

**SCHEME FOR COMPENSATORY AFFORESTATION
OVER 12.728 ha OF NON-FOREST GOVT. LAND
IDENTIFIED IN VILLAGE PODADIHI UNDER
BANSAPAL TAHASIL OF B.J.P. RANGE OF
KEONJHAR FOREST DIVISION AGAINST LAYING
OF TAILING, WATER, POWER &
COMMUNICATION CABLES FROM,
BENEFICIATION PLANT AT DUBUNA UNDER
KEONJHAR DIVISION OF 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	01-02
II	DETAILS OF LAND IDENTIFIED FOR COMPENSATORY AFFORESTATION	03-03
III	DELINEATION OF PROPOSED AREA ON SUITABLE MAP	04-04
IV	AGENCY RESPONSIBLE FOR COMPENSATORY AFFORESTATION	04-04
V	DETAILS OF WORK SCHEDULED PROPOSED FOR COMPENSATORY AFFORESTATION	05-06
VI	COST STRUCTURE OF PLANTATION, PROVISION OF FUNDS AND UTILIZATION	07-11
VII	DETAILS OF PROPOSED MONITORING MECHANISM	12-12

CHAPTER- I

BRIEF NOTE ON THE PROPOSED FOREST DIVERSION PROPOSAL

M/s ArcelorMittal Nippon Steel India Limited (Formerly known as Essar Steel India Limited), 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 already commissioned the plant and it is operational now. Being a part of Beneficiation Plant operation, for establishment of Tailing Dam for Beneficiation Plant, user agency has identified 321.81 Ac. of land in village Sankari under Banspal Tahasil in district Keonjhar. The Proposed Tailing dam is shifted to Sankari instead of Malda.

The tailings generated from the Beneficiation plant at Dabuna shall be pumped & transported to the Tailing Dam in the form of slurry. The water will be reclaimed from the tailing pond and will be pumped back to the Beneficiation Plant for recycle process of Beneficiation Plant.

It is proposed to lay 18.178 Km long Tailing & Water Pipelines, Power & Communication Cables from our Beneficiation Plant at Dabuna under Barbil Tahasil to the Proposed Tailing Dam at Sankari under Banspal Tahasil in the district of Keonjhar, Odisha for transportation of tailings. The proposed Pipeline will be laid minimum 1.0 meters beneath the ground surface throughout the alignment. The Right of way for laying pipelines shall accommodate Power & Communication cables along with this Tailing & Water Pipelines. The Proposed pipelines alignment has been planned mostly in the Govt. lands including both Forest, Non-forest land and Private lands adjacent to ROW of PWD roads and Village roads leaving appropriate gap from the extreme edge of the ROW boundary.

The length and hectare of the land required for laying of Pipelines, the details of which are given below-

Forest Land	:	15.557 Km (i.e. 12.728 Ha)
Non-Forest Land	:	2.621 Km (i.e. 9.291 Ha)

The total forest land involved in the project is 12.728 Ha. coming under Champua & BJP Ranges in Keonjhar Forest Division and the total non-forest land involved in the project is 9.291 Ha. coming under Barbil, Jhumpura and Banspal Tahasils in Keonjhar District.

The aforesaid pipe line system is running from Beneficiation Plant at Dabuna under Barabil Tahasil to the Proposed Tailing Dam at Sankari under Banspal Tahasil in Dist. Keonjhar. The GPS co-ordinate of starting point of pipeline project in non-forest land is 21°50'55.35" Latitude 85°24'32.10" Longitude and the ending point is 21°44'10.98" Latitude 85°26'50.50" Longitude and starting point of pipeline project in forest land is 21°50'22.96" Latitude 85°24'20.78" Longitude and the ending point is 21°44'28.92" Latitude 85°26'23.83" Longitude in Keonjhar district.

The underground pipe line system project of M/s. ArcelorMittal Nippon Steel India Limited (Formerly known as M/s Essar Steel India Ltd.) involves a total of 22.019 ha land in Keonjhar Forest Division which includes 12.728 ha forest land and 9.291 ha non-forest land.

The present Compensatory Afforestation scheme is prepared at the prevailing wages @Rs. 308.00 per man days over 12.728 ha Non-forest Govt. land identified in village Podadihi under BJP Range of Banspal Tahasil allotted for the said purpose vide letter No. 1379/Rev dt. 01.09.2017 of Collector, Keonjhar, with maintenance period of 10 (ten) years. The non-forest Govt. land over 12.728 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 12.728 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 laying of tailing, water, power & communication cables from, beneficiation plant at Dubuna under Keonjhar Division of Keonjhar District of M/s Essar Steel India Limited by the Collector, Keonjhar vide letter No 1379/Rev dt. 01.09.2017.

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 12.728 ha in favour of laying of tailing, water, power & communication cables from, beneficiation plant at Dubuna under Keonjhar Division of Keonjhar District 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)	503(P)	0.540	Parbat- I
			504(P)	5.000	Parbat- I
			505(P)	7.188	Parbat- I
			Total	12.728	

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 12.728 ha.

The topography of the area is mainly hilly situated on upland. During the site inspection it was 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. 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 12.728 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

In Sq. Km.			
Sl. No	Name of the village	Area identified for plantation (in ha)	Open Forest
1	Podadihi	12.728	0.13

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 800 plants/ ha can be planted in the proposed CA site.

Species to be planted:-

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

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 12.728 ha.

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

The planting area has been surveyed and demarcated through GPS survey and 6 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 @800 per ha over 12.728 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, N.P.K. and Urea 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 wire mesh LBCD structures of dimension 10' x 10' x 5' to the tune of 13 nos. over the entire plantation site and Water Body- 1No.

D(5)-PROTECTION AGAINST FIRE AND BIOTIC INTERFERENCE

It is proposed to protect the CA plantation from grazing by domestic animals using wire mesh fencing. The total length of such fencing comes to 1.54 Km (1540 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 Plantation for 800 Saplings (18 months old seedlings) @ 308.00/- Mandays as per revised wage rate by Labour Commissioner, Odisha, Bhubaneswar vide Notification No. 6100/LC dated 21.10.2020.

Sl.	Item of Works	Preferable Period of Execution	Labour in Mandays	Labour Cost (₹)	Material Cost (₹)	Total Cost in (₹)
PREVIOUS YEAR (ADVANCE WORK) NURSERY RAISING						
1	Nursery Cost (18 month Old Seedlings) @Rs.34.84/- part (Rs.8.68 to be released) for 1100 seedlings (1000+100) (Nov to March)	Nov-March	22.8	7022.4	1254.4	8276.8
	TOTAL.		22.8	7022.4	1254.4	8276.8
2	Monitoring & Supervision charge 5% of the total cost					413.84
	GRAND TOTAL		22.8	7022.4	1254.4	8690.64
0TH YEAR OPERATION						
1	Nursery Cost (1 yr 6 months old seedlings) part @ Rs.34.84 per seedling (Rs22.14 to be released) for 1100 seedlings (1000+100)	April - March	56.8	17494.4	3579.2	21073.6
	TOTAL.		56.8	17494.4	3579.2	21073.6
2	Monitoring & Supervision charge 5% of the total cost					1053.68
	GRAND TOTAL		56.8	17494.4	3579.2	22127.28
1ST YEAR OPERATION						
1	Nursery Cost (6 months old seedling) balance @ Rs.4.02 for 1100 seedling	April-June	11.6	3572.8	289.6	3862.4
2	Alignment & stacking at 4M spacing including clearance sites in avenue & 2.5m x 2.5m in case of block plantation	April-May	12	3696	0	3696
3	Excavation of pits- 45cmx45cmx45cm in hard soil with vertical cut edges to make an uniform cube& heaping the excavated soil outside the pits.	May-June	41.6	12812.8	0	12812.8
4	Refilling of pits with excavated soil after breaking the clouds completely	June	6.4	1971.2	0	1971.2
5	Carriage and transport of saplings from Nursery site to plantation site over an average lead of 10kms @ Rs.6 per seedling for 1100 seedlings	July	0	0	5280	5280
6(a)	Cost of Fym 0.25 CFT per plant @ Rs.15 per cft for 250 cft		0	0	3000	3000
6(b)	Cost of Vermicompost 250 gm per plant @ Rs.20 per kg for 250 kg		0	0	4000	4000
6(c)	Cost of NPK 50 gm per plant as basal dose @ Rs.24 per kg for 50 kg		0	0	960	960
6(d)	Cost of Granular Insecticide 10gm per plant @ Rs.80 per kg for 10 kg		0	0	640	640

7	Planting of sapling after carefully removing from sacks including mixing of Fym, Vermicompost, Granular Insecticide & Scooping the soil to required depth & pressing the soil around the plants.	July-Aug	20	6160	0	6160
8	Cost of chemical fertilizer (Urea/DAP/NPK etc.)		0	0	960	960
9	1st weeding around the plant to a radius of 45 cm, application of fertilizer	August	20	6160	0	6160
10	2nd weeding around the plant to a radius of 50 cms	September	16	4928	0	4928
11	Soil working around 0.5 Mt radius of the plant & application of fertilizer, mulching with available materials	Sept-Oct	25.6	7884.8	0	7884.8
12	Watering for 5 months. 10 days per month- from Nov. to March, including cost of water, labour & Transportation through tractor/tanker @ Rs.84 per seedling for 1000 seedlings	November-March	0	0	67200	67200
13	Watch & ward for 9 months from July to March. 270 Days.	July-March	112	34496	0	34496
14	Contingency Expenditure		0	0	364	364
	TOTAL.		265.2	81681.6	82693.6	164375.2
15	Monitoring & Supervision charge 5% of the total cost					8218.76
	GRAND TOTAL		265.2	81681.6	82693.6	172593.96
2ND YEAR OPERATION						
1	Cost of sapling - 1 yr & 6 months old for casualty replacement @ Rs.34.84 per seedling for 100 seedlings		0	0	2787.2	2787.2
2	Carriage and transport of saplings from Nursery site to plantation site over an average lead of 10kms @ Rs.6 per seedling for 100 seedlings	July	0	0	480	480
3	Replacement of casualty after reopening the pits & planting of sapling 100 nos. With application of FYM, Vermicompost and granular insecticides	July-Aug	3.2	985.6	0	985.6
4(a)	Cost of FYM 0.25 cft per plant @ Rs.15 per cft for 25 cft for 100 plants		0	0	300	300
4(b)	Cost of Granular Insecticide 10gm per plant @ Rs.80 per kg for 1 kg		0	0	64	64
4(c)	Cost of NPK 50 gm per plant as basal dose @ Rs.24 per kg for 5 kg		0	0	96	96
4(d)	Cost of Vermicompost 250 gm per plant @ Rs.20 per kg for 25 kg		0	0	400	400
4(e)	Cost of chemical fertilizer (Urea/DAP/NPK etc.)		0	0	960	960
5	1st weeding around the plant to a radius of 30 cm & application of fertilizer	August	16	4928	0	4928
6	Soil working around 0.5MT radius & application of fertilizer, Moisture conservation & mulching	August-Sept	19.2	5913.6	0	5913.6

7	2nd weeding around the plant to radius of 0.5 MT.	Oct-Nov	12.8	3942.4	0	3942.4
8	Watering for eight months 5 days per month including cost of water, labour & transportation through tractor/ tankers. (April to June & Nov. to March) @ Rs.67.20 per seedling for 1000 seedlings	April-June Nov-March	0	0	53760	53760
9	Watch & ward for 12 months from April. to March (365 days)	April-Mar	148.8	45584	0	45584
10	Contingency Expenditure		0	0	1104	1104
	TOTAL.		200	61353.6	59951.2	121304.8
11	Monitoring & Supervision charge 5% of the total cost					6065.24
	Grand Total		200	61353.6	59951.2	127370.04
3RD YEAR MAINTENANCE						
1	Weeding, Soil working & Manuring	Sept-Oct	16	4928	0	4928
2	Cost of chemical fertilizer (Urea/DAP/NPK etc.)		0	0	960	960
3	Watch & ward for 12 months from April to March. 365 Days.	April-Mar	148.8	45830.4	0	45830.4
	TOTAL.		164.8	50758.4	960	51718.4
4	Monitoring & Supervision charge 5% of the total cost					2585.92
	GRAND TOTAL		164.8	50758.4	960	54304.32
4TH YEAR MAINTENANCE						
1	Watch & ward for 12 months from April to March. 365 Days.	April-Mar	148.8	45830.4	0	45830.4
	TOTAL.		148.8	45830.4	0	45830.4
2	Monitoring & Supervision charge 5% of the total cost					2291.52
	GRAND TOTAL		148.8	45830.4	0	48121.92
5TH YEAR MAINTENANCE						
1	Watch & ward for 12 months from April to March. 365 Days.	April-Mar	148.8	45830.4	0	45830.4
	TOTAL.		148.8	45830.4	0	45830.4
2	Monitoring & Supervision charge 5% of the total cost					2291.52
	GRAND TOTAL		148.8	45830.4	0	48121.92
6TH YEAR MAINTENANCE						
1	Watch & ward for 12 months from April to March. 365 Days.	April-Mar	148.8	45830.4	0	45830.4
	TOTAL.		148.8	45830.4	0	45830.4
2	Monitoring & Supervision charge 5% of the total cost					2291.52
	GRAND TOTAL		148.8	45830.4	0	48121.92
7TH YEAR MAINTENANCE						
1	Watch & ward for 12 months from April to March. 365 Days.	April-Mar	148.8	45830.4	0	45830.4
	TOTAL.		148.8	45830.4	0	45830.4
2	Monitoring & Supervision charge 5% of the total cost					2291.52
	GRAND TOTAL		148.8	45830.4	0	48121.92

8TH YEAR MAINTENANCE						
1	Watch & ward for 12 months from April to March. 365 Days.	April-Mar	148.8	45830.4	0	45830.4
	TOTAL.		148.8	45830.4	0	45830.4
2	Monitoring & Supervision charge 5% of the total cost					2291.52
	GRAND TOTAL		148.8	45830.4	0	48121.92
9TH YEAR MAINTENANCE						
1	Watch & ward for 12 months from April to March. 365 Days.	April-Mar	148.8	45830.4	0	45830.4
	TOTAL.		148.8	45830.4	0	45830.4
2	Monitoring & Supervision charge 5% of the total cost					2291.52
	GRAND TOTAL		148.8	45830.4	0	48121.92
10TH YEAR MAINTENANCE						
1	Watch & ward for 12 months from April to March. 365 Days.	April-Mar	148.8	45830.4	0	45830.4
	TOTAL.		148.8	45830.4	0	45830.4
2	Monitoring & Supervision charge 5% of the total cost					2291.52
	GRAND TOTAL		148.8	45830.4	0	48121.92

ABSTRACT						
Sl. No.	Year of operation	No. Person Day	Labour cost @ Rs. 308/- per day	Material cost (Rs.)	Monitoring & Supervision charge 5% of the total cost	Total cost in (Rs.)
1	PREVIOUS YEAR	22.8	7022.4	1254.4	413.84	8690.64
2	0TH YEAR PLANTING	56.8	17494.4	3579.2	1053.68	22127.28
3	1ST YEAR PLANTING	265.2	81681.6	82693.6	8218.6	172593.96
4	2ND YEAR MAINTENANCE	200	61353.6	59951.2	6065.24	127370.04
5	3RD YEAR MAINTENANCE	164.8	50758.4	960	2585.92	54304.32
6	4TH YEAR MAINTENANCE	148.8	45830.4	0	2291.52	48121.92
7	5th YEAR MAINTENANCE	148.8	45830.4	0	2291.52	48121.92
8	6th YEAR MAINTENANCE	148.8	45830.4	0	2291.52	48121.92
9	7th YEAR MAINTENANCE	148.8	45830.4	0	2291.52	48121.92
10	8th YEAR MAINTENANCE	148.8	45830.4	0	2291.52	48121.92
11	9th YEAR MAINTENANCE	148.8	45830.4	0	2291.52	48121.92
12	10th YEAR MAINTENANCE	148.8	45830.4	0	2291.52	48121.92
	Total	1751.2	539123.2	148438.4	34377.92	721939.7
	Total plantation cost (12.728 ha x Rs. 721939.7/-)					9188848.50

ADDITIONAL COST PROPOSED

1	Wire mesh LBCD of size 10' x 10' x 5' for 13 nos. @Rs 38,155/- per LBCD	38,155 x 13 nos	496015.00
2	One water body of size 40mt x 30mt x 3mt in the plantation site	1 x 6,06,800	606800.00
3	Cost of Wire mesh Fencing over 1.54 Km. with 3 years maintenance @2% of cost per RKM @Rs. 72.98.090/- per RKM	Rs. 72,98.090 x 1.54 Km	11239058.6
4	One Watcher shed @Rs 10 lakh	1 x 10,00,000	1000000.00
5	Compound wall (in RMT @Rs. 0.075 lakh x 100 mtr)		750000.00
	Sub-Total		14091873.6

* The plantation will be maintained over a period of 10 years and is at a distant place from nearest habitation hence provision needs to be made a watcher shed for around the year for accommodation of labourers and watchers deployed in the plantation. Further the watcher shed would also be used as camp for fire squad members during the fire season.

TOTAL COST OF PROJECT

1	Plantation over 12.728 ha @ Rs. 721939.7/- per ha.	9188848.50
2	Total additional cost	14091873.60
	Total	23280722.10
3	15% of the total plantation cost towards Entry Point Activity/ Incentive to VSS etc.	3492108.31
	Total	26772830.41
4	Add 20% escalation	5354566.08
	Grand Total	32127396.49 Or say 3,21,27,500.00

(Rupees three crore twenty-one lakh twenty-seven thousand five hundred) Only

PROVISION OF FUNDS AND FUND UTILIZATION

Rs. 3,21,27,500.00 (Rupees three crore twenty-one lakh twenty-seven 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 12.728 HA OF DEGRADED FOREST LAND
IDENTIFIED IN RENDA PRF UNDER TELKOI
FOREST RANGE OF KEONJHAR FOREST DIVISION
AGAINST LAYING OF TAILING, WATER, POWER &
COMMUNICATION CABLES FROM,
BENEFICIATION PLANT AT DUBUNA UNDER
KEONJHAR DIVISION OF 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	01-02
II	DETAILS OF LAND IDENTIFIED FOR COMPENSATORY AFFORESTATION	03-03
III	DELINEATION OF PROPOSED AREA ON SUITABLE MAP	04-04
IV	AGENCY RESPONSIBLE FOR COMPENSATORY AFFORESTATION	04-04
V	DETAILS OF WORK SCHEDULED PROPOSED FOR COMPENSATORY AFFORESTATION	05-06
VI	COST STRUCTURE OF PLANTATION, PROVISION OF FUNDS AND UTILIZATION	07-11
VII	DETAILS OF PROPOSED MONITORING MECHANISM	12-12

CHAPTER- I

BRIEF NOTE ON THE PROPOSED FOREST DIVERSION PROPOSAL

M/s ArcelorMittal Nippon Steel India Limited (Formerly known as Essar Steel India Limited), 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 Jagatsighpur. The user agency has already commissioned the plant and it is operational now. Being a part of Beneficiation Plant operation, for establishment of Tailing Dam for Beneficiation Plant, user agency has identified 321.81 Ac. of land in village Sankari under Banspal Tahasil in district Keonjhar. The Proposed Tailing dam is shifted to Sankari instead of Malda.

The tailings generated from the Beneficiation plant at Dabuna shall be pumped & transported to the Tailing Dam in the form of slurry. The water will be reclaimed from the tailing pond and will be pumped back to the Beneficiation Plant for recycle process of Beneficiation Plant.

It is proposed to lay 18.178 Km long Tailing & Water Pipelines, Power & Communication Cables from our Beneficiation Plant at Dabuna under Barbil Tahasil to the Proposed Tailing Dam at Sankari under Banspal Tahasil in the district of Keonjhar, Odisha for transportation of tailings. The proposed Pipeline will be laid minimum 1.0 meters beneath the ground surface throughout the alignment. The Right of way for laying pipelines shall accommodate Power & Communication cables along with this Tailing & Water Pipelines. The Proposed pipelines alignment has been planned mostly in the Govt. lands including both Forest, Non-forest land and Private lands adjacent to ROW of PWD roads and Village roads leaving appropriate gap from the extreme edge of the ROW boundary.

The length and hectare of the land required for laying of Pipelines. the details of which are given below-

Forest Land	:	15.557 Km (i.e. 12.728 Ha)
Non-Forest Land	:	2.621 Km (i.e. 9.291 Ha)

The total forest land involved in the project is 12.728 Ha. coming under Champua & BJP Ranges in Keonjhar Forest Division and the total non-forest land involved in the project is 9.291 Ha. coming under Barbil, Jhumpura and Banspal Tahasils in Keonjhar District.

The aforesaid pipe line system is running from Beneficiation Plant at Dabuna under Barabil Tahasil to the Proposed Tailing Dam at Sankari under Banspal Tahasil in Dist. Keonjhar. The GPS co-ordinate of starting point of pipeline project in non-forest land is 21°50'55.35" Latitude 85°24'32.10" Longitude and the ending point is 21°44'10.98" Latitude 85°26'50.50" Longitude and starting point of pipeline project in forest land is 21°50'22.96" Latitude 85°24'20.78" Longitude and the ending point is 21°44'28.92" Latitude 85°26'23.83" Longitude in Keonjhar district.

The underground pipe line system project of M/s. ArcelorMittal Nippon Steel India Limited (Formerly known as M/s Essar Steel India Ltd.) involves a total of 22.019 ha land in Keonjhar Forest Division which includes 12.728 ha forest land and 9.291 ha non-forest land.

Non forest Govt. land over 12.728 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. 1379/Rev dt. 01.09.2017 of the Collector, Keonjhar for Compensatory Afforestation. The non-forest Govt. land over 12.728 ha has been considered for plantation under ANR model @800 seedlings / ha has been prepared to this effect.

The present scheme aims at preparation of a site-specific Compensatory Afforestation scheme over 12.728 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 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	12.728	0.13

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

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, N.P.K. and Urea 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 wire mesh LBCD structures of dimension 10' x 10' x 5' to the tune of 13 nos. over the entire plantation site and Water Body- 1No.

D(5)-PROTECTION AGAINST FIRE AND BIOTIC INTERFERENCE

It is proposed to protect the CA plantation from grazing by domestic animals using wire mesh fencing. The total length of such fencing comes to 1.60 Km (1600 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 Pitawali VSS.

CHAPTER- VI

Cost Norm for Plantation for 400 Saplings (18 months old seedlings) @ 308.00/- Mandays as per revised wage rate by Labour Commissioner, Odisha, Bhubaneswar vide Notification No.

6100/LC dated 21.10.2020.

Sl. No.	Item of Works	Preferable Period of Execution	Labour in Mandays	Labour Cost (₹)	Material Cost (₹)	Total Cost in (₹)
PREVIOUS YEAR (ADVANCE WORK) NURSERY RAISING						
1	Nursery Cost (18 month Old Seedlings) @Rs.34.84/- part (Rs.8.68 to be released) for 1100 seedlings (1000+100) (Nov to March)	Nov-March	11.4	3511.2	627	4138
	TOTAL.		11.4	3511.2	627.2	4138.4
2	Monitoring & Supervision charge 5% of the total cost				0	207
	GRAND TOTAL		11.4	3511.2	627.2	4345
0TH YEAR OPERATION						
1	Nursery Cost (1 yr 6 months old seedlings) part @ Rs.34.84 per seedling (Rs22.14 to be released) for 1100 seedlings (1000+100)	April - March	28.4	8747	1790	10537
	TOTAL.		28.4	8747.2	1790	10537
2	Monitoring & Supervision charge 5% of the total cost				0	527
	GRAND TOTAL		28.4	8747.2	1790	11064
1ST YEAR OPERATION						
1	Nursery Cost (6 months old seedling) balance @ Rs.4.02 for 1100 seedling	April-June	5.8	1786	145	1931
2	Alignment & stacking at 4M spacing including clearance sites in avenue & 2.5m x 2.5m in case of block plantation	April-May	6	1848	0	1848
3	Excavation of pits- 45cmx45cmx45cm in hard soil with vertical cut edges to make an uniform cube& heaping the excavated soil out side the pits.	May-June	20.8	6406	0	6406
4	Refilling of pits with excavated soil after breaking the clouds completely	June	3.2	986	0	986
5	Carriage and transport of saplings from Nursery site to plantation site over an average lead of 10kms @ Rs.6 per seedling for 1100 seedlings	July	0	0	2640	2640
6(a)	Cost of Fym 0.25 CFT per plant @ Rs.15 per cft for 250 cft		0	0	1500	1500
6(b)	Cost of Vermicompost 250 gm per plant @ Rs.20 per kg for 250 kg		0	0	2000	2000
6(c)	Cost of NPK 50 gm per plant as basal dose @ Rs.24 per kg for 50 kg		0	0	480	480
6(d)	Cost of Granular Insecticide 10gm per plant @ Rs.80 per kg for 10 kg		0	0	320	320
7	Planting of sapling after carefully removing from sacks including mixing of Fym, Vermicompost, Granular Insecticide & Scooping the soil to required depth & pressing the soil around the plants.	July-Aug	10	3080	0	3080

8	Cost of chemical fertilizer (Urea/DAP/NPK etc.)		0	0	480	480
9	1st weeding around the plant to a radius of 45 cm, application of fertilizer	August	10	3080	0	3080
10	2nd weeding around the plant to a radius of 50 cms	September	8	2464	0	2464
11	Soil working around 0.5 Mt radius of the plant & application of fertilizer, mulching with available materials	Sept-Oct	12.8	3942	0	3942
12	Watering for 5 months. 10 days per month- from Nov. to March, including cost of water, labour & Transportation through tractor/tanker @ Rs.84 per seedling for 1000 seedlings	November-March	0	0	33600	33600
13	Watch & ward for 9 months from July to March. 270 Days.	July-March	56	17248	0	17248
14	Contingency Expenditure		0	0	182	182
	TOTAL.		132.6	40841	41347	82188
15	Monitoring & Supervision charge 5% of the total cost				0.00	4109
	GRAND TOTAL		132.6	40840.8	41346.8	86297
2ND YEAR OPERATION						
1	Cost of sapling - 1 yr & 6 months old for casualty replacement @ Rs.34.84 per seedling for 100 seedlings		0	0	1394	1394
2	Carriage and transport of saplings from Nursery site to plantation site over an average lead of 10kms @ Rs.6 per seedling for 100 seedlings	July	0	0	240	240
3	Replacement of casualty after reopening the pits & planting of sapling 100 nos. With application of FYM, Vermicompost and granular insecticides	July-Aug	1.6	492.8	0	493
4(a)	Cost of FYM 0.25 cft per plant @ Rs.15 per cft for 25 cft for 100 plants		0	0	150	150
4(b)	Cost of Granular Insecticide 10gm per plant @ Rs.80 per kg for 1 kg		0	0	32	32
4(c)	Cost of NPK 50 gm per plant as basal dose @ Rs.24 per kg for 5 kg		0	0	48	48
4(d)	Cost of Vermicompost 250 gm per plant @ Rs.20 per kg for 25 kg		0	0	200	200
4(e)	Cost of chemical fertilizer (Urea/DAP/NPK etc.)		0	0	480	480
5	1st weeding around the plant to a radius of 30 cm & application of fertilizer	August	8	2464	0	2464
6	Soil working around 0.5MT radius & application of fertilizer, Moisture conservation & mulching	August-Sept	9.6	2956.8	0	2957
7	2nd weeding around the plant to radius of 0.5 MT.	Oct-Nov	6.4	1971.2	0	1971

8	Watering for eight months 5 days per month including cost of water, labour & transportation through tractor/ tankers. (April to June & Nov. to March) @ Rs.67.20 per seedling for 1000 seedlings	April-June Nov-March	0	0	26880	26880
9	Watch & ward for 12 months from April. to March (365 days)	April-Mar	74.4	22915.2	0	22915
10	Contingency Expenditure		0	0	552	552
	TOTAL.		100	30800.00	29976	60776
11	Monitoring & Supervision charge 5% of the total cost		0		0	3039
	Grand Total		100	30800	29975.6	63814.38
3RD YEAR MAINTENANCE						
1	Weeding, Soil working & Manuring	Sept-Oct	8	2464	0	2464
2	Cost of chemical fertilizer (Urea/DAP/NPK etc.)		0	0	480	480
3	Watch & ward for 12 months from April to March. 365 Days.	April-Mar	74.4	22915	0	22915
	TOTAL.		82.4	25379	480	25859
4	Monitoring & Supervision charge 5% of the total cost		0		0	1293
	GRAND TOTAL		82.4	25379.2	480	27152.16
4TH YEAR MAINTENANCE						
1	Watch & ward for 12 months from April to March. 365 Days.	April-Mar	74.4	22915	0	22915
	TOTAL.		74.4	22915	0	22915
2	Monitoring & Supervision charge 5% of the total cost					1146
	GRAND TOTAL		74.4	22915	0	24061
5TH YEAR MAINTENANCE						
1	Watch & ward for 12 months from April to March. 365 Days.	April-Mar	74.4	22915	0	22915
	TOTAL.		74.4	22915	0	22915
2	Monitoring & Supervision charge 5% of the total cost					1146
	GRAND TOTAL		74.4	22915	0	24061
6TH YEAR MAINTENANCE						
1	Watch & ward for 12 months from April to March. 365 Days.	April-Mar	74.4	22915	0	22915
	TOTAL.		74.4	22915	0	22915
2	Monitoring & Supervision charge 5% of the total cost					1146
	GRAND TOTAL		74.4	22915	0	24061
7TH YEAR MAINTENANCE						
1	Watch & ward for 12 months from April to March. 365 Days.	April-Mar	74.4	22915	0	22915
	TOTAL.		74.4	22915	0	22915
2	Monitoring & Supervision charge 5% of the total cost					1146
	GRAND TOTAL		74.4	22915	0	24061
8TH YEAR MAINTENANCE						
1	Watch & ward for 12 months from April to March. 365 Days.	April-Mar	74.4	22915	0	22915

	TOTAL.		74.4	22915	0	22915
2	Monitoring & Supervision charge 5% of the total cost					1146
	GRAND TOTAL		74.4	22915	0	24061
9TH YEAR MAINTENANCE						
1	Watch & ward for 12 months from April to March. 365 Days.	April-Mar	74.4	22915	0	22915
	TOTAL.		74.4	22915	0	22915
2	Monitoring & Supervision charge 5% of the total cost					1146
	GRAND TOTAL		74.4	22915	0	24061
10TH YEAR MAINTENANCE						
1	Watch & ward for 12 months from April to March. 365 Days.	April-Mar	74.4	22915	0	22915
	TOTAL.		74.4	22915	0	22915
2	Monitoring & Supervision charge 5% of the total cost					1146
	GRAND TOTAL		74.4	22915	0	24061

ABSTRACT						
Sl. No.	Year of operation	No. Person Day	Labour cost @ Rs. 308/- per day	Material cost (Rs.)	Monitoring & Supervision charge 5% of the total cost	Total cost in (Rs.)
1	Previous Year	11.4	3511.2	627.2	206.9	4345.3
2	0TH YEAR PLANTING	28.4	8747.2	1789.6	526.8	11063.6
3	1ST YEAR PLANTING	132.6	40840.8	41346.8	4109.4	86297.0
4	2ND YEAR MAINTENANCE	100.0	30800.0	29975.6	3038.8	63814.4
5	3RD YEAR MAINTENANCE	82.4	25379.2	480.0	1293.0	27152.2
6	4TH YEAR MAINTENANCE	74.4	22915.2	0.0	1145.8	24061.0
7	5th YEAR MAINTENANCE	74.4	22915.2	0.0	1145.8	24061.0
8	6th YEAR MAINTENANCE	74.4	22915.2	0.0	1145.8	24061.0
9	7th YEAR MAINTENANCE	74.4	22915.2	0.0	1145.8	24061.0
10	8th YEAR MAINTENANCE	74.4	22915.2	0.0	1145.8	24061.0
11	9th YEAR MAINTENANCE	74.4	22915.2	0.0	1145.8	24061.0
12	10th YEAR MAINTENANCE	74.4	22915.2	0.0	1145.8	24061.0
	Total	876	269684.8	74219.2	17195.2	361099.2
	Total plantation cost (12.728 ha x Rs. 361099.2/-)					4596070.61

ADDITIONAL COST PROPOSED

1	Wire mesh LBCD of size 10' x 10' x 5' for 13 nos. @Rs 38,155/- per LBCD	38,155 x 13 nos	496015.00
2	One water body of size 40mt x 30mt x 3mt in the plantation site	1 x 6.06,800	606800.00
3	Cost of Wire mesh Fencing over 1.60 Km. with 3 years maintenance @2% of cost per RKM @Rs. 72,98,090/- per RKM	Rs. 72,98,090 x 1.60 Km	11676944.00
4	One Watcher shed @Rs 10 lakh	1 x 10,00,000	1000000.00
5	Compound wall (in RMT @Rs. 0.075 lakh x 100 mtr)		750000.00
	Sub-Total		14529759.00

* The plantation will be maintained over a period of 10 years and is at a distant place from nearest habitation hence provision needs to be made a watcher shed for around the year for accommodation of labourers and watchers deployed in the plantation. Further the watcher shed would also be used as camp for fire squad members during the fire season.

TOTAL COST OF PROJECT

1	Plantation over 12.728 ha @ Rs. 361099.2/- per ha.	4596070.61
2	Total additional cost	14529759.00
	Total	19125829.61
3	15% of the total plantation cost towards Entry Point Activity/ Incentive to VSS etc.	2868874.44
	Total	21994704.05
4	Add 20% escalation	4398940.81
	Grand Total	26393644.86 Or say 2,63,93,700.00

(Rupees two crore sixty-three lakh ninety-three thousand seven hundred) Only

A. PROVISION OF FUNDS AND FUND UTILIZATION

Rs. 2,63,93,700.00 (Rupees two crore sixty-three lakh ninety-three thousand seven 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**