII)]		619
	b) Do 75 mm x 40 mm x 1.12 mm	40 Nos.	
	@ 25.76/each [Page No. 191, item No. 20 (iii)]		1030
	14. Supplying fitting and fixing M.S. clamps for door and window frame made of flat bent bar, end bifurcated with necessary screws etc. by cement concrete (1:2:4) as per direction (cost of concrete will be paid separately) 44mm x 6mm x 200 mm length	56 Nos.	
	@ 29.84/each [Page No. 189, Item No. 18(b)]		1671
	15. Iron socket bolt of approved quality fitted and fixed complete 300 mm long x 10 mm dia bolt	12 Nos.	
	@ 100.68/each [Page No. 197 Item No. 25(e)]		1208
	16. Iron hasp bolt of approved quality fitted and fixed complete (oxidized) with 16 Nos. dia rod with cement bolt and round fitting. 300 mm long	2 Nos.	
	182.91/each [Page No. 199, Item No. 27@]		366
	17. Iron door handle of approved quality fitted and fixed complete 150 mm x 5.5 mm	12 Nos.	
	@ 46.13/each [Page No. 217, Item No. 70(ii)]		554
	18. Labour for chipping of concrete surface before taking up plastering work.	49.69 Sqm	
	@ 14.40/m2 [Page No. 319, Item No. 1]		716
	b. Plaster (to wall, floor, ceiling etc.) with sand and cement mortar including rounding off or chamfering corners as directed and taking out joints including throating, noising and drip course, sea holding/staging where necessary. With (1:6) cement mortar with 20 mm th. OUTside 2 x 10.829 x 3.8 2 x 4.65 x 3.8 Parapet Wall inside 2 x 10.829 x .30 Top surface 2 x 10.829 x .25 2 x 4.65 x .25	82.30 m2 35.34 m2 6.50 m2 2.79 m2 5.41 m2 2.33 m2	
		134.670 m2	
	Inside Wall Hall Room 2(3.65+7.679)x3	67.97 m2	
			429424
	Kitchen 2(2.525 + 1.5) x 3 Bath Room 2(1.2 + 1.5) x 3 x 2 Nos. Passage 2 x (.90 + 2.525) x 3	24.5 m2 32.40 m2 20.55 m2	
		145.07 m2	
		total	279.740 m2
	Deduction D 1 x 1 x 2= D1 .9 x 2 = W1 6 Nos. x .75 x 1.2 = W2 4 nos. x .75 x 1.2= V 3 Nos. x .60 x .50 = D2 2 x .72 x 2=	2 m2 1.80 m2 6.48 m2 3.60 m2 0.90 m2 3.00 m2	
		17.78 m2	
	Total	261.960 m2	
	@ 127.96/m2 [Page No. 319, Item No. 2(i)c]		33520

c. 15 mm th plaster with (1:4) on R.C.C surface	18.03 m2	
i. Room 3.65 x 7.679=	3.79 m2	
ii. Kitchen 2.525 x 1.5=	2.27 m2	
iii. Passage .90 x 2.525=	3.60 m2	
iv. Bathroom 1.2 x 1.5 x 2=	13.65 m2	
v. Chajja 13.65 x .50 x 2=		
	51.34 m2	
@ 128.65/m2 [Page No. 319, Item No. 2(ii)(b)]		6605
20. Z-batten shutters of door & window as per design having tongued and groove-half lab joined as per direction of the Engineer-in-charge including fitting and fixing shutter in position, but excluding the cost of hinges and other fittings in ground floor.		
b. Shutter with 19 mm thick planks, 19 mm thick batteni.	2.0 m2	
i. Sal Local	1.80 m2	
D= 1x2 =	6.48 m2	
D1= .9 x 2 =	3.60 m2	
W= 6 x .90 x 1.2=		
W2= 4 x .75 x 1.2=		
	13.88 m2	
@ 2025.89/m2 [Page No. 243, Item No. 94(B)]		28119
21. M.S or W.I. ornamental grill of approved design joints continuously welded with M.S. W.I. flats and bars of windows, railing etc. fitted and fixed with necessary screw and lugs in ground floor.	6.48 Sqm	
i. Grill weighing above 10 kg/sqm and upto 16 kg/m	3.60 Sqm	
W= 6x.90x1.2=	0.90 Sqm	
W1= 4x.75x1.2		
V= 3x.6x.5		
	10.98 Sqm	
@ 67.01/Kg. [Page No. 155, Item No. 10(a)(i)]		7371
22. Artificial stone in floor, dado, stair case etc. with cement concrete (1:2:4) with stone clips, laid in panels as directed with tapping made with ordinary or with cement (as necessary) and marble dust in proportion (1:2) including smooth finishing and rounding off corners including raking out joints or roughening of concrete surface and application of cement slurry before flooring works using cement @ 1.75 kg/Sqm all complete including all materials and labour in ground floor 3 mm thick topping (High polishing grinding on this item is not permitted with ordinary cement)	28.03 m2	
ii. 25 mm thick	3.79 m2	
Room 3.65 x 7.679 =	2.27 m2	
Kitchen 2.525 x 1.5=	3.60 m2	
Passage .90 x 2.525 =		
Bathroom 2 x 1.2 x 1.5 =		
	37.69 m2	
@ 228.73/m2 [Page No. 91, Item No. 3 (II)]		8621
23. Applying decorative cement based paint of approved quality after preparing the surface including scraping the same thoroughly (plastered or concrete surface) as the manufacturer's specification in Ground Floor.	130.52 m2	
C. Two Coat		
@ 47.92/m2 [Page No. 335, Item No. 16 (III)]		5602
24. Inside white washing including cleaning smoothening surface thoroughly	279.72 m2	
a. Three coats		
@ 1363.50/% sqm [Page No. 329, Item No. 3		3814
25. Priming one coat on steel or other metal surface with synthetic oil bound primer of approved quality including smoothening surface by sand papering etc.	5.20 m2	
D= 1x2x2.6=	4.68 m2	
D1= 1 x .9 x 2 x 2.6=	16.85m2	
W= 6 x .90 x 1.2 x 2.6=	9.36 m2	
W1= 4x.75x1.2x2.6=	6.48 m2	
Grill W= 6 x .90 x 1.2 x 1=	3.60 m2	
W1= 4 x .75 x 1.2 x 1	0.90 m2	
V= 3x.5x.6x1		
	10.98 m2	
@ 24.98/m2 [Page No. 343, Item No. 7(a)]		274
26. Painting with best quality synthetic enamel paint of approved make and brand including smoothening surface by sand papering etc. including using of approved putty etc. on the surface in necessary.	10.980 m2	
B. On steel or other metal surface with super gloss (hi-gloss)		
iv. Two coat (with any shade except white)		
@ 64.79/M2 [Page No. 343, Item No. 8(b)(iv)]		711
a. On timber or plastered surface 2	36.090 m2	2441

27. P.V.C. door shutter- 37 mm thick supplying fitting and fixing P.V.C door shutter of approved quality & shade in position the style & rail of the P.V.C door shutter will be made of rigid P.V.C. multicavity hollow camber of 59 mm x 30 mm section with 20 mm (+ 0.2 mm) will thickness, horizontal & vertical section shall be fixed to each other by self topping screws and one solid polymeric/MS tubular galvanized L-shaped brackets 100 mm x 200 mm in each corner of the shutter frame for placing hinges. Polymer based multicavity hollow section of 120 mm x 30 mm with 2.0 mm (+ 0.20 wall thickness will be placed in the middle reinforced by solid polymer bar of 200 mm long at ends & screws for both sides the section frame will then be fitted in by P.C.C. panels of size 100 mm x 25 mm with wall thickness 1.2 m (+0.2 mm) and 2 Nos. of .6 mm dia bright rod will be inserted. 3 Nos, x .75 x 2	4.5 m2	
@ 1892.31/m2 [Page No. 301, Item No. 155 (B)]		8515
28. Supplying fitting & fixing factory made prelaminate PVC door frame of size 50 mm x 47 mm with a wall thickness of 5 mm made out of extruded 5 mm PVC sheet miter cut at two corners and joined with two Nos. of 1.5 mm long brackets of 15 mm x 1mm M.S. square tube. The two vertical door profiles are to be reinforced with 19 mm x 1mm M.S square tube of 19 gauge weather seal to be provided through out the frame. The door frame shall be fixed with the wall using 65/100 mm long M.S. screw through the frame by using PVC fasteners. A minimum of 4 Nos. of screws to be provided for each vertical member and minimum 2 Nos. for horizontal member etc., complete as per manufacturer's specification and direction of Engineer-in-charge.	14.25 RM	
@ 431.33/RM [Page No. 293, Item No. 150]		6146
29. Construction of septic tank of different capacities as per approved drawing with 1st class brick work in cement mortar (1:4) including two 560 mm dia R.C.C manhole cover (heavy type) of approved make supplied, fitted and fixed in the 100 mm thick R.C.C (1:1.5:3) top slab with necessary fittings 20 mm cement laster (4:1) with neat cement finish to the internal surfaces and 15 mm cement plaster (4:1) to outside wall upto 200 mm below G.L. floor finished with 25 mm grey artificial stone over 100 mm R.C.C. (1:1.5:3) bottom slab including supplying fitting and fixing all necessary species, fittings, S.W. tees, C.I. foot rest etc. including excavation earth in al; sorts of soil shoring bailing out and pumping out water as necessary ramming dressing the bed and fitting the sides of the tanks with earth, removing foreign materials from the chamber and including constructing attached inspection pit as per approved drawing and connection all necessary pipes joints etc. with internal plaster work and artificial stone flooring is to be done with admixture of water proofing compound @ 0.5% by weight of cement with all costs of labour and materials. ii. For 10 user		
costs of labour and materials ii. For 10 user		
@ 32926.00/each [Page No. 83, item No. 3(i)]		32926
3. Construction of circular soak well 2.5 M deep in all types of sandy soil with dry B/W upto 1.60 M from the bottom having 150 mm intermediate cement B/W (4:1) band all round and cement B/W (4:1) upto 0.90 M from top with 19 mm plaster (4:1) to inside face upto the depth of cement B/W 12 mm plaster (4:1) on outer face of G.L. and 6 mm plaster (4:1) on top of R.C.C slab i/c filling bottom 1.0 M of the well with brick metal (50-63 mm size) i/c with concrete (3:1:5:1) with stone chips and necessary reinforcement and shuttering & R.C.C manhole cover of approved make 560 mm dia in R.C. slab cover making necessary arrangements for pipe connection excavation of well and filling brick metal to in side i/c shoring, dewatering and removing the excess earth from the premises as per direction complete with all costs of labour and materials.	15111	
@ 15111/each [Page No. 87, Item No. 4] Sanitary		
<b>Total Rs.</b>		<b>590306</b>
<b>Add contingency 3%</b>		<b>Rs. 17,709.00</b>
<b>Total Rs.</b>		<b>608015</b>

616

## Proposed Estimate for Construction of Community hall.

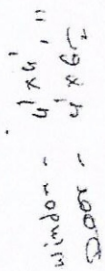
Item No.	Description of Items	Unit	Rate (Rs.)	Amount (Rs.)
1	Earth work in excavation of foundation trenches or drains, in all sorts of soil (including mixed soil but excluding laterite or sandstone) including removing, spreading or stacking the spoils within a lead of 75 m. as directed. The item includes necessary trimming the sides of trenches, levelling, dressing and ramming the bottom, bailing out water as required complete. a) Depth of excavation exceeding 1.5mtr FD 21.2 x 0.6 x 0.9 = 11.45 M3			
		11.45	120.47	1,379.14
2	Single Brick Flat Soling of picked jhama bricks including ramming and dressing bed to proper level and filling joints with local sand. Floor 6.1 x 4 = 24.4 M2 24.4 M2			
		24.4	308	7,515.20
3	Cement concrete with graded stone blallast (40 mm size) excluding a) in gr.floor a.6:3: 1 proportion 21.2 x 0.6 x 0.075 = 0.95 M3 Floor 6.16 x 3 x 0.075 = 1.83 M3 0 M3 2.78 M3			
		2.78	4,219.00	11745.7
4	Brick work with 1st class bricks in cement mortar (1 :6) a) in foundation and plinth FD 21.2 x 0.5 x 0.15 = 1.59 M3 21.2 x 0.3 x 0.15 = 0.95 M3 21.2 x 0.25 x 0.3 = 1.59 M3 Upto P.L 21.2 x 0.5 x 0.3 = 3.18 M3 = 0 M3 7.31 M3			
		8.5	5,222.00	44,387.00
5	Brick work with 1st class bricks in cement mortar (1 :6) a.super structure Gr.floor. Wall 21.2 x 0.25 x 2.4 = 12.72 M3 4 x 0.25 x 0.9 = 0.9 M3 13.62 M3  <u>Deduction for opening</u> Door-2 1.2 x 0.25 x 2 = 1.2 M3 Door-4 1.2 x 0.25 x 1.2 = 0.36 M3 = 0 M3 (-) 1.56 M3 12.06 M3			
		12.06	5,447.00	65,690.82

Item No.	Description of Items	Unit	Rate (Rs.)	Amount (Rs.)
6	<p>Ordinary Cement concrete (mix 1 :2:4) with graded stone chips (6mm nominal size) excluding shuttering and reinforcement, if any, in ground floor.</p> <p>(d) With local hard blackstone variety chips (crusher broken)</p> <p>Lintel 21.2 x 0.25 x 0.15 = 0.80 M3</p> <p>Chajha 1.5 x 0.50 x 0.075 = 0.32 M3</p> <p>= 0.00 M3</p> <p>= 0.00 M3</p> <p><b>1.12 M3</b></p>	1.12	5,872.00	6,547.28
7	<p>Reinforcement for reinforced concrete work in all sorts of structures including distribution bars, stirrups, binders etc initial straightening and removal of loose rust (if necessary), cutting to requisite length, hooking and bending to correct shape, placing in proper position and binding with 16 gauge black annealed wire at every intersection, complete as per drawing and direction.</p> <p>Tor steel 1.11 x 1.00% x 7850 = 8.713 kg</p> <p>= <b>0.0871 MT</b></p>	0.0871	61787.00	5381.65
8	<p>Hire and labour charges for shuttering with centering and necessary staging upto 4 m using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete slabs, beams and columns, lintels curved or straight including fitting, fixing and striking out after completion of works (upto roof of ground floor).</p> <p>(a) 25 mm to 30 mm thick wooden shuttering as per decision &amp; direction of Engineer-In-Charge.</p> <p>Lintel lx 21.2 x 0.15 = 6.36 M2</p> <p>Chaja-4 x 2.4 x .0.08 = 0.72 M2</p> <p>= 0.00 M2</p> <p>= 0.00 M2</p> <p><b>7.08 M2</b></p>	7.08	729	5161.32
9	<p>Plaster (to wall, floor, ceiling etc.) with sand and cement mortar including rounding off or chamfering corners as directed and raking out joints including throating, nosing and drip course, scaffolding/staging where necessary (Ground floor). [Excluding cost of chipping over concrete surface]</p> <p>i) With 1:6 cement mortar a.1 Omm thick plaster.</p> <p>l x 22.20 x 3.20 = 71.04 = 71.04 M2</p> <p>Chaja-12x 1.50 x 0.45 = 8.10 = 8.10 M2</p> <p>Less- 4 x 1.20 x 1.20 = 5.76 = 5.76 M2</p> <p><b>2 x 1.20 x 2.00 = 4.80</b> = 4.80 M2</p> <p><b>68.58 M2</b></p> <p>ii) 20mm th. plaster (1:6) cement sand mortar</p> <p>Inside 20.2 x 2.80 = 56.56 M2</p> <p>Less- 6 l. 20 x 1.20 = 8.64 M2</p> <p><b>47.92 M2</b></p>	68.58 47.92	191 192	13098.8 9200.64
10	<p>Galvanised corrugated iron sheet work (excluding the supporting frame work) fitted and fixed with 10 mm. dia J or L hook-bolts, limpet and bitumen washers and putty complete with 150 mm. end lap and one corrugation minimum side lap. (Payment to be made on area of finished work) (GCI sheet to be supplied by contractor)</p> <p>Total area= 2 x 6.4 x 2.85 = 36.20</p>	36.2	725	26245





Item No.	Description of Items	Unit	Rate (Rs.)	Amount (Rs.)
18	Iron socket bolt of app. quality fitted & fixed comp i) 150 mm long x 10 mm dia bolt. W- 7 x 2 = 14 Nos ii) 225 mm long x 10 mm dia bolt. D- 1 x 2 = 2 Nos	14 2	71 87	994 174
19	Colour washing with pigments of any shade with a white wash priming. Two coats of colour wash. Quantity same as item No.9 i), ii) & iii) 27.82 + 70.57 + 132.37 = 230.76 M2	230.76	22.4	5,169.02
20	(a) Priming one coat on timber or plastered surface with synthetic oil bound primer of approved quality including smoothening surfaces by sand papering etc. 7 1.2 x 1.2 x 2.6 = 7.48 M2 2 1.2 x 1.2 x 2.6 = 12.48 M2 4 1.2 x 1.2 x 2.6 = <u>14.98 M2</u> 34.94 M2	34.94	41	1,432.54
21	Painting with best quality synthetic enamel paint of approved make and brand including smoothening surface by sand papering etc. including using of approved putty etc. on the surface, if necessary. 4x 1.20 x 1.20 x 1.00 = 5.76 2x 1.20 x 2.00 x 2.00 = 12.48 4x 1.20 x 1.20 x 2.60 = <u>14.98</u> 33.22	33.22	89	2,956.58
	Total amount =			<b>244724.43</b>
	Or Say			<b>244724</b>



## 617 A

**Estimate for Jetty (45.00M length x 2.00 M wide and approach path 15.00 M x 2.50 M)**

SI No	Description of work	Quantity		Rate (In Rs.)			Amount (In Rs.)
1	Earth work in excavation of foundation trenches in all sorts of soil (Depth of excavation not exceeding 1500 mm)	64.69	m3	120.47	/	m3	7793.20
2	Earth work in filling in foundation/plinth with excavated earth	21.56	m3	78.31	/	m3	1688.36
3	Supplying U/C bullah piles at work site, including dressing and making one end pointed i) 125 mm dia	360	m	145.00	/	m	52200.00
4	Labour for driving U/c bullah piles by monkey in all sorts of soil including hoisting and placing piles in position and including hire and labour for necessary driving appliances and all	360	M	92.00	/	M	33120.00
5	Hire and labour charges for shoring work(including necessary close plank walling, framing salballah piling struttingetc.)complete as per direction of the EIC for foundation excavation in trenches rafts etc (vertical surface of contact area with supporting earth to be	38.4	M2	431.00	/	M2	16550.40
6	Baling out water from foundation area for c instruction purpose			LS			60000.00
7	Supply and fitting fixing of copper dam (used for RCC pillar casting in the river) (1.5m x 1.5m x 1.2 m) made of 18 g MS sheet with (25 mm x 25 mm x 5 mm) MS Angle and 25 mm x 25 mm x 5 mm) Ms angle and 25 mm MS flat for covering batterns.	4	nos	15000.00	/	nos	60000.00
8	Supplying and laying polythene sheet over PCC in foundation	123.1	m2	25.00	/	m2	3077.50
9	Filling in foundation by silver sand in layers not exceeding 150 mm as directed and consolidating the same by thorough saturation with water and ramming complete, including the cost of supply of sand.	76.08	m3	985.24	/	m3	74957.06

SI No	Description of work	Quantity		Rate (In Rs.)			Amount (In Rs.)
10	Cement concrete (4:2:1) with graded stone chips (20 mm size) excluding shuttering and reinforce cement	7.08	m3	6688.86	/	m3	47357.13
11	Cement concrete (M-20) (3:1 1/2 : 1) with graded stone chips (20 mm size) excluding shuttering and	57.88	m3	7485.81	/	m3	433278.68
12	Hire and labour carnages for shuttering with centering and necessary staging etc including striking out after completion of work a) steel shuttering or 9 to 12 mm	339.83	m2	360.00	/	m2	122338.80
13	Supplying reinforcement including cutting binding etc as per design	81.784	qty	6193.60	/	qty	506537.38
14	Brick work in cement mortar a) (4:1)	13.16	m3	6293.00	/	m3	82815.88
15	Plaster to wall ceiling etc with sand cement mortar a) 10 mm thick plaster (4:1)	149.54	m2	140.00	/	m2	20935.60
16	Neat cement about 1.5 mm thick	140	m2	38.00	/	m2	5320.00
17	Neat cement about 1.5 mm thick 25 mm thick artificial stone flooring with cement concrete (4:2:1) laid in panel including neat cement	139.1	m2	303.00	/	m2	42147.30
18	Applying decorative cement based paint of approved quality after preparing the surface	140	m2	67.87	/	m2	9501.80
<b>TOTAL</b>							<b>1579712.10</b>
<b>Riverine charges 30%</b>							<b>473913.63</b>
<b>Contingency 3%</b>							<b>47391.36</b>
<b>TOTAL</b>							<b>2101017.09</b>

or say 2100893.00

ESTIMATED COST OF "JETTY (20.00M)" AT SUNDERBAN TIGER RESERVE

Sl. No.	Item	Unit	Page/ite m	No	Length L (m)	Width/ Radius B (m)	Height H (m)	Quantity	Rate (in Rs.)	Amount (in Rs.)
1	Earth work in excavation of foundation trenches or drains, in all sorts of soil (including mixed soil but excluding laterite or sandstone) including removing, spreading or stacking the spoils within a lead of 75 m. as directed. The item includes necessary trimming the sides of trenches, leveling, dressing and ramming the bottom, bailing out water as required complete.	%cum	P-1/2							
	(a) Depth of excavation not exceeding 1,500 mm.			16	16.5	0.45		167.864		
	Pile			8	2.25	0.9	1.85	29.97		
	Pile Cap						Tt	197.834	12047	23833.1
2	Earth work in filling in foundation trenches or plinth with good earth, in layers not exceeding 150 mm. including watering and ramming etc. layer by layer complete. (payment to be made on the basis of measurement of finished quantity of work) (a) With eart obtained from excavation of foundation 1/5th of earth work in excavation =	%cum	P-3/3					39.56688	7831	3098.5
3	Cement concrete with graded jhama khoa (30 mm size) excluding shuttering in foundation (1:3:6) Pile Cap	cum	P-11/4	8	2.25	0.9	0.1	1.62	5803	9400.9

Sl. No.	Item	Unit	Page/Item m	No	Length L (m)	Width/ Radius B (m)	Height H (m)	Quantity	Rate (in Rs.)	Amount (in Rs.)
4	Ordinary Cement Concrete (mix 1:1.5:3) with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement if any, in ground floor as per relevant IS Codes.  (i) Pakur Variety  Pile Pile Cap Column Beam Beam Slab Step	cum	P-12/6(b)	16 8 16 8 2 1 27	16.5 2.25 3.6 2.5 21.39 21.39 2.5	0.45 0.9 0.3 0.3 0.3 2.5 0.25	0.75   0.35 0.35 0.2 0.15	167.8644 12.15 16.27776 2.1 4.4919 10.695 1.265625		
				Tt	214.8447	7415.25	1593127.05			
5	Hire and labour charges for shuttering with centering and necessary staging upto 4 mm using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete slabs, beams and columns, lintels curved or straight including fitting, fixing and striking out after completion of works (upto roof of ground floor)  (a) 25 mm to 30 mm thick wooden shuttering as per decision & direction of Engineer-In-Charge. i) Beam, Column, Slab, Pile Cap ii) Shoring				P-26/12					
		sqm.						180.450	360	64962.0
		sqm.						19.600	360	7056.0





## ESTIMATED OF "TWO STORED SATELLITE CAMP" AT SUNDERBAN TIGER RESERVE

Sl. No.	Description of Work	Page/Item	No	Length L (m)	Width/Radius B (m)	Height H (m)	Quantity	Unit	Rate (in Rs.)	Unit	Amount (in Rs.)
1	Earth work in excavation of foundation trenches or drains, in all sorts of soil (including mixed soil but excluding laterite or sandstone) including removing, spreading or stacking the spoils within a lead of 75 m. as directed. The item includes necessary trimming the sides of trenches, leveling, dressing and ramming the bottom, bailing out water as required complete.	P-1/2									
	(a) Depth of excavation not exceeding 1,500 mm.										
	Foundation (F1)		3	1.2	1.2	1.5	6.480 cum				
	Foundation (F2)		5	1.35	1.35	1.5	13.669 cum				
	Foundation (F3)		4	1.5	1.5	1.5	13.500 cum				
	Tie beam		1	12.7	0.25	0.25	0.794 cum				
			1	27.925	0.25	0.35	2.443 cum				
	Total						36.886 cum		12047 %cum		4443.65
2	Supplying and laying Polythene Sheet (150 gm /sq.m) over damp proof course or below flooring or roof terracing or in foundation or in foundation trenches.	P-45/13									
	Foundation (F1)		3	1.2	1.2		4.32 sqm				
	Foundation (F2)		5	1.35	1.35		9.11 sqm				
	Foundation (F3)		4	1.5	1.5		9.00 sqm				
	Tie beam		1	12.7	0.25		3.18 sqm				
			1	27.925	0.25		6.98 sqm				
	Total						32.59 sqm		25	sqm	814.72
3	Single Brick Flat Soling of Picked Jhama bricks including ramming and dressing bed to proper level and filling joints with local sand.	P-11/1									

Sl. No.	Description of Work	Page/Item	No	Length L (m)	Width/Radius B (m)	Height H (m)	Quantity	Unit	Rate (in Rs.)	Unit	Amount (in Rs.)
	Foundation (F1)		3	1.5	1.5		6.75	sqm			
	Foundation (F2)		5	1.75	1.75		15.31	sqm			
	Foundation (F3)		4	2	2		16.00	sqm			
	Tie beam		1	12.7	0.25		3.18	sqm			
			1	27.925	0.25		6.98	sqm			
	Floor		1	7.975	4.3		34.29	sqm			
			1	7.975	2.375		18.94	sqm			
	Total						101.452	sqm	377	sqm	38247.36
4	Cement concrete with graded jhama khoa (30 mm size) excluding shuttering in ground floor and foundation.	P-11/4									
	(a) 1:3:6 proportion										
	Foundation (F1)		3	1.5	1.5	0.075	0.51	sqm			
	Foundation (F2)		5	1.75	1.75	0.075	1.15	sqm			
	Foundation (F3)		4	2	2	0.075	1.20	sqm			
	Tie beam		1	12.7	0.25	0.075	0.24	sqm			
			1	27.925	0.25	0.075	0.52	sqm			
	Floor		1	7.975	4.3	0.075	2.57	sqm			
			1	7.975	2.375	0.075	1.42	sqm			
	Total						7.609	cum	5803	cum	44154.39
5	Earth work in filling in foundation trenches or plinth with good earth, in layers not exceeding 150 mm. including watering and ramming etc. layer by layer complete. (Payment to be made on the basis of measurement of finished quantity of work)	P-3/3									
	(a) with earth obtained from excavation of foundation.										
	1/5 th of earth work in excavation		-	-	-	-	7.377	cum	7831	%cum	577.7

Sl. No.	Description of Work	Page/Item	No	Length L (m)	Width/Radius B (m)	Height H (m)	Quantity	Unit	Rate (in Rs.)	Unit	Amount (in Rs.)
6	Controlled Cement concrete with well graded stone chips (20 mm graded nominal size) excluding shuttering and reinforcement with complete design of concrete as per IS : 456 and relevant special publications, submission of job mix formula after preliminary mix design after testing of concrete cubes as per direction of Engineer-in charge. Consumption of cement will not be less than 300 kg of cement with Super plasticiser per cubic metre of controlled concrete but actual consumption will be determined on the basis of preliminary test and job mix formula. In ground and foundation.	P-12/6 (b)									
	[using concrete mixture]										
	(a) M 25 Grade										
	(i) Pakur Variety										
	a) foundation & ground floor										
	Foundation (F1)		3	1.20	1.20	0.2	0.86	cum			
	Foundation (F2)		5	1.35	1.35	0.2	1.82	cum			
	Foundation (F3)		4	1.50	1.50	0.2	1.80	cum			
							4.49	cum			
7	Hire and labour charges for shuttering with cenetering and necessary staging upto 4 m using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete slabs, beams and columns, lintels curved or straight including fitting, fixing and striking out after completion of works (upto roof of ground floor)	P-26/12									

Sl. No.	Description of Work	Page/Item	No	Length L (m)	Width/Radius B (m)	Height H (m)	Quantity	Unit	Rate (in Rs.)	Unit	Amount (in Rs.)
	(a) 25 mm to 30 mm thick wooden shuttering as per decision & direction of Engineer-in-charge										
	Foundation & Ground floor						175.086	sqm	360	sqm	63031.0
	First Floor						124.847	sqm	378	sqm	46337.0
	Mumty Room (2nd H)						28.415	sqm	396	sqm	10863.1
8	Reinforcement for reinforced concrete work in all sorts of structures including distribution bars, stirrups, binders etc initial straightening and removal of loose rust (if necessary), cutting to requisite length, hooking and bending to correct shape, placing in proper position and binding with 16 guage black annealed wire at every intersection, complete as per drawing and direction.	P-27/15									
	Ground floor						2.057	M.T	68508	M.T	140921.0
	First floor						1.088	M.T	68988	M.T	74588.9
	Mumty Room (2nd H)						0.202	M.T	69468	M.T	13858.0
9	Brick work with 1st class bricks in cement mortar (1:6)	P-29/22									
	(b) In superstructure, ground floor deduction for opening		1	12.1	0.25	2.25	6.806	cum			
	Door (D)		1	1	0.25	2.1	0.525	cum			
						Total	6.281	cum	5943	cum	37329.5
	In first floor		1	28.85	0.25	2.25	16.228	cum			
	Deduction for opening										
	Door (D1)		1	0.9	0.25	2.1	0.473	cum			
	Door (D2)		1	0.8	0.25	2.1	0.42	cum			
	Window (W1)		5	1.5	0.25	1.35	2.531	cum			
	Window (W2)		1	1.2	0.25	1.2	0.36	cum			
	Window (W3)		1	0.6	0.25	0.6	0.09	cum			
						Total	12.354	cum	6055	cum	74805.7

Sl. No.	Description of Work	Page/Item	No	Length L (m)	Width/Radius B (m)	Height H (m)	Quantity	Unit	Rate (in Rs.)	Unit	Amount (in Rs.)
	mumty room (2nd H)		1	12.1	0.25	2.15	6.504	cum			
	deduction for opening										
	Door (D1)		1	0.9	0.25	2.1	0.473	cum			
	Window (W1)		1	1.5	0.25	1.35	0.506	cum			
						Total	5.525	cum	6167	cum	34072.7
10	125 mm. thick brick work 1st class bricks in cement mortar (1:4) in ground floor.	P-31/29									
	In first floor		1	15.25		2.65	40.413	sqm			
	Deduction for opening										
	Door (D1)		2	0.9		2.1	3.78	sqm			
	Door (D2)		2	0.8		2.1	3.36	sqm			
							33.273	sqm	795	sqm	25253.8
	Parapet wall (2nd H)		1	25.3		0.9	22.77	sqm	807	sqm	18375.4
11	Extra for using approved H.B netting in every third layer in 29 & 30 above in any floor	P-31/31					56.043	sqm	46	sqm	2578
12	Wood work in door and window frame fitted and fixed in position complete including a protective coat of painting at the contact surface of the frame excluding cost of concrete, Iron Butt Hinges and M.S clamps. (The quantum should be corrected upto three decimals)	P-85/1									
	(d) Sal:Local										
	in gr. Floor										
	Door (D)		2	5.2	0.1	0.075	0.078	cum	89279	cum	6963.76
	In first floor										
	Door (D1)		3	5.1	0.1	0.075	0.1148	cum			
	Door (D2)		2	5	0.1	0.075	0.075	cum			
	Window (W1)		5	5.7	0.1	0.075	0.214	cum			
	Window (W2)		2	4.8	0.1	0.075	0.072	cum			
	Window (W3)		2	2.4	0.1	0.075	0.036	cum			

Sl. No.	Description of Work	Page/Item	No	Length L (m)	Width/Radius B (m)	Height H (m)	Quantity	Unit	Rate (in Rs.)	Unit	Amount (in Rs.)
						Total	0.512	cum	89479	cum	45768.51
	mumty room (2nd H)										
	Door (D1)		1	5.1	0.1	0.075	0.0383	cum			
	Window (W1)		1	5.7	0.1	0.075	0.043	cum			
						Total	0.081	cum	89679	cum	7264
	Panel shutters of door and window, as per design (each panel consisting of single plank without joint), including fitting and fixing the same in position but excluding the cost of hige and other fittings.	P-105/84									
13	in ground floor.										
	(In case of non-supply of single plank, penal rate of reduction of 20% will be made)										
	(iv) 25mm thick shutters with 12mm thick panel of size 30 to 45 cm.										
	(b) Sishu, Gamar, Champa, Badam, Bhola, Mogra, Hallak.										
	in ground floor.										
	Door (D)		1	2.04	0.88		1.7952	sqm	2527	sqm	4536.47
	In first floor										
	Door (D1)		3	2.04	0.78		4.7736	sqm			
	Door (D2)		2	2.04	0.68		2.7744	sqm			
	Window (W1)		5	1.38	1.23		8.487	sqm			
	Window (W2)		2	1.08	1.08		2.3328	sqm			
	Window (W3)		2	0.48	0.48		0.4608	sqm			
						Total	18.829	sqm	2556	sqm	48125.9
	mumty room (2nd H)										
	Door (D1)		1	2.04	0.78	0.075	1.5912	sqm			
	Window (W1)		1	1.38	1.23	0.075	1.6974	sqm			
						Total	3.289	sqm	2585	cum	8501.03

Sl. No.	Description of Work	Page/Item	No	Length L (m)	Width/Radius B (m)	Height H (m)	Quantity	Unit	Rate (in Rs.)	Unit	Amount (in Rs.)
14	Supplying, fitting & Fixing factory made P.V.C. Door frame of size 50 mm x 47mm with a wall thickness of 5 mm, made out of extruded 5mm PVC sheet metre cut at two corners and joined with two nos. of 1.5mm long brackets of 15mm x 15mm M.S. square tube. The two vertical door profiles are to be reinforced with 19mm x 19mm MS square tube of 19 guage, weather seal to be provided through out the frame. The door frame shall be fixed with the wall using 65/100 mm long MS screws through the frame by using P.V.C fasteners. A minimum of 4 nos. of screws to be provided for each vertical member and minimum 2 nos. for horizontal member etc. complete as per manufacturer's specification and direction of Engineer-in-charge.	P-136/149									
	In first floor										
	Door (D2)		1	4.95			4.95	rm	352	rm	1742.4

Sl. No.	Description of Work	Page/Item	No	Length L (m)	Width/Radius B (m)	Height H (m)	Quantity	Unit	Rate (in Rs.)	Unit	Amount (in Rs.)
15	Supplying, fitting & fixing 30mm thick factory made solid panel PVC door shutter consisting of outer frame made out of M.S. frame shall have cost of steel primers of approved make and manufacture, M.S. frame covered with 5 mm th. Heat moulded PVC "C" channel of size 30 mm th, 70 mm width out of which 50 mm shall be flat and 20 mm shall be tapered in 45 degree angel on either sides forming styles; and 5 mm th. 95 mm wide PVC sheet out of which 75 mm shall be flat and 20mm tapered in 45 degree on the inner side to form top & bottom rail and 115 mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered on both sides to form lock rail. Top, bottom and lock rails shall be provided either side of the panel with 10mm(5mm x 2) th., 20mm wide cross PVC sheet as gap insert for top rail and bottom rail. Paneling of 5mm th. both side PVC sheet to be fitted in the M.S. frame welded/sealed to the styles & rails with 7mm (5 mm + 2 mm)th. x 15 mm wide PVC sheet beading on inner side and joined together with solvent cement	P-133/145									
In first floor											
Door (D2)			1	0.75	2.1		1.575	sqm	2277	sqm	3586.3



Sl. No.	Description of Work	Page/Item	No	Length L (m)	Width/Radius B (m)	Height H (m)	Quantity	Unit	Rate (in Rs.)	Unit	Amount (in Rs.)
16	Supplying, fitting and fixing M.S. clamps for door and window frame made of flat bent bar, end bifurcated with necessary screws etc. by cement concrete (1:2:4) as per direction. (cost of concrete will be paid separately)	P-90/18									
	(a) 40mm x 6mm, 250mm length		96				96	nos	33	no	3168
17	Iron butt hinges of hinges of approved quality fitted and fixed with steel screws, with ISI mark.	P-91/20									
	(vii) 100mm. X 58 mm. X 1.90 mm.		96				96	nos	52	no	4992
18	Iron socket bolt of approved quality fitted and fixed complete.	P-93/25									
	(d) 225mm long x 10mm dia bolt		16				16	nos	87	no	1392
19	i) Iron hasp bolt of approved quality fitted and fixed complete (oxidised) with 16mm dia rod with centre bolt round fitting.	P-93/27									
	(c) 300mm long		16				16	nos	193	no	3088
20	(A) Iron door ring of approved quality fitted and fixed with nut and washer complete	P-98/59									
	(i) 50mm dia		16				16	nos	19	no	304
21	(a) M.S. or W.I. Ornamental grill of approved design joints continuously welded with M.S. W.I. flats and bars of windows, railing etc. fitted and fixed with necessary screws and lugs in ground floor.	P-76/10									



Sl. No.	Description of Work	Page/Item	No	Length L (m)	Width/Radius B (m)	Height H (m)	Quantity	Unit	Rate (in Rs.)	Unit	Amount (in Rs.)
24	Plaster (to wall, floor, ceiling etc.) with sand and cement mortar including rounding off or chamfering corners as directed and raking out joints including throating, nosing and drip course, scaffolding/staging where necessary (Ground floor). [Excluding cost of chipping over concrete surface]										
	<b>(i) With 1:6 cement mortar</b>										
	(a) 20 mm thick plaster										
	In ground floor						129.75125	sqm	181	sqm	23484.98
	in first floor						183.774	sqm	185	sqm	33998.19
	in mummy room & parapet wall (2nd H)						94.25125	sqm	189	sqm	17813.49
	<b>(i) With 1:6 cement mortar</b>										
	(a) 20 mm thick plaster										
	In ground floor						28.4	sqm	156	sqm	4430.4
	in first floor						122.8194	sqm	160	sqm	19651.1
	in mummy room (2nd H)						28.4	sqm	164	sqm	4657.6
	<b>(i) With 1:4 cement mortar</b>										
	(a) 10 mm thick plaster										
	In ground floor						63.802	sqm	140	sqm	8932.28
	in first floor						63.802	sqm	144	sqm	9187.49
	in mummy room (2nd H)						7.74	sqm	148	sqm	1145.52

Sl. No.	Description of Work	Page/Item	No	Length L (m)	Width/Radius B (m)	Height H (m)	Quantity	Unit	Rate (in Rs.)	Unit	Amount (in Rs.)
25	Supplying, fitting & fixing 1st quality Ceramic tiles in walls and floors to match with the existing work & 4 nos. of key stones (10mm) fixed with araldite at the back of each tile & finishing the joints with white cement mixed with colouring oxide if required to match the colour of tiles including roughening of concrete surface, if necessary or by synthetic adhesive & grout materials etc.	P-52/30 (B.a.ii)									
	first floor (toilet)		1	7.2		1.8	12.96	sqm	806	sqm	10445.76
	first floor (kitchen)		1	4.675		1.2	5.61	sqm	806	sqm	4521.66
26	Artificial stone in floor, dado, staircase etc with cement concrete (1:2:4) with stone chips, laid in panels as directed with topping made with ordinary or white cement (as necessary) and marble dust in proportion (1:2) including smooth finishing and rounding off corners including raking out joints or roughening of concrete surface and application of cement slurry before flooring works using cement @ 1.75 kg/sq.m all complete including all materials and labour.	P-40/3/(ii)									
	Ground floor						63.054	sqm	303	sqm	19105.4
	first floor						67.4795	sqm	307.55	sqm	20753.3
	mumty room (2nd H)						11.407	sqm	312.09	sqm	3560
27	White washing including cleaning and smoothening surface thoroughly.	P-155/3									
	all floors										
	(a) One coat						314.963	sqm	1358%sqm		4277.2

[illegible]

NORTH BENGAL GROUP C QUARTER						
Estimate for construction of Group- "C" Quarter at Alipurduar						
1	P-01 earth work in excavation of foundation trenches					
	It-02 or drain in all sorts of soils( including mixed soils)..... Etc					
	(a) Depth of excavation not exceeding /500mm					
	Foundation					
		1x11.24x0.06x0.75	5.058	m3		
		2x6.32x0.60x0.75	5.688	m3		
		2x6.47x0.60x0.75	5.823	m3		
		1x2.00x0.60x0.75	1.215	m3		
		1x2.00x0.60x0.75	0.9	m3		
		1x3.95x0.60x0.75	1.777	m3		
			20.461	m3	73.77	1509.41
2	P-03 Earth in fitting in foundation trenches or plinth					
	It-03 with good earth in layer not exceeding 15 cm					
	as directed.....complete					
	(a) with excavation earth					
		x20.461 m3	4.092	m3	47.6	195
	with carries earth ( with radius of 3 km)					
	Room	2x3.03x3.03x0.45=	8.262			
		1x3.64x3.03x0.45	4.963			
		1x3.64x2.70x0.45	4.422			
		1x2.7x2.00x0.45=	2.43			
		1x1.2x1.8x0.45=	0.972			
		1x3.95x1.20x0.30=	1.422			
			22.471	m3	275.46	6190
3	P-?? Bed room					
	It-01	2x3.03x3.03=	11.029			
	Dlning	1x3.64x2.70=	2.828			
	kitchen	1x2.7x2=	5.4			
	toilet	1x1.2x1.8=	2.16			
	ver	1x3.95x1.20=	4.74			
	col	12x0.60x0.60=	4.32			
	step	1x1.2x1.60=	1.92			
			57.758	m3	237.87	13739
4	P-33 (a) Cement concrete with 30mm down					
	graded shingles excluding shuttering.....etc					
	Foundation QTY	57.758m2x0.075=	4.331	m3		
	Bed Room	2x3.03x3.03x0.075=	1.377			
		1x3.64x3.03x0.075=	0.827			
		1x3.64x2.7x0.075=	0.737			
		1x2.7x2.00x0.075=	0.405			
		1x1.2x3.95x0.075=	0.355			
			8.032	m3	3840.62	30848
5	05-P-33 ordinary cement concrete M-15(Mix 1:2:3)					
	It-05 with graded stone chips (20mm size) excluding shuttering & reinforcement with river bazaree (N.B Varity)					
??? Footing base						
		12x0.60x0.60x0.15=	0.648	m3		
		12x0.45x0.45x0.25=	0.670	m3		
		12x0.25x0.25x0.25=	0.15	m3		
		12x0.25x0.25x3.00=	2.25	m3		
Beam		1x11.00x0.25x0.25=	0.6870	m3		
		2x7.6x0.25x0.25=	0.95	m3		
		2x6.4x0.25x0.25=	0.8	m3		
		2x3.00x0.25x0.25=	0.375	m3		
		2x3.64x0.25x0.25=	0.455	m3		
		1x2.00x0.25x0.25=	0.125	m3		
???		10x1.00x1.60x0.075=	1.2	m3		
		1x11.00x0.15x0.125=	0.206	m3		
		2x7.60x0.15x0.125=	0.285	m3		
		2x6.40x0.15x0.125=	0.24	m3		
		2x3.00x0.15x0.125=	0.112	m3		
		2x3.64x0.15x0.125=	0.136	m3		
		1x2.00x0.15x0.125=	0.037	m3		
			9.263	m3 @	3783.62	35048
6	P-65 Reinforcement for R.C.C. work in all sorts of It-15 structures including distribution.....etc					
	Qty @ 1.25% of vol of R.C.C					
	125% OF 9.263 m3@7.85 M.T		0.908	MT @	65000	59020.00
7	P-63 (F) Hire and labour Charges for shuttering with					
	It-12 Centering and necessary staging etc.					

	1) 25mm to 30mm thick shuttering						
	Footling	12x4x0.60x0.60x0.15=	4.32				
		12x4x0.45x0.45x0.25=	5.4				
		12x4x0.25x0.25x0.20=	2.4				
	col	12x4x0.25x3.00=	36				
	le beam	1x2x11.00x0.25=	5.5				
		2x6.32x0.25=	3.16				
		2x6.47x0.25=	3.24				
		2x3.00x0.25=	1.5				
		2x3.00x0.25=	1.5				
		1x1.80x0.25=	0.45				
			63.47	m3	2308.95		
	???	1x2x11.00x0.15=	3.3	m3			
		2x2x6.20x0.15=	3.72				
		2x2x6.25x0.15=	3.75				
		2x2x3.00x0.15=	1.8				
		2x2x3x0.15=	1.8				
		1x2x2.73x0.15=	0.819				
		1x2x1.80x0.15=	0.54				
	???	11x1.20x1.60=	21.12				
			100.319	m2	163.52		16404
8	P-69 Brick work with 1st ck= lass bricks In cement						
	It-22 mortor (6:1)						
	in foundation & plinth						
	???	1x11.00x0.40x0.15=	0.66	m3			
		2x6.10x0.40x0.15=	0.732	m3			
		2x6.00x0.40x0.15=	0.72	m3			
		2x3.00x0.40x0.15=	0.36	m3			
		2x3.00x0.40x0.15=	0.36	m3			
	???	1x1.20x1.80x0.15=	0.324	m3			
		1x0.90x1.80x0.15=	0.243	m3			
		1x0.6x1.80x0.15=	0.162	m3			
		1x0.30x1.80x0.15=	0.081	m3			
	vall	1x11.00x0.25x0.60=	1.65	m3			
		2x6.10x0.25x0.60=	1.83	m3			
		2x6.00x0.25x0.60=	1.8	m3			
		2x3.00x0.25x0.60=	0.9	m3			
		2x3.00x0.25x0.60=	0.9	m3			
		1x1.80x0.25x0.60=	0.27	m3			
		1x2.70x0.25x0.60=	0.405	m3			
		1x3.95x0.25x0.45=	0.444	m3			
			11.841	m3			
	Less Col 12x0.25x0.25x0.75=		-0.562	m3			
			11.279	m3	3763.4		42447
9	P-73 125 mm thick brick work with 1st class bricks						
	It-29 In cement mortar (1:4)						
	Vall	1x11x2.85=	31.35				
		2x6.10x2.85=	34.77				
		2x6.00x2.85=	34.2				
		2x3.00x2.85=	17.1				
		2x3.00x2.85=	17.1				
		1x1.80x2.85=	5.13				
		1x2.7x2.85=	7.695				
			147.345	m2			
	Less opening(-) D-6x2.10x1.00= 12.60 m2						
	(-) W-11x1.20x0.90= 11.88 m2						
			(-) 24.48				
			122.865	m2	520.79		63987
10	P-179 Wood work In door and © wndow						
	Frames fitted and fixed complete.....						
	?? Door	6x5.20x0.10x0.075=	0.234	m3			
	W	11x4.20x0.10x0.075	0.346	m3			
	V	6x3.40x0.10x0.075=	0.153	m3			
			0.733	m3	87019		63785
11	11 P-189 M.S Clamps for fixing door, windowframe						
	It-18						
	Qty=		100	No.	34.3		3430
12	P-319 plastered (to ceiling, wall floor etc) with						
	It-02 sand & cement mortar						
	(6:1) proportion,(i), 20mm thick plaster						
	??? Side wall-		129.016	m2			
	??? Inth area	61.18x0.75=	45.885	m2			

			174.9	m2	119.04	20820
	Measurement In details					
	?? Per vide It No-9					
		15mm thick out side (4:1)				
		Qty	129.016	m2	119.03	15357
13	P-323 Neat cement punning about 1.5 mm thick					
	It-08..... etc					
	GL to P.L	1x11.00x0.75=	8.25	m2		
		1x6.32x0.75=	4.74	m2		
		1x6.47x0.75=	4.85	m2		
		1x3.64x0.75=	2.73	m2		
		1x3.25x0.75=	2.44	m2		
	Step	1x1.80x1.20=	2.16	m2		
	Bed room	2x3.6x3.6=	25.92	m2		
		1x3.6x4.24=	15.26	m2		
	Dining	1x4.24x3.33=	14.119	m2		
	Kitchen	1x3.33x2.140=	7.992	m2		
	Ver	1x4.74x1.20=	5.688	m2		
			94.149	m2	28.51	2684
14	P-91 (iii) Gray artificial stone, floor, dado					
	It-03.....etc					
	Qty=		57.758	m2	190.49	11002
15	P-191 Iron but hinges of approved quality fitters					
	It-20 and fixed complete					
	???	100mmx58mmx1.25mm				
	Door	6x2	12	No	45.7	548
		??x50mmx1.25mm				
	Window	11x4	44	No	28.28	1244
16	P-197 Iron catch hook of approved quality fitted					
	It-24 and fixed complete		22	No	35.99	792
17	P-197 Iron socket bolt of approved quality fitted					
	It-24 and fixed complete					
	Door	225mmx10mmx10mm bolt=				
		6x2	12	No	79.59	955
	Window	100mmx10mm dia bolt				
		11x2	22	No	39.29	864
18	P-199 Iron haps bolt of approved quality fitted					
	It-27 and fixed complete					
		300mm long for door				
		6x1	6	No	182.91	1097
19	P-??? Iron door handle of approved quality fitted					
	It-?? and fixed complete					
		17x2	34	No	36.34	1236
20	P-243 Z- batten shutter of door and window as					
	It-94 per design.....etc					
	Local hard wood					
		6x2.05x0.99=	12.0177	m2		
		11x1.05x0.80=	9.24			
		6x1.20x0.50=	3.6			
			25.017	m2	2150.29	53794
21	P-329 Colour Washing with "Ela" with coat					
	It-04 of white washing Including cleaning & smoothening surface throughly.....etc					
	2(Two) coats Qty=	129.016m2x2	258.032	m2	1390.77%	3589
22	P-343 (a) priming one coat on timber or plaster					
	It-07 surface of approved quality.....etc					
		6x2x2.05x0.99=	24.354	m2		
		11x2x1.05x0.80=	18.48	m2		
		6x2x1.20x0.50=	7.2	m2		
			50.034	m2	28.38	1420
23	P-343( A) Painting with best quality synthetic enamel					
	It-08 Paint of approved make and brand..... Etc					
	Quantity=		50.034	m2	36.97	1850
24	P-131 (B) Galvanised corrugated iron sheet work					
	It-24 ( excluding the supporting frame)					
	(b)	with 0.63mm thick shut				
		13.27x5.26=	69.8	m2		
		69.80/3	23.26			
			93.06	m2	555.95	51737



25	P-135 (a) Galvanised Iron sheet ridging minimum						
	It-30	250mm and above Lap each way and fitted					
		with necessary.bolt, screw,washer etc					
		6x6.15=	36.9	m	292.62		10798
26	P-149 M.S Structural work with hollow section						
	It- 2A (TATA makes square of rectangular shape						
	.....etc, complete)						
	I) For roof truss work						
	(a) span upto 12 m	2x6.30x5.375	67.725	m2			
	ver	1x1.8x4.5	8.1	m2			
			75.825	m2			
		at 9.00 kg/sqm	682.425	kg	72.69		49605
							565994
				Add S & P work total rs + LS			30000
							595994
				Add contingency- 2 %			11920
					Gross Amount		607,914

Estimate for proposed Construction of Group - D quarter						
Sl .No.	Page & Item	Description of Item	Unit	Quantity	Rate (Rs)	Amount( Rs)
1	P-1/1-2(a) & (e-1)	Earth work in excavation of foundation trenches or drains all sorth (including mixed soil but excluding latarite or sandstone)including removing.the item includes necessary trimming the sides of tenches, levelling,dressing and ramming the bottom bailing out as require complete.				
		A) Depth of excavation not cxceeding 1500 mm	%Cum	8.732	9221.3	80520.3916
2	P-3/1-3(a)	Earth work in filling in foundation trenches or Pinth with good earth in layers not exceeding 150mm, including watering and ramming etc. by layer complete				
		A) With earth obtained from excavation of foundation				
		1/5 of the excavation	% Cum	1.75	5949.4	10411.45
		©(iii) With carried earth arranged by the contractor with in a radius of 3 km . Including the cost of carried earth.	% Cum	21.54	34432.66	741679.4964
3	P-99/1-13	Supplying and laying polythene Sheet (150gm / sq.m) over damp proof course or below flooring or roof terracing or in foundation or in foundation trenches	Sqm.	54.94	18.95	1041.113
4	P-59/1-10(II)	Cement concrete with (30 mm down) graded Shingles excluding shuttering				
		N.B Variety				
		(A)6:3:1 proportion				
		(i) ground floor				
		Soling Area x 0.075	Cum	4.121	3225.86	13293.76906
5	P-39/1-7(ii)	Ordinary cement concrete (mix1:2:4) with graded stone chips (20 mm nominal size excluding shuttering and reinforcement if any in ground floor				
		(A) River bazree. In ground floor	Cum.	6.236	3972.8	24774.3808
6	P-65/1-15(a)	Reinforcements of reinforced cement concrete work in all sorts of structures including distribution bars, stirrups ets. Including supply of rods, initial straightening and removal of loose rusts (if necessary), cutting to requisite length, hooking and bending to correct shape, placing in proper position and binding with 16 gauge black anniealed wire at every inter- sections, complete as per drawing and direction (a) for work in foundation, basement and up to roof of ground floor / up 4m. Steel / Mild steel				
		(i) Ground floor .1% of RCC vire item no. 5	MT	0.441	59780	26362.98

Sl .No.	Page & Item	Description of Item	Unit	Quantity	Rate (Rs)	Amount( Rs)
7	P-61/1-12(a)	Hire and labour charges for shuttering with centering and necessary staging upto 4m using approved stout props thick hard wood planks of approved thickness with required bracing for concrete slabs, beams, columns, lintels curved or straight including fitting fixing and striking out after completion work (upto roof of ground floor)				
		(a) 25mm to 30mm thick wooden shutters as per direction and decision of E.I.C.				
		A) Ground floor	Sqm.	58.191	278.17	16186.99047
8	P-69/1-22	Brick work with 1st class bricks in cement mortar(6:1)				
		a) in foundation and plinth	Cum.	8.145	3951.57	32185.53765
9	P-73/1-29	125mm thick brick work with 1st class bricks in cement mortar (4:1) th H.B netting in every third layer				
		a) in ground floor	Sqm.	90.4	546.82	49432.528
10	P-179/1-1	Wood work in door and window frame and fixed complete including a protective coat of painting at the contact surface of the frame. Sal				
		i) In ground floor	Cum	0.583	87019	50732.077
11	P-189/1-18	S.F.F M.S clamp for fixing door window frame made of flat bent bar and bidurcated, fixed in cement concrete mortar with stone chips (4:2:1) fitted and fixed complete, As per drawing				
		40mmx 6mm above 250 mm length	Each 64.000	64	34.3	2195.2
12	P-319/1-2	Plaster(to all floor ceiling etc.) with sand and cement mortar including rounding off or chamfering corners as directed and taking out joints or roughening of concrete surface including throating nosing and drip course where necessary (ground floor)				
		a) with (6:1) cement 20mm thick (internal)				
		1) Gr. Floor (inside)	Sqm	153	130.94	20033.82
		a) with (6:1) cement 15 mm thick (External)				
		1) Gr. Floor (inside)	Sqm.	90	111.57	10041.3
		b) Inside (4:1) cement mortar, 10 mm thick plaster				
		i) Gr. Floor	Sqm.	42	102.21	4292.82
13	P-323/1-8	Neat cement punning about 1.5 mm thick wall, dado, window sills, floor, drain etc. Note- Cement 0.152 cum. Per 100 sq.m	Sqm.	30	31.36	940.8
14	P-91/1-3	Artificial stone in floor, dado staircase etc. with cement concrete (1:2:4) with stone chips laid in panels as directed with topping made with ordinary or white cement (as necessary) and marble dust in proportion (2:1) including smooth finishing and rounding off corners and application of cement sturry @1.75Kg./sqm. all complete including materials and labours. In ground floor 3mm thick topping.				

		i) 25 mm thick				
<b>116</b>						
Sl .No.	Page & Item	Description of Item	Unit	Quantity	Rate (Rs)	Amount( Rs)
		a) GR Floor	Sqm	39.5	235.12	9287.24
15	P-191/1-18	Iron butt hinge of approved quality fitted and fixed with steel screw (bearing ISI mark.)				
		a) 100mmx 58mm x1.90mm				
		DOOR	Each	24	45.73	1097.52
		b)50mm x37mm x1.50mm				
		Window	Each	28	15.14	423.92
16	P197/1-25	Iron socket bolt approved quality fitted and fixed complete				
		c)100 mm long x 10mm dia bolt.				
		Window	Each	28	39.29	1100.12
		d)150 mm long x 10mm dia bolt				
		DOOR		12	58.52	702.24
17	P-199/1-27	Iron haps bolt of approved quality fitted and fixed complete (galvanised) with 16 mm dia rod with central bolt and round fittings,				
		a) 250mm long	Each	2	173.54	347.08
18	P-215/1-65	Anodised aluminium D-type handle of approved quality fitted and fixed complete				
		a) With continuous plate.				
		Window				
		vi) 100 mm grip x 10 mm dia rod				
		Door				
		vii) 150mm grip x 10mm dia rod	Each	22	100.22	2204.84
19	P-243/1-94	Z- batten shutters of door and window, as per design having tongued and groove - half lap jointed as per direction of the Engineer- in charge including fitting and fixing shutter in position but excluding the cost of hinge and other fittings in ground floor				
		(A) Shutters with 25mm thick planks, 19mm thick battens				
		(iii) Sishu, Gamar, Champ, Badam, Bhola, Mogra, Hallak				
		In Ground floor	Sq.m.	17.62	2150.29	37888.1098
20	P-329/1-3	White washing including clearing and smoothening the surface thoroughly in all floor				
		II) Three Coats				
		I) Gr.Floor	% Sq.m	225	13.635	3067.875
21	P-343/1-7(b)	Priming one coat on Steel or other metal surface with synthetic enamel oil bound primer of approved quality including smoothening surface by sand papering etc.	Sq.m.	30	30.65	919.5

22	P-343/1-7(b)	Priming one coat on steel or other metal surface with synthetic enamel. Oil bound primer of approved quality including smoothening surface by sand papering etc.	Sq.m	7.5	24.98	187.35
<b>117</b>						
Sl .No.	Page & Item	Description of Item	Unit	Quantity	Rate (Rs)	Amount( Rs)
23	P-343/1-8(A)	Painting with best quality synthetic enamel paint of approved make and brand including smoothening surface by sand papering etc. including using approved putty etc.on the surface if necessary:				
		A)On timber or plastered surface (with super gloss) two coats				
		Two coats (with any shade except white)		30	67.63	2028.9
		B) On steel or other metal surface (with super gloss-hi-gloss)				
		Two coats (with any shade except white)	Sq.m.	7.5	58.47	438.525
24	P-155/1-10	M.S or W.I. Ornamental grills of approved design joints continuously welded with M.S flats and bars of windows, railing etc. fitted and fixed with necessary screws and lugs in ground floor.				
		i) Grill weighing above 10 kg/ sqm. And up to 16 kg/sqm.				
		ii) In Gr. Floor	Qtl	0.75	6701.3	5025.975
25	PO-131/1-34	Galvanised corrugated iron sheet work(excluding the supporting frame work) fitted and fixed with 10mm dia J or L hook- bolts, limpet and bitumen washers and putty complete with 150mm end lap and one corrugation minimum side lap (payment to be made on area of finished work) (GCI sheet to be supplied by contractor)				
		(i) In Roof				
		B) With 0.60 mm thick sheet	sqm.	64.15	533.64	34233.006
26	P-135/1-30	Galvanised iron sheet ridging fitted with necessary bolts, screws, washers etc. complete. (225 mm end lapping)				
		(A) 300mm lapping each way				
		(b) with 0.60 mm sheet	Mtr.	20.5	292.62	5998.71
27	P-147/1-2	M.S structural works in roof trusses with tubular sections conforming to IS 806-1957 & IS: 1161-1958 connected to one another with breacket, gusset cleats as per design, direction of Engineer-in charge complete including cutting to requisite size, fabrication with necessary metal are welding conforming to IS: 816-1956 & IS :9595 using electrodes of approved make and beand conforming to ISA 815- 1957 ,haulage,hoisting and erection all complete				
		The rate includes the cost of rolled steel section consumables such as electrodes, gas and hire charge of all tools and plants and labour required for the work including all incidental chargessuch as electricity charges, labour insurance charges etc				
		i)For trusses spanning up to 12.00.	MT	0.75	68105.31	51078.9825
						<b>1240154.00</b>



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	(vii) 100mm x 58mm x1.90mm															
	i) ground floor															
136																
Sl No.	Description of Item	Side	Nos.	Length	Breadth	Height		Quantity	Unit	Rate	Amount (Rs.)					
	Door	1	3				=	3	nos.							
								3	nos.	62.4	187.20					
	P-199, Item no. 27 (i)															
16	Iron hasp bolt of approved quality fitted and fixed complete (oxidised) with 16mm dia road with centre bolt and round fitting															
	c) 300mm long															
	i) ground floor															
	Door	1	1				=	1	nos.							
								1	nos.	228.94	228.94					
	Page -131 it 24															
17	Galvanised corrugated iron sheet work (excluding the supporting frame work complete															
	a) In roof															
	a) With 0.60mm thick sheet															
	roof	1	2	3.5	5		=	35								
		1	2	2.4	1.5		=	7.2								
							=	42.2		900	37980.00					
	P-135 itme 30															
18	Galvnised iron sheet ridging															
	A) 300 mm laping each way															
	a) with 0.60mm sheet															
		1	1	1	8		=	8								
							=	8		510	4080.00					
	P-319, item no - 02															
20	Plaster (to wall, floor, ceiling etc) with sand and cement mortar including rounding off or chamfering.....etc															
	Floor	1	1	6	4		=	24.00	sqm							
	Wall	2	2	6	0.9		=	21.60	sqm							
	Wall	2	2	4	0.9		=	14.40	sqm							
		2	2	1.5	0.9		=	5.40	sqm							
					MKD-A			65.40	sqm							
	Deduction for opening :-															
	door	1	2	0.9	1		=	1.80	sqm							
					MKD-B			1.80	sqm							
					MKD-a -MKD-B			63.60	sqm							
								63.60	sqm	175.2	11142.72					
21	Net purning cement	1	1	6	4		=	24.00	sqm	39	936.00					
22	priming one coat on timber, plaster ..															
	a) on timber or plaster surface															
	Room	2	2	2.4	6		=	57.60	sqm							
		2	2	2.4	4		=	38.40	sqm							
	door	1	2	0.9	1		=	1.80	sqm							
	Window	6	2	1.2	0.9		=	12.96	sqm							
								110.76	sqm	50.4	5582.30					
	'It P-343, Item - 8															
23	(A) Painting with best quality synthetic enamel paint of approved make....etc															
	a) on timber or plastered surface with super gloss (hi-gloss)															
	ii) Two coats (white in shade)	2	2	1.5	6		=	36.00	sqm							
		2	2	1.5	4		=	24.00	sqm							
								60.00	sqm	103.2	6192.00					
	P-335, Item-16															

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Sl No.	Description of item of works	Total Cost		
		Vol/Unit	Rate	Amount (Rs.)
	Cost of earth digging including mixed, morrum soil and any other stone including spreading spoils within a lead of 75 mtr including			
	bailling out of water up to 1mtr depth if required and back filling with medium sand including cost of sand as follows:			
1	a)Up to 3 meter below G.L =3Mtr.@Rs.680.00/m	3	680	2040
2	b)3 Meter to 6 Meter =3 Mtr. @Rs.729.00/m	3	729	2187
3	c)6Meter to 9 Meter =3 Mtr @Rs.797.00/m	3	797	2391
4	d)9 Meter to 12 Meter =3 Mtr.@ Rs.866.00/m	3	866	2598
5	e) 12 Meter to 15 Meter =3 Mtr.@Rs.897.00/m	3	897	2691
6	f)15 Meter to 18 Meter =3 Mtr.@Rs.975.00/m	3	975	2925
7	Cost of supply of precast R.C.C Well ring made with cement concrete (4:2:1) with stone chips and 0.8% reinforcement fitted fixed in position true to plumb in the well including jointing with cement Mortar 2:1 complete as per direction:	18	2205	39690
8	Cost of supply of Iron Angle and making hole at the centre including fitting fixing in position properly complete. 10 Kg @ Rs.45.50.Kg.	10	45.5	455
9	Supplying and fitting in position 15 cm dia Pullcy Ino @ Rs.235.00 E	1	235	235
10	<b>Construction of Platform:-</b>			
	Consolidation work over 14.766m2			
	a) Sand packing over 14.766m2×0.15 Mtr =2.215 m3@ 214.71/m3	2.215	214.71	475.58
	b) Boulder soling over 14.766m2×0.30 mtr =4.430 m3 @750.00/m3	4.43	750	3322.5
	c)Single brick flat soling over 14.766m2 @114.00/m2	14.766	114	1683.32
	d)C.C Work (4:2:1) with Chandil chips over 14.766m2×0.10=1.4766 m3 @2707.00/m3	1.4766	3654.45	5396.16
	e)Brick work of parapet wall in the platform 2.331 m3 @ 2070.00/m3	2.331	2898	6755.24
	f) Pillar 0.25×0.25× 1Metre × 2 Nos = 0.125m3 @2070.00/m3	0.125	2898	362.25
	Cost of cement plastering 20 mm thick (6:1) with cement mortar Platform = 14.766m2,Pillar=2.000m2 Parapet=8.925m2, Total=25.691 m2 @62.00/m2	25.691	83.7	2150.34
	Neat cement punning over (15 mm thick) 25.691 m2@ 16.00/m2	25.691	17.6	452.16
	Colour washing with "ELLA" with a coat of white wash priming including cleaning and smoothening surface thoroughly (two coats) over 25.691 m2 @ 4.80/m2	25.691	4.8	123.32
	Cleaning washing and removing rubbish and silt from the site	5	88.27	441.35
				<b>76374.22</b>
	Contingency			633.78
	Total			<b>77008</b>

Sl. No.	PARTICULARS	AMOUNT (Rs.)
1	Supply fitting fixing P.V.C pipe of approved make & brand medium duty confirming threaded of match with GI accessories etc. Complete 80 mm. dia P.V.C pipe 44 mtr X 261/-	11,484.00
2	Supply fitting fixing P.V.C of approved make & brand No. Separate payment will be made of accessories 30 mtr. X 151/- per mtr	4530.00
3	Boring deep earth with boring machine of any type of stone soil hard mix soil & with parallel boring hole & something surfaced etc. as per direction of Engg.-incharge. 40mtr X 253/- per mtr	10,120.00
4	3" X 2" Socket 1nos X 115/- each	115.00
5	2" Socket filter 2nos (10'-0' each) X 1040/- each	2,080.00
6	2" X 1/4' Reducing socket 1nos X 95/- each	95.00
7	2" X plug cutter 1 nos x 82/- each	82.00
8	6" X 2" Nipple 1nos X 78/- each	78.00
9	3" Clamp 1nos X 39/- each	39.00
10	3" Wall Guard 1nos X 175/- each	175.00
11	3" Adopter 1nos X 105/- each	105.00
12	2" X 1'4" Elbow 1nos X 45/- each	45.00
13	2" Socket 3nos X 3nos X 43/- each	129.00
14	5/8" Nut bolt 4nos X 9/- each	36.00
15	Cable wire (approved brand) 50mtr X 62/- per mtr	3,100.00
16	Cable Rod iron 36mtr X 16/- per mtr	576.00
17	Solvent cement 1.5 kg X 340/- per kg	510.00
18	1 HP Pump Sagar or equivalent 14200/- (garneted 1 year)	14,200.00
19	Sintex tank 500ltr X 7.50/- per ltr.	3,750.00
20	1" P.V.C (approved brand) ISI 9mtr X 122/- per mtr	1,098.00
21	3/4" P.V.C (approved brand) ISI 25mtr X 109/- per mtr	2,725.00
22	1'4 X 1" Reduser GI 1nos X 40/- each	40.00
23	GI Bend 12nos X 22/- each	264.00
24	1" X 3/4" Tee GI 2nos x 40/- each	80.00
25	1" GI elbow 4nos X 50/- each	200.00
26	3/4" Union 2nos X 45/- each	90.00
27	1" Union 1nos X 55/- each	55.00
28	1'4" X 1/2" 4nos X 45/- each	180.00
29	3/4" gate valve 1nos X 160/- per pvc	160.00
30	1/2" Bid cock 4nos X 70/- each per pvc	280.00
31	1/2 GI nipple 4nos X 32/- each	128.00
32	1" Socket 4nos X 24/- each	96.00
33	3/4" Socket 4nos X 21/- each	84.00
34	Iron clamp 20nos X 4.50/- each	90.00
35	Electrical warring with underground line with all accessories of all materials wire/pipe/switch board/plug/mcv for submersible motor connection	3200.00
36	Pipe line mistri from water tank to delivery line at quarter	900.00
37	2nos 0.25 X 0.25 X 1.2 mtr Brick pillar	880.00
38	1 nos concrete slab (4:2:1) with reinforcement for water tank base fitting & bricks works around the wayer tank complete 1.20 X 1.20 X 0.75	1201.00
<b>TOTAL</b>		<b>63,000.00</b>

## GROWING STOCK SURVEY

## PLOT WISE(UNIT)-20 Mt\*20Mt

Item No	Particulars of Work	Unit	Rate	Total for 614 Nos. of Plot
	Cost of doing the following works in connection with study on Sal coppice regeneration/ growth study (Maintenance of Old Plot-60 Nos. during the year 2014-15 under WP(S)-Divn. II			
1	Cleaning the boundary line mt wide bu cutting jangle etc.,chilchiling and removing the same over 80mt	1 M.D.	183.00	183.00
2	Painting trees at boundary with approved quality paint at BH 5 cm wide etc. complete over 80Rmt.	1 M.D.	183.00	183.00
3	marking/ numbering each stump / tree with black/white paint including cleaning jungles, blazing etc. complete over 400 m2	4.5 MD	183.00	823.50
4	Assisting in taking measurement of different parameters,recording tabulation as format over 1 plot.	1 MD	183.00	183.00
5	Digging boundary trench (20 mt*20 mt) of size (0.30 mt wide X 0.30 mt Depth) X 80 Rmt.	3 MD	183.00	549.00
6	Transportation cost of labour equipments etc from Camp to field per plot	60 Km	7.50	450.00
7	Collection of CFC map from different ranges and Xeroxing the same & supply of paint etc.		128.50	128.50
	<b>Total:-</b>			<b>2,500.00</b>

## GROWING STOCK SURVEY

## SPECIFICATION: 20MT \* 20 MT.(PER UNIT)

SL No	Particulars	Quantity	Rate	Amount (Rs.)
	Cost of doing the following wworks in connection with the study on sal coppice regeneration / growth study(new Area-2014-15) in felling coupe under Bankura (North), Bankura(South) & panchet Division. Total No. of plots= 40 Nos.@ 3600/- =Rs. 1,44,000.00			
1	Laying out plots by clearing jungles, cutting bushes, climbers etc. over 400 M2	1MD	183.00	183.00
2	Cleaning the boundary line 3 mt wide by cutting jungle, bushes over 20 mt * 4 side = 80 Rmt & removing the same.	2 MD	183.00	366.00
3	Digging boundary trenches of size (0.30 mt * 0.30 mt) * 80Rmt per plot-including, levelling etc. complete 6 Mandays per plot	6 MD	183.00	1,098.00
4	Painting Trees at plot boundary line with paint at BH around the trees etc. compleate over 80 Rmt	80 Rmt	4.00	320.00
5	Marking or numbering each stamp & tree with black paint including cleaning jungles etc. compete over 400 M2	3 MD	183.00	549.00
6	Assisting/helping the staff for taking misc. measurements of different parameters recording & tabulating as per format over 1 plot	2 MD	183.00	366.00
7	Transpoatation cost of staff, labourers, field equipments etc. from camp site to field site over 60 km.	60 KM.	8.00	480.00
8	Collection of CFC Mouza Map from different Forest Ranges & xeroxing the same	Per Unit	50.00	50.00
9	Supplying of different colour paints, brash etc.		100.00	100.00
10	Supplying drinking water, arranging field equipments for ready to field works as and when required	Per Unit	88.00	88.00
	<b>Total:-</b>			<b>3,600.00</b>

813

## ESTIMATE FOR ELEPHNAT PROOF TRENCH

Item No	Particulars of Work	Units	Rate Rs.	Amount (Rs.)
	Cost of doing the following works in connection with cutting elephant proof trench size 1.80mt x 1.20mtx2.15mt volume per one running meter =3.2255 m <sup>3</sup>			
1	Cost of cleaning of surface before earth cutting and demarcation per 100 mt	1.500 MD	224.580	336.87
2	Cutting of earth as per requirement for the EPT over 100 rmt =322.5m <sup>3</sup>	322.500	145.000	46762.50
3	Earth compacting in the inner margin off the EPT over 100 mt	11.000	216.000	2376.00
4	Contingencies			37.50
	<b>Total expenses per 100 rmt</b>			<b>49513</b>

814

## ESTIMATE FOR ELEPHANT PROOF TRENCH WITH BOULDERS

Item no.	Particulars of Work	Units	Rate	Amount (Rs.)
	Cost of doing the following works in connection with cutting elephant proof trench size 1.80mt+1.20mtX2.15mt volume per one running meter =3.225 m <sup>3</sup>			
1	Cost of cleaning of surface before earth cutting and demarcation per 100 mt	MD 1.5	224.58	336.87
2	Cutting of earth as per requirement for the EPT over 100 rmt =322.5m <sup>3</sup>	322.5	145	46762.5
3	Earth compacting in the inner margin off the EPT over 100 mt	11	224.58	2470.38
4	Contingencies			37.5
	Total Part 1			<b>49607.25</b>
5	Boulder layering at one side outer edge of trench 100X2.90X0.20 =58 m <sup>3</sup>			0
a	Boulder collection and carriage upto working site over 58 m <sup>3</sup>	58	969	56202
	Total Part 1 and part 2			<b>105809</b>

## POWER FENCING

Average Post Span :10-15 . Number of Line :4 line (3- Phase &amp; 1- Earth)

SI	Description	Unit	Rate 2 Rs.	Amount (Rs.)
1	BASE UNIT FIXED COST:- (Up to kilometer in a stress) Energizer AEI (5Joules), 12 volt 88 /100 amps Exide maintenance free Battery, Solar PV /Module 54/60 watts 12 volt , warning Sign ,Lead out Cable, strain Insulator, Joint Clamp, Super Earth Kit, Neon Tester 5 light indicator solar Battery Charge controller, Tool Kit.	One	98500	98500
2	VERIABLE COST :- Rope gate kit Super Earth Kit, DI Cable, High Tensile Wire 12 SWG (m), Strain   Insulator of polypropylene,  Joint Clamp, Tension Spring Galvaanized, Wire Tightner All Aluminum Die Cast, Post Protection Clamp, corner/thru/pull post 50mm pipe with concrete grouting, support post 25mm pipe & intermediate post 25x25x3 T/L section.	Meter	128	128000
3	Installation, Testing & Commissiong.	per km	9500/km	9500
4	Transportation charge 5 km	1 Job	15000=00	15000
	<b>Total Amount</b>			<b>251000</b>

816

ESTIMATE FOR CSB (JHAW) CREATION FOR SOUTH BENGAL

Labour Rate = Rs. 224.58 Unit = 1 hec.

Sl. No.	Particulars of Works	Unit/ MD	Rate of MD (Rs)	Amount in Rs.
	<b>Cost of doing following works in connection with creation of CSB Jhaw.pltn.</b>			
	<b>A. Nursery Works:-</b>			
1	Cost of making shade with splitted Bamboo, rope thatch of size (4.0 mt. x 1.50 mt.) and supply of Oil cake etc.	L.S.	800.00	800.00
2	Cost of sorting, shifting of seedlings & application of Oil cake	L.S.	900.00	900.00
3	Cost of weeding, cleaning & watering of potted seedlings for 3 months	L.S.	800.00	800.00
	<b>B. Field Works:-</b>			
1	Cost of digging planning pits 1600 nos. @ 25 MD	18	224.58	4042.44
2	Cost of digging planting pits 448 nos. of size 0.60 mt. x 0.45 mt. x 0.45 mt.	19	224.58	4267.02
3	Cost of making conical shape earthen mounts of dia 1.0 mt. as base over 1600 nos.	25	224.58	5614.50
4	Infilling planting in the vacancy area over 1 ha @ 4 MD per ha.	12	224.58	2694.96
5	1 <sup>st</sup> time weeding, cleaning & mulching with fertilizer 18 MD per ha.	18	224.58	4042.44
6	2 <sup>nd</sup> time weeding, cleaning, mulching the planted seedlings 14 MD per ha.	18	224.58	4042.44
7	Cost of application organic manure as per doses prescriber per pit @ 18 MD per ha.	18	224.58	4042.44
8	2 <sup>nd</sup> time cost of application of organic /inorganic fertilizer @ 12 MD per Ha.	12	224.58	2694.96
9	<b>Misc. Works:-</b>			
	i) Seedlings carriage : 1920 on contract &	L.S.		1060.20
	ii) Binding seedlings with sticks			
<b>Total :</b>				<b>35001</b>

817

Fencing work

Unit= 1 hec.

Sl No	Details of works.	Total/ M.D.	Rate (Rs)	T/Cost of M.D.(Rs)	Material comp.			Total. (Rs)
					Inputs / ors.	Rate (Rs)	Total Materials (Rs)	
10	Supply of fencing post of girth 31 cm t- 40 cm of length 1.80 mt. over 66 nos. @92/-				66 Nos.	92	5520	5520.00
11	Supply of barbed wire 2 ply 2 g. / 2 points for erection of barbed wire fencing 4 strands				60 kg.	69	3864	3864.00
12	Making holes for embedding the fencing post for erection of barbed wire fencing over 35 nos.	3	224.58	673.74				673.74
13	Cost of straining barbed wire by fitting, fixing staples	2	224.58	449.16				449.16
14	Fencing Materials i) Staple				LS	LS	181.70	253.15
	ii) Collar				0.5 tin	880	440.00	440.00
	<b>Total :-----</b>							<b>11200.05</b>
<b>Grand Total :</b>				<b>Rs. 46201</b>				

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## BOUNDARY RCC PILLARS of size 1.20m\*0.25m SOUTH BENGAL

Sl No.	Particulars of work	No	h	l	b	Vol.	Unit	Rate	Amount (Rs.)	Remarks pg. ref. as per PWD Schedule 2014
1	Ordinary cement concrete works(1:1:5:3) graded stone chips (20 mm Down) etc.-pakur variety	1	1.05	0.25	0.25	0.06	M3			
		1	0.45	0.15	0.25	0.01	M3			
					Total:	0.07	M3	6755.28	472.86	P/14-7/(1)&25/11-3
2	Hire and labour charges of shuttering etc.	1	1.05	1.00		1.05	M2			
		1	0.85	0.25		0.21	M2			
					Total:	1.26	M2	389	490.14	P/26/12©
3	M.S Reinforcement including bending, binding etc 8mm.Dia 4Nos * 1.05 Rmt.=4.20Rmt 4Nos. * 0.40 Rmt.=1.60Rmt 8Nos. * 0.50 Rmt.=4.00Rmt Total: 9.80Rmt	0.39 Kg/ Mt.	9.80			3.82	Kg			
						3.82	Kg			
	(+) Add 10% for cutting, bending,lapping etc:				Total	0.38	Kg			
		Or	Say		Over:	4.2	Kg	68.35	287.07	P/27/15(1)
4	15.0 mm thick Plastering with 6:1 cement mortar etc:	1	1.05	1.00		1.05	M2			
		3	0.15	0.25		0.11	M2			
		1	0.20	0.25		0.06	M2			
		3	0.45	0.25		0.33	M2			
					Total	1.52	M2	144.00	218.88	P/151/2(I)( c)
5	Engraving "FD" letter in both opposite facing side etc.				2 Nos.	5.54	each		11.08	
								Total:-		
									1480.03 or say	
Total:-									1,480.00	

(Rupees One thousand four hundred eighty only)

[illegible]

**(Rupees Three Thousand Three Hundred Thirty Five ) only**

**901 Survey Monitoring of 1<sup>st</sup> year Plantation (Sampling Intensity 7.5%) Per Plot of 20 ha JICA**

<b>Sl. No</b>	<b>Particulars of Work</b>	<b>Rate</b>	<b>Amount (Rs) Per Ha.</b>
<b>1</b>	Hiring of Vehicle for Survey Monitoring works @ Rs. 12 per Km (including fuel etc.) by the concerned Range Officer & staff.	<b>L.S</b>	2160.00
<b>2</b>	Cost of carrying survey materials, files, forms etc. manually up to non- motorable plots and engaging labors for helping in checking area of plantation created and counting for enumeration (3 plots X 2500 sq. m) including demarcation of sample plots by making earthen mound in four corner with pegging painted with color for easy identification. (3 plots X 4 nos. pegs)	<b>8 md @ Rs.221</b>	1768.00
<b>3</b>	Laying out sample plots (size 50m X50m) and taking measurement i.e collar girth, BHG etc. of seedlings and enumeration of old natural / planted trees within the sample plot. ( 3 plots X 2500 sq.m)	<b>6 md @ Rs. 221</b>	1326.00
<b>4</b>	Purchase of tracing paper, printing of Data Sheet and final report, computer paper, printer, cartridge etc. and other overhead charges required for works related with Monitoring & Evaluation.	<b>L.S</b>	200.00
<b>5</b>	Engaging persons for computation & tabulation of Field Data in the new Monitoring evaluation enumeration forms at the Division Office	<b>L.S</b>	2000.00
<b>6</b>	Hiring of vehicle for Inspection of survey monitoring works in the field by DFO & higher authorities.	<b>L.S</b>	2500.00
<b>7</b>	Contingency	<b>L.S</b>	46.00
	<b>Total cost for 20 Ha.</b>		<b>10000.00</b>
	<b>Total cost for 1 Ha.</b>		<b>500.00</b>
	<b>(Rupees Five Hundred Only)</b>		

**902 Survey Monitoring of 1<sup>st</sup> year Plantation (Sampling Intensity 7.5%) Per Plot of 20 ha State Plan**

<b>Sl. No</b>	<b>Particulars of Work</b>	<b>Rate</b>	<b>Amount (Rs) Per Ha.</b>
<b>1</b>	Hiring of Vehicle for Survey Monitoring works @ Rs. 12 per Km (including fuel etc.) by the concerned Range Officer & staff.	<b>L.S</b>	2160.00
<b>2</b>	Cost of carrying survey materials, files, forms etc. manually up to non- motorable plots and engaging labors for helping in checking area of plantation created and counting for enumeration (3 plots X 2500 sq. m) including demarcation of sample plots by making earthen mound in four corner with pegging painted with color for easy identification. (3 plots X 4 nos. pegs)	<b>8 md @ Rs.221</b>	1768.00
<b>3</b>	Laying out sample plots (size 50m X50m) and taking measurement i.e collar girth, BHG etc. of seedlings and enumeration of old natural / planted trees within the sample plot. ( 3 plots X 2500 sq.m)	<b>6 md @ Rs. 221</b>	1326.00
<b>4</b>	Purchase of tracing paper, printing of Data Sheet and final report, computer paper, printer, cartridge etc. and other overhead charges required for works related with Monitoring & Evaluation.	<b>L.S</b>	200.00
<b>5</b>	Engaging persons for computation & tabulation of Field Data in the new Monitoring evaluation enumeration forms at the Division Office and field visit.	<b>L.S</b>	1500.00
<b>6</b>	Contingency	<b>L.S</b>	46.00
	<b>Total cost for 20 Ha.</b>		<b>7000.00</b>
	<b>Total cost for 1 Ha.</b>		<b>350.00</b>
	<b>(Rupees Three Hundred Fifty Only)</b>		

**903 Survey Monitoring of 3<sup>rd</sup> & 5<sup>th</sup> year Plantation (S. Intensity 5%) Per Plot of 30 ha State Plan**

<b>Sl. No</b>	<b>Particulars of Work</b>	<b>Rate</b>	<b>Amount (Rs) Per Ha.</b>
<b>1</b>	Hiring of Vehicle for Survey Monitoring works @ Rs. 12 per Km (including fuel etc.)	<b>L.S</b>	2160.00
<b>2</b>	Cost of carrying survey materials, files, forms etc. manually up to non- motorable plots and engaging labors for helping in checking area of plantation created and counting for enumeration (2 plots X 2500 sq. m) including demarcation of sample plots by making earthen mound in four corner with pegging painted with color for easy identification.	<b>8 md @ Rs.221</b>	1768.00
<b>3</b>	Laying out sample plots (size 50m X50m) and taking measurement i.e collar girth, BHG etc. of seedlings and enumeration of old natural / planted trees within the sample plot. ( 2 plots X 2500sq.m)	<b>6 md @ Rs. 221</b>	1326.00
<b>4</b>	Purchase of tracing paper, printing of Data Sheet and final report, computer paper, printer, cartridge etc. and other overhead charges required for works related with Monitoring & Evaluation.	<b>L.S</b>	200.00
<b>5</b>	Engaging persons for computation & tabulation of Field Data in the new Monitoring evaluation enumeration forms at the Division Office and field visit.	<b>L.S</b>	1500.00
<b>6</b>	Engaging labors for plantation sample plot site cleaning and clearing of jungles for conducting survey monitoring works.	<b>L.S</b>	500.00
<b>7</b>	Contingency	<b>L.S</b>	46.00
	<b>Total cost for 30 Ha.</b>		<b>7500.00</b>
	<b>Total cost for 1 Ha.</b>		<b>250.00</b>
	<b>(Rupees Two Hundred Fifty Only)</b>		

**904 Survey Monitoring of Older Plantation (10, 15, 20 years old) (Sampling Intensity 5%)  
(In hills for all plantations irrespective of distances)(Plot size 50m X 50m) Per plot of 30 Ha**

**STATE PLAN**

<b>Sl. No</b>	<b>Particulars of Work</b>	<b>Rate</b>	<b>Amount (Rs) Per Ha.</b>
<b>1</b>	Hiring of Vehicle for Survey Monitoring works @ Rs. 12 per Km (including fuel etc.)	<b>L.S</b>	4600.00
<b>2</b>	Cost of carrying survey materials, files, forms etc. manually up to non- motorable plots and engaging labors for helping in checking area of plantation created and counting for enumeration (2 plots X 2500 sq. m) including demarcation of sample plots by making earthen mound in four corner with pegging painted with color for easy identification.	<b>8 md @ Rs.221</b>	1768.00
<b>3</b>	Laying out sample plots (size 50m X50m) and taking measurement i.e collar girth, BHG, height of the trees etc. of seedlings and enumeration of old natural / planted trees within the sample plot. ( 2 plots X 2500sq.m)	<b>6 md @ Rs. 221</b>	1326.00
<b>4</b>	Purchase of tracing paper, printing of Data Sheet and final report, computer paper, printer, cartridge etc. and other overhead charges required for works related with Monitoring & Evaluation.	<b>L.S</b>	200.00
<b>5</b>	Engaging persons for computation & tabulation of Field Data in the new Monitoring evaluation enumeration forms at the Division Office and field visit.	<b>L.S</b>	1500.00
<b>6</b>	Engaging labors for plantation sample plot site cleaning and clearing of jungles for conducting survey monitoring works.	<b>L.S</b>	300.00
<b>7</b>	Contingency	<b>L.S</b>	56.00
	<b>Total cost for 30 Ha.</b>		<b>9750.00</b>
	<b>Total cost for 1 Ha.</b>		<b>325.00</b>
	<b>(Rupees Three Hundred Twenty Five Only)</b>		

**905 Survey Monitoring of Older Plantation (10,15,20 years old) (Sampling Intensity 5%)  
(In Plains and where plantations are far off)(Plot size 50m X50m) Per plot of 30 Ha**

<b>Sl. No</b>	<b>Particulars of Work</b>	<b>Rate</b>	<b>Amount (Rs) Per Ha.</b>
<b>1</b>	Hiring of Vehicle for Survey Monitoring works @ Rs. 12 per Km (including fuel etc.)	<b>L.S</b>	3800.00
<b>2</b>	Cost of carrying survey materials, files, forms etc. manually up to non- motorable plots and engaging labors for helping in checking area of plantation created and counting for enumeration (2 plots X 2500 sq. m) including demarcation of sample plots by making earthen mound in four corner with pegging painted with color for easy identification.	<b>8 md @ Rs.221</b>	1768.00
<b>3</b>	Laying out sample plots (size 50m X50m) and taking measurement i.e collar girth, BHG, height of the trees etc. of seedlings and enumeration of old natural / planted trees within the sample plot. ( 2 plots X 2500sq.m)	<b>6 md @ Rs. 221</b>	1326.00
<b>4</b>	Purchase of tracing paper, printing of Data Sheet and final report, computer paper, printer, cartridge etc. and other overhead charges required for works related with Monitoring & Evaluation.	<b>L.S</b>	200.00
<b>5</b>	Engaging persons for computation & tabulation of Field Data in the new Monitoring evaluation enumeration forms at the Division Office and field visit.	<b>L.S</b>	1500.00
<b>6</b>	Engaging labors for plantation sample plot site cleaning and clearing of jungles for conducting survey monitoring works.	<b>L.S</b>	300.00
<b>7</b>	Contingency	<b>L.S</b>	106.00
	<b>Total cost for 30 Ha.</b>		<b>9000.00</b>
	<b>Total cost for 1 Ha.</b>		<b>300.00</b>
	<b>(Rupees Three Hundred Only)</b>		



**906 Survey Monitoring of Older Plantation (10, 15,20 years old) (Sampling Intensity 5%)  
(In Plains and where plantations are nearby)(Plot size 50m X50 m) Per plot of 30 Ha**

<b>Sl. No</b>	<b>Particulars of Work</b>	<b>Rate</b>	<b>Amount (Rs) Per Ha.</b>
<b>1</b>	Hiring of Vehicle for Survey Monitoring works @ Rs. 12 per Km (including fuel etc.)	<b>L.S</b>	3100/-
<b>2</b>	Cost of carrying survey materials, files, forms etc. manually up to non- motorable plots and engaging labors for helping in checking area of plantation created and counting for enumeration (2 plots X 2500 sq. m) including demarcation of sample plots by making earthen mound in four corner with pegging painted with color for easy identification. (2 plots X 4 nos. pegs)	<b>8 md @ Rs.221</b>	1768.00
<b>3</b>	Laying out sample plots (size 50m X50m) and taking measurement i.e collar girth, BHG, height of the trees etc. of seedlings and enumeration of old natural / planted trees within the sample plot. ( 2 plots X 2500sq.m)	<b>6 md @ Rs. 221</b>	1326.00
<b>4</b>	Purchase of tracing paper, printing of Data Sheet and final report, computer paper, printer, cartridge etc. and other overhead charges required for works related with Monitoring & Evaluation.	<b>L.S</b>	200.00
<b>5</b>	Engaging persons for computation & tabulation of Field Data in the new Monitoring evaluation enumeration forms at the Division Office and field visit.	<b>L.S</b>	1500.00
<b>6</b>	Engaging labors for plantation sample plot site cleaning and clearing of jungles for conducting survey monitoring works.	<b>L.S</b>	300.00
<b>7</b>	Contingency	<b>L.S</b>	56.00
	<b>Total cost for 30 Ha.</b>		<b>8250.00</b>
	<b>Total cost for 1 Ha.</b>		<b>275.00</b>
	<b>(Rupees Two Hundred Seventy Five Only)</b>		