

## **CHAPTER-I**

### **BRIEF NOTE ON THE PROPOSED FOREST DIVERSION PROPOSAL**

Ghoraburhani – Sagasahi Iron ore block of M/s Essar Steel India Ltd over an area of 139.165 ha situated in Sagasahi, Kalamang and Ghoraburhani village under Koira Tehsil of Sundargarh District under jurisdiction of Koira Forest Range of Bonai Division. During verification of the land schedule allotted for said Mining Lease area it is found that the total area over 139.165 hectare consists of 76.666 ha Mendhamarani PRF, 3.794 ha Village Forest, 45.941 ha DLC Forest and 12.764 ha non-forest land.

The said mining block, allotted through auction in favour of M/s Essar Steel India Ltd, finds place within the latitude  $21^{\circ}56'08.83896''$  to  $21^{\circ}57'09.61956''$ N and longitude  $85^{\circ}17'02.542096''$  to  $85^{\circ}17'57.53148''$ E in survey of India Topo Sheet No. F45N5 (73 G/5). The area of the allotted mining block over 139.165 ha, on verification of land schedule by Tahasildar, Koira, comes to 139.165 ha.

Forest Diversion Proposal bearing Proposal No. FP/OR/MIN/18611/2016 over 126.401 ha (PRF - 76.666 ha, Village Forest - 3.794 ha and 45.941 ha DLC Forest) under Sec. 2(iii) of F. C. Act, 1980 including 5.563 ha forest land abide for Safety Zone along the Lease boundary and village road. Out of the above applied area under Section 2(iii) of FC Act 1980, an area over 120.838 Ha excluding the safety zone is also being simultaneously applied under Section 2(ii) of FC Act, 1980 for diversion, under the same proposal for a period of 50 years as would be coterminous with the lease period under Section 8(A) 2 of MMDR Amendment Act, 2015.

The present Compensatory Afforestation scheme is prepared at the prevailing wages @Rs. 213.50 per man days over 120.838 ha Non-forest Govt. land identified in village Podadihi under BJP Range of Banspal Tahasil allotted for the said purpose vide letter No. 1174/Rev dt. 11.07.2017 of Collector, Keonjhar, with maintenance period of 10 (ten) years.

## **CHAPTER- II**

### **DETAILS OF LAND IDENTIFIED FOR COMPENSATORY AFFORESTATION**

#### **A. LAND IDENTIFICATION AND JOINT VERIFICATION OF THE IDENTIFIED SITE.**

The site for Compensatory Afforestation has been identified in village Podadihi under Bansapal Tahasil in B.J.P. Range of Keonjhar Forest Division over 120.838 ha and has been jointly verified by the Tahasildar, Bansapal, Revenue Inspector, Suakati, Range Officer, B.J.P. Range and Forest Section Officer, Suakati. The identified land has been allotted in favour of Ghoraburhani – Sagarahi Iron ore block of M/s Essar Steel India Limited by the Collector, Keonjhar vide letter No 1174/Rev dt. 11.07.2017. The identified site bears Khata No. 67(AAA).

#### **B. INFORMATION ON NON-ENCROACHMENT AND NON-ENCUMBRANCE.**

The Tahasildar, Bansapal has given certificate of non-encroachment and non-encumbrance in respect of the non-forest Govt. land identified and allotted for Compensatory Afforestation over 120.838 ha in favour of Ghoraburhani – Sagarahi Iron ore block of M/s Essar Steel India Limited.

#### **C. INFORMATION ON LAND STATUS.**

The land scheduled and land status identified and allotted for Compensatory Afforestation is furnished hereunder:-

Tahasil	Village	Khata No.	Plot No.	Area(in Ha)	Kissam.
Bansapal	Podadihi	67(AAA)	329(P)	15.200	Parbat- I
			361(P)	2.400	Parbat- I
			537(P)	3.600	Parbat- II
			538	12.780	Parbat- I
			539	14.519	Parbat- I
			565	16.800	Parbat- I
			566(P)	8.701	Parbat- II
			499(P)	18.040	Parbat- I
			500(P)	13.538	Parbat- II
			501	15.260	Parbat- I
			<b>Total</b>	<b>120.838</b>	

#### **D. SUITABILITY OF IDENTIFIED SITE FOR COMPENSATORY AFFORESTATION.**

The identified land is free from encroachment and encumbrance. This land is neither covered under Section-4 of Orissa Forest Act, 1972 nor included in DLC report.

The non-forest Govt. land identified in village Podadihi is in two patch situated on upland with gentle slope and is suitable for Compensatory Afforestation in ANR plantation model@ 1000 seedling per ha over 120.838 ha.

The topography of the area is mainly hilly situated on upland. During the site inspection on dated 18.11.2017 it is observed that in most of the area, the top soil is eroded due to “Podu cultivation” in the past. The soil is prone to erosion necessitating soil-moisture conservation measures. Available depth of lateritic-loam soil is conducive for plantation, but in most of the area there is a requirement of foreign soil for better growth of plantation coupled with suitable soil-moisture conservation measures. This necessitates the undersigned to adopt Bald Hill Plantation norms approved by PCCF, Odisha. The norms provided in this project is proportionately reduced to accommodate 1000 plants/ ha. The average temperature varies from 13.5° C minimum in December to 45°C maximum in May. The annual rainfall varies from 1200 mm to 1500 mm. The maximum rainfall is received during the rainy season from July to September. The identified land is considered for Compensatory

Afforestation in ANR plantation over 120.838 ha. The CA scheme is envisaged to be executed with involvement of Podadihi 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 16 nos of 4' height RCC pillars have been posted around the identified area and the GPS survey data showing latitude & Longitude of each point and their chainage with bearing has been depicted in the village sheet map (Map Enclosed). A durable sign board has been erected at the identified site at a conspicuous location with name of the project, year of allotment, name of the scheme, details of plots etc. depicted there on.

### **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 the 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 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. The Range Officer, BJP Range has submitted verification report vide his memo No. 275 dated 26.10.2017 with his specific observations that on an average 1000 plants/ ha can be planted in the proposed CA site. The report of GIS based DSS is enclosed herewith.

#### **Species to be planted:-**

1. *Syzygium 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 @1100 seedlings per ha including seedlings for 10% casualty replacement for 120.838 ha.

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

The planting area has been surveyed and demarcated through GPS survey and 38 nos of 4' height RCC pillars have been posted at inter visible distance (as per the direction of forest Range Officer, BJP Range) with GPS co-ordinates, 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 and backward bearing, pillar No. and distance between pillars reflected in the map. A durable 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 @1000 per ha over 120.838 ha 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 gms 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 dimension 10' x 10' x 5' to the tune of 150 nos. over the entire plantation site.

#### **D(5)-PROTECTION AGAINST FIRE AND BIOTIC INTERFERENCE**

It is proposed to protect the CA plantation from grazing by domestic animals using Barbed wire fencing (7 Strands). The total length of such Barbed wire fencing for both the patches which comes to 7.48 Km (7480 M). 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 Podadihi VSS.

## CHAPTER- VI

### **COST NORM FOR COMPENSATORY AFFORESTATION @ 1000 PLANTS PER HECTARE (NORM AS APPLICABLE FOR BALD HILL PLANTATION)**

**Labour cost @ Rs 213.50 per manday**

Sl No	Item of work	Preferable period of execution	Manday	Labour cost @ Rs 213.50 per day	Material cost per hectare in Rs	Total cost per hectare in Rs.
<b>Preparatory operation (0<sup>th</sup> Year)</b>						
1.	Survey and demarcation	June	2	427.00	0	427.00
2.	Pitting (1000 per ha) each pit 45cm <sup>3</sup>	Nov-Dec	80	17080.00	0	17080.00
3.	Soil and water conservation measures (a) Staggered trench along the contour @ 300 per ha (2.5mx0.5mx0.5m), digging of percolation pits @ 600 per ha in lieu of staggered trenches, gully plugging and Drainage line treatment, half moon trench on the uphill side of each planting pit (100 MD for staggered trench/ percolation pits and 30 MD for gully plugging, drainage line treatment and half moon trench)	Sept-Nov	130	27755.00	0	27755.00
	(b) Site clearance-8 MD. Alignment and staking of contour lines on ground, planting pits, contour trenches/ percolation pits and check dam sites etc.-2 MD	July-Aug	10	2135.00	0	2135.00
4	Raising of seedlings in poly bags (minimum 60 cm high) @ Rs 9.45 per seedling (Rs 6.67 in 0 <sup>th</sup> year) Part (1100 saplings to be raised for one hectare from January-March @ Rs 7708/-	October-March	27.5	5871.00	1837.00	7708.00
<b>Total 0<sup>th</sup> year</b>			<b>249.5</b>	<b>53268.00</b>	<b>1837.00</b>	<b>5510500</b>
<b>Planting Operation (1<sup>st</sup> Year)</b>						
1	Cost of sapling (balance) from April-June/July @ Rs 2.78 per seedling for 1100 seedlings = Rs. 3240/-	April-July	13.44	2869.00	371.00	3240.00
2	Freshening of pits, filling with fertile soil and farm yard manure (FYM), application of insecticide and planting of 60 cm tall saplings including carriage of plants	June-July	68.125	14545.00	0	14545.00
3	Cost of fertile soil 0.25 cft @ Rs 6 per cft/ FYM 0.25 cft @ Rs 15 per cft per pit		0	0	5750.00	5750.00
4	Carriage. Planting including casualty replacement, fertilizer application, 1 <sup>st</sup> weeding, 2 <sup>nd</sup> weeding, soil working.	July-August	22.5	4804.00	0	4804.00
6	Cost of fertilizer and insecticide (Granular insecticide @ 5gms/plant @Rs 80/- per kg, NPK 100 gms/plant in two doses @ Rs 24 per kg		0	0	2800.00	2800.00
7	Maintenance of Soil and Moisture Conservation measures (20% of cost)	October-December	26	5551.00	0	5551.00
8	Closure to grazing, fire and other biotic	April-	30	6405.00	0	6405.00

	interference by engaging watch & ward	March				
9	Fire tracing and control, display board construction, painting/writing, other miscellaneous cost	Jan-Feb	10	2135.00	360.00	2495.00
	<b>Total (1<sup>st</sup> year)</b>		<b>170.065</b>	<b>36309.00</b>	<b>9281.00</b>	<b>45590.00</b>

#### Maintenance Operation (2<sup>nd</sup> Year)

1	Casualty replacement including seedling cost @ Rs 9.45 per seedling and its transportation	June-July	6.25	1334.00	945.00	2279.00
2	Soil working, 1 <sup>st</sup> weeding, 2 <sup>nd</sup> weeding and fertilizer application	August-October	14.375	3069.00	0	3069.00
3	Cost of fertilizer @ 50 gms NPK per plant. Insecticide @ 5 gm per plant		0	0	1240.00	1240.00
4	Maintenance of Soil and Moisture Conservation measures (20% of cost)	August-October	26	5551.00	0	5551.00
5	Fire tracing and control, and other miscellaneous cost	Feb-March	10	2135.00	0	2135.00
6	Closure to grazing, fire and other biotic interference by engaging watch & ward	April-March	30	6405.00	0	6405.00
	<b>Total 2<sup>nd</sup> Year</b>		<b>86.625</b>	<b>18494.00</b>	<b>2185.00</b>	<b>20679.00</b>

#### Maintenance Operation (3<sup>rd</sup> Year)

1.	S.M.C measures (Renovation)-	April-March	26	5551.00	0	5551.00
2	Maintenance of plantation	Apr-Mar	11.25	2402.00	0	2402.00
3	Closure to grazing, fire and other biotic interference by engaging watch & ward	April-March	30	6405.00	0	6405.00
	<b>Total 3<sup>rd</sup> Year</b>		<b>67.25</b>	<b>14358.00</b>	<b>0</b>	<b>14358.00</b>

#### Maintenance Operation (4<sup>th</sup> Year)

1	S.M.C measures- 21MD, and maintenance of plantation – 14 MD	April-March	35	7472.50	0	7472.50
2	Closure to grazing, fire and other biotic interference by engaging watch & ward	April-March	18	3843.00	0	3843.00
	<b>Total 4<sup>th</sup> Year</b>		<b>53</b>	<b>11315.50</b>	<b>0</b>	<b>11315.50</b>

#### Maintenance Operation (5<sup>th</sup> Year)

1	S.M.C measures- 21MD, and maintenance of plantation – 14 MD	April-March	35	7472.50	0	7472.50
2	Closure to grazing, fire and other biotic interference by engaging watch & ward	April-March	18	3843.00	0	3843.00
	<b>Total 5<sup>th</sup> Year</b>		<b>53</b>	<b>11315.50</b>	<b>0</b>	<b>11315.50</b>

#### Maintenance Operation (6<sup>th</sup> Year)

1	S.M.C measures- 21MD, and maintenance of plantation – 14 MD	April-March	35	7472.50	0	7472.50
2	Closure to grazing, fire and other biotic interference by engaging watch & ward	April-March	18	3843.00	0	3843.00
	<b>Total 6<sup>th</sup> Year</b>		<b>53</b>	<b>11315.50</b>	<b>0</b>	<b>11315.50</b>

#### Maintenance Operation (7<sup>th</sup> Year)

1	S.M.C measures- 21MD, and maintenance of plantation – 14 MD	April-March	35	7472.50	0	7472.50
2	Closure to grazing, fire and other biotic interference by engaging watch & ward	April-March	18	3843.00	0	3843.00
	<b>Total 7<sup>th</sup> Year</b>		<b>53</b>	<b>11315.50</b>	<b>0</b>	<b>11315.50</b>

#### Maintenance Operation (8<sup>th</sup> Year)

1	S.M.C measures- 21MD, and maintenance of plantation – 14 MD	April-March	35	7472.50	0	7472.50
2	Closure to grazing, fire and other biotic interference by engaging watch & ward	April-March	18	3843.00	0	3843.00
	<b>Total 8<sup>th</sup> Year</b>		<b>53</b>	<b>11315.50</b>	<b>0</b>	<b>11315.50</b>

#### Maintenance Operation (9<sup>th</sup> Year)

1	S.M.C measures- 21MD, and	April-	35	7472.50	0	7472.50
---	---------------------------	--------	----	---------	---	---------

2	maintenance of plantation – 14 MD Closure to grazing, fire and other biotic interference by engaging watch & ward	March April-March	18	3843.00	0	3843.00
	<b>Total 9<sup>th</sup> Year</b>		<b>53</b>	<b>11315.50</b>	<b>0</b>	<b>11315.50</b>
<b>Maintenance Operation (10<sup>th</sup> Year)</b>						
1	S.M.C measures- 21MD, and maintenance of plantation – 14 MD	April-March	35	7472.50	0	7472.50
2	Closure to grazing, fire and other biotic interference by engaging watch & ward	April-March	18	3843.00	0	3843.00
	<b>Total 10<sup>th</sup> Year</b>		<b>53</b>	<b>11315.50</b>	<b>0</b>	<b>11315.50</b>
	<b>Total</b>		<b>944.44</b>	<b>201637.50</b>	<b>13303.00</b>	<b>214940.50</b>

### ABSTRACT

Sl. No.	Year	No. Person Days	Labour cost @ Rs. 200/- per day	Material	Total Cost (Rs.)
1	0 <sup>th</sup> year	249.5	53268.00	1837.00	55105.00
2	1 <sup>st</sup> year	170.065	36309.00	9281.00	45590.00
3	2 <sup>nd</sup> year	86.625	18494.00	2185.00	20679.00
4	3 <sup>rd</sup> year	67.25	14358.00	0	14358.00
5	4 <sup>th</sup> year	53	11315.50	0	11315.50
6	5 <sup>th</sup> year	53	11315.50	0	11315.50
7	6 <sup>th</sup> year	53	11315.50	0	11315.50
8	7 <sup>th</sup> year	53	11315.50	0	11315.50
9	8 <sup>th</sup> year	53	11315.50	0	11315.50
10	9 <sup>th</sup> year	53	11315.50	0	11315.50
11	10 <sup>th</sup> year	53	11315.50	0	11315.50
	<b>Total</b>	<b>944.44</b>	<b>201637.50</b>	<b>13303.00</b>	<b>214940.50</b>
<b>Total Cost Norm per ha.</b>					<b>214940.50</b>
<b>Total Cost of plantation (120.838 ha.)</b>					<b>25972980.13</b>

### **ADDITIONAL COST PROPOSED**

1	SMC measures- LBCD structure of dimension 10' x 10' x 5' @Rs. 6844.86/- per LBCD structure for 120 LBCD structures.	821383.20
2	Additional incentive (3% of cumulative expenditure upto 4 <sup>th</sup> year) 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. 5260/- for 120.838 ha.	635607.88
3	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 120.838 ha	1232547.60
4	Barbed Wire Fencing for 7.48 Km. Barbed wire fencing- maintenance @ 5% /Annum for 10 year	750500.00 280687.00
	Barbed wire fencing-Provision of gate @Rs. 9,600/ gate for 4 gates	9600.00
	<b>Sub-Total</b>	<b>11148548.68</b>

**N.B:- Unit cost of LBCD structure along with Barbed wire fencing is enclosed as Annexure- I & II.**

5	One speed moving vehicle for DFO office for monitoring of the plantation (The vehicle should be procured by the User Agency and handed over to the Office of the DFO, Keonjhar)		1800000.00
	Maintenance of vehicle for 10 years (To be taken up by User Agency)	@250000.00	2500000.00
	<b>Sub-Total</b>		<b>4300000.00</b>
	<b>Grand Total</b>		<b>18802407.37</b>

A.

**TOTAL COST OF PROJECT**

1.	Cost of ANR model over 120.838 ha	25972980.13
2	Additional Cost	11148548.68
	<b>Sub Total</b>	<b>37121528.81</b>
3	Add 20% escalation	7424305.76
	<b>Grand Total</b>	<b>44545834.57</b> <b>Or say</b> <b>44545835.00</b>

(Rupees four crore eighty-five lakh seventy thousand four hundred sixty-five) only.

B.

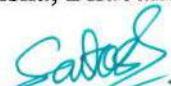
**THE ITEMS TO BE PROVIDED IN KIND**

1.	One speed moving vehicle for DFO office for monitoring of the plantation (The vehicle should be procured by the User Agency and handed over to the Office of the DFO, Keonjhar)	1800000.00
2	Maintenance of vehicle for 10 years (To be taken up by User Agency)	2500000.00
	<b>Total</b>	<b>4300000.00</b>

(Rupees forty-three lakh) only.

**PROVISION OF FUNDS AND FUND UTILIZATION**

Rs. 4,45,45,835/- (Rupees four crore forty-five lakh forty-five thousand eight hundred thirty-five) only shall be deposited by the User Agency i.e. M/s Essar Steel India Limited on approval of the scheme in 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**

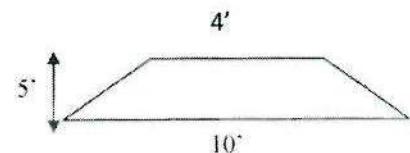
Compensatory Afforestation will be taken up in the identified site by the Range Officer, BJP Forest Range of Keonjhar Division. The Range Forest Officer, BJP Forest Range will undertake field checks of the works undertaken at the identified site and will be cross checked by the Asst. Conservator of Forests, (Afn.) 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 BJP Forest 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.



**S. Sahoo**  
Divisional Forest Officer,  
Keonjhar Division

## Annexure-I

### LOOSE BOULDER CHECK DAM



(A) Size - 10' x 10' x 5'

(i) Requirement of boulder (Procured from quarry)

$$\frac{1}{2} (10' + 4') \times 10' \times 5' = 350 \text{ cft or } 9.90 \text{ cum}$$

Cost of Boulder @ Rs. 199/- per cum for 9.9 cum - Rs. 1,970.00/-

(ii) Labour for construction of LBCD for 1 cum

$$\text{Mulia} \quad 1.04 \text{ No} \times 213.50 = 222.04$$

$$\text{Mason special} \quad 0.17 \text{ No.} \times 273.50 = 46.49$$

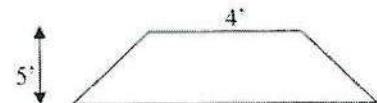
$$\text{Stone packer} - \quad 0.35 \text{ No.} \times 233.50 = 81.72$$

$$\text{Total} \quad \underline{\underline{= 350.25}}$$

$$\text{For 9.90 cum} \quad \underline{\underline{9.90 \times 350.25 =}} \quad \begin{array}{l} \text{Rs. 3467.47/-} \\ \text{Rs. 5437.47/-} \\ \text{(Rounded to Rs 5438/-)} \end{array}$$

Rate for 1 cum Rs. 549.25 per cum or Rs. 550 per cum

### LOOSE BOULDER CHECK DAM



(A) Size-10' x 10' x 5'

(i) Requirement of boulder (Picked up and broken)

$$\frac{1}{2} (10' + 4') \times 10' \times 5' = 350 \text{ cft or } 9.90 \text{ cum}$$

@ Rs.185/- per cum Rs. 1,831.50/-

(ii) Labour for construction of LBCD for 1 cum

$$\text{Mulia} \quad 1.04 \text{ No} \times 213.50 = 222.04$$

$$\text{Mason special} \quad 0.17 \text{ No.} \times 273.50 = 46.49$$

$$\text{Stone packer} - \quad 0.35 \text{ No.} \times 233.50 = 81.72$$

$$\text{Total} \quad \underline{\underline{= 350.25}}$$

$$\text{For 9.90 cum} \quad \underline{\underline{9.90 \times 350.25 =}} \quad \begin{array}{l} \text{Rs. 3467.47/-} \\ \text{Rs. 5298.97/-} \\ \text{(Rounded to Rs 5300/-)} \end{array}$$

For 1 cum Rs.535.25/ cum or Rs. 535/- per Cum

N.B. The cost of transportation with a lead of 5 Kms- Rs.156.40/cum.

ABSTRACT		REMARKS
SL NO.	ITEM	
1	Loose Boulder Check Dam(LBCD) Constructed from the boulder procured from the quarry	Rs. 550/Cum
2	In- situ collected, broken and utilized for construction of LBCD	Rs 535/Cum
3*	Cost of transportation within a lead of 5 Kms	Rs. 156.40/ Cum

\* Rate will be proportionately enhanced for lead more than 5 km in specific cases.

*✓*

Annexure- II

**ESTIMATE OF COST FOR ONE KM BARBED WIRE FENCING**

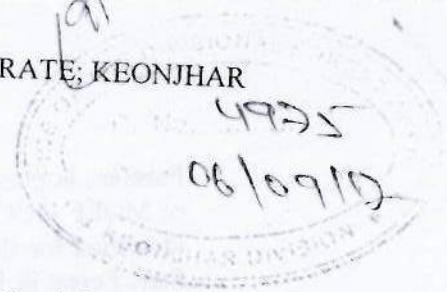
No of pillars required 500 nos.	:		
Cost of 1 pillar	:	Rs.	568.00
Transportation charges	:	Rs.	244.00
Cost of base fixing	:	Rs.	244.00
Cost of fixing barbed wire @ 49.00	:	Rs.	<u>49.00</u>
Total Cost for fixing 1 pillar	:	Rs.	1105.00
Cost for 500 pillars	:	Rs.	5,52,500.00
Cost of barbed wire (1 Qntls.) @ 13,200.00	:		
Cost barbed wire (5+2) strand	:		
7500 mtrs or 15 Qntls.	:	Rs.	<u>1,98,000.00</u>
Total cost for 1 Km.	:	Rs.	7,50,500.00
Total cost for fencing over 7.48 Kms	:	Rs.	5613740.00
Maintenance 5% - Rs.2,80,687/- per annum	:		
For 10 years	:	Rs.	28,06,870.00
Provision of Gate 4 nos. @ Rs.9,600/- per gate	:	Rs.	38,400.00
Total barbed wire fencing over 7.48 Kms. :		Rs.	84,59,010.00

OFFICE OF THE COLLECTOR & DISTRICT MAGISTRATE, KEONJHAR

4/11/12 To

No 1379 /Rev/ Dt 01.09.12

The Divisional Forest Officer,  
Keonjhar Division.Keonjhar



Sub:-

Identification/allotment of non-forest Government land for raising  
Compensatory afforestation for projects of Essar Steel India Ltd.

Ref:-

Your letter No.3310 /Mining dt.17.5.2017 and this office letter No.  
2224 dt.18.10.2016 and letter No.565 dt.5.4.2017

Sir,

With reference to the letters on the subject cited above, I am to say that the following schedule of non-forest government land measuring 150.032 Ha. in village Podadihi under Banspal Tahasil has been identified for raising Compensatory afforestation in lieu of forest land to be diverted for the three projects of Essar Steel India Limited. namely 1.Ghorburhani-Sagasahi Iron Ore block- (120.838 ha.), 2. Slurry , Water Pipelines, power&communication cables from Kalamang(Ghoraburuni-Sagasahi Block) under Koira Tahasil in Sundargarh District to their Beneficiation plant Dabuna under Barbil Tahasil in keonjhar District.(16.466ha.) and 3. Tailings ,Water pipelines,Power & Communication cables from their Beneficiation Plant at Dabuna to proposed Tailing Pond at Sankhari (12.728 ha.) The land has been jointly verified by the Tahasildar,Banspal and Range Officer,BJP Range on dt.21.7.2017.Copy of the joint verification report is enclosed for reference.

Land Schedule

Name of the Tahasil-Banspal  
Name of village-Podadihi

Khata No	Plot No	Area in Ac.	Kisam	Name of the project
67(AAA)	329(P)	15.200	Parbat-I	For Ghorburhani- Sagasahi Iron Ore Block
	361(P)	2.400	Parbat-I	
	537(P)	3.600	Parbat-II	
	538	12.780	Parbat-I	
	539	14.519	Parbat-I	
	565	16.800	Parbat-I	
	566(P)	8.701	Parbat-II	
	499(P)	18.040	Parbat-I	
	500(P)	13.538	Parbat-II	
	501	15.260	Parbat-I	
Total		120.838		
67(AAA)	502	8.100	Parbat-I	For laying ofSlurry,water pipelines,Power &communication cable fromkalamang to Dabuna under Barbil
	503(P)	8.366	Parbat-I	
	Total	16.466		
	503(P)	0.540	Parbat-I	
67(AAA)	504(P)	5.000	Parbat-I	For laying of Tailing Waterpipelines,Power &communication cable from Beneficiation plant at Dabuna to proposed tailing pond at Sankhari under Barbil
	505(P)	7.188	Parbat-I	
	Total	12.788		
	G.Total	150.032		

90

Memo No 1883 /Rev/Dt 01.09.17

Copy forwarded to the General Manager, M/s Essar Steel India Ltd., 3A, 3rd Floor, Fortune Tower, Chandrasekharpur, Bhubaneswar-751023 for information and necessary action with reference to his letter No.59 dt.23.6.2017

B  
22.8.17  
Addl. District Magistrate,  
Keonjhar

6F  
13/11/17

Ref. No. ESIL / CA / PL / 17 / 162  
Date : Nov 13, 2017

6482  
14/11/17



**Essar Steel India Limited**

At/P.O. - Dabuna

Pin - 758034

Via - Joda

Dist - Keonjhar

Odisha, India

[www.essar.com](http://www.essar.com)

CIN - U27100GJ1976FLC013787

To  
The Divisional Forest Officer,  
Keonjhar Forest Division,  
Keonjhar.

Sub: - Undertaking for submission of ORSAC authenticated DGPS Map of Non-Forest land identified for raising Compensatory Afforestation in lieu of diversion of forest land proposed to be diverted for Ghorburhani–Sagasahi Iron ore Block over 120.838 Ha – reg

Ref: 1. Our Application No. ESIL/CA/ Mining/59/2017 dated. 23.06.2017.  
2. Allocation order issued by Collector – No. 1379 dated 01.09.2017

Respected Sir,

With reference to the above cited subject & reference letter nos, we do hereby undertake to submit the ORSAC authenticated DGPS Map of Non-Forest land identified for raising Compensatory Afforestation in lieu of diversion of forest land proposed to be diverted for Ghorburhani – Sagasahi Iron ore Block over 120.838 Ha. before the proposal move from state government to MoEF, Central.

Requesting you to kindly forward our CA scheme for Ghorburhani – Sagasahi Iron ore Block over 120.838 Ha to D.F.O, Bonai for further proceedings.

Thanking you.

Yours faithfully,  
For **Essar Steel India Limited.**

**Authorised Signatory.**

COUNTERSIGNED  
Sarita  
Divisional Forest Officer  
Keonjhar Division



**Beta Version**

Change Password

Logout

Help

**FOREST COVER MAP**

FCM LEGEND

- VERY DENSE FOREST
- MODERATELY DENSE FOREST
- OPEN FOREST
- SCRUB
- NON FOREST

**Forest Cover Map**

FCM Without Grid Result
NON FOREST 0.01
OPEN FOREST 0.45

FCM Without Grid Result

NON FOREST 0.01

OPEN FOREST 0.45

ORISSA

300 m

1000 ft

Lat: 21.382 Long: 85.381

Scale: 1:7553

All results are in Square Kilometer.

**Decision Rule 1**

Get Land/Forest Cover

MIS Application

Get Time Series

Get Result Table

LI Result

DSS Result

FCM Without Grid Result

FTM Without Grid Result

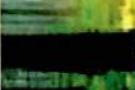
BR Without Grid Result

Time Series Result

Save Result Table



## GIS based Decision Support System



Load Polygon

Select Polygon

Decision Rule 1

Get Land/Forest Cover

MIS Application

Get Time Series

Get Result Table

LI Result

DSS Result

FCM Without Grid Result

FTM Without Grid Result

BR Without Grid Result

Time Series Result

Save Result Table

Beta Version

Welcome DFO Keonjhar

Change Password

Logout

Help

FOREST COVER MAP

FCM LEGEND

- VERY DENSE FOREST
- MODERATELY DENSE FO
- OPEN FOREST
- SCRUB
- NON FOREST



Forest Cover Map

FCM Without Grid Result

NON FOREST

OPEN FOREST

0.01

0.73

Lat: 21.691 Long: 85.387

Scale: 1:9806

500 m

1000 ft

All results are in Square Kilometer.