

**SCHEME FOR COMPENSATORY AFFORESTATION
OVER 16.466 ha OF NON-FOREST GOVT. LAND
IDENTIFIED IN VILLAGE PODADIHI UNDER
BANSAPAL TAHASIL OF B.J.P. RANGE OF
KEONJHAR FOREST DIVISION AGAINST LAYING
20" DIA DUAL PIPELINES (SLURRY & WATER),
POWER & COMMUNICATION CABLES
ALONG/ACROSS THE SIDE OF THE ROADS OF
WORKS DEPARTMENT & GOVERNMENT LAND
INCLUDING FOREST LAND FROM KALAMANG
(GHORABURHANI-SAGASAHU BLOCK) UNDER
KOIRA TAHASIL, SUNDARGARH DISTRICT TO
BENEFICIATION PLANT AT DABUNA UNDER
BARBIL TAHASIL, KEONJHAR DISTRICT**

OF

**M/S ARCELORMITTAL NIPPON STEEL INDIA
LIMITED**

(formerly known as Essar Steel India Limited)

ELEMENTS OF THE SCHEME FOR COMPENSATORY AFFORESTATION

CHAPTER	PARTICULARS	PAGE NUMBER
I	BRIEF NOTE ON THE PROPOSED FOREST DIVERSION PROPOSAL	01-01
II	DETAILS OF LAND IDENTIFIED FOR COMPENSATORY AFFORESTATION	02-02
III	DELINEATION OF PROPOSED AREA ON SUITABLE MAP	03-03
IV	AGENCY RESPONSIBLE FOR COMPENSATORY AFFORESTATION	03-03
V	DETAILS OF WORK SCHEDULED PROPOSED FOR COMPENSATORY AFFORESTATION	04-05
VI	COST STRUCTURE OF PLANTATION, PROVISION OF FUNDS AND UTILIZATION	06-13
VII	DETAILS OF PROPOSED MONITORING MECHANISM	14-14

CHAPTER- I

BRIEF NOTE ON THE PROPOSED FOREST DIVERSION PROPOSAL

M/s Essar Steel India Ltd, which is incorporated under the Companies Act 1956, has established an iron ore Beneficiation plant at Dabuna, in District-Keonjhar and pellet plant at Paradeep, in District Jagatsinghpur. The User Agency has granted of a mining lease for Ghoraburhani-Sagasahi Block for Iron Ore in Ghoraburhani, Sagasahi&Kalamang village, KoiraTahasil, Sundargarh District on 139.165 Hectare Area (90.629 Hectare Area of mineralized area and 48.536 Hectare Area of non-mineralized area) of Topo Sheet No. 73G/5 by Govt. of Odisha as per the letter of intent from Director of Mines, Govt. of Odisha.

It is proposed to lay around 27 Km long 20" Dia. dual Pipelines (Slurry & Water), Power & Communication Cables along/across the side of the roads of Works department & government land including Forest land from Kalamang (Ghoraburuni-Sagasahi Block) under KoiraTahasil in Sundargarh Dist. to our Beneficiation Plant at Dabuna under BarabilTahasil in Dist. Keonjhar to transport Iron ore fines in the form of slurry & water. The proposed Pipelines will be laid minimum 1.5 meters beneath the ground surface throughout the alignment. The Right of way for laying pipelines shall accommodate Power & Communication cables along with this Slurry & Water Pipelines. The proposed pipelines alignment has been planned far away from Bridges, Culverts & Structures but in the ROW limit of existing roads leaving appropriate gap from the extreme edge of the ROW boundary. The proposed pipelines will traverse along/across roads of Works department, Government land and Forest land.

Out of total forest land 16.466 Ha involved in the project, an area of 12.650 ha is coming under Keonjhar Forest Division and 3.816 Ha is coming under Bonai Forest Division. The User Agency has applied for the permission to the Works Department for ROW to lay the pipeline along the road and to Revenue Divisional Commissioner, Northern Zone, Sambalpur for the permission to lay the Pipeline on the Government land.

The present Compensatory Afforestation scheme is prepared at the prevailing wages @Rs. 308.00 per man days over 16.466 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. The non-forest Govt. land over 16.466 ha has been considered for plantation under ANR model @800 seedlings / ha and a separate scheme has been prepared to this effect to accommodate balance seedlings @400 seedlings/ ha in degraded forest land identified in Renda PRF under Telkoi Range.

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 16.466 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 – Sagasahi 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 – Sagasahi 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)	502	8.100	Parbat- I
			503(P)	8.366	Parbat- I
			Total	16.466	

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 one patch situated on upland with gentle slope and is suitable for Compensatory Afforestation in ANR plantation model @ 800 seedling per ha over 16.466 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 800 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 16.466 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.

III(2) DECISION SUPPORT SYSTEM- ANALYSIS OF FOREST COVER MAP

The map of the proposed CA land was processed using DSS for analysis of Forest cover over the area. The result obtained are depicted in the **Annexure- I**.

Decision Support System of non- forest land identified in village Podadihi under Banspal Tahasil

Sl. No	Name of the village	Area identified for plantation (in ha)	MDF	Non-forest	In Sq. Km.
					Open Forest
1	Podadihi	16.466	0.03	0.03	0.11

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.

-188-

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. 461 dated 27.07.2017 with his specific observations that on an average 800 plants/ ha can be planted in the proposed CA site. The report of GIS based DSS is enclosed herewith.

Species to be planted:-

1. *Syzgiumcumini*(Jamu)
2. *Adina cardifolia*(Kuruma)
3. *Anogeissuslatifolia*(Dhaura)
4. *Accacia catechu* (Khair)
5. *Dalbergiasissoo*(Sissoo)
6. *Azadirrachtaindica*(Neem)
7. *Gmelinaarborea* (Gambar)
8. *Terminaliabelerica*(Bahada)
9. *Terminaliachebula*(Harida)
10. *Pongamiapinnata* (Karanja)
11. *Embliaofficinalis* (Ainla)
12. *Shorearobusta*(Sal)

B. PRE-PLANTING OPERATION

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

Nursery will be raised @880 seedlings per ha including seedlings for 10% casualty replacement for 16.466 ha.

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

The planting area has been surveyed and demarcated through GPS survey and 38nos 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 @800 per ha over 16.466 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 N.P.K. 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 17 nos. over the entire plantation site and Cement Concrete Check Dam- 1No.

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 1.81Km (1810 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 Podadiki VSS.

-189-

CHAPTER- VI

COST NORM FOR BALD HILL PLANTATION @ 800 PLANTS PER HECTARE						
Labour cost @ Rs 308.00 per manday						
Sl No	Item of work	Preferable period of execution	Manday	Labour cost @ Rs. 308.00 per day	Material cost per hectare in Rs	Total cost per hectare in Rs.
Preparatory operation (0th Year)						
1	Survey and demarcation	June	2	616	0	616
2	Pitting (1600 pits per ha.)- each pit 45cm ³	Nov-Dec	64	19712	0	19712
3	Soil and water conservation measures	Sept-Nov	130	40040	0	40040
	(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)					
	(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	3080	0	3080
4	Raising of seedlings in poly bags (minimum 60 cm high) @ Rs 9.45 per seedling (Rs 6.67 in 0 th year) Part (880 saplings to be raised for one hectare from January-March @ Rs 11739/-	October-March	22	6776	2939	9715
Total 0th year			228	70224	2939	73163
Monitoring & supervision charges 5% of the total cost						3658.15
Grand Total			228	70224	2939	76821.15
Planting Operation (1st Year)						
1	Cost of sapling (balance) from April-June/July @ Rs 2.78 per seedling for 880 seedlings = Rs.2446.40/-	April-July	10.75	3311	593	3904
2	Freshening of pits-64 MD, filling with fertile soil and farm yard manure (FYM)-24 MD, application of insecticide and planting of 60 cm tall saplings including carriage of plants-21MD	June-July	54.5	16786	0	16786
3	Cost of fertile soil 0.25 cft @ Rs 6 per cft/ FYM 0.25 cft @ Rs 15 per cft per pit		0	0	4600	4600
4	Sowing of seeds on dug out earth of trench	June	3	924	200	1124
5	Carriage-6 MD. Planting including casualty replacement-6 MD, fertilizer application-5 MD, 1 st weeding-7 MD, 2 nd weeding-5 MD, soil working-7 MD.	July-August	18	5544	0	5544

6	Cost of fertilizer and insecticide (Granular insecticide @ 5gms/plant @Rs 80/- per kg = Rs 640.00, NPK 100 gms/plant in two doses @ Rs 24 per kg = Rs 3840.00)		0	0	2240	2240
7	Maintenance of Soil and Moisture Conservation measures (20% of cost)	October-December	26	8008	0	8008
8	Closure to grazing, fire and other biotic interference by engaging watch & ward	April-March	30	9240	0	9240
9	Fire tracing and control, display board construction, painting/writing, other miscellaneous cost	Jan-Feb	10	3080	360	3440
Total (1st year)			152.25	46893	7993	54886
Monitoring & supervision charges 5% of the total cost						2744.3
Grand Total			152.25	46893	7993	57630.3
Maintenance Operation (2nd Year)						
1	Casualty replacement-6 MD including seedling cost @ Rs 9.45 per seedling and its transportation	June-July	5	1540	828.8	2368.8
2	Soil working-7 MD, 1 st weeding-6 MD, 2 nd weeding-6 MD and fertilizer application-4 MD	August-October	11.5	3542	0	3542
3	Cost of fertilizer @ 50 gms NPK per plant @ Rs 24/- per kg for 1600 plants = Rs 1920.00. Insecticide @ 5 gm per plant for 160 nos of plants @ Rs 80 per kg = Rs 64.00		0	0	992	992
4	Repair and maintenance of Bamboo fence including material cost		15	4620	2540	7160
5	Maintenance of Soil and Moisture Conservation measures (20% of cost)	August-October	26	8008	0	8008
6	Fire tracing and control, and other miscellaneous cost	Feb-March	10	3080	0	3080
7	Closure to grazing, fire and other biotic interference by engaging watch & ward	April-March	30	9240	0	9240
Total 2nd Year			97.5	30030	4360.8	34390.8
Monitoring & supervision charges 5% of the total cost						1719.54
Grand Total			97.5	30030	4360.8	36110.34
Maintenance Operation (3rd Year)						
1	S.M.C measures (Renovation)--	April-March	55	16940	0	16940
2	Closure to grazing, fire and other biotic interference by engaging watch & ward	April-March	18	5544	0	5544
Total 3rd Year			73	22482	0	22482
Monitoring & supervision charges 5% of the total cost						1124.2
Grand Total			73	22482	0	23608.2
Maintenance Operation (4th Year)						

1	S.M.C measures- 21MD, and maintenance of plantation – 14 MD	April-March	48	14784	500	15284
2	Closure to grazing, fire and other biotic interference by engaging watch & ward	April-March	18	5544	0	5544
	Total 4th Year		66	20328	500	20828
	Monitoring & supervision charges 5% of the total cost					1041.4
	Grand Total		66	20328	500	21869.4
Maintenance Operation (5th Year)						
1	S.M.C measures- 21MD, and maintenance of plantation – 14 MD	April-March	48	14784	500	15284
2	Closure to grazing, fire and other biotic interference by engaging watch & ward	April-March	18	5544	0	5544
	Total 5th Year		66	20328	500	20828
	Monitoring & supervision charges 5% of the total cost					1041.4
	Grand Total		66	20328	500	21869.4
Maintenance Operation (6th Year)						
1	S.M.C measures- 21MD, and maintenance of plantation – 14 MD	April-March	48	14784	500	15284
2	Closure to grazing, fire and other biotic interference by engaging watch & ward	April-March	18	5544	0	5544
	Total 6th Year		66	20328	500	20828
	Monitoring & supervision charges 5% of the total cost					1041.4
	Grand Total		66	20328	500	21869.4
Maintenance Operation (7th Year)						
1	S.M.C measures- 21MD, and maintenance of plantation – 14 MD	April-March	48	14784	500	15284
2	Closure to grazing, fire and other biotic interference by engaging watch & ward	April-March	18	5544	0	5544
	Total 7th Year		66	20328	500	2082
	Monitoring & supervision charges 5% of the total cost					1041.4
	Grand Total		66	20328	500	21869.4
Maintenance Operation (8th Year)						
1	S.M.C measures- 21MD, and maintenance of plantation – 14 MD	April-March	48	14784	500	15284
2	Closure to grazing, fire and other biotic interference by engaging watch & ward	April-March	18	5544	0	5544
	Total 8th Year		66	20328	500	20828
	Monitoring & supervision charges 5% of the total cost					1041.4
	Grand Total		66	20328	500	21869.4
Maintenance Operation (9th Year)						
1	S.M.C measures- 21MD, and maintenance of plantation – 14 MD	April-March	48	14784	500	15284

2	Closure to grazing, fire and other biotic interference by engaging watch & ward	April-March	18	5544	0	5544
	Total 9th Year		66	20328	500	20828
	Monitoring & supervision charges 5% of the total cost					1041.4
	Grand Total		66	20328	500	21869.4
Maintenance Operation (10th Year)						
1	S.M.C measures- 21MD, and maintenance of plantation – 14 MD	April-March	48	14784	500	15284
2	Closure to grazing, fire and other biotic interference by engaging watch & ward	April-March	18	5544	0	5544
	Total 10th Year		66	20328	500	20828
	Monitoring & supervision charges 5% of the total cost					1041.4
	Grand Total		66	20328	500	21869.4

ABSTRACT

Sl	Year	Mandays	Labour cost (Rs.)	Material cost (Rs.)	Monitoring & supervision charges 5% of the total cost (Rs)	Total (Rs.)
1	0 th year	228	70224	2939.00	3658.15	76821.15
2	1 st year	152.25	46893	7993.00	2744.30	57630.30
3	2 nd year	97.5	30030	4360.80	1719.54	36110.34
4	3 rd year	73	22482	0.00	1124.20	23608.20
5	4 th year	66	20328	500.00	1041.40	21869.40
6	5 th year	66	20328	500.00	1041.40	21869.40
7	6 th year	66	20328	500.00	1041.40	21869.40
8	7 th year	66	20328	500.00	1041.40	21869.40
9	8 th year	66	20328	500.00	1041.40	21869.40
10	9 th year	66	20328	500.00	1041.40	21869.40
11	10 th year	66	20328	500.00	1041.40	21869.40
Total		1012.75	311927	18792.80	16535.99	347255.79
Total Plantation over 13.466 ha						4676146.46

COST STRUCTURE OF PLANTATION, PROVISION OF FUNDS AND UTILIZATION						
ESTIMATE OF COST FOR 1.00 HA. UNDER ANR WITHOUT GAP PLANTATION MODEL						
Cost norm for Aided Natural Regeneration(ANR) without Gap planting						
Wage rate Rs. 308.00/-manday						
Sl No	Item of work	Preferable period of execution	Person days	Labour (Rs)	Material (Rs)	Total (Rs)
0th year						
1	Survey demarcation and pillar posting, GPS reading with mapping	Nov/Dec	2	616	0	616
2	Site Preparation	Nov/Dec	2	616	0	616

3	Cutting of high stumps		5	1540	0	1540
	Sub Total		9	2772	0	2772
4	Monitoring & Supervision charge 5% of the total cost					138.6
	Grand Total		9	2772	0	2910.6
1st year						
1	Silvicultural operation involving clearance of weeds, cutting of climbers, singling of shoots etc.	Sep/Oct	15	4620	0	4620
2	Soil Conservation Measures (Staggered trenches of dimension 2 m x 0.5 m x 0.5 m @ 60 nos per ha) or its equivalent	Sep/Oct	20	6160	0	6160
3	Fireline Tracing and inspection path	Feb/Mar	3	924	0	924
4	Watch & ward	Aug-Mar	5	1540	0	1540
5	Contingency and unforeseen expenditure		0	0	500	500
	Sub Total		43	13244	500	13744
6	Monitoring & Supervision charge 5% of the total cost					687.2
	Grand Total		43	13244	500	14431.2
2nd year						
1	Soil conservation Measures (Renovation of staggered trenches etc.)	Sep/Oct	8	2464	0	2464
2	Fireline Tracing and inspection path	Feb/Mar	1	308	0	308
3	Watch & ward (whole year)	Apr-Mar	7	2156	0	2156
4	Contingency and unforeseen expenditure		0	0	300	300
	Sub Total		16	4928	300	5228
5	Monitoring & Supervision charge 5% of the total cost					261.4
	Grand Total		16	4928	300	5489.4
3rd Year						
1	Fireline Tracing and inspection path	Feb/Mar	1	308	0	308
2	Watch & ward (whole year)	Apr-Mar	7	2156	0	2156
3	Contingency and unforeseen expenditure		0	0	300	300
	Sub Total		8	2464	300	2764
4	Monitoring & Supervision charge 5% of the total cost					138.2
	Grand Total		8	2464	300	2902.2
4th year						
1	Fireline Tracing and inspection path	Feb/Mar	1	308	0	308
2	Watch & ward and cultural operation	Apr-Mar	2	616	0	616
3	Contingency and unforeseen expenditure			0	100	100
	Sub-Total		3	924	100	1024
4	Monitoring & Supervision charge 5% of the total cost					51.2
	Grand Total		3	924	100	1075.2
5th year						
1	Fireline Tracing and inspection path	Feb/Mar	1	308	0	308

2	Watch & ward and cultural operation	Apr-Mar	2	616	0	616
3	Contingency and unforeseen expenditure			0	100	100
	Sub-Total		3	924	100	1024
4	Monitoring & Supervision charge 5% of the total cost					51.2
	Grand Total		3	924	100	1075.2
6th year						
1	Fireline Tracing and inspection path	Feb/Mar	1	308	0	308
2	Watch & ward and cultural operation	Apr-Mar	2	616	0	616
3	Contingency and unforeseen expenditure			0	100	100
	Sub-Total		3	924	100	1024
4	Monitoring & Supervision charge 5% of the total cost					51.2
	Grand Total		3	924	100	1075.2
7th year						
1	Fireline Tracing and inspection path	Feb/Mar	1	308	0	308
2	Watch & ward and cultural operation	Apr-Mar	2	616	0	616
3	Contingency and unforeseen expenditure			0	100	100
	Sub-Total		3	924	100	1024
4	Monitoring & Supervision charge 5% of the total cost					51.2
	Grand Total		3	924	100	1075.2
8th year						
1	Fireline Tracing and inspection path	Feb/Mar	1	308	0	308
2	Watch & ward and cultural operation	Apr-Mar	2	616	0	616
3	Contingency and unforeseen expenditure			0	100	100
	Sub-Total		3	924	100	1024
4	Monitoring & Supervision charge 5% of the total cost					51.2
	Grand Total		3	924	100	1075.2
9th year						
1	Fireline Tracing and inspection path	Feb/Mar	1	308	0	308
2	Watch & ward and cultural operation	Apr-Mar	2	616	0	616
3	Contingency and unforeseen expenditure			0	100	100
	Sub-Total		3	924	100	1024
4	Monitoring & Supervision charge 5% of the total cost					51.2
	Grand Total		3	924	100	1075.2
10th year						
1	Fireline Tracing and inspection path	Feb/Mar	1	308	0	308
2	Watch & ward and cultural operation	Apr-Mar	2	616	0	616
3	Contingency and unforeseen expenditure			0	100	100
	Sub-Total		3	924	100	1024
4	Monitoring & Supervision charge 5% of the total cost					51.2
	Grand Total		3	924	100	1075.2

ABSTRACT						
Sl. No.	Year	Person days	Labour cost @308.00/- per manday (in Rs.)	Material cost (in Rs.)	Monitoring & Supervision charge 5% of the total cost in (Rs.)	Total cost (in Rs.)
1	0th Year	9	2772	0	138.6	2910.6
2	1st Year	43	13244	500	687.2	14431.2
3	2nd Year	16	4928	300	261.4	5489.4
4	3rd Year	8	2464	300	138.2	2902.2
5	4th Year	3	924	100	51.2	1075.2
6	5th Year	3	924	100	51.2	1075.2
7	6th Year	3	924	100	51.2	1075.2
8	7th Year	3	924	100	51.2	1075.2
9	8th Year	3	924	100	51.2	1075.2
10	9th Year	3	924	100	51.2	1075.2
11	10th Year	3	924	100	51.2	1075.2
	Total	97	29876	1800	1583.8	33259.8
Total Cost of plantation (3.00 ha.)						99779.40

ADDITIONAL COST PROPOSED

1	SMC measures- LBCD structure of dimension 10' x 10' x 5' @Rs. 8725.39/- per LBCD for 17 no. LBCD structures.	8725.39 x 17 nos.	148331.63
2	Cement Concrete Check Dam 1 No.	1 x 988947.96	988947.96
3	Cost of Barbed Wire Fencing over 1.81 KM with 3 years maintenance @2% of cost per RKM @Rs. 6,83,876 /- per RKM	6,83,876 x 1.81Km	1237815.56
	Sub-Total		2375095.15

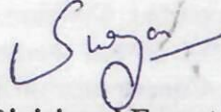
TOTAL COST OF PROJECT

1	Plantation (Bald Hill) over 13.466 ha @ Rs. 347255.79/- per ha.	4676146.46
2	Plantation over 3.00 ha ANR without Gap @Rs. 33259.80/- per ha	99779.40
	Total Plantation cost	4775925.86
3	Total additional cost	2375095.15
	Total	7151021.01
4	15% of the total plantation cost towards Entry Point Activity/ Incentive to VSS etc.	1072653.15
	Total	8223674.16
5	Add 20% escalation	1644734.83
	Grand Total	9868408.99
		Or say 98,68,500.00

(Rupees ninety-eight lakh sixty-eight thousand five hundred) Only

PROVISION OF FUNDS AND FUND UTILIZATION

Rs. 98,68,500.00 (Rupees ninety-eight lakh sixty-eight thousand five hundred) Only shall be deposited by the User Agency i.e. M/s ArcelorMittal Nippon Steel India Limited (formerly known as 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, (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 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.


**Divisional Forest Officer,
Keonjhar Division**

**SCHEME FOR COMPENSATORY AFFORESTATION
OVER 16.466 HA OF DEGRADED FOREST LAND
IDENTIFIED IN RENDA PRF UNDER TELKOI
FOREST RANGE OF KEONJHAR FOREST DIVISION
AGAINST LAYING 20" DIA DUAL PIPELINES
(SLURRY & WATER), POWER & COMMUNICATION
CABLES ALONG/ACROSS THE SIDE OF THE ROADS
OF WORKS DEPARTMENT & GOVERNMENT LAND
INCLUDING FOREST LAND FROM KALAMANG
(GHORABURHANI-SAGASAHU BLOCK) UNDER
KOIRA TAHASIL, SUNDARGARH DISTRICT TO
BENEFICIATION PLANT AT DABUNA UNDER
BARBIL TAHASIL, KEONJHAR DISTRICT**

OF

**M/S ARCELORMITTAL NIPPON STEEL INDIA
LIMITED
(formerly known as Essar Steel India Limited)**

ELEMENTS OF THE SCHEME FOR COMPENSATORY AFFORESTATION

CHAPTER	PARTICULARS	PAGE NUMBER
I	BRIEF NOTE ON THE PROPOSED FOREST DIVERSION PROPOSAL	01-01
II	DETAILS OF LAND IDENTIFIED FOR COMPENSATORY AFFORESTATION	02-02
III	DELINEATION OF PROPOSED AREA ON SUITABLE MAP	03-03
IV	AGENCY RESPONSIBLE FOR COMPENSATORY AFFORESTATION	03-03
V	DETAILS OF WORK SCHEDULED PROPOSED FOR COMPENSATORY AFFORESTATION	04-05
VI	COST STRUCTURE OF PLANTATION, PROVISION OF FUNDS AND UTILIZATION	06-10
VII	DETAILS OF PROPOSED MONITORING MECHANISM	11-11

CHAPTER- I

BRIEF NOTE ON THE PROPOSED FOREST DIVERSION PROPOSAL

M/s Essar Steel India Ltd, which is incorporated under the Companies Act 1956, has established an iron ore Beneficiation plant at Dabuna, in District-Keonjhar and pellet plant at Paradeep, in District Jagatsinghpur. We have already commissioned both the plants and are in operational now. We have been granted of a mining lease for Ghoraburhani-Sagasahi Block for Iron Ore in Ghoraburhani, Sagasahi & Kalamang village, Koira Tahasil, Sundargarh District on 139.165 Hectare Area (90.629 Hectare Area of mineralized area and 48.536 Hectare Area of non-mineralized area) of Topo Sheet No. 73G/5 by Govt. of Odisha as per the letter of intent from Director of Mines, Govt. of Odisha.

It is proposed to lay around 27 Km long 20" Dia. dual Pipelines (Slurry & Water), Power & Communication Cables along/across the side of the roads of Works department & government land including Forest land from Kalamang (Ghoraburuni-Sagasahi Block) under Koira Tahasil in Sundargarh Dist. to our Beneficiation Plant at Dabuna under Barabil Tahasil in Dist. Keonjhar to transport Iron ore fines in the form of slurry & water. The proposed Pipelines will be laid minimum 1.5 meters beneath the ground surface throughout the alignment. The Right of way for laying pipelines shall accommodate Power & Communication cables along with this Slurry & Water Pipelines. The proposed pipelines alignment has been planned far away from Bridges, Culverts & Structures but in the ROW limit of existing roads leaving appropriate gap from the extreme edge of the ROW boundary. The proposed pipelines will traverse along/across roads of Works department, Government land and Forest land.

Out of total forest land 16.466 Ha involved in the project, an area of 12.650 ha is coming under Keonjhar Forest Division and 3.816 Ha is coming under Bonai Forest Division. The User Agency has applied for the permission to the Works Department for ROW to lay the pipeline along the road and to Revenue Divisional Commissioner, Northern Zone, Sambalpur for the permission to lay the Pipeline on the Government land.

Non forest Govt. land over 16.466 ha has been identified and allotted in village Podadihi under Bansapal Tahasil in B.J.P. Range of Keonjhar Forest Division, in favour of M/s Essar Steel India Ltd, vide letter No. 1174/Rev dt. 11.07.2017 of the Collector, Keonjhar for Compensatory Afforestation. The said non-forest Govt. land, allotted over 16.466 ha, involves tree growth over 3.00 ha under MDF, 3 ha under Non-forest and 11 ha under Open Forest as per DSS. The non-forest Govt. land over 13.466 ha has been considered for plantation under ANR model @800 seedlings / ha and 3.00 ha has been considered ANR without Gap plantation scheme has been prepared to this effect.

The present scheme aims at preparation of a site-specific Compensatory Afforestation scheme over 16.466 ha of degraded forest land identified in Renda PRF under Telkoi Forest Range of Keonjhar Division at the prevailing wage rate @Rs. 308.00 per MD with a maintenance period of ten years to accommodate the balance seedlings (16.466 ha x 1000 - 13.466 ha x 800) under ANR with gap modal @400 seedlings/ ha.

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 Renda PRF in Coupe- ORY-IX under Oriya- Binida Improvement Series of Telkoi Range in Keonjhar Forest Division. This Forest Block is allotted to Improvement Series 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- open jungle mainly sal in SoI Topo Sheet No. F45N7. The vegetation consists of Sal and its scattered 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-

1. Regenerate of the degraded forest blocks including the areas once affected by shifting cultivation, by appropriate silvicultural inputs and protection measures with people's participation.
2. Improvement of the micro-climate and micro-edaphic conditions through soil and moisture conservation measures.
3. Encouragement of natural regeneration for increasing the biodiversity in forest crop.
4. Fulfillment of the bonafide needs of the local inhabitants for fuel wood, small timber, fodder and N.T.F.P. to the extent possible depending upon the productivity of the forests to ensure their participation.

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

The identified site in Renda PRF 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 hilly having good depth of red boulder mixed soil conducive for plantation under ANR with Gap model @400 seedling per ha. The average maximum temperature is 40⁰ to 45⁰C and minimum 5⁰ to 10⁰ 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 in village Pitnali. 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 Pitnali 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).

III(2) DECISION SUPPORT SYSTEM- ANALYSIS OF FOREST COVER MAP

The map of the proposed CA land was processed using DSS for analysis of Forest cover over the area. The result obtained are depicted in the **Annexure- I**.

Decision Support System of degraded forest land identified in Renda PRF under Telkoi Range

Sl. No	Name of the site	Area identified for plantation (in ha)	In Sq. Km.
			Open Forest
1	Renda PRF	16.466	0.17

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. *Embllica officinalis* (Ainla)
12. *Shorea robusta* (Sal)

B. PRE-PLANTING OPERATION

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

Nursery will be raised @440 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, Telkoi 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 cm x 30 cm x 30 cm. will be dug @400 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 N.P.K. 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 17 nos. over the entire plantation site and Cement Concrete Check Dam- 1No.

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 2.47 Km (2470 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 Pitanali VSS.

CHAPTER- VI

Cost Norm For Aided Natural Regeneration @400 plants per ha @308.00/- Mandays as per revised wage rate vide Notification No. 6100/LC dated 21.10.2020 by Labour Commissioner, Odisha, Bhubaneswar and approved cost norm communicated by PCCF, Odisha vide memo No. 25281 dated 18.12.2018.

0 th year (Advance work) Pre-planting operation.						
Sl No	Item of work	Preferable period of execution	person days	Labour (Rs)	Material (Rs)	Total (Rs)
0th year						
1	Survey demarcation and pillar posting, GPS reading with mapping	Nov/Dec	2	616	0	616
2	Site Preparation	Nov/Dec	2	616	0	616
3	Silviculture Operation including clearance of weed, climber cutting, high stump cutting, singling of shoots etc.	Jan/Feb	5	1540	0	1540
4	Nursery cost (6 months old seedling) part @ Rs. 9.45/- seedling (Rs. 6.67 in 0th) year + Rs. 2.78 in 1st year) for 440 seedlings (400+40)		11	3388	735	4123
5	Contingency and unforeseen expenditure		0		165	165
	Sub Total		20	6160	900	7060
6	Monitoring & Supervision charge 5% of the total cost					353
	Grand Total		20	6160	900	7413
1st year						
1	Nursery cost (6 months old seedling) balance @Rs. 2.78 for 440 seedlings	Apr-Jul	5	1540	255	1795
2	Pitting 30 cm cube size	Feb/Mar	12	3696	0	3696
3	Carriage and planting including casualty replacement	Jul/Aug	10	3080	0	3080
4	Complete weeding, Soilworking, manuring	Aug/Sep	12	3696	0	3696
5	Cost of vermin compost @200gms/plant @Rs. 20/-per kg=Rs. 1600.00 and Granular insecticide 5 gms/ plant @ Rs. 80 per kg=Rs.160.00	Aug/Sep	0	0	1760	1760
6	Cost of chemical fertilizer (a) Urea 70 gms/plant in two subsequent doses @ Rs.6 per kg =Rs 168.00 (b) NPK 50 gms/plant @ Rs. 24/- per kg= Rs. 480.00 as basal dose		0	0	648	648
7	Silvicultural operation involving clearance of weeds, cutting of climbers, singling of shoots etc.	Sep/Oct	15	4620	0	4620
8	Soil Conservation Measures (Staggered trenches of dimension 2 m x 0.5 m x 0.5 m@ 60 nos per ha) or its equivalent	Sep/Oct	20	6160	0	6160

9	Fireline Tracing and inspection path	Feb/Mar	3	924	0	924
10	Watch & ward	Aug-Mar	7	2156	0	2156
11	Contingency and unforeseen expenditure		0	0	319	319
	Sub Total		84	25872	2982	28854
12	Monitoring & Supervision charge 5% of the total cost					1442.7
	Grand Total		84	25872	2982	30296.7
2nd year						
1	Casualty Replacement including cost of seedling, carriage and planting	Jul/Aug	2	616	497.2	1113.2
2	Complete weeding and cultural operations	Sep/Oct	4	1232	0	1232
3	Soil working and manuring	Sep/Oct	4	1232	0	1232
4	Cost of fertilizer and insecticide (a) Vermicompost 200 gms/plant @ Rs. 20/ per kg=Rs.1600 (b) Granular insecticide 5 gms/plant for 40 plants 200gms @ Rs. 80/- per kg=Rs.16.00	Sep/Oct	0	0	1616	1616
5	Fireline Tracing and inspection path	Feb/Mar	1	308	0	308
6	Soil conservation Measures (Renovation of staggered trenches etc.)	Sep/Oct	8	2464	0	2464
7	Watch & ward (whole year)	Apr-Mar	7	2156	0	2156
8	Contingency and unforeseen expenditure		0	0	362	362
	Sub Total		26	8008	2475.2	10483.2
9	Monitoring & Supervision charge 5% of the total cost					524.16
	Grand Total		26	8008	2475.2	11007.36
3rd Year						
1	Complete weeding and cultural operations	Aug/Sep	2	616	0	616
2	Soil working	Aug/Sep	2	616	0	616
3	Fireline Tracing and inspection path	Feb/Mar	1	308	0	308
4	Watch & ward (whole year)	Apr-Mar	7	2156	0	2156
	Sub Total		12	3696	0	3696
5	Monitoring & Supervision charge 5% of the total cost					184.8
	Grand Total		12	3696	0	3880.8
4th year						
1	Fireline Tracing and inspection path	Feb/Mar	1	308		308
2	Watch & ward and cultural operation	Apr-Mar	2	616		616
	Sub-Total		3	924	0	924
3	Monitoring & Supervision charge 5% of the total cost					46.20
	Grand Total		3	924	0	970.20
5th year						
1	Fireline Tracing and inspection path	Feb/Mar	1	308		308
2	Watch & ward and cultural operation	Apr-Mar	2	616		616

	Sub-Total		3	924	0	924
3	Monitoring & Supervision charge 5% of the total cost					46.20
	Grand Total		3	924	0	970.20
6th year						
1	Fireline Tracing and inspection path	Feb/Mar	1	308		308
2	Watch & ward and cultural operation	Apr-Mar	2	616		616
	Sub-Total		3	924	0	924
3	Monitoring & Supervision charge 5% of the total cost					46.20
	Grand Total		3	924	0	970.20
7th year						
1	Fireline Tracing and inspection path	Feb/Mar	1	308		308
2	Watch & ward and cultural operation	Apr-Mar	2	616		616
	Sub-Total		3	924	0	924
3	Monitoring & Supervision charge 5% of the total cost					46.20
	Grand Total		3	924	0	970.20
8th year						
1	Fireline Tracing and inspection path	Feb/Mar	1	308		308
2	Watch & ward and cultural operation	Apr-Mar	2	616		616
	Sub-Total		3	924	0	924
3	Monitoring & Supervision charge 5% of the total cost					46.20
	Grand Total		3	924	0	970.20
9th year						
1	Fireline Tracing and inspection path	Feb/Mar	1	308		308
2	Watch & ward and cultural operation	Apr-Mar	2	616		616
	Sub-Total		3	924	0	924
3	Monitoring & Supervision charge 5% of the total cost					46.20
	Grand Total		3	924	0	970.20
10th year						
1	Fireline Tracing and inspection path	Feb/Mar	1	308		308
2	Watch & ward and cultural operation	Apr-Mar	2	616		616
	Sub-Total		3	924	0	924
3	Monitoring & Supervision charge 5% of the total cost					46.20
	Grand Total		3	924	0	970.20

ABSTRACT

Sl. No.	Year	Person days	Labour cost @308.00/- per Manday (Rs.)	Material cost (Rs.)	Monitoring & Supervision charge 5% of the total cost (Rs.)	Total cost (Rs.)
1	0th Year	20	6160	900	353	7413
2	1st Year	84	25872	2982	1442.7	30296.7
3	2nd Year	26	8008	2475.2	524.16	11007.36
4	3rd Year	12	3696	0	184.8	3880.8
5	4th Year	3	924	0	46.20	970.20
6	5th Year	3	924	0	46.20	970.20
7	6th Year	3	924	0	46.20	970.20
8	7th Year	3	924	0	46.20	970.20
9	8th Year	3	924	0	46.20	970.20
10	9th Year	3	924	0	46.20	970.20
11	10th Year	3	924	0	46.20	970.20
	Total	163	50204	6357.2	2828.06	59389.26
Total plantation cost over 16.466 ha x 59389.26					977903.55	

ADDITIONAL COST PROPOSED

1	SMC measures- LBCD structure of dimension 10' x 10' x 5' @Rs. 8725.39/- per LBCD for 17 no. LBCD structures.	8725.39 x 17 nos.	148331.63
2	Cement Concrete Check Dam 1 No.	1 x 988947.96	988947.96
3	Cost of Barbed Wire Fencing over 2.47 KM with 3 years maintenance @2% of cost per RKM @Rs. 6,83,876 /- per RKM	683876 x 2.47 KM	1689173.72
	Sub-Total		2826453.31

TOTAL COST OF PROJECT

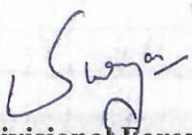
1	Plantation over 16.466 ha @ Rs. 59389.26 per ha.	977903.55
2	Total additional cost	2826453.31
	Total	3804356.86
3	15% of the total plantation cost towards Entry Point Activity/ Incentive to VSS etc.	570653.52
	Sub-Total	4375010.38
4	Add 20% escalation	875002.07
	Grand Total	5250012.45 Or say 52,50,100.00

(Rupees fifty-two lakh fifty thousand one hundred) Only

-199-

A. PROVISION OF FUNDS AND FUND UTILIZATION

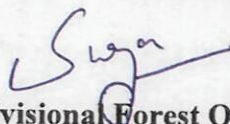
Rs. 52,50,100.00 (Rupees fifty-two lakh fifty thousand one hundred) only shall be deposited by the User Agency M/s ArcelorMittal Nippon Steel India Limited (formerly known as Essar Steel India Limited) on approval of the scheme to the Ad-hoc CAMPA Account and the funds will be utilized for raising of 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, Telkoi Range of Keonjhar Division. The Range Forest Officer, Telkoi 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-Green watch 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 Telkoi 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**

