

**OFFICE OF THE DIVISIONAL FOREST OFFICER, NABARANGPUR DIVISION**  
**Phone No. 06858-222014 (OFFICE/FAX), Cell No. 09437094840**  
**Email -dfo.ngpur@yahoo.co.in**

Memo No. 37724F(Misc.) /2016  
 Dated, Nabarangpur, 28 Oct-2016

To

*The Regional Chief Conservator of Forests,  
 Koraput Circle, Koraput.*

Sub: - Proposal for diversion of 51.783 ha. of forest land for construction of Turi-Guntat Irrigation project in Nabarangpur Block of Nabarangpur District under Nabarangpur Forest Division.

Ref :- 1. Memo No. 17849/9F (Irrg)-317/2016 dtd. 19.09.2016 of Addl. PCCF Forest Diversion & Nodal Officer, FC Act, O/o the Principal Chief Conservator of Forests, Odisha, Bhubaneswar.  
 2. Your Memo No. 3477 dtd. 08.09.2016.

With reference to the above cited subject, I am submitting herewith the compliance to the observations pointed out by the Special Secretary to Government of Odisha, Forest & Environment Department vide his letter No. 10F (Cons)-256/2016-16462/F&E dtd. 02.09.2016.

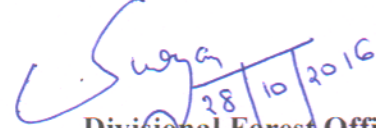
| OBSERVATIONS   | COMPLIANCE   |
|--|--|
| i) The project proposal includes a reservoir as well as canal project where forest land is also required. Since this is a non-site specific project, more than two alternate sites should have been examined and details thereof submitted to ensure avoiding/minimum use of forest land as per para 2.1(3) of FC Act guidelines. Despite mention of several alternative sites examined for this project at pate 212/DP, no details of such examination as per above FC Act guideline has been furnished in the DP to ensure inescapability of forest land shall therefore be furnished. | Complied on page : 214 & 214a  |
| ii) It needs to be clarified whether this is major/medium irrigation project.  | This is a Medium Irrigation Project as the CCA is 9135 Ha (for major CCA should be 10,000 Ha or above). Page:-24 |
| iii) The project envisages two barrages to be linked by a canal. This project needs 363.309 ha. of land including 20.774 ha. of forest land for canal project for irrigation. Details of canal project such as its length, width and other relevant information has not  | Complied on page : 27 to 29  |

been furnished.

iv) As per report of DFO, Nabarangpur and RCCF, Koraput, 51.783 ha. of forests land required for the project includes 7.193 ha. of Bikrampur Reserved Forests However forest land schedule of Bikrampur Village authenticated by Tahasildar, Nabarangpur (page 106/DP) does not mention about this extent of land in RF. Land schedule of this village needs to mention RF land duly signed by DFO, Nabarangpur and Tahasildar, Nabarangpur Besides, the DFO, Nabarangpur is required to furnish a map (A/4size) showing boundary pillars of 7.193 ha. of RF land required for the project duly authenticated by him.

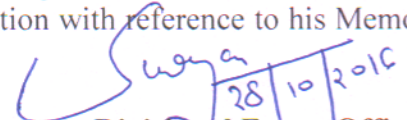
Complied on page: 106 & 106a.

This is for favour of kind information and necessary action.

  
28/10/2016  
**Divisional Forest Officer,**  
**Nabarangpur Division.**

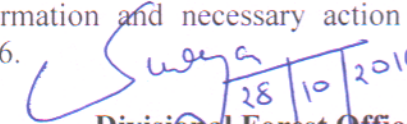
Memo No. 3773 Dtd. 28/10/16

Copy submitted to the Addl. Principal Chief Conservator of Forests, Forest Diversion & Nodal Officer, FC Act, O/o the Principal Chief Conservator of Forests, Odisha, Bhubaneswar for information and necessary action with reference to his Memo No. 17848/9F (Irrg)-317/2016 dtd. 19.09.2016.

  
28/10/2016  
**Divisional Forest Officer**  
**Nabarangpur Division.**

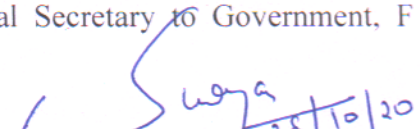
Memo No. 3774 Dtd. 28/10/16

Copy to the Special Secretary to Government, Forest & Environment Department Govt. of Odisha, Bhubaneswar for information and necessary action with reference to his Memo No. 16463/ F& E dtd. 02.09.2016.

  
28/10/2016  
**Divisional Forest Officer**  
**Nabarangpur Division.**

Memo No. 3775 Dtd. 28/10/16

Copy forwarded to the Executive Engineer, Koraput Investigation Division, Jeypore, Dist- Koraput for information and necessary action with reference to Memo No. 16465/ F& E dtd. 02.09.2016 of Special Secretary to Government, F & E Department.

  
28/10/2016  
**Divisional Forest Officer**  
**Nabarangpur Division.**

## JUSTIFICATION FOR LOCATING TURI-GUNTAT IRRIGATION PROJECT IN FOREST LAND

During the Investigation of the Project various alternatives were checked for feasibility of structure, submergence, involvement of forest land, displacement and optimal uses of the inflow in Turi and Guntat River for irrigating cultivable land in its proposed command area.

### Alternative I:

First a site selected across Turi River near village Siuni (Lat:  $19^{\circ} 14' 16.74''$  & Long:  $82^{\circ} 27' 07.20''$ ) 0.50 km below the confluence of Guntat River. Which may involves 42 ha of forest land. The site was abandoned due to non-availability of suitable rock strata for foundation and higher submergence.

### Alternatives II:

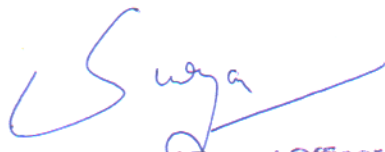
The second site was examined 2.5 km downstream of the confluence near village Bhimaguda (Lat  $19^{\circ} 14' 06.49''$  N and Long  $82^{\circ} 26' 27.56''$  E) which may involves 35 ha of forest land. The site was also abandoned due to non-availability of suitable rock strata for foundation and higher submergence in the villages like Bhimaguda & Siuni.


### Alternatives III:

As further going down stream of the alternative site-II would have resulted reduction in the proposed command area, further investigation was carried out on the upstream of the confluence. It was decided to construct two separate barrages one at Deola (Lat:  $19^{\circ} 15' 29''$  N & Long:  $82^{\circ} 28' 22''$  E) on river Guntat and another at village Chatahandi (Lat:  $19^{\circ} 16' 55''$  N & Long:  $82^{\circ} 26' 24''$  E) on River Turi. The sites have suitable hard rock strata available in the beds for foundation.

The alternative III was finalized for the project due to suitable foundation stone, less submergence, no displacement and higher command area. The submergence of unavoidable forest land is 31.009 ha (4.80%) of the total submergence of 645.664ha

Accordingly a link canal to transfer excess water from Turi river to Guntat river and two counter canals from the head work have been planned ensuring minimal involvement of forest land of 20.774 ha (5.7%) of the total land 363.309ha required for the canal system.

  
Divisional Forest Officer  
Nabarangpur Division

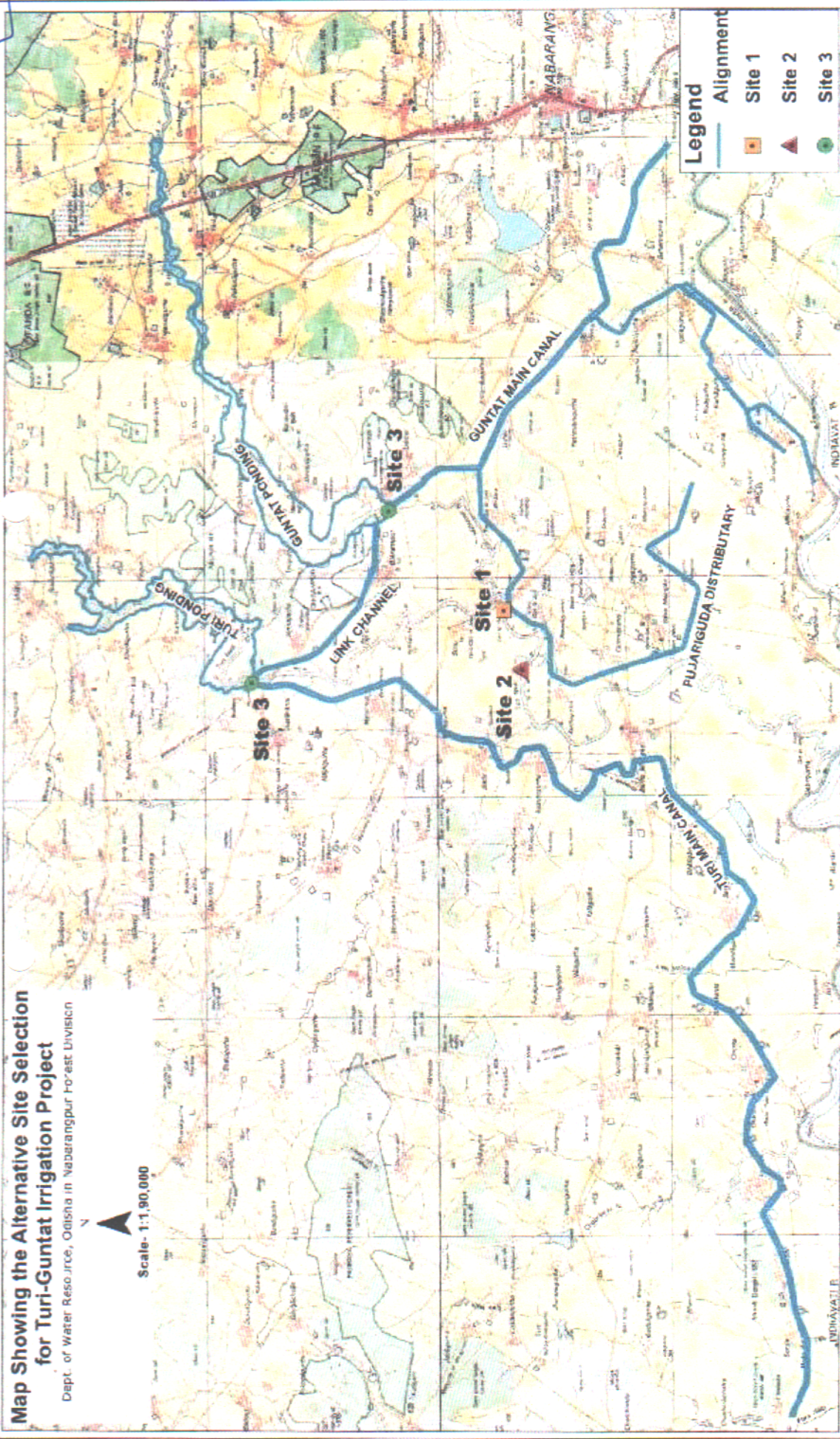
  
Executive Engineer  
Koraput Investigation Division,  
Jeypure, Koraput

214a

### Map Showing the Alternative Site Selection for Turi-Guntat Irrigation Project

Dept. of Water Resource, Odisha in Nabarangpur Forest Division

Scale- 1:1,90,000



**Legend**

- Alignment
- Site 1
- ▲ Site 2
- Site 3

*Surya*

Divisional Forest Officer  
Nabarangpur Division

*Ravi Kumar*  
Executive Engineer  
Koraput Investigation Division  
Koraput (Odisha, India)

## Project Details:

### 1. Introduction

The Turi Guntat Irrigation Project is an integrated diversion scheme envisages construction of two barrages one each across river Turi at Chatahandi and river Guntat at Deula village respectively in Nabarangpur block of Nabarangpur district, Odisha. The total catchment intercepted is 612 Km<sup>2</sup> i.e. 381 Km<sup>2</sup> is the independent catchment of river Turi at barrage site and 231 Km<sup>2</sup> is independent catchment of river Guntat at Guntat barrage side. The two ponds will be connected by a link channel. The catchment area lies entirely in the State of Odisha. *On completion of this project it envisaged to irrigate about 9135 ha (CCA), hence it is an Medium Irrigation Project.* The estimated cost of project is 11,787.50 lakhs as per 2010 price index. There will be zero displacement and it will provide potable water for 10,000 population. The project is dedicated for benefit of people without any adverse impact in KBK region.

### 2. Location

The Turi Barrage is located near village Chatahandi at latitude 19<sup>o</sup> 16' 55" N and longitude 82<sup>o</sup> 26' 24" E. The Guntat Barrage is located near village Deula at latitude 19<sup>o</sup> 15' 29" N and longitude 82<sup>o</sup> 28' 22" E. vide toposheet reference 65- I/ 7, 8, 10, 11, 3, 4 ,6, scale (1: 50,000). The Project site is 13 km away from Nabarangpur District head quarter town on NH – 26. The nearest railway station is Jeypore.

### 3. Communication

The Project site is 13 km away from Nabarangpur District head quarter town on NH – 26. The nearest railway station is Jeypore in Koraput district.

### 4. Climate

The climate is extremely tropical characterized with hot summer and cold winter. Rainfall occurs mainly during monsoon stretching between mid June to October. The distribution of rainfall is not uniform. The principal crop is paddy, which is not assured to the cultivators due to irregular and uneven rainfall pattern in the ayacut area.

*Rajy*  
Executive Engineer  
Koraput Investigation Division  
Jeypore (K)

**SALIENT FEATURES OF TURI-GUNTAT IRRIGATION PROJECT**

|    |                                      |   |                     |
|----|--------------------------------------|---|---------------------|
| 1. | <b>Location</b>                      | <b>Turi</b>   | <b>Guntat</b>       |
|    | i. State                             | Odisha  | Odisha              |
|    | ii. District                         | Nabarangpur   | Nabarangpur         |
|    | iii. Sub Division                    | Nabarangpur   | Nabarangpur         |
|    | iv. Village                          | Chatahandi  | Deula               |
|    | v. River                             | Turi  | Guntat              |
|    | vi. Location                         | longitude 82°26' 24" longitude 82°28' 22"               |                     |
|    | vii. Block                           | Nabarangpur   | Nabarangpur         |
|    | viii. Topo Sheet ref                 | 65-I/7, 65-I/8, 65-I/10, 65-I/11, 65-I/3,65-I/4, 65-I/6 |                     |
|    | ix. Type                             | Barrage   | Barrage             |
|    | x. Sub-Basin                         | Indrabati   | Indrabati           |
| 2. | <b>Hydrology</b>                     |   |                     |
|    | i. Catchment Area (Km <sup>2</sup> ) | 381 Km <sup>2</sup>                                     | 231 Km <sup>2</sup> |
|    | ii. Maximum annual rainfall          | 1784.65mm   | 1879mm              |
|    | iii. Minimum annual rainfall         | 874mm   | 845mm               |

*Rev.*  
 Executive Engineer  
 Koraput Investigation Division  
 Jeypore (K)

|                             |             |             |
|-----------------------------|-------------|-------------|
| iv. Average annual rainfall | 1418mm      | 1509mm      |
| v. 75% dependable yield     | 622mm       | 643mm       |
| vi. Design flood            | 2724 cumecs | 1726 cumecs |

**3. Principal Level**

|                            |            |            |
|----------------------------|------------|------------|
| i. T.B.L                   | 568.50 M.  | 566.50 M.  |
| ii. H.F.L                  | 566.00 M.  | 564.50 M.  |
| iii. Pond Level            | 563.00 M.  | 562.00 M.  |
| iv. F.S.L of Canal         | 562.50 M.  | 561.50 M.  |
| v. Barrage bays            | 558.00 M.  | 557.00 M.  |
| vi. Under Sluices          | 557.00 M.  | 556.00 M.  |
| vii. Average B.L of River  | 557.435 M. | 556.210 M. |
| viii. Deepest B.L of River | 556.765 M. | 555.775 M. |

**4. Submergence Details**

i. No. of villages to be submerged Nil

**5. Barrage**

|                       |                  |                  |
|-----------------------|------------------|------------------|
| i. Type               | Concrete Barrage | Concrete Barrage |
| ii. Length of Barrage | 136 M.           | 98 M.            |
| iii. Number of Bays   | 7 Nos.           | 6 Nos.           |

*Deu*

|    |                                    |                  |                  |
|----|------------------------------------|------------------|------------------|
|    | viii. Deepest B.L of River         | 556.765 M.       | 555.775 M.       |
| 4. | <b>Submergence Details</b>         |                  |                  |
|    | i. No. of villages to be submerged | Nil              |                  |
| 5. | <b>Barrage</b>                     |                  |                  |
|    | i. Type                            | Concrete Barrage | Concrete Barrage |
|    | ii. Length of Barrage              | 136 M.           | 98 M.            |
|    | iii. Number of Bays                | 7 Nos.           | 6 Nos.           |
|    | iv. Size of Gate                   | 10 M. * 5 M.     | 10 M. * 5 M.     |
|    | v. Number of Under Sluices         | 4 Nos.           | 2 Nos.           |
|    | vi. Size of Under Sluice Gate      | 10 M. * 6 M.     | 10 M. * 6 M.     |
|    | vii. Type of Gate                  | Vertical         | Vertical         |
| 6. | <b>Details of Command Area</b>     |                  |                  |
|    | i. G. C. A                         | 10300 Ha         |                  |
|    | ii. C. C. A                        | 9135 Ha          |                  |
|    | iii. Intensity of Irrigation       | 88%              |                  |
|    | iv. Kharif                         | 8000 Ha          |                  |
|    | v. Annual Irrigation               | 8000 Ha          |                  |
| 7. | <b>Length of Canal System</b>      |                  |                  |
|    | Length of Main Canal               | 36.5 km          |                  |
|    | Width of Main Canal                | 70 Mtr           |                  |
|    | Length of Link Canal               | 4.35 km          |                  |
|    | Width of Link Canal                | 50 Mtr           |                  |
|    | Length of Distributaries Canal     | 18 km            |                  |
|    | Width of Distributaries Canal      | 40Mtr            |                  |
|    | Length of Minor Canal              | 4.67 km          |                  |
|    | Width of Minor Canal               | 25 Mtr           |                  |

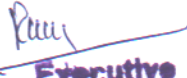
  
**Executive Engineer**  
**Korapur Investigation Division**  
**Jeypore (**




## Forest Land Schedule

Name of the Village: Bikrampur  
 Name of the PS: Nabarangpur  
 Name of the Tahasil: Nabarangpur  
 Name of the District: Nabarangpur

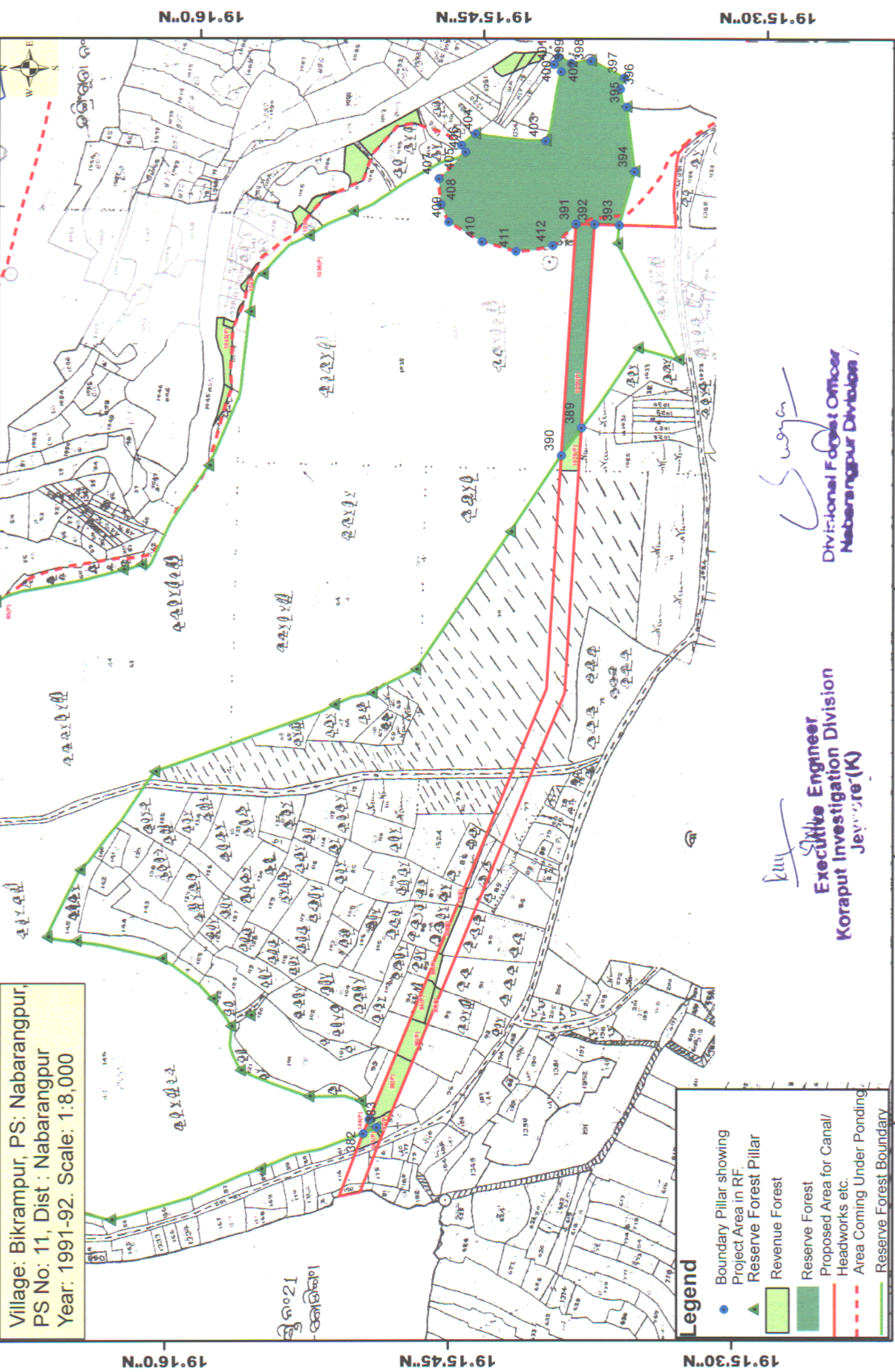
| Sl. No.      | Khata No | Plot No | Total Area (in Acre) | Alienation Area (in Acre) | Kisam          | Name of the Tenant | Remarks on Forest |
|--------------|----------|---------|----------------------|---------------------------|----------------|--------------------|-------------------|
| 1            | 588      | 87(P)   | 0.830                | 0.054                     | Forest         | Rakhita            | RevenueForest     |
| 2            | 588      | 88(P)   | 1.360                | 0.166                     | Forest         | Rakhita            | RevenueForest     |
| 3            | 588      | 89(P)   | 0.540                | 0.155                     | Forest         | Rakhita            | RevenueForest     |
| 4            | 588      | 93(P)   | 1.430                | 0.134                     | Forest         | Rakhita            | RevenueForest     |
| 5            | 588      | 94(P)   | 0.940                | 0.353                     | Forest         | Rakhita            | RevenueForest     |
| 6            | 588      | 161(P)  | 0.560                | 0.175                     | Village Forest | Rakhita            | RevenueForest     |
| 7            | 588      | 95(P)   | 2.440                | 0.474                     | Forest         | Rakhita            | RevenueForest     |
| 8            | 588      | 97(P)   | 0.570                | 0.154                     | Forest         | Rakhita            | RevenueForest     |
| 9            | 588      | 98(P)   | 1.900                | 0.767                     | Forest         | Rakhita            | RevenueForest     |
| 10           | 588      | 146(P)  | 51.880               | 0.054                     | Village Forest | Rakhita            | Reserve Forest    |
| 11           | 588      | 1025(P) | 3.500                | 0.356                     | Forest         | Rakhita            | RevenueForest     |
| 12           | 588      | 1035(P) | 37.830               | 4.295                     | Forest         | Rakhita            | Reserve Forest    |
| 13           | 588      | 1036    | 0.410                | 0.144                     | Village Forest | Rakhita            | RevenueForest     |
| 14           | 588      | 1042    | 0.680                | 0.121                     | Jungle         | Rakhita            | RevenueForest     |
| 15           | 588      | 1043    | 0.920                | 0.480                     | Jungle         | Rakhita            | RevenueForest     |
| 16           | 588      | 1044    | 0.460                | 0.284                     | Jungle         | Rakhita            | RevenueForest     |
| 17           | 588      | 1107    | 1.800                | 0.531                     | Village Forest | Rakhita            | RevenueForest     |
| 18           | 588      | 1109    | 1.910                | 0.451                     | Village Forest | Rakhita            | RevenueForest     |
| 19           | 588      | 1112    | 0.200                | 0.200                     | Jungle         | Rakhita            | RevenueForest     |
| 20           | 588      | 1113    | 0.080                | 0.080                     | Village Forest | Rakhita            | RevenueForest     |
| 21           | 588      | 1116    | 0.120                | 0.120                     | Village Forest | Rakhita            | RevenueForest     |
| 22           | 588      | 1120(P) | 19.880               | 13.425                    | Gochar         | Rakhita            | Reserve Forest    |
| <b>Total</b> |          |         | <b>110.360</b>       | <b>22.973</b>             |                |                    |                   |

  
**Executive Engineer**  
 Koraput Investigation Division  
 Jeypur

  
**Divisional Forest Officer**  
 Nabarangpur Division

  
**Tahasildar**  
 Nabarangpur

106a



Village: Bikrampur, PS: Nabarangpur,  
 PS No: 11, Dist : Nabarangpur  
 Year: 1991-92. Scale: 1:8,000

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**Legend**

- Boundary Pillar showing Project Area in RF.
- ▲ Reserve Forest Pillar
- Revenue Forest
- Reserve Forest
- Proposed Area for Canal/Headworks etc.
- Area Coming Under Ponding
- Reserve Forest Boundary

*Kalyan*  
**Executive Engineer**  
**Koraput Investigation Division**  
 Jeyanire (K)

*Surya*  
**Divisional Forest Officer**  
**Nabarangpur Division**

82°27'15"E 82°27'30"E 82°27'45"E 82°28'0"E 82°28'15"E

19°15'30"N 19°15'45"N 19°16'0"N