



OFFICE OF THE DIVISIONAL FOREST OFFICER, DHENKANAL FOREST DIVISION
Tele Fax No-06762226717, E-mail ld-dfo.dhenkanal@gmail.com

Memo No 9378 3F/Misc/11/2017/dt. 27/10/17

To

The Divisional Forest Officer,
Cuttack Forest Division.

Sub: Four/Two laning of Talcher-Duburi-Chandikhol section of NH-200/23 km 301.89 to km 427.885 of NH-200 and km 8.500 to km 14.866 of NH-23) in the State of Odisha to be executed on EPC mode under NHDP-III-Compensatory Afforestation Scheme reg.

Ref: Your Memo No-6748/5F/2017 dt.07.09.2017 and this Office Memo No-6309 dt.16.09.2017, Memo No-8620 dt.25.09.2017.

On the above mentioned subject under reference, it is to inform you that the Degraded Forest land of 352.462 ha. has been identified in 266.03 ha. in Madhi Reserve Forest and 86.432 ha. in Anantapur RF under Kamakhyanagar West Range of this Division for Compensatory Afforestation purpose against the above project. Accordingly Compensatory Afforestation scheme along with suitability certificate, CD, DGPS & Topo Sheet map in 06 (six) copies in Booklet are sent herewith for taking further action at your end, the receipt of which may please be acknowledged.

Encl: As Above.

Ritika *27/10/17*
Divisional Forest Officer,
Dhenkanal Division

Memo No 9379 /dt. 27/10/17

Copy forwarded for favour of kind information & necessary action to.

1. Addl. Principal Chief Conservator of Forests (Forest Diversion & Nodal Officer) FC Act, O/o the Principal Chief Conservator of Forests, Odisha, Bhubaneswar.
2. Regional Chief Conservator of Forests, Angul.

Ritika *27/10/17*
Divisional Forest Officer,
Dhenkanal Division

Memo No 9380 /dt. 27/10/17

Copy forwarded to Project Director, PIU, NHAI, Dhenkanal, Plot No-1768, Near Kalinga Eye-Hospital, Dakhinakali Road, Dhenkanal-759001 for information & necessary action.

Ritika *27/10/17*
Divisional Forest Officer,
Dhenkanal Division

**SCHEME FOR COMPENSATORY
AFFORESTATION OVER AN AREA OF
352.462 HA. IN DEGRADED FOREST LAND
IN 266.03 IN MADHI RF AND 86.432 HA. IN
ANANTAPUR RF OF KAMAKHYANAGAR
WEST RANGE UNDER DHENKANAL FOREST
DIVISION.**

**AGAINST THE FOREST LAND USED BY-
NATIONAL HIGHWAY AUTHORITY OF
INDIA.**

**FOR FOUR/TWO LANING OF TALCHER-
DUBURI-CHANDIKHOL SECTION OF NH-
200/23 km 301.89 TO KM 427.885 OF NH-200
AND KM 8.500 TO KM 4.866 OF NH-23 IN THE
STATE OF ODISHA UNDER DHENKANAL
FOREST DIVISION & CUTTACK FOREST
DIVISION IN DHENKANAL & CUTTACK
DISTRICT.**

**DHENKANAL FOREST DIVISION
DHENKANAL**

LAND SUITABILITY CERTIFICATE BY DIVISIONAL FOREST OFFICER,
DHENKANAL FOREST DIVISION

This is to certify that 352.462 ha. of degraded Forest land is identified in Madhi RF & Anantpur RF comprising in two patches i.e. 266.03 Ha. in Madhi RF and 86.432 Ha. in Anantapur RF under Kamakyanagar West Range of Dhenkanal Forest Division is suitable for the purpose of Compensatory Afforestation under **Aided Natural Regeneration (ANR) Plantation** @ of 200 plants per hectare in lieu of Forest land 176.231 ha. i.e. 70.87 ha. in Dhenkanal Forest Division and 105.361 ha. in Cuttack Forest Division to be diverted for four/two laning of Talcher-Duburi-Chandikhol section of NH-200/23 km 301.89 to km 427.885 of NH-200 and km 8.500 to km 14.866 of NH-23 in the State of Odisha in Dhenkanal & Cuttack District by National Highway Authority of India.

Place: Dhenkanal
Date : 27th October 2017


Divisional Forest Officer
Dhenkanal Division
Divisional Forest Officer
Dhenkanal Division

Official Seal.....

Compensatory Afforestation Scheme over 352.462 Ha. in degraded forest land in 266.03 ha. in Madhi RF & 86.432 ha. in Anantapur RF of Kamakhyanagar West Range under Dhenkanal Division against diversion of Forest land for Four/Two laning of Talcher-Duburi-Chandikhol section of NH-200/23 km 301.89 to km 427.885 of NH-200 and km 8.500 to km 14.866 of NH-23 in the State of Odisha under Dhenkanal Forest Division & Cuttack Forest Division in Dhenkanal & Cuttack District.

by

NATIONAL HIGHWAY AUTHORITY OF INDIA.

1. INTRODUCTION:

The National Highway Authority of India has submitted a diversion proposal of 70.870 ha. of Forest land in Dhenkanal District under Dhenkanal Forest Division and 105.361 ha. in Cuttack District under Cuttack Forest Division i.e. all total forest land 176.231 ha. for Four/Two laning of Talcher-Duburi-Chandikhol section of NH-200/23 km 301.89 to km 427.885 of NH-200 and km 8.500 to km 14.866 of NH-23 in the State of Odisha in Dhenkanal Forest Division & Cuttack Forest Division respectively for non-forestry purpose.

The Project involves 176.231ha. of forest land. In lieu of this 176.231 Ha. x 2 = 352.462 ha. degraded forest land has been identified for raising Compensatory Afforestation in Aided Natural Regeneration (ANR) Plantation @ 200 Plants per Hectare in Madhi RF and Anantapur RF comprising two patches i.e. 266.03 Ha. in Madhi RF and 86.432 Ha. in Anantapur RF under Kamakyanagar West Range of Dhenkanal Forest Division.

The total area of Madhi RF is 420.89 ha. and Anantapur RF is 20016.06 which are allotted to eco-restoration Working Circle. The Special object of management of this working circle areas detailed below.

- i) To improve the condition of existing forest through protection against grazing, fire and illicit felling.
- ii) To enhance soil productivity through soil and moisture conservation measure.

- iii) To stabilize ratio between water run-off during rainy season and that of during dry season.
- iv) To restock barren area through artificial regeneration of most desirable indigenous species.
- v) To involve the local community in protection and management of the forest.
- vi) To restore and improve the micro-climate and micro-edaphic condition.
- vii) To increase the bio-diversity in the forest crop by encouraging natural regeneration. This Compensatory Afforestation area has been allotted to Madhi RF & Anantapur RF. The area over 352.462 Ha. has been identified for Aided Natural Regeneration (ANR) Plantation is in 266.03 Ha. of Madhi RF and 86.432 Ha. of Anantapur RF. These areas comes under category -II of the treatment series. These areas have gaps in between artificial regeneration with soil moisture conservation and strict supervision to eradicate any biotic interference for 10 years will improve the condition of the forest growth naturally found in the area.

2. ALLOCATION OF DEGRADED FOREST LAND FOR COMPENSATORY AFFORESTATION,

The degraded forest land identified is mostly undulating ground which processed good growth of Misc species but due to biotic interference like collection of firewood by the local stake holders, grazing and forest fire has degraded the foothills which need to be covered under ANR plantation (2mt x 2 mt) spacing.

3. DESCRIPTION OF EXISTING VEGETATION.

Some forest growth having 10.20 % crown density existing Siarimalia RF. The main species noticed Sal (Shorea Robusta, Asan (Terminalia Tomentosa), Dhaura (Anogeissus Accuminate), Kasi (Bridelia Retusa), Mankada Kendu (Diosprus melanoxylon), Karada, Bel (Aegle marmelos), Bahada (Terminalia belerica), Kochila (Strychnos nux-vomica), Sunari (Cassia fistula), Cane, Kalucha, Nahalbeli, Chatian (Alstonia Scholaris), Khajuri, Amla (Embllica Officinalis), Kaju etc.

4. TOPOGRAPHIC & SOIL

The site Madhi RF is shown in Topo-sheet Number 73H/5 & Anantapur RF is shown in Topo Sheet Number-73G/8. The soil type occurring in the area is shallow somewhat exclusively drained, calcareous soil on plane land with loamy surface, susceptible to erosion associated with deep and well drained.

5. CLIMATIC CONDITION

The climate condition of the area favoring growth of dry deciduous forest having average annual rainfall of 75-100 Cm and maximum temperature 45 degrees Centigrade. The summer season is from March to June, winter from November to February and riny season is from July to September.

6. OBJECTIVE OF THE SCHEME

It is mandatory requirement under the provision of FC Act, 1980.

- a. To replenish the loss of forest land to be diverted for non-forestry purpose i.e. for NH-200/23 of National Highway of India.
- b. To generate employment to the villagers living around the area.
- c. To increase the ground water table through soil & moisture conservation.
- d. To increase the bio-diversity for improvement of the local ecology.
- e. To fulfill the requirement of fuel wood and small timber of the local inhabitants.
- f. To provide a green clothing to the area by means of artificial regeneration or plantation in order to reduce soil erosion.

7. ECO- RESTORATION OPERATION

- a. All high stumps are to be removed.
- b. Coppice with multiple shoots should be signed out by retaining the sound ones.
- c. Complete protection against the fire, grazing & illicit felling shall be ensure.
- d. The area should be managed under JFM mode i.e. involving local VSS members from inception of this project.
- e. The indigenous hardy species as shown in the choice of species should be preferred for artificial regeneration.
- f. Preference should be given to species suitable for elephant fodder.

8. PLANTATION TECHNIQUE

The area should be well demarcated before raising plantation by GPS survey. A map should be prepared and followed for execution of the plantation basing on the soil depth. Preferably indigenous species are to be planted coupled with soil & moisture conservation measures.

9. CHOICE OF SPECIES

Considering the edaphic & micro climate conditions of the site, the following species are recommended.

Common Name	Scientific Name	Suitable for
Simuli	Bombax Ceiba	ANR Plantation
Sisoo	Dalbergia Sisoo	-do-
Bija	Pterocarpus marsupium	-do-
Asana	Terminalia tomentosa	-do-
Neem	Azadirachta Indica	-do-
Karanja	Pongamia Pinnata	-do-
Jack Fruit	Atocarpus heterophyllus	-do-
Bara	Ficus bengalensis	-do-
Bel	Aegle marmelos	-do-
Kaitha	Limonia acidissima	-do-
Mango	Mangifera indica	-do-
Jari	Ficus benjamins	-do-
Jamun	Syzygium cumini	-do-

10. SURVEY & DEMARCTION

The area should be clearly surveyed by GPS in the field with reference to the map to ascertain the exact area available for plantation. The masonry pillars of 4 feet height should be erected on the boundary of the site preferably on the curvatures painted in white colour & the pillar number with GPS reading i.e. latitude has to be written on the pillars in black.

The plantation needs to be indicated by sign boards at corners or point of intersection with artifacts like roads, inspection paths & boundary lines. The sign board should contain the names of plantation site, area, year of planting, planting module, number of seedlings planted and other details if necessary.

Extra man days are required for cleaning of weeds as the assigned area is covered with full of woody weed growth.

11. NURSERY

a. A good nursery is the pre-requisite for a successful plantation. All care should be taken to raise healthy & sound seedlings of required sizes before they are put to plantation size. Planting of one year old seedlings above species shall be taken up. Nursery programme must be planted out as per the Guidelines in the plantation manual so that a good stock of healthy seedlings can be raised. 10% extra seedlings be raised to cover the shortfall due to casualty in the nursery stage.

b. The temporary nursery should be raised near the plantation site as far as practicable.

c. A good variety of local seeds should be collected.

d. Proper treatment of seeds should be done as per the manual.

e. Shifting of polythene bags once seedlings is recommended not only to develop resistance for isolation but not allow the roots striking into the ground soil.

12. PROTECTION.

The important element of successful plantation is protection. Watchers are to be engaged on daily wage basis for 10 years. Besides trench as well as barbed wire fencing shall be taken up in the plantation.

13. CONTROL

a. The nursery journal, plantation journal and other records shall be maintained separately in accordance with the provision of "The Odisha Forest Plantation Manual 1977" indicating the physical & financial achievement. Necessary entries with regard to plantation activities undertaken shall be entered in the journals and shall be produced before the inspecting officer. In case of any eventuality like cyclone, thunder storm, hail storm etc. if caused destruction to the plantation, this should also be noted. It is also necessary to note the distribution of rain fall which not only helps in the growth of plants at site but also acts as a guide line for the ensuing years nursery schedule to be formulated.

b. For protection, measures shall be taken to save the plantation from fire incidents & prevent accidental trespass of cattle, goat etc. to the premises of the nursery. Boundary area will be scrapped to a width of 2mt during February / March and the cut materials are to be burnt under strict supervision. The inspection path around 4 Ha. plot shall have to be laid out and weed growth are to be scrapped.

13. SOIL & WATER CONSERVATION METHOD

c. It is to be taken up the soil and moisture conservation work. Small gullies are to be plugged by the live plants. Either area will be dried out quickly water conservation measures will be taken by digging staggered trenches. These trenches will be dug along the contour in a continuous manner. The dimension of the trenched will be 2.5 mt. x 0.5 mt. x 0.5 mt. and dug out earth will be kept on the lower hill sides. It should be 300 numbers in an average per hectare. Staggered trenched are to be aligned 15 mt. apart along the contour and 7.56 mt. across the contour. Check dams are proposed to be constructed out of dry rubbles across the nallaha and gullies. The cost of SMC work is included in plantation cost norm.

14. PEOPLES PARTICIPATION

The local communities are to be involved for the protection of the plantation. The VSS is to be formed (If not formed earlier) and incentive to be given to the VSS for their active participation in protecting the plantation. Livelihood option and EPA are to be taken to improve the socio-economic status of the people living around the forest. For effective protection of area, watch and ward shall be provided during the project period (From inception to 10th year) and subsequently the plantation will be looked after by the VSS.

15. WATCH & WARD

Watcher (1 watchers for every 10 Ha. plantation) should be engaged round the year for 10 years starting from the inception of the plantation.

16. SOIL & MOISTURE CONSERVATION MEASURES.

As the area is in a valley soil conservation measures like stagard trench of size 0.5 mt x 0.5 m x 2 mt @ 60 Nos. /Hectare shall be constructed to observe rain water for the seedlings planted.

17. FENCING AND TRENCH

To protect the plantation from grazing and other biotic interference, fencing shall be taken up over 17355 mtr. of periphery by barbed wire fencing all around. The trench of length 17355 mtr and size (3 mtr X 2.5 mtr X 1 mtr) will be also dug out around the proposed Reserve Forest area along with the barbed wire fencing as the herd of elephants used to stay in Madhi RF and Anantapur RF throughout the year and for protection of plantation, both barbed wire fencing and trench are required.

18. MONITORING AND EVALUATION

The scheme shall be executed and monitored by the Divisional Forest Officer, Dhenkanal Division from time to time. To facilitate this, the User Agency shall bear the cost of infrastructure required and shall provide also the infrastructural facilities.

19. FUNDING AGENCY

The National Highway Authority of India will pay the cost of Afforestation in two patches for 352.462 ha, for amounting Rs. 3,27,41,300/- . The above amount is to be deposited by user agency in CAMPA fund through e-portal mode only. The cost of Comp. Affn. of Rs. 3,27,41,300/- is to be paid by the User Agency on receipt of demand notice from Divisional Forest Officer, Dhenkanal Division in proper head of account respectively. However the User Agency will furnish an undertaking to pay any additional amount in case the wage rate is escalated between date of recommendation of this proposal & issue of Stage-II approval issued by MoEF & Climate Change for diversion of forest land.

20. EXECUTING AGENCY

Divisional Forest Officer, Dhenkanal Forest Division.

21. TOTAL COST OF THE PROJECT

The total cost of the project will be

- A. Cost of Plantation- Rs. 3,27,41,300/- (To be deposited in CAMPA fund through e-portal mode only by the User Agency)


Divisional Forest Officer,
Dhenkanal Division

Divisional Forest Officer
Dhenkanal Division

**COST NORM FOR AIDED NATURAL REGENERATION (ANR) PLANTATION @ 200 PLANTS PER
HECTARE WAGE RATE
RS. 213.50/- PER DAY.**

Sl No.	Item of Work	Preferable period of execution	Person days	Labour Cost @ 200 per day	Material Cost (In Rs.)	Total (in Rs.)
1	2	3	4	5	6	7
0th year (Advance work) pre-planting operation						
01	Survey, Demarcation and Pillar Posting, GPS Reading with mapping	Nov/Dec	2	427	0	427
02	Site Preparation	Nov/Dec	2	427	0	427
03	Silvicultural Operation including clearance of weed, climber cutting, high stump cutting, singling of shoots etc.	Jan / Feb	5	1067.50	0	1067.50
04	Nursery cost (6 months old seedlings) part @ Rs.9.45/- seedlings (Rs.6.67 in 0 th year + Rs.2.78 in 1 st year) for 220 seedlings (200+20)	Jan / Mar	5.5	1174.25	367	1541.25
05	Contingency & Unforeseen Expenditure		0	0	133	133
Total			14.5	3095.75	500	3595.75
1st year / Planting year						
01	Nursery Cost (6 months old seedlings) balance @ Rs.2.78 for 220 seedlings	Apr-Jul	2.5	533.75	112	645.75
02	Pitting 30 cm cube size.	Feb / Mar	6	1281	0	1281
03	Carriage and planting including casualty replacement	Jul / Aug	5	1067.50	0	1067.50
04	Complete weeding, soil working, Manuring	Aug / Sep	6	1281	0	1281
05	Cost of Vermi Compost 200 gms / Plant @ Rs.20/- per Kg= Rs.800.00 and Granular Insecticides 5 gms / Plant @ Rs.80/- per Kg = Rs.80.00	Aug / Sep	0	0	880	880
06	Cost of Chemical Fertilizer (a) Urea 70 Gms / Plant in two subsequent doses @ Rs.6/- per Kg = Rs.84.00 (b) NPK 50 Gms / Plant @ Rs.24/- per Kg = Rs.240 as basal dose		0	0	324	324
07	Fireline Tracing and Inspection Path	Sep/Oct	15	3202.50	0	3202.50
08	Silvicultural Operation involving clearance of weeds, cutting of climbers, singling of shoots etc.	Sep/Oct	20	4270	0	4270
09	Soil Conservation Measures (Staggered trenches of dimension 2m x 0.5 m x 0.5 m @ 60 Nos. per Ha.) or its equivalent.	Feb/Mar	3	640.50	0	640.50
10	Watch & Ward	Aug-Mar	7	1494.50	0	1494.50
11	Contingency and Unforeseen Expenditures		0	0	304	304
Total			64.5	13770.75	1620	15390.75

Sl No.	Item of Work	Preferable period of execution	Person days	Labour Cost @ 213.50 per day	Material Cost (In Rs.)	Total (in Rs.)
1	2	3	4	5	6	7
2nd year Maintenance						
1	Casualty replacement including cost of seedlings, carriage and planting	Jul/Aug	1	213.50	189	402.5
2	Complete weeding & cultural operation	Sep/Oct	2	427	0	427
3	Soil working and manuring	Sep/Oct	2	427	0	427
4	Cost of Fertiliser and insecticide (a) Vermi Compost 200 gms / Plant @ Rs.20/- per Kg = Rs.800/- (b) Granular Insecticides 5 gms /plant for 20 plants 100 gms @ Rs.80/- per Kg - Rs.8.00.	Sep/Oct	0	0	808	808
5	Soil Conservation Measures (Renovation of staggered trenches etc.)	Sep/Oct	8	1708	0	1708
6	Fire line Tracing and Inspection Path	Feb/Mar	1	213.50	0	213.50
7	Watch & Ward (Whole Year)	Apr-Mar	7	1494.50	0	1494.50
8	Contingency and Unforeseen Expenditures		0	0	181	181
Total			21	4483.50	1178	5661.50
3rd year Maintenance						
1	Complete Weeding & Cultural Operations	Aug / Sep	1	213.50	0	213.50
2	Soil Working	Aug / Sep	1	213.50		213.50
3	Fire line Tracing and Inspection Path	Feb/Mar	1	213.50	0	213.50
4	Watch & Ward (Whole Year)	Apr-Mar	7	1494.50	0	1494.50
5	Contingency and Unforeseen Expenditures		0	0	200	200
Total			10	2135	200	2335
4th year Maintenance						
1	Fire line Tracing and Inspection Path	Feb / Mar	1	213.50	0	213.50
2	Watch & Ward & Cultural Operations	Apr- Mar	2	427	0	427
Total			3	640.50	0	640.50
5th year Maintenance						
1	Fire line Tracing and Inspection Path	Feb / Mar	1	213.50	0	213.50
2	Watch & Ward & Cultural Operation	Apr- Mar	2	427	0	427
Total			3	640.50	0	640.50

6 th year Maintenance						
1	Fire line Tracing and Inspection Path	Feb / Mar	1	213.50	0	213.50
2	Watch & Ward & Cultural Operation	Apr- Mar	2	427	0	427
	Total		3	640.50	0	640.50
7 th year Maintenance						
1	Fire line Tracing and Inspection Path	Feb / Mar	1	213.50	0	213.50
2	Watch & Ward & Cultural Operation	Apr- Mar	2	427	0	427
	Total		3	640.50	0	640.50
8 th year Maintenance						
1	Fire line Tracing and Inspection Path	Feb / Mar	1	213.50	0	213.50
2	Watch & Ward & Cultural Operation	Apr- Mar	2	427	0	427
	Total		3	640.50	0	640.50
9 th year Maintenance						
1	Fire line Tracing and Inspection Path	Feb / Mar	1	213.50	0	213.50
2	Watch & Ward & Cultural Operation	Apr- Mar	2	427	0	427
	Total		3	640.50	0	640.50
10 th year Maintenance						
1	Fire line Tracing and Inspection Path	Feb / Mar	1	213.50	0	213.50
2	Watch & Ward & Cultural Operation	Apr- Mar	2	427	0	427
	Total		3	640.50	0	640.50


 Divisional Forest Officer,
 Dhenkanal Division

 Divisional Forest Officer
 Dhenkanal Division

ESTIMATE FOR BARBED WIRE FENCING (PERIMETER 17.355 KM)

(9.617 KM. IN MADHI RF & 7.738 KM. IN ANANTAPUR RF)

Estimate for 1 kilometer (Spacing 2.5 mtr + 10% for corner support)

No of pillar Required 440 Nos.	UNIT	RATE / UNIT	AMOUNT (IN RS.)
Cost of 1 pillar	440	350	1,54,000/-
Transportation charges	440	35	15,400/-
Cost of base fixing (CC grunting 1' x 1' x 1')	440 Cft.	60	26,400/-
Cost of fixing barbed wire @ 20 U/S + 10 skii]			7000/-
Cost of barbed wire (1Qntl) @ 8,500/-			
Cost of barbed wire (5+2)strand (5,000+ 2560 meter)			
7560 mtrs or 14 Qntls			1,19,000/-
Total cost for 1 km			3,21,860/-
Maintenance 5% per annum			16,093/- or 16,100/-
Maintenance for 4 year			64,400/-
Provision of Gate 02 Nos. per KM @ Rs. 5000/- gate			10,000/-
TOTAL			3,96,260/-

Per km of Rs. 3,96,260 x 17.355 Km = Rs. 68,77,092.30 or 68,77,100/-

P.S.
Divisional Forest Officer,
Dhenkanal Division
Divisional Forest Officer
Dhenkanal Division

TOTAL FINANCIAL OUTLAY OF THE SCHEME

A. Cost of Plantation to be deposited in CAMPA fund by User Agency

ABSTRACT

Sl. No	Year	Manday	Labour Cost (Rs)	Material Cost (Rs)	Total (Rs)
1	0th Year	14.5	3095.75	500	3595.50
2	1st Year	64.5	13770.75	1620	15390.75
3	2nd Year	21	4483.50	1178	5661.50
4	3rd Year	10	2135	200	2335
5	4th Year	3	640.50	0	640.50
6	5th Year	3	640.50	0	640.50
7	6th Year	3	640.50	0	640.50
8	7th Year	3	640.50	0	640.50
9	8th Year	3	640.50	0	640.50
10	9th Year	3	640.50	0	640.50
11	10th Year	3	640.50	0	640.50
		131	27968.50	3498	31466.50
12	TOTAL 31466.50 × 352.462 Ha.				1,10,90,745/-
13	20 % M & E				22,18,150/-
14	G. Total				1,33,08,895/-
15	Cost of Barbed Fencing over 7560 mtr @ per 3,96,260 Km for 17.355 KM				68,77,100/-
16	Trench (17.355 Kms) @ 5,50,000 per Km.				95,45,250/-
17	Cleaning for 352.462 Ha. of 20 mandays, i.e Rs213.50×20×352.462=	Due to heavy woody growth, extra labour is required to clean the area			15,05,013/-
18	Special Soil Moisture Conservation Structure of 20 mandays, i.e Rs213.50×20×352.462=	-			15,05,013/-
	G.Total				3,27,41,271/- or 3,27,41,300/-

(Rupees Three Crore Twenty Seven Lakhs Forty One Thousand Three Hundred) only.

RJ
 Divisional Forest Officer,
 Dhenkanal Division
 Divisional Forest Officer
 Dhenkanal Division

DERIVED POINT COORDINATES OF CA LAND BOUNDARY FOR NH200 AT ANATAPUR RF AREA				
PILLAR_ID	LONGITUDE (E)	LATITUDE (N)	EASTING	NORTHING
ANP1	85°27'17.70000"	21°03'59.80000"	339478.148	2330297.825
ANP2	85°27'24.33308"	21°03'54.22604"	339667.946	2330124.565
ANP3	85°27'32.08833"	21°03'53.82842"	339891.678	2330110.172
ANP4	85°27'35.61999"	21°03'53.39929"	339993.49	2330095.99
ANP5	85°27'43.50000"	21°03'48.40000"	340219.458	2329940.061
ANP6	85°28'05.20000"	21°03'48.70000"	340845.909	2329943.254
ANP7	85°28'32.22574"	21°03'42.19592"	341624.082	2329735.769
ANP8	85°28'47.09061'	21°03'28.23645"	342049.06	2329302.407
ANP9	85°29'03.16385"	21°03'24.76418"	342512.008	2329191.215
ANP10	85°29'01.62307"	21°03'33.67199"	342470.137	2329465.559
ANP11	85°29'04.70000'	21°03'39.20000"	342560.57	2329634.705
ANP12	85°28'43.64961"	21°03'42.31532"	341953.865	2329736.291
ANP13	85°28'16.95089"	21°03'53.31315"	341186.454	2330081.856
ANP14	85°27'59.20517"	21°03'53.45212"	340674.277	2330391.05
ANP15	85°27'42.35299"	21°03'57.77947"	340189.134	2330228.808
ANP16	85°27'34.97608"	21°04'01.13271"	339977.202	2330333.98
ANP17	85°27'31.84919"	21°04'07.19889"	339888.752	2330521.394
ANP18	85°27'29.53722"	21°04'09.51919"	339822.71	2330593.391
ANP19	85°27'25.67251"	21°04'13.60973"	339712.379	2330720.259
ANP20	85°27'21.50000"	21°04'15.60000"	339592.539	2330782.628
ANP21	85°27'17.62881"	21°04'14.36269"	339480.435	2330745.663
ANP22	85°27'19.36632"	21°04'07.66733"	339528.589	2330539.287

Forest Range Officer
Kamakshyanagar West Range

परियोजना निदेशक
PROJECT DIRECTOR
भारतीय राष्ट्रीय राजमार्ग प्रधिकरण
National Highways Authority of India
प. का.इ. डेवलपमेंट / PIU Dhenkanal

S. SAI
Site Engineer
National Highways Authority of India
Project Implementation Unit-Dhenkanal

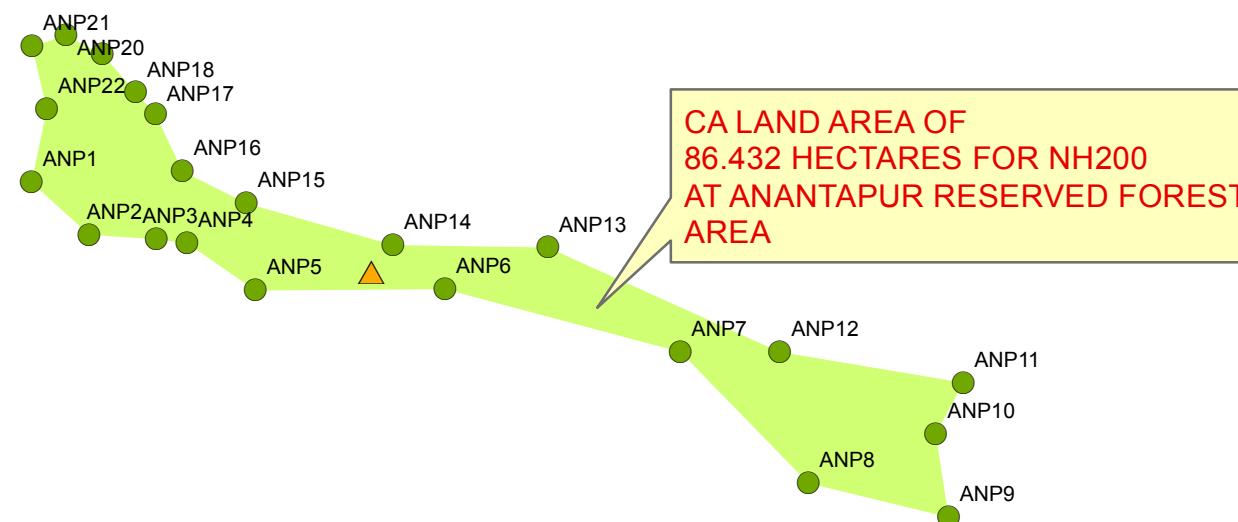
R.
Divisional Forest Officer
Dhenkanal Division

**MAP SHOWING DGPS SURVEYED RESERVED FOREST LAND
FOR COMPENSATORY AFFORESTATION
AT ANANTAPUR RESERVED FOREST AREA FOR NH200**



0 750 1,500 3,000 Meters

SCALE 1:25000



DERIVED POINT COORDINATES OF CA LAND BOUNDARY FOR NH200 AT ANATAPUR RF AREA

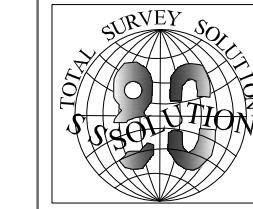
PILLAR_ID	LONGITUDE (E)	LATITUDE (N)	EASTING	NORTHING
ANP1	85°27'17.70000"	21°03'59.80000"	339478.148	2330297.825
ANP2	85°27'24.33308"	21°03'54.22604"	339667.946	2330124.565
ANP3	85°27'32.08833"	21°03'53.82842"	339891.678	2330110.172
ANP4	85°27'35.61999"	21°03'53.39929"	339993.49	2330095.99
ANP5	85°27'43.50000"	21°03'48.40000"	340219.458	2329940.061
ANP6	85°28'05.20000"	21°03'48.70000"	340845.909	2329943.254
ANP7	85°28'32.22574"	21°03'42.19592"	341624.082	2329735.769
ANP8	85°28'47.09061"	21°03'28.23645"	342049.06	2329302.407
ANP9	85°29'03.16385"	21°03'24.76418"	342512.008	2329191.215
ANP10	85°29'01.62307"	21°03'33.67199"	342470.137	2329465.559
ANP11	85°29'04.70000"	21°03'39.20000"	342560.57	2329634.705
ANP12	85°28'43.64961"	21°03'42.31532"	341953.865	2329736.291
ANP13	85°28'16.95089"	21°03'53.31315"	341186.454	2330081.856
ANP14	85°27'59.20517"	21°03'53.45212"	340674.277	2330091.05
ANP15	85°27'42.35299"	21°03'57.77947"	340189.134	2330228.808
ANP16	85°27'34.97608"	21°04'01.13271"	339977.202	2330333.98
ANP17	85°27'31.84919"	21°04'07.19889"	339888.752	2330521.394
ANP18	85°27'29.53722"	21°04'09.51919"	339822.71	2330593.391
ANP19	85°27'25.67251"	21°04'13.60973"	339712.379	2330720.259
ANP20	85°27'21.50000"	21°04'15.60000"	339592.539	2330782.628
ANP21	85°27'17.62881"	21°04'14.36269"	339480.435	2330745.663
ANP22	85°27'19.36632"	21°04'07.66733"	339528.589	2330539.287

NOTE:
A) DGPS SURVEYED COMPENSATORY AFFORESTATION LAND FOR NH200:86.432

Legend

- ▲ BASE_POINT
- CA_LAND_BOUNDARY_PILLAR_NH200
- CA_LAND_NH200

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S S SOLUTION

Durgapur

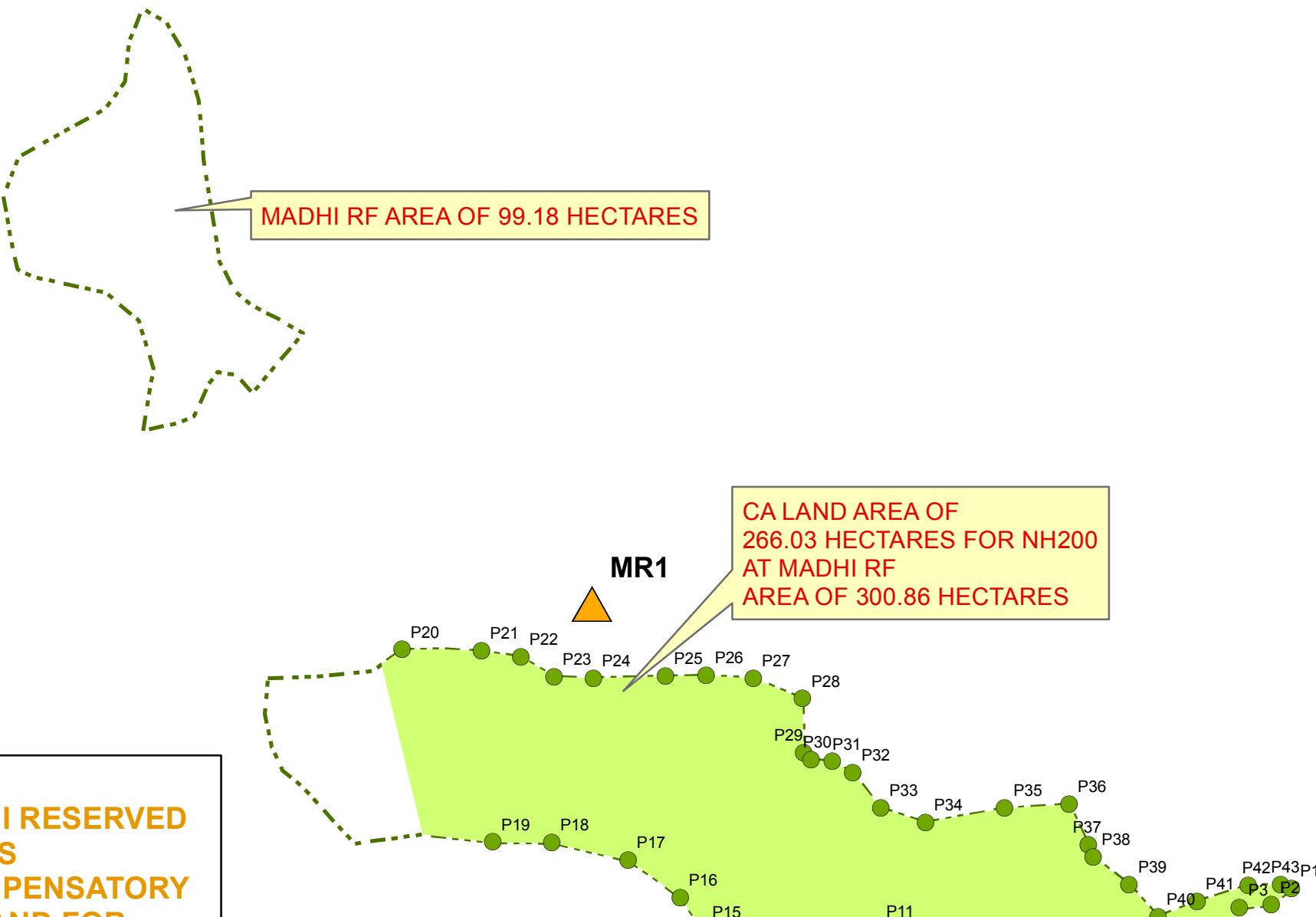
Website:- www.sssolutiongroup.com

EMAIL ID:sssolution_88@rediffmail.com



MAP SHOWING DGPS SURVEYED RESERVED FOREST LAND FOR COMPENSATORY AFFORESTATION AT MADHI RESERVED FOREST AREA FOR NH200

0 750 1,500 3,000 Meters
 SCALE 1:25000

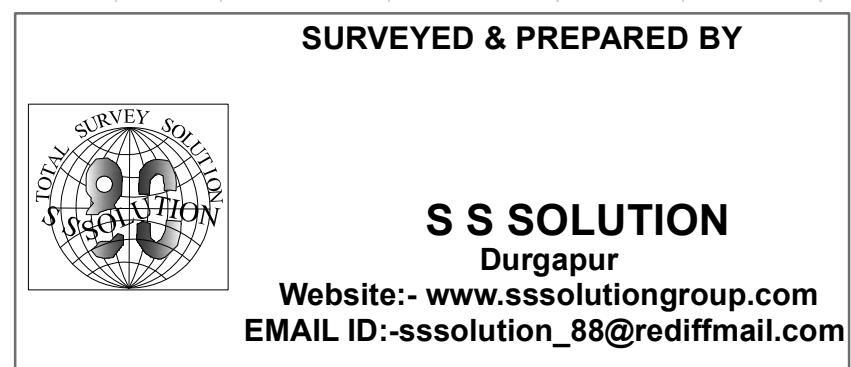


NOTE:
A) TOTAL AREA OF MADHI RESERVED FOREST: 400 HECTARES
B) DGPS SURVEYED COMPENSATORY AFFORESTATION LAND FOR NH200: 266.03 HECTARES.

Legend

- ▲ BASE_POINT
- CA_LAND_BOUNDARY_PILLAR_NH200
- CA_LAND_NH200
- MADHI RF_BOUNDARY

DERIVED POINT COORDINATES OF CA LAND BOUNDARY FOR NH200				
PILLAR_ID	LONGITUDE (E)	LATITUDE (N)	EASTING	NORTHING
P1	85°33'45.54853"	20°57'49.65714"	350570.432	2318811.282
P2	85°33'42.56582"	20°57'47.36038"	350483.648	2318741.431
P3	85°33'37.80670"	20°57'46.90721"	350346.064	2318728.731
P4	85°33'32.75172"	20°57'39.08606"	350197.897	2318489.548
P5	85°33'19.79489"	20°57'37.59970"	349823.247	2318447.214
P6	85°33'18.50105"	20°57'34.97296"	349785.147	2318366.781
P7	85°33'13.94798"	20°57'35.96688"	349653.913	2318398.531
P8	85°33'06.20939"	20°57'36.03643"	349430.414	2318402.689
P9	85°32'58.19086"	20°57'36.10836"	349198.829	2318406.997
P10	85°32'48.26796"	20°57'39.19028"	348913.078	2318504.364
P11	85°32'43.75615"	20°57'43.48847"	348783.961	2318637.715
P12	85°32'38.45292"	20°57'40.64130"	348629.99	2318551.558
P13	85°32'33.55469"	20°57'37.48147"	348487.627	2318455.681
P14	85°32'27.16429"	20°57'39.01003"	348303.477	2318504.364
P15	85°32'17.81668"	20°57'43.19773"	348034.66	2318635.598
P16	85°32'14.25588"	20°57'47.64150"	347933.06	2318773.182
P17	85°32'06.39100"	20°57'52.81762"	347707.353	2318934.423
P18	85°31'54.98191"	20°57'55.18534"	347378.492	2319010.249
P19	85°31'46.18200"	20°57'55.17868"	347124.323	2319012.376
P20	85°31'32.35001"	20°58'22.02366"	346732.418	2319841.533
P21	85°31'44.22713"	20°58'21.93532"	347075.422	2319835.66
P22	85°31'50.11601"	20°58'21.15152"	347245.28	2319809.995
P23	85°31'55.08984"	20°58'18.41516"	347388.16	2319724.535
P24	85°32'00.97598"	20°58'18.29935"	347558.129	2319719.414
P25	85°32'11.71298"	20°58'18.63916"	347868.326	2319727.025
P26	85°32'17.83702"	20°58'18.75292"	348045.229	2319728.907
P27	85°32'24.88038"	20°58'18.51622"	348248.587	2319719.772
P28	85°32'32.24800"	20°58'15.65432"	348460.573	2319629.83
P29	85°32'32.52098"	20°58'08.11376"	348466.346	2319397.887
P30	85°32'33.61801"	20°58'07.16275"	348497.764	2319368.356
P31	85°32'36.78101"	20°58'06.89268"	348589.042	2319359.22
P32	85°32'39.85699"	20°58'05.34875"	348677.452	2319310.936
P33	85°32'44.06100"	20°58'00.43255"	348797.499	2319158.661
P34	85°32'50.76499"	20°57'58.47610"	348990.582	2319096.743
P35	85°33'02.59499"	20°58'00.53663"	349332.836	2319157.007
P36	85°33'12.25598"	20°58'01.17664"	349612.046	2319174.162
P37	85°33'15.13300"	20°57'55.51794"	349693.569	2318999.409
P38	85°33'15.89699"	20°57'53.86468"	349715.177	2318948.372
P39	85°33'21.31700"	20°57'50.01235"	349870.653	2318828.503
P40	85°33'25.65439"	20°57'45.56542"	349994.697	2318690.631
P41	85°33'31.49618"	20°57'47.74874"	350164.031	2318756.248
P42	85°33'39.09539"	20°57'50.08453"	350384.164	2318826.098
P43	85°33'43.93116"	20°57'50.19419"	350523.865	2318828.215



CA LAND AREA OF
266.03 HECTARES FOR NH200
AT MADHI RF
AREA OF 300.86 HECTARES

MAP SHOWING DGPS SURVEYED RESERVED FOREST LAND FOR COMPENSATORY AFFORESTATION AT MADHI RESERVED FOREST AREA FOR NH200

0 2,500 5,000 10,000 Meters

SCALE 1:50000

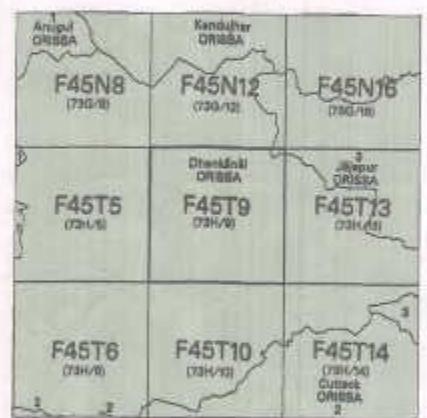


MADHI RF AREA OF 99.18 HECTARES



No. F45T9

Scale 1:50,000



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CONVENTIONAL SYMBOLS



REFERENCES

NH 200 National Highway No. 200 PWD Public Works Department.

RD Road Engineering Organization.

NOTES :-

Heights are in metres and above Indian Ordnance Sea Level.

Distances are approximate.

A water height, (W.H.), represents the approximate height, in metres, between the top and bottom of an important building or object.

The distance between Shekharpur and Jajpur District has been omitted to reduce cut by the distance.

The source documents of areas of Reserved or Protected Forests are shown by green shades.

Head Post is shown thus.

Power lines with pylons surveyed with polar unbalance.

Contour interval 30 METRES

Projection - UTM Datum - WGS 84

Magnetic Variation from True North about 2° West in 2008.

(Actual change negligible.)

1:50,000

Scale 1:50,000

CONTOUR INTERVAL 30 METRES

For further details about this map, contact:

Director, Odisha Geo-Spatial Data Centre

Survey of India,

Survey Bhawan, PO - R.R. Laboratory,

Barabati - 751013

Fax : 0674 - 220418

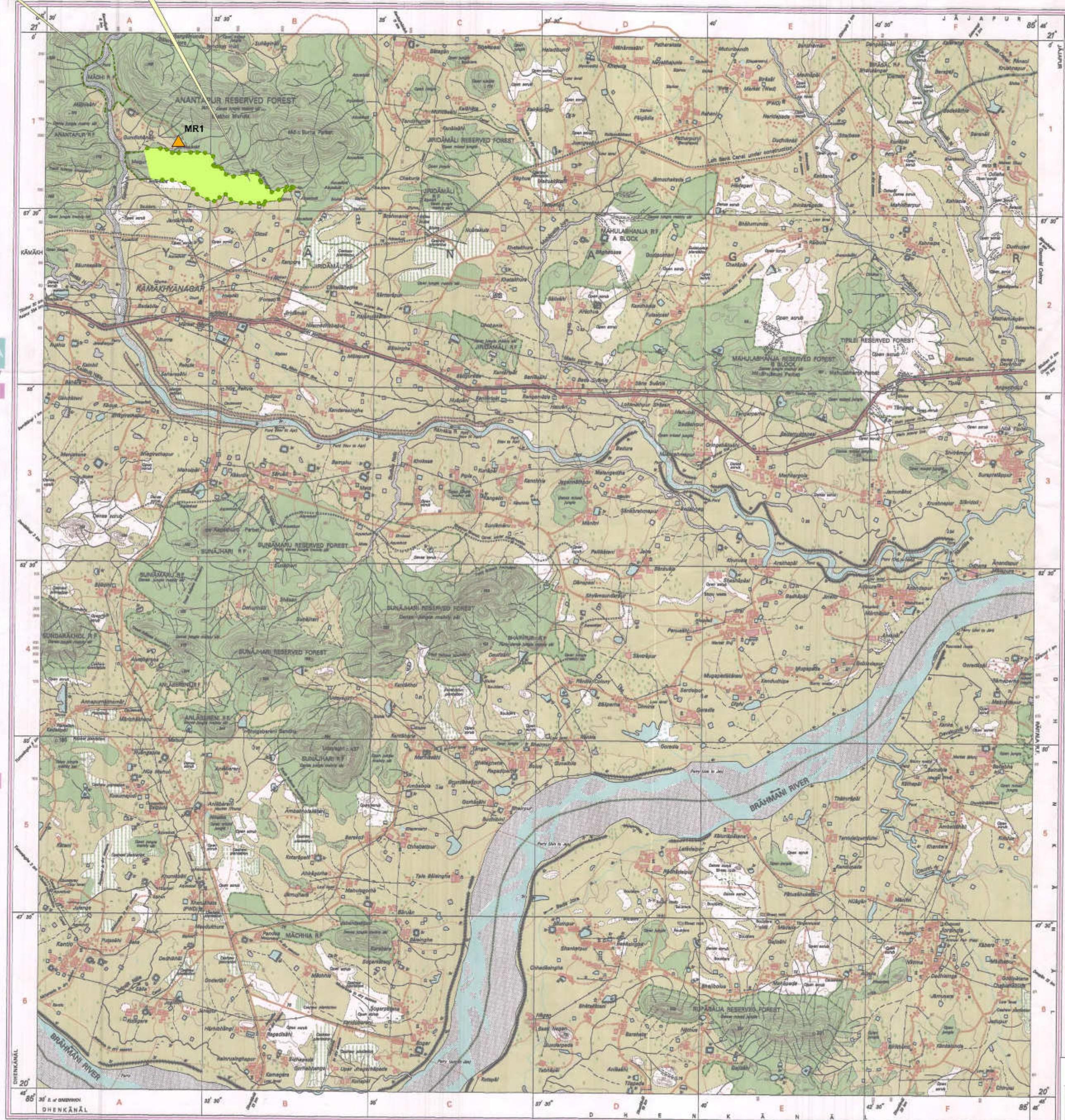
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DERIVED POINT COORDINATES OF CA LAND BOUNDARY FOR NH200

PILLAR_ID	LONGITUDE (E)	LATITUDE (N)	EASTING	NORTHING
P1	85°33'45.54853"	20°57'49.65714"	350570.432	231881.282
P2	85°33'42.56582"	20°57'47.36038"	350483.648	231874.141
P3	85°33'37.80570"	20°57'46.90721"	350346.064	231872.731
P4	85°33'32.75172"	20°57'39.08600"	3501937.897	2318489.548
P5	85°33'19.79489"	20°57'37.59970"	349823.247	2318447.214
P6	85°33'18.50105"	20°57'34.97296"	349785.147	2318366.781
P7	85°33'13.94798"	20°57'35.96688"	348653.913	2318388.531
P8	85°33'06.20199"	20°57'36.03643"	349430.414	2318402.689
P9	85°32'58.19086"	20°57'35.10236"	349198.829	2318406.997
P10	85°32'48.26796"	20°57'39.19028"	348913.078	2318504.364
P11	85°32'43.75615"	20°57'43.48847"	347707.353	2318934.473
P12	85°32'38.45292"	20°57'40.64130"	348629.99	2318551.558
P13	85°32'33.55469"	20°57'37.48147"	348487.627	2318455.681
P14	85°32'27.16429"	20°57'39.01003"	348303.477	2318504.364
P15	85°32'17.81668"	20°57'43.19773"	348034.66	2318635.591
P16	85°32'14.25588"	20°57'47.64150"	347933.06	2318773.182
P17	85°32'06.39100"	20°57'52.81767"	347707.353	2318934.473
P18	85°31'54.96191"	20°57'55.18534"	347378.492	231910.249
P19	85°31'46.18200"	20°57'55.17868"	347124.323	231912.376
P20	85°31'32.35001"	20°58'22.02366"	346732.418	2319841.533
P21	85°31'14.22713"	20°58'21.93532"	347075.422	2319835.66
P22	85°31'01.11601"	20°58'21.15152"	347245.28	2319809.995
P23	85°31'55.06984"	20°58'18.41516"	347388.16	2319724.211
P24	85°32'00.97598"	20°58'18.29935"	347588.129	2319719.414
P25	85°32'11.71286"	20°58'18.63191"	347828.326	2319727.204
P26	85°32'13.83702"	20°58'18.75297"	348045.573	2319729.907
P27	85°32'24.88038"	20°58'18.51622"	348284.587	2319730.772
P28	85°32'32.24800"	20°58'18.65432"	348460.573	2319629.83
P29	85°32'32.52098"	20°58'08.11376"	348466.346	2319397.887
P30	85°32'33.61801"	20°58'07.16275"	348493.764	2319368.356
P31	85°32'36.78101"	20°58'06.89268"	348589.042	2319359.22
P32	85°32'39.85699"	20°58'05.34875"	348677.452	2319310.936
P33	85°32'44.06100"	20°58'04.43255"	348797.499	2319158.661
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P35	85°32'02.59499"	20°58'00.53663"	349332.836	2319175.007
P36	85°33'12.25598"	20°58'01.17664"	340612.046	2319174.162
P37	85°33'15.13300"	20°57'55.51794"	349693.569	2318999.409
P38	85°33'15.89699"	20°57'53.86468"	349715.177	2318948.372
P39	85°33'21.31700"	20°57'50.01235"	349870.653	2318828.502
P40	85°33'25.65439"	20°57'45.56542"	349994.697	2318690.631
P41	85°33'31.49618"	20°57'47.74874"	350164.031	2318756.248
P42	85°33'39.09539"	20°57'50.08453"	350384.164	2318826.098
P43	85°33'43.93116"	20°57'50.19419"	350523.865	2318828.215

NOTE:
A) TOTAL AREA OF MADHI RESERVED FOREST: 400 HECTARES
B) DGPS SURVEYED COMPENSATORY AFFORESTATION LAND FOR NH200: 266.03

Legend

- ▲ BASE_POINT
- CA_LAND_BOUNDARY_PILLAR_NH200
- CA_LAND_NH200
- MADHI_RF_BOUNDARY

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S S SOLUTION

Durgapur

Website:- www.sssolutiongroup.com
EMAIL ID:- sssolution_88@rediffmail.com