

**SCHEME FOR COMPENSATORY  
AFFORESTATION OVER 169.72 HA. OF  
DEGRADED FOREST LAND IDENTIFIED  
IN KARO RF UNDER BARBIL FOREST  
RANGE OF KEONJHAR FOREST  
DIVISION AGAINST BOLANI ORE MINES  
(5.10 SQ. MILES)  
OF**

**M/s STEEL AUTHORITY OF INDIA LTD**

ELEMENTS OF THE SCHEME FOR COMPENSATORY AFFORESTATION

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## BRIEF NOTE ON THE PROPOSED FOREST DIVERSION PROPOSAL

Bolani Ores Mines under Raw Materials Division of M/s SAIL, a Govt. of India PSU, is an ongoing mining project for exploitation of Iron Ores in Barbil Tahasil of Keonjhar District. The Mining Lease area is situated in village Bolani, Balagoda & Karo Reserved Forest under Barbil Forest Range of Keonjhar Forest Division. The aforesaid mining lease over 5.10 sq. miles (1321.45 ha) was granted for 30 years with validity from 11.04.1960 to 10.04.1990. First RML was granted for a period of 20 years with effect from 10.04.1990 to 09.04.2010 vide letter No. III (A) SM-1/97-10731/SM, dated 25.11.1999 of Govt. of Odisha, Steel & Mines Department. The 2<sup>nd</sup> RML has been granted for a period of 20 years with effect from 11-04-2010 with validity up to 10.04.2030 vide express order no III(A)SM-1/97-10731/SM. dated 29.05.2014 of Govt. of Odisha, Steel & Mines Department.

The Mining Lease is located within latitude 22°05'11.7"N to 22°07'39.4" N and longitude 85°15'52.7" E to 85° 20'13.8" E in survey of India Topo sheet No. 73 F/8. The total mining lease area of Bolani Ore Mines (5.10 Sq Miles ML) of M/s. SAIL is 1321.45 ha involving 1225.78 ha Forest land & 95.67 ha Non-Forest Land. The total Forest Land over 1225.78 ha includes 1181.66 ha Reserved Forest (Karo RF) & 44.12 ha Revenue Forest land.

The total Forest land involved in the aforesaid mining lease has been diverted U/s 2(ii) of Forest (Conservation) Act-1980 during 2<sup>nd</sup> RML as depicted hereunder-

1. 1152.58 ha Forest land excluding Forest land over 317 ha located in Karo-Karampada elephant corridor vide approval letter F No.8-17/1997-FC(pt.) dt.11.12.2012.
2. 54.05 ha broken Forest land located in Karo-Karampada elephant corridor vide approval letter F No.8-17/1997-FC(pt.) dt.09.07.2013.
3. 262.95 ha Forest land located in Karo-Karampada elephant corridor & 73.2 ha Forest land located in the safety zone vide approval letter F No.8-17/1997-FC(pt.) dt.12.11.2014.

Pursuant to the guideline F No. 8-78/1996-FC(pt.) dt.10.03.2015 read with F No. 8-78/1996-FC(pt.) dt.09.03.2016 of MoEF & CC, Govt. of India, an area over 87.09 Ha Non-forest land has been certified by the Tahasildar, Barbil to be forest land as on 25.10.1980 as per Govt. record out of the total Non Forest land over 95.68 Ha involved in the mining lease. The said non-forest land recorded as forest as on 25.10.1980 has been proposed for diversion under section 2(ii) of FC Act, 1980 vide proposal No. FP/OR/MIN/17936/2016.

The present scheme aims at preparation of a site-specific Compensatory Afforestation scheme over 169.72 ha of degraded forest land identified within Karo RF under Barbil Forest Range of Keonjhar Division i.e. double in extent to the 84.86 ha proposed for diversion with a maintenance period of ten years.

## CHAPTER- II

### DETAILS OF LAND IDENTIFIED FOR COMPENSATORY AFFORESTATION

#### IDENTIFICATION OF DEGRADED FOREST LAND

##### II(1)- Details of identified Forest land-

The identified Forest land for Compensatory Afforestation is situated in Karo Reserved Forest in Coupe- HRT-VIII & IX of compartment No. 17(P), 18(P) & 19(P) under Haramath Improvement Series of Barbil Range in Keonjhar Forest Division. This Forest Block is allotted to improvement working circle of the present Working Plan.

##### II(2)- Character of existing vegetation of the identified site for Compensatory Afforestation-

The prevailing forest growth has been categorized under forest type- 3C/C2e Moist Peninsular Valley Sal and 5B/C2 Northern Dry Mixed Deciduous Forest. The vegetation consists of Sal and its associates like Jamu, Piasal, Asana, Sisoo, Kuruma, Karada, Dhaura, Khair, Sidha, Harida, Bahada and Ainla.

##### II(3)- Working Plan prescription for the identified site for Compensatory Afforestation-

The prescribed objectives of management for the identified forest block is depicted hereunder-

- Regeneration of degraded forest block by providing silvicultural input.
- Ensuring Soil & Moisture Conservation Measures to enrich the micro-edaphic conditions.
- Tending the existing crop for maximum growth and improving the density condition and composition of the crop.

##### II(4)- Suitability of the identified site for Compensatory Afforestation-

The identified site in Coupe- HRT-VIII & IX of Karo RF is a degraded patch with existing vegetation of Sal and Sal associates. Gaps are sporadically spread over the forest block. The topography of the area is mainly undulating plain having good depth of red boulder mixed soil conducive for plantation under ANR with Gap model @200 seedling per ha. The average maximum temperature is 40° to 45°C and minimum 5° to 10° C and annual rainfall varies from 1100 mm to 1800 mm. The maximum rainfall is received during the rainy season from July to September. The identified site is situated adjacent to village Laserda. The site has been demarcated with 4 feet RCC pillars with erection of durable signboard depicting Scheme, Year, User Agency, Area etc. on it. Therefore, the CA scheme is envisaged to be executed with involvement of Laserda VSS.

### CHAPTER-III

#### DELINEATION OF PROPOSED AREA ON SUITABLE MAP

##### III(1)- GPS COORDINATES AND GPS MAP OF THE COMPENSATORY AFFORESTATION SITE

The area has been demarcated through GPS survey and GPS survey data showing latitude and longitude of each point and their chainage with bearing is also enclosed in the map prepared thereon (Maps enclosed).

### CHAPTER- IV

#### AGENCY RESPONSIBLE FOR COMPENSATORY AFFORESTATION

##### IV(1)- AGENCY RESPONSIBLE FOR PLACEMENT OF FUNDS

The user agency shall provide funds for raising Compensatory Afforestation as per approved scheme.

##### IV(2)- AGENCY RESPONSIBLE FOR EXECUTION OF COMPENSATORY AFFORESTATION

The Territorial Wing of the Forest Department i.e. Divisional Forest Officer, Keonjhar Division will be assigned with the task for execution of the Compensatory Afforestation.

## CHAPTER- V

### DETAILS OF WORK SCHEDULE PROPOSED FOR COMPENSATORY AFFORESTATION

#### A. PLANTING PLAN

Planting Plan reflects the species specific treatment of the identified site. Choice of species is based on the geo-morphology of the site, soil-texture, structure, fertility and depth, proneness of the site to water logging etc. Specific treatment of the site in terms of soil and moisture conservation intervention will be depicted in the treatment map. A treatment map will invariably be prepared for Species to be planted and treatments to be applied to the different patches shown in the treatment map and planting plan. This plan will be followed when actual planting is carried out.

##### Species to be planted:-

1. *Syzgium cumini*(Jamu)
2. *Adina cardifolia* (Kuruma)
3. *Anogeissus latifolia* (Dhaura)
4. *Accacia catechu* (Khair)
5. *Dalbergia sissoo*(Sissoo)
6. *Azadirachta indica*(Neem)
7. *Gmelina arborea* (Gambar)
8. *Terminalia belerica*(Bahada)
9. *Terminalia chebula*(Harida)
10. *Pongamia pinnata* (Karanja)
11. *Emblica officinalis* (Ainla)

#### B. PRE-PLANTING OPERATION

##### B(I)-RAISING OF PLANTATION STOCK- NURSERY-

Nursery will be raised @220 seedlings per ha. including seedlings for 10% causality replacement.

##### B(II)-SURVEY, DEMARCATION & PILLAR POSTING, GPS READING WITH MAPPING-

The planting area has been surveyed and demarcated with four feet height RCC pillars at inter visible distance (as per the direction of the Forest Range officer, Barbil Range) with GPS coordinates, forward and backward bearing, pillar No. and distance between pillars inscribed in it. A GPS map in the scale of 1:4000 has been prepared along with GPS co-ordinates, forward & backward bearing, pillar to pillar distance and pillar numbers reflected in the map. A sign board has been erected at a conspicuous location with name of the site, scheme, area etc. depicted on it.

**B(III)-SITE PREPARATION AND SILVICULTURAL OPERATION INCLUDING CLEARANCE OF WEED, CLIMBER CUTTING, HIGH STUMP CUTTING, SINGLING OF SHOOTS-**

The clearing of the site involving removal of invasive weeds, bushes, climbers, high stumps and singling of shoots will be taken up preferably by the end of February and latest by the end of March. Pits of the dimension 30 x 30 x 30 cm. will be dug @200 per ha. in the available gaps preferably 2 months before or at least a month before planting of seedlings.

**C. PLANTING OPERATION**

Planting of seedlings will be taken up in the month of July. The polythene covering of the balls of earth will be carefully removed before planting. Care will be taken to see that the ball of earth is not broken while doing so. The seedling with the ball of earth will then be placed firmly in the pit and buried at such a depth that the root collar is well below the surface of the soil. The soil around the plant will be well compacted with the heel as a final step so that there is a proper bond between the ball and the surrounding soil. The earth close to the collar will be slightly elevated so that rain water does not accumulate very close to the plant.

**D. POST PLANTING OPERATION**

**D(1)-CASUALTY REPLACEMENT**

The entire area will be gone over in the same order as plantation was carried out and casualties, if any, will be replaced as soon as the main plantation operation is over.

**D(2)-WEEDING AND SOIL WORKING**

Regular and efficient weeding will start immediately after sprouting of the stumps is complete or after the seedlings have started throwing up new buds.

**D(3)-MANURING AND INSECTICIDE APPLICATION**

On degraded sites urban compost or farmyard manure, wherever available, will be added to the soil while refilling the pits. As regards artificial fertilizers, the minerals required and dosage @ 50 grammes of patent mixtures like 'Gromor' or N.P.K. (2:2:1) will be applied in two split doses one in August and the other in September.

**D(4)-SOIL MOISTURE CONSERVATION MEASURES**

Special Soil Moisture Conservation Measures will be taken up through construction of LBCD structures of 3 mtr span to the tune of 30 Nos and 2 mtr span to the tune of 40 Nos over the entire plantation site and staggered trenches of dimension 2.5 x 0.5 x 0.5 mtr to the tune of 60 Nos. per ha over 169.72 ha.

**D(5)-PROTECTION AGAINST FIRE AND GRAZING**

Fire line tracing will be ensured to protect the plantation from fire and watch & ward will be provided as per the approved norm for protecting the plantation from grazing with involvement of Laserda VSS.

## COST STRUCTURE OF PLANTATION, PROVISION OF FUNDS AND UTILIZATION

## A. ESTIMATE OF COST FOR 1.00 HA. UNDER ANR PLANTATION MODEL

0<sup>th</sup> year ( Advance work) Pre-planting operation.

Sl. No.	Item of work	Preferable period of execution	Person days	Labour (₹)	Material (₹)	Total
1	Survey, Demarcation & pillar posting, GPS Reading with mapping	Nov-Dec	2	400	0	400
2	Site preparation.	Nov-Dec	2	400	0	400
3	Silvicultural Operation including clearance of weed, climber cutting, high stump cutting, singling of shoots etc	Jan-Feb	5	1000	0	1000
4	Nursery cost (6 months old seedling) part @`9.45/- seedling (`6.67 in 0 <sup>th</sup> year + `2.78 in 1 <sup>st</sup> year) for 220 seedlings (200+20)	Jan-March	5.5	1100	367	1467
5	Contingency and Unforeseen Expenditures		0	0	133	133
	Sub-Total		14.5	2900	500	3400
1 <sup>ST</sup> YEAR OPERATION						
1	Nursery cost (6 months old seedling) balance @`2.78 for 220 seedling	Apr-Jul	2.5	500	112	612
2	Pitting 30 cm cube size	Feb/Mar	6	1200	0	1200
3	Carriage and planting including casualty replacement	Jul/Aug	5	1000	0	1000
4	Complete weeding, Soil working, Manuring	Aug/Sep	6	1200	0	1200
5	Cost of Vermi compost @200gms/ plant @`20/- per Kg= `800.00 and Granular Insecticide 5 gms/ plant @`80/- per Kg= `80.00	Aug/Sep	0	0	880	880
6	Cost of Chemical fertilizer (a) Urea 70 gms/ plant@`6/- per Kg= `84.00 (b)NPK 50 gms/ plant @`24/- per kg= `240.00 as basal dose.		0	0	324	324
7	Silvicultural Operation involving clearance of weeds, cutting of climbers, singling	Sep/ Oct	15	3000	0	3000



	of shoots etc.					
8	Soil Conservation Measures (Staggered trenches of dimension 2m X 0.5m X 0.5m @60 nos per ha) or its equivalent	Sep/ Oct	20	4000	0	4000
9	Fireline Tracing and Inspection path	Feb/ Mar	3	600	0	600
10	Watch & ward	Aug-Mar	7	1400	0	1400
11	Contingency and Unforeseen Expenditures		0	0	304	304
	Sub-Total		64.5	12900	1620	14520
2 <sup>ND</sup> YEAR OPERATION						
1	Casualty Replacement including cost of seedling, carriage and planting	Jul/ Aug	1	200	189	389
2	Complete weeding and cultural operations	Sep/ Oct	2	400	0	400
3	Soil working and manuring	Sep/ Oct	2	400	0	400
4	Cost of Fertilizer and insecticide (a) Vermi compost @200gms/ plant @`20/- per Kg= `800.00 (b) Granular Insecticides 5 gms/ plant for 20 plants 100 gms @`80/- per Kg= `8.00	Sep/ Oct	0	0	808	808
5	Soil Conservation Measures (Renovation of staggered trenches etc.)	Sep/ Oct	8	1600	0	1600
6	Fireline Tracing and Inspection path	Feb/ Mar	1	200	0	200
7	Watch & ward (whole year)	Apr/ Mar	7	1400	0	1400
8	Contingency and Unforeseen Expenditures		0	0	181	181
	Sub-Total		21	4200	1178	5378
3 <sup>RD</sup> YEAR OPERATION						
1	Complete weeding and cultural operations	Aug/ Sep	1	200	0	200
2	Soil working	Aug/ Sep	1	200	0	200
3	Fireline Tracing and Inspection path	Feb/ Mar	1	200	0	200
4	Watch & ward (whole year)	Apr-Mar	7	1400	0	1400
5	Contingency and Unforeseen Expenditures		0	0	200	200
	Sub-Total		10	2000	200	2200
4 <sup>TH</sup> YEAR OPERATION						
1	Fireline Tracing and Inspection path	Feb/ Mar	1	200	0	200
2	Watch & ward and cultural operations	Apr-Mar	2	400	0	400
	Sub-Total		3	600	0	600

5 <sup>TH</sup> YEAR OPERATION						
1	Fireline Tracing and Inspection path	Feb/ Mar	1	200	0	200
2	Watch & ward and cultural operations	Apr-Mar	2	400	0	400
	Sub-Total		3	600	0	600
6 <sup>TH</sup> YEAR OPERATION						
1	Fireline Tracing and Inspection path	Feb/ Mar	1	200	0	200
2	Watch & ward and cultural operations	Apr-Mar	2	400	0	400
	Sub-Total		3	600	0	600
7 <sup>TH</sup> YEAR OPERATION						
1	Fireline Tracing and Inspection path	Feb/ Mar	1	200	0	200
2	Watch & ward and cultural operations	Apr-Mar	2	400	0	400
	Sub-Total		3	600	0	600
8 <sup>TH</sup> YEAR OPERATION						
1	Fireline Tracing and Inspection path	Feb/ Mar	1	200	0	200
2	Watch & ward and cultural operations	Apr-Mar	2	400	0	400
	Sub-Total		3	600	0	600
9 <sup>TH</sup> YEAR OPERATION						
1	Fireline Tracing and Inspection path	Feb/ Mar	1	200	0	200
2	Watch & ward and cultural operations	Apr-Mar	2	400	0	400
	Sub-Total		3	600	0	600
10 <sup>TH</sup> YEAR OPERATION						
1	Fireline Tracing and Inspection path	Feb/ Mar	1	200	0	200
2	Watch & ward and cultural operations	Apr-Mar	2	400	0	400
	Sub-Total		3	600	0	600
	Grand Total		131	26200	3498	29698

#### ABSTRACT

Year	Person days	Labour	Material	Total
0th Year	14.5	2900	500	3400
1st Year	64.5	12900	1620	14520
2nd Year	21	4200	1178	5378
3rd Year	10	2000	200	2200
4th Year	3	600	0	600
5th Year	3	600	0	600
6th Year	3	600	0	600
7th Year	3	600	0	600
8th Year	3	600	0	600
9th Year	3	600	0	600
10th Year	3	600	0	600
Total	131	26200	3498	29698
Total Cost Norm per ha.				29698
Total Cost of plantation (169.72 ha.)				5040345

### ADDITIONAL COST PROPOSED

1	SMC measures- LBCD structure of 2mtr span @ Rs. 5389/- for 40 structures.	215560.00
2	SMC measures- LBCD structure of 3 mtr span @ Rs. 11248/- for 30 structures.	337440.00
3	Staggered trenches @Rs. 9160/- for 60 Nos per ha. over 169.72 ha.	1554635.00
4	Additional incentive (3%) for VSS/Fr./FG proposed for more than 80% survival and very good growth during 4 <sup>th</sup> year of maintenance as per recommendation of DFO and RCCF. @Rs. 891/- for 169.72 ha.	151221.00
5	Additional EPA expenses if implemented through VSS at rate Rs.1200/- in 0 <sup>th</sup> Year, Rs.2400/- in 1 <sup>st</sup> Year, Rs.1800/- in 2 <sup>nd</sup> Year, Rs.600/- in 3 <sup>rd</sup> Year, Rs.600/- in 4 <sup>th</sup> Year, Rs.600/- in 5 <sup>th</sup> Year, Rs.600/- in 6 <sup>th</sup> year, Rs.600/- in 7 <sup>th</sup> year, Rs.600/- in 8 <sup>th</sup> year, Rs.600/- in 9 <sup>th</sup> year, Rs.600/- in 10 <sup>th</sup> year @ Rs. 10200/- per ha for 169.72 ha	1731144.00
	Total	3990000.00

N.B:- Unit cost of LBCD structures of different dimension along with staggered trenches is enclosed as Annexure- I , II & III.


### TOTAL COST OF PROJECT

1.	Plantation over 169.72 ha @ Rs.29698/- per ha.	50,40,345.00
2	Total additional cost	39,90,000.00
	Total	90,30,345.00
5	Add 10% escalation	9,03,035.00
	Grand Total	99,33,380.00

(Rupees ninety-nine lakh thirty-three thousand three hundred eighty) Only

### A. PROVISION OF FUNDS AND FUND UTILIZATION


Rs. 99,33,380.00 (Rupees ninety-nine lakh thirty-three thousand three hundred eighty) only shall be deposited by the User Agency M/s Steel Authority of India Limited on approval of the scheme to the Ad-hoc CAMPA Account and the funds will be utilized for raising of Compensatory Afforestation by the Divisional Forest Officer, Keonjhar Division on allotment by the Principal Chief Conservator of Forests, Odisha, Bhubaneswar.

  
 Divisional Forest Officer,  
 Keonjhar Division

## CHAPTER- VII

### DETAILS OF PROPOSED MONITORING MECHANISM

Compensatory Afforestation will be taken up in the identified site by the Range Officer, Barbil Range of Keonjhar Division. The Range Forest Officer, Barbil Range will undertake field checks of the works undertaken at the identified site and will be cross checked by the Asst. Conservator of Forests, (Affn.) and Divisional Forest Officer, Keonjhar Division. GPS co-ordinates along with other required informations of Compensatory Afforestation will be uploaded in the e-Greenwatch Portal of NIC, MoEF, Govt. of India for the purpose of online monitoring. Annual progress of plantation involving growth of planted seedlings, survival percentage etc. will be monitored and recorded in the plantation journal by the field staffs of Barbil Range and reported to the Divisional Forest Officer for necessary action. The same thing will be reported to the Regional Chief Conservator of Forests, Rourkela Circle and Chief Conservator of Forests (PP&A), O/o the Pr. Chief Conservator of Forests, Odisha, Bhubaneswar and necessary corrective measures will be followed if required so.

  
Divisional Forest Officer,  
Keonjhar Division

## ESTIMATE OF COST FOR ONE LOOSE BOULDER STRUCTURE

It has been proposed to take up Soil Conservation Measures by construction of Loose Boulder Structure over the plantation site of size 3 mtr span to the tune of 30 Nos and 2 mtr span to the tune of 40 Nos. The unit cost of LBCD structure is produced hereunder-


The unit cost of LBCD structure of 2 mtr span size is produced hereunder

Sl. No.	Item of activity	Cost per unit (Rs.)	Total unit (No/ Cum)	Total cost (in Rs.)
1.	Leveling the unshaped surface of the selected site & layout the structure foundation L.S. 1 MD.	200	1	200
2.	Excavation of foundation in hard soil within initial lead of 50 mtr. including rough dressing and breaking of clods to maximum size 5 cm. to 7 cm. laying in layer not exceeding 0.3 in depth to strengthening both side U/S approx. bund of loose boulder structure.	66.67	3.63	242.01
	Base with apron- $1 \times 3.70 \times 3.00 \times 0.30 = 3.33$			
	Wing wall- $4 \times 0.50 \times 0.50 \times 0.30 = 0.30$			
	@ Rs.6667.00 per 100 cum.			
3.	Rough stone dry packing	571.87	8.65	4946.67
	up to GL			
	Base with apron- $1 \times 3.70 \times 3.00 \times 0.30 = 3.33$			
	Wing wall- $4 \times 0.50 \times 0.50 \times 0.30 = 0.30$			
	Above GL			
	Super structure $1 \times 2.00 \times (2.70 + 0.60)/2 \times 0.60 = 1.980$			
	Wing wall- $4 \times 0.50 \times 0.50 \times 0.50 = 0.50$			
	Side wall-			
i.	$2 \times (0.50 + 1.10)/2 \times 0.9 \times 0.5 = 0.72$			
ii.	$2 \times (0.5 + 1.10)/2 \times 1.2 \times 0.5 = 0.96$			
iii.	$2 \times 0.6 \times 0.6 \times 0.5 = 0.36$			
iv.	$2 \times 1.0 \times 0.5 \times 0.5 = 0.50$			
	@ Rs.571.87 per cum			
	G. Total:-			5388.68 or 5389.00

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Divisional Forest Officer,  
Keonjhar Division

Span of 3 Mtr. Size

Sl. No.	Item of activity	Cost per unit (Rs.)	Total unit (No/ Cum)	Total cost (in Rs.)
1.	Leveling the unshaped surface of the selected site & layout the structure foundation L.S. 1 MD.	200	1	200.00
2.	Excavation of foundation in hard soil within initial lead of 50 mtr. including rough dressing and breaking of clods to maximum size 5 cm. to 7 cm. laying in layer not exceeding 0.3 in depth to strengthening both side U/S approx. bund of loose boulder structure.	66.67	6.42	428.02
	Base with apron- $1 \times 5.10 \times 4.00 \times 0.30 = 6.12$			
	Wing wall- $4 \times 0.50 \times 0.50 \times 0.30 = 0.30$			
	@ Rs.6667.00 per 100 cum.			
3.	Rough stone dry packing	571.87	18.57	10619.62
	up to GL			
	Base with apron- $1 \times 5.10 \times 4.00 \times 0.30 = 6.12$			
	Wing wall- $4 \times 0.50 \times 0.50 \times 0.30 = 0.30$			
	Above GL			
	Super structure - $1 \times (4.10 + 0.60)/2 \times 1.00 \times 3.0 = 7.05$			
	Wing wall- $4 \times 0.50 \times 0.50 \times 0.50 = 0.50$			
	Side wall-			
i.	$2 \times (0.50 + 1.50)/2 \times 1.5 \times 0.5 = 1.50$			
ii.	$2 \times (0.5 + 1.50)/2 \times 2.0 \times 0.5 = 2.00$			
iii.	$2 \times 0.6 \times 1.0 \times 0.5 = 0.60$			
iv.	$2 \times 1.0 \times 0.5 \times 0.5 = 0.50$			
	@ Rs.571.87 per cum			
	G. Total:-			11247.64 Or 11248.00


  
 Divisional Forest Officer,  
 Keonjhar Division

Annexure- III

ESTIMATE OF COST FOR ONE SPECIAL SMC STRUCTURE (2.5 Mtr. x 0.5 Mtr. x 0.5 mtr.)

The unit cost of Staggered Trench of size 2.5 mtr x 0.5mtr x0.5mtr along with Agave Plant on the dugout soil is produced hereunder-

Sl. No.	Item of activity	Cost per unit (Rs.)	Total unit (No/ Cum)	Total cost (in Rs.)
1	Earth Work in excavation if staggered trench in hard soil including Rough dressing and leveling the beds and heaping the dugout soil at the downhill side of the trench and leveling the same too. Size of a trench = 2.5 Mtr x 0.5 Mtr x 0.5 Mtr @ 130 MD/ ha for 300 Nos.	86.67	1	86.67
2.	Cost of Agave Planting on the dugout soil and its maintenance including weeding, soil working, manuring, cost of fertilizer etc. for seven years 03 nos. of Agave plants per trench @ Rs.22.00 per plant on LS	22.00	3	66.00
	Total cost per trench	108.67	4	152.67
	Cost of 60 nos. of Staggered Trenches per ha			9160.00
	Cost of Staggered Trenches for 169.72 ha			1554635.00

  
 Divisional Forest Officer,  
 Keonjhar Division