



**REPORT ON
DGPS SURVEY USING HIGH RESOLUTION
SATELLITE IMAGE
OF**

**DGPS SURVEY OF FOREST PATCHES (1.732 Ha.) REQUIRED FOR
TRANSPORTATION OF COAL VIA ROAD AND APPROACH ROAD TO
KANCHANPUR VILLAGE (TOWNSHIP)**

Submitted to

**NTPC
TALAIPELLI COAL MINING PROJECT
LAILUNGA ROAD, TEHSIL-GHARGHODA,
DISTRICT-RAIGARH, PIN CODE-496111,
CHHATTISGARH**



Submitted by

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Official Notification (for DGPS Survey)
No. F7-14/2013/12
Government of Chhattisgarh


वन मण्डलाधिकारी
रायगढ़, वनमण्डल

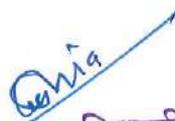
DGPS SURVEY CARRIED OUT
For


वन मण्डलाधिकारी
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NTPC
TALAIPALLI COAL MINING PROJECT
LAILUNGA ROAD, TEHSIL-GHARGHODA,
DISTRICT-RAIGARH, PIN CODE-496111,
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1. INTRODUCTION

Ministry of Environment and Forests, Govt. of India vide their circular No.F.No.-11-9/98-FC, dated 08-07-2011 have stipulated that to ensure accurate delineation of forest area proposed to be diverted for non-forestry purposes under Section-2 of Forest Conservation Act, 1980 the diversion proposal under Forest Conservation Act shall be accompanied by DGPS/ETS surveyed reports of the forest land proposed for diversion as per guidelines laid down in the circular issued by ministry of forest and Environment, Government of India from time to time. While submitting proposal for diversion of forest land for non forest purpose, the user agency has to submit the georeferenced boundary, using DGPS in shape file containing maps along with hard copy authenticated by Divisional Forest Officer (DFO) concerned. The conventional methods of survey to delineate and demarcate the forest land with reference to the earlier Cadastral/Forest Compartment are time consuming. Further, the conventional surveys are “Un projected” Surveys, hence linking them to geospatial domain is a challenging task. The modern survey technique using Differential Global positioning system (DGPS) with georeferenced high resolution satellite image bring efficacy in survey in shorter time span compared to old method of survey and record preparation.

In view of above M/S NTPC Tallaipalli Coal Mining Project has allotted CCOST vide purchase order no. TLCMP/C&M/CS-54/2018-19, Dated 27.12.2018 to undertake DGPS survey of 1.732 hectare left-out revenue forest land in the approach road for coal transportation to Kanchanpur village (township) for which forest clearance is to be applied . These include revenue forest of 0.950 hectare of village Auraimuda comprising plot no 17 (chhote jhaad ke jungle - 0.950 hectare), Dhoram village comprising plot no 377/1,377/4 and 251/1 (chhote jhad ke jungle – 0.336, 0.058 and 0.048 hectare), Kanchanpur comprising plot no 709 (bade jhadd ke jungle 0.250 hectare) and Raikera village comprising plot no 587/1and 857/12 (chhote jhaad ke jungle - 0.078 and 0.012 hectare

- The present study is taken up to conduct DGPS survey of identified 1.732 hectare of forest land in respect of transportation of coal via road and approach road to Kanchanpur village (Township).

2. SCOPE OF WORK

- 1.1. Control survey and Geo-referencing of the Identified revenue forest area using DGPS:
 - 1.1.1. Establishment of base station and fixing the coordinate linked to IGS (International GNSS Services) as per the SOI guidelines.
 - 1.1.2. DGPS observations of road centre line in cadastral sheets of the revenue forest land.
 - 1.1.3. Identification of revenue forest land patches in the Geo-referenced project area map.
- 1.2. DGPS observation of revenue forest area, along road as per requirement.
- 1.3. Carrying out survey work using DGPS (UTM coordinates) for demarcation of revenue forest area.
- 1.4. Computation of revenue forest area through digitization and GIS analysis
- 1.5. Processing of DGPS observations for final co-ordinates and generation of georeferenced shape files of the revenue forest patches.
- 1.6. Submission revenue forest patches boundary along the road (showing the pillar number and its DGPS coordinates) output file in shape file and kml file format.
- 1.7. Submission of 1 set of hard copy of plans & report of Area showing the pillar numbers and its DGPS coordinates and its soft copy in CD format as below:
- 1.8. Text report explaining the methodology adopted for DGPS survey. Tabulated reading of DGPS readings (in UTM) and coordinate

3. LOCATION OF FOREST AREA APPROACH ROAD

Forest patches (1.732 ha.) for transportation of coal via road and approach road to kanchanpur village (township) under Talaipalli coal mining project is located at Raikera, Auraimuda, Dhoram and Kanchanpur villages. Distance is about 30 km from Talaipalli coal mine to Kanchanpur village. Along the road and approach road to kanchanpur few forest patches have been identified which are falling in the survey of India Toposheet No 64N/08.

The minimum and maximum coordinates along the road is

Upper Right corner: - 22° 13' 44.720" N, 83° 25' 2.274" E

Lower Left corner: - 22° 10' 57.693" N, 83° 19' 46.653" E

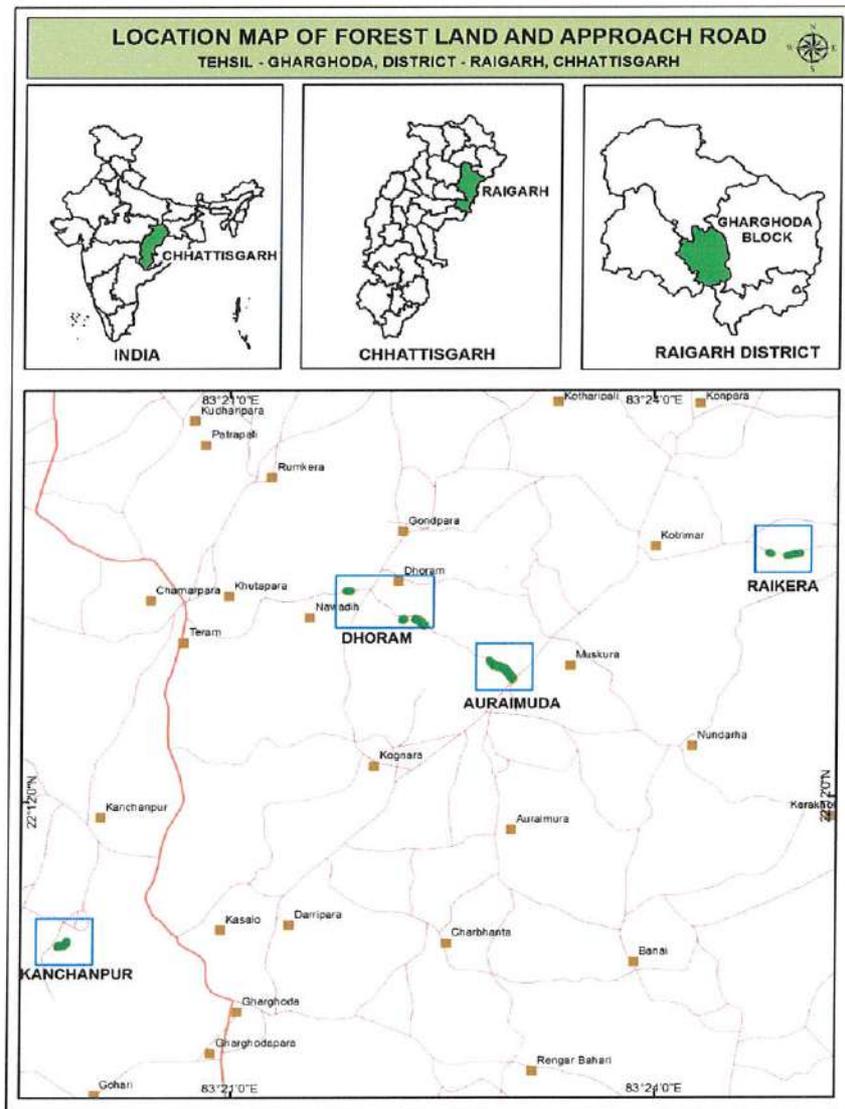


Figure 1: Location map of the area

4. DATA SETS USED

4.1. The Satellite Imagery:

High resolution Cartosat-I data with panchromatic images of 2.5 m resolution and multispectral images of Resourcesat-2 (LISS-IV) with 5.8 m resolution of date 2014-15 was acquired through National Remote Sensing Centre, Hyderabad used for study as reference.

4.2. Cadastral Map:

Cadastral map of proposed road and approach road for coal transportation to Kanchanpur village from NTPC Talaipalli mine was provided by NTPC for demarcation of affecting revenue forest land to be diverted. Cadastral map was geo-referenced and overlaid on the satellite imagery for further analyses.

4.3. DGPS Data:

Leica DGPS with CS/GS12 Raw Data Logging License for Viva CS field controller, which enables logging of GNSS raw data with a GS12 receiver and GS12 GNSS Smart Antenna, Geodetic 120 channel GNSS receiver was used for GCPs collection.

5. DGPS SYSTEM

DGPS system consist a reference receiver located on a known position that has been previously surveyed, and one or more receivers, the antenna, differential correction processing system and data link equipment. Both the reference receiver and user receiver collect and store data for later processing. DGPS system is based on the principle that receiver in the same vicinity will simultaneously experience common error on a particular satellite ranging signal. In the user receiver, measurements are taken from the reference receiver to remove common errors. Based on this principle, the user receiver must use the same set of satellite as the reference station then the DGPS equation is formulated to remove the common error get cancel. The common errors are signal path delay through atmosphere and satellite clock.

6. PROCEDURE FOR SURVEY

To assess the present position of the revenue and forest compartment maps of the road and approach road areas through which the alignment is passing, the survey has been carried out by dual frequency DGPS (Leica) to first transfer the established Ground Control Points (GCP) along the MGR area and

precise geo-coordinates of forest land diverted for construction of approach road has been taken at identified interval using dual frequency DGPS in RTK (Real Time Kinematic) mode.

6.3. Digitization and geo-referencing of Cadastral maps

Cadastral map of road and approach road for coal transportation provided by NTPC digitized and geo-referenced with the image taking the junctions, roads, etc. of the nearby area.

6.4. GIS Analysis

DGPS observation were recorded after identification of alignment pillars on record maps and on the ground subsequently observation were potted on the record map and correlation was made between identified alignment and DGPS drawn alignment with recorded observation. Based on the proper superimposition final area statistics were generated using ArcGIS software (10.0), area calculated and statistics of area was generated.

7. INPUT DATA

- Survey of India Toposheet (1:50000 Scale).
- Cadastral map of forest patches of road and approach road area.
- BHUVAN-satellite by bhuvan3.nrsc.gov.in
- Leica GS12 Base and Rover Dual Frequency RTK / Post Processing Differential Global Positioning System

8. EQUIPMENT SPECIFICATIONS

S. No.	DGPS Equipment Specifications
1	<p>DESCRIPTION BASE AND ROVER</p> <p>GS12 GNSS Smart Antenna, Geodetic 120 channel GNSS receiver, includes GPS L1 + L2, 1 Hz position rate, (e.g. Glonass, Galileo, GPS L5, Network RTK, Raw data logging)</p> <p>GS12 GLONASS License for the Viva CS10 field controller, which enables use of GLONASS with a GS12 receiver.</p> <p>GS12 Raw Data Logging License for Viva CS10 field controller, which enables logging of GNSS raw data with a GS12 receiver.</p> <p>GS12 5Hz License for Viva CS10 field controller, which enables to compute 5 Hz positions with a GS12 receiver.</p> <p>GS12 RTK Reference Station License key for Viva CS10 field controller, which enables the GS12 to be used as an RTK base station.</p> <p>CS10 Field Controller. Ruggedized WinCE field controller with full VGA touch display, 1GB NAND Flash Memory, 512MB SDRAM, CF/SD card slot and 2MP camera. Includes Bluetooth, virtual numeric keypad, and stylus.</p>
2	<p>RTK Base and Rover Radio</p> <p>HPR2, Satellite-EASY Pro 35W high power radio, 403-473 Mhz RX/TX radio. 5 Meter Mast for Base, Gainflex antenna, CGR10, 403-470 Mhz RXO radio for controllers. ProCom Unity Gain Antenna, GLS13 telescopic aluminum pole</p>
3	<p>Field Software</p> <p>SmartWorx Viva Software (with CS LT license)</p>
4	<p>Data Processing Software</p> <p>Leica Geo Office GNSS-PP Bundle (Node locked). Includes LandXML Import/Export, COGO calculations, L1/L2 GNSS processing, GLONASS, RINEX Import and Datum & Map., LGO Design & Adjustment 3D</p>
5	<p>Measurement Performance & Accuracy</p> <p>Accuracy (rms) Code differential with DGPS / RTCM2</p> <p>DGPS / RTCM</p> <p>Accuracy (rms) with Real-Time (RTK)²</p> <p>Standard of compliance</p>

S. No.	DGPS Equipment Specifications	
	Rapid static (phase)	
	Static mode agree initialization	
	Kinematic (phase)	
	Moving mode after initialization	
	Accuracy (rms) with Post Processing²	
	Static (phase) with long observations	
	Static and rapid static (phase)	Typically 25 cm (rms)
	Kinematic (phase)	
	On the Fly (OTF) Initialization	Compliance with ISO17123-8
	RTK technology	Horizontal: 5 mm + 0.5 ppm (rms)
		Vertical: 10 mm + 0.5 ppm (rms)
	Reliability of OTF initialization	Horizontal: 10 mm + 1 ppm (rms)
		Vertical: 20 mm + 1 ppm (rms)
	Time of initialization	
	ORF range	Horizontal: 3 mm + 0.1 ppm (rms)
		Vertical: 3.5 mm + 0.4 ppm (rms)
	Network RTK	Horizontal: 5 mm + 0.5 ppm (rms) / Vertical: 10 mm + 0.5 ppm (rms)
	Network technology	Horizontal: 10 mm + 1 ppm (rms) / Vertical: 20 mm + 1 ppm (rms)
	Supported RTK network solutions	Leica SmartCheck+ technology
	Supported RTK network standards	Better than 99.99% ²

9. LAND SCHEDULE DETAILS

Table 1: Details of Revenue forest

S. No.	KHASRA No.	VILLAGE	LAND TYPE	AREA (In Ha.)	Total
1	17	Auraimuda	REVENUE FOREST	0.950	0.950
2	377/1	Dhoram		0.336	0.442
3	377/4			0.058	
4	251/1			0.048	
5	709	Kanchanpur		0.250	0.250
6	587/1	Raikera		0.078	0.090
7	587/12			0.012	
Total				1.732	1.732

Table 2: Center line pillar coordinates of Road in Auraimuda village (Annexure-IIA)

COORDINATES OF ROAD CENTER LINE				
PILLAR ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE	
	LATITUDE	LONGITUDE	NORTHING	EASTING
C10	22° 12' 51.68146" N	83° 22' 59.89420" E	2458486.12647	745686.16621
C11	22° 12' 52.75341" N	83° 22' 59.07439" E	2458518.73665	745662.16225
C12	22° 12' 54.12992" N	83° 22' 58.10343" E	2458560.64854	745633.68098
C13	22° 12' 55.33733" N	83° 22' 57.06736" E	2458597.32891	745603.41626
C14	22° 12' 56.30546" N	83° 22' 55.61411" E	2458626.45962	745561.31706
C15	22° 12' 56.80557" N	83° 22' 53.95893" E	2458641.10033	745513.65961
C16	22° 12' 57.30904" N	83° 22' 52.28906" E	2458655.83798	745465.57972
C17	22° 12' 58.22558" N	83° 22' 50.82998" E	2458683.37916	745423.33886
C18	22° 12' 59.37469" N	83° 22' 49.59277" E	2458718.17538	745387.34147
BASE STATION	22° 12' 52.51883" N	83° 22' 59.13937" E	2458511.54872	745664.13722

Ramesh

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 एनटीपीसी लिमिटेड / NTPC Limited
 तलपोजी, बनावई और भालमुड़ा कोल माइनिंग प्रोजेक्ट्स
 Talpajji, Banai & Bhalumuda Coal Mining Projects
 ललुंगा रोड, घरघोडा, जिला - रायगढ़ (छ.ग.) 496111
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Kamal

Kamal

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 उत्तीसगढ़ विज्ञान एवं प्रौद्योगिकी परिषद,
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 घरघोड़ा वन परिक्षेत्र

वन परिक्षेत्र अधिकारी
 तमनार

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Table 3: Bounding area coordinates of revenue forest in Auraimuda village (Annexure-III)

COORDINATES OF REVENUE FOREST BOUNDING POINTS				
POINT ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE	
	LATITUDE	LONGITUDE	NORTHING	EASTING
1	22° 12' 51.05960" N	83° 22' 59.81534" E	2458466.95871	745684.20802
2	22° 12' 52.38675" N	83° 22' 58.77635" E	2458507.32169	745653.80168
3	22° 12' 53.87199" N	83° 22' 57.72162" E	2458552.54127	745622.86815
4	22° 12' 55.01592" N	83° 22' 56.74002" E	2458587.29290	745594.19485
5	22° 12' 55.90911" N	83° 22' 55.39927" E	2458614.16871	745555.35440
6	22° 12' 56.38821" N	83° 22' 53.81363" E	2458628.19432	745509.69920
7	22° 12' 56.91071" N	83° 22' 52.08064" E	2458643.48898	745459.80211
8	22° 12' 57.23495" N	83° 22' 51.56448" E	2458653.23198	745444.85895
9	22° 12' 58.43424" N	83° 22' 51.34035" E	2458690.02841	745437.85837
10	22° 12' 57.70737" N	83° 22' 52.49747" E	2458668.18695	745471.35733
11	22° 12' 57.22293" N	83° 22' 54.10423" E	2458654.00630	745517.62001
12	22° 12' 56.70181" N	83° 22' 55.82895" E	2458638.75052	745567.27974
13	22° 12' 55.65874" N	83° 22' 57.39469" E	2458607.36492	745612.63767
14	22° 12' 54.40314" N	83° 22' 58.47211" E	2458569.22066	745644.11024
15	22° 12' 53.01273" N	83° 22' 59.48677" E	2458526.90077	745673.85009
16	22° 12' 51.70466" N	83° 23' 0.48232" E	2458487.10539	745703.00288
17	22° 12' 58.47500" N	83° 22' 51.27546" E	2458691.25327	745435.97976
18	22° 12' 58.61231" N	83° 22' 50.46783" E	2458695.11426	745412.77755
19	22° 12' 58.94136" N	83° 22' 50.15264" E	2458705.09579	745403.58923
20	22° 12' 59.64886" N	83° 22' 49.96480" E	2458726.77799	745397.86610

Table 4: Center line pillar coordinates of Road in Dhoram village (Annexure-IIB)

COORDINATES OF ROAD CENTER LINE				
PILLAR ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE	
	LATITUDE	LONGITUDE	NORTHING	EASTING
C19	22° 13' 14.39495" N	83° 22' 22.63342" E	2459168.16734	744607.81028
C20	22° 13' 15.65057" N	83° 22' 21.49814" E	2459206.28805	744574.68421
C21	22° 13' 16.65118" N	83° 22' 20.12842" E	2459236.45788	744534.96582
C22	22° 13' 17.45227" N	83° 22' 18.52853" E	2459260.38600	744488.75020
C23	22° 13' 17.21946" N	83° 22' 13.38239" E	2459250.91492	744341.44925
C25	22° 13' 28.96898" N	83° 21' 52.14915" E	2459602.88811	743727.57149
C26	22° 13' 29.14675" N	83° 21' 47.12663" E	2459606.11081	743583.61812
BASE STATION	22° 12' 52.51883" N	83° 22' 59.13937" E	2458511.54872	745664.13722

Table 5: Bounding area coordinates of revenue forest in Dhoram village (Annexure-III B)

COORDINATES OF REVENUE FOREST BOUNDING POINTS				
POINT ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE	
	LATITUDE	LONGITUDE	NORTHING	EASTING
1	22° 13' 14.37814" N	83° 22' 22.11478" E	2459167.41742	744592.96166
2	22° 13' 15.37565" N	83° 22' 21.21287" E	2459197.70185	744566.64515
3	22° 13' 16.33181" N	83° 22' 19.90401" E	2459226.53130	744528.69136
4	22° 13' 17.09601" N	83° 22' 18.37778" E	2459249.35779	744484.60348
5	22° 13' 17.80816" N	83° 22' 18.68001" E	2459271.40331	744492.91799
6	22° 13' 16.97056" N	83° 22' 20.35284" E	2459246.38446	744541.24028
7	22° 13' 15.92498" N	83° 22' 21.78387" E	2459214.85866	744582.73682
8	22° 13' 14.91749" N	83° 22' 22.69480" E	2459184.27119	744609.31667
9	22° 13' 16.92425" N	83° 22' 13.81784" E	2459242.02788	744354.06532
10	22° 13' 16.79958" N	83° 22' 12.98728" E	2459237.81992	744330.33353
11	22° 13' 16.92472" N	83° 22' 12.87195" E	2459241.61829	744326.96951
12	22° 13' 17.53561" N	83° 22' 13.06924" E	2459260.50137	744332.32671
13	22° 13' 17.66652" N	83° 22' 13.92575" E	2459264.91279	744356.79880
14	22° 13' 29.64072" N	83° 21' 51.14548" E	2459623.10561	743698.49916
15	22° 13' 29.53763" N	83° 21' 50.34653" E	2459619.57648	743675.66292
16	22° 13' 29.57516" N	83° 21' 49.44519" E	2459620.32812	743649.82651
17	22° 13' 29.71113" N	83° 21' 48.88600" E	2459624.26117	743633.74353
18	22° 13' 29.88119" N	83° 21' 50.35186" E	2459630.14890	743675.65070
19	22° 13' 29.81289" N	83° 21' 51.11682" E	2459628.38968	743697.59536

Table 6: Center line pillar coordinates of Road in Kanchanpur village (Annexure-IIC)

COORDINATES OF ROAD CENTER LINE				
PILLAR ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE	
	LATITUDE	LONGITUDE	NORTHING	EASTING
C24	22° 10' 59.50272" N	83° 19' 50.54301" E	2454950.51770	740314.97180
C25	22° 10' 58.33149" N	83° 19' 49.25210" E	2454913.91630	740278.53770
C26	22° 10' 58.06822" N	83° 19' 47.60925" E	2454905.09350	740231.59015
C27	22° 10' 58.05398" N	83° 19' 46.32524" E	2454904.09034	740194.80645
BASE STATION	22° 11' 01.15144" N	83° 19' 51.68939" E	2455001.74565	740347.03876

Table 7: Bounding area coordinates of revenue forest in Kanchanpur village (Annexure-III C)

COORDINATES OF REVENUE FOREST BOUNDING POINTS				
POINT ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE	
	LATITUDE	LONGITUDE	NORTHING	EASTING
1	22° 10' 59.17350" N	83° 19' 50.74049" E	2454940.47624	740320.78581
2	22° 10' 58.21831" N	83° 19' 49.74459" E	2454910.65111	740292.70209
3	22° 10' 57.87747" N	83° 19' 48.97343" E	2454899.82550	740270.76742
4	22° 10' 57.69954" N	83° 19' 47.64488" E	2454893.76692	740232.78519
5	22° 10' 57.69322" N	83° 19' 46.65443" E	2454893.13634	740204.40917
6	22° 10' 58.40850" N	83° 19' 46.69437" E	2454915.15969	740205.21563
7	22° 10' 58.42522" N	83° 19' 47.58834" E	2454916.06762	740230.82225
8	22° 10' 58.12540" N	83° 19' 48.53401" E	2454907.25992	740258.05984
9	22° 10' 58.57244" N	83° 19' 48.79270" E	2454921.12698	740265.26055
10	22° 10' 58.68565" N	83° 19' 49.13447" E	2454924.76030	740274.99985
11	22° 10' 58.87468" N	83° 19' 49.37711" E	2454930.68257	740281.86271
12	22° 10' 58.87097" N	83° 19' 49.89436" E	2454930.79611	740296.68505
13	22° 10' 59.11314" N	83° 19' 49.91867" E	2454938.25737	740297.26713
14	22° 10' 59.19548" N	83° 19' 50.29494" E	2454940.95613	740308.00924
15	22° 10' 59.91720" N	83° 19' 50.40201" E	2454963.20727	740310.73577
16	22° 11' 0.36009" N	83° 19' 50.76829" E	2454976.99389	740321.02117

Table 8: Center line pillar coordinates of Road in Raikera village (Annexure-II D)

COORDINATES OF ROAD CENTER LINE				
PILLAR ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE	
	LATITUDE	LONGITUDE	NORTHING	EASTING
C1	22° 13' 44.82650" N	83° 25' 1.79009" E	2460176.55908	749152.04297
C2	22° 13' 44.55628" N	83° 25' 0.38648" E	2460167.60337	749111.97014
C3	22° 13' 44.27448" N	83° 24' 58.99172" E	2460158.29550	749072.15638
C4	22° 13' 43.98718" N	83° 24' 57.67304" E	2460148.85321	749034.52442
C5	22° 13' 43.82843" N	83° 24' 56.08548" E	2460143.24313	748989.12762
C6	22° 13' 43.80603" N	83° 24' 54.33727" E	2460141.75507	748939.06189
C7	22° 13' 44.05975" N	83° 24' 52.46039" E	2460148.70337	748885.17499
C8	22° 13' 44.44185" N	83° 24' 50.97534" E	2460159.78076	748842.44903
C9	22° 13' 45.05782" N	83° 24' 49.26378" E	2460177.94998	748793.12007
BASE STATION	22° 14' 01.23704" N	83° 26' 39.94017" E	2460726.61542	751955.36683

Table 9: Bounding area coordinates of revenue forest in Raikera village (Annexure-III D)

COORDINATES OF REVENUE FOREST BOUNDING POINTS				
POINT ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE	
	LATITUDE	LONGITUDE	NORTHING	EASTING
1	22° 13' 44.55930" N	83° 25' 2.27110" E	2460168.55830	749165.95250
2	22° 13' 44.41404" N	83° 25' 1.54382" E	2460163.75648	749145.19135
3	22° 13' 44.22369" N	83° 25' 0.55506" E	2460157.44769	749116.96228
4	22° 13' 43.94891" N	83° 24' 59.18796" E	2460148.36847	749077.93739
5	22° 13' 43.63390" N	83° 24' 57.73561" E	2460138.01247	749036.49026
6	22° 13' 43.49193" N	83° 24' 56.31594" E	2460132.99565	748995.89410
7	22° 13' 43.58501" N	83° 24' 56.31866" E	2460135.86060	748995.92640
8	22° 13' 43.71543" N	83° 24' 57.21841" E	2460140.28460	749021.63520
9	22° 13' 43.94085" N	83° 24' 58.34678" E	2460147.73583	749053.84624
10	22° 13' 44.25926" N	83° 24' 59.80274" E	2460158.19790	749095.39490
11	22° 13' 44.46511" N	83° 25' 1.09758" E	2460165.12342	749132.38380
12	22° 13' 44.64981" N	83° 25' 2.25944" E	2460171.33770	749165.57400
13	22° 13' 44.44715" N	83° 24' 49.89567" E	2460159.45038	748811.51992
14	22° 13' 44.66342" N	83° 24' 49.29471" E	2460165.82989	748794.19970
15	22° 13' 44.88284" N	83° 24' 48.66722" E	2460172.29418	748776.11790
16	22° 13' 44.91890" N	83° 24' 48.88778" E	2460173.50428	748782.41801
17	22° 13' 44.86612" N	83° 24' 49.19721" E	2460172.02168	748791.30733
18	22° 13' 44.70371" N	83° 24' 49.53178" E	2460167.17762	748800.97069

for Kamal

Ramesh

रमेश खेर / RAMESH KHER
 मुख्य महाप्रबंधक / Chief General Manager
 एनटीपीसी लिमिटेड / NTPC Limited
 तलाईपाली, बनाई और भालमुड़ा कोल माइनिंग प्रोजेक्ट्स
 Talaiपाली, Banai & Bhalumuda Coal Mining Projects
 लैलुंगा रोड, घरघोड़ा, जिला - रायगढ़ (छ.ग.) 496111
 Lailunga Road Ghargoda, Distt. - Raigarh (C.G.) 496111

कार्यालय,
 छत्तीसगढ़ विज्ञान एवं प्रौद्योगिकी परिषद,
 विज्ञान भवन,
 विधान सभा रोड, दलदल सिवनी,
 रायपुर (छ.ग.) पिन - 492014

Amis

वन परिक्षेत्र अधिकारी
 वन परिक्षेत्र घरघोड़ा

d
 वन मण्डलाधिकारी
 घरघोड़ा वन मण्डल

J
 वन परिक्षेत्र अधिकारी
 तमनार

J
 वन मण्डलाधिकारी
 रायगढ़, वनमण्डल

10. DELIVERABLES

DGPS Surveyed Forest Patches Superimposed on Toposheet (1:50000)

Annexure-I

DGPS Survey boundary and Pillar coordinates (1:4000)

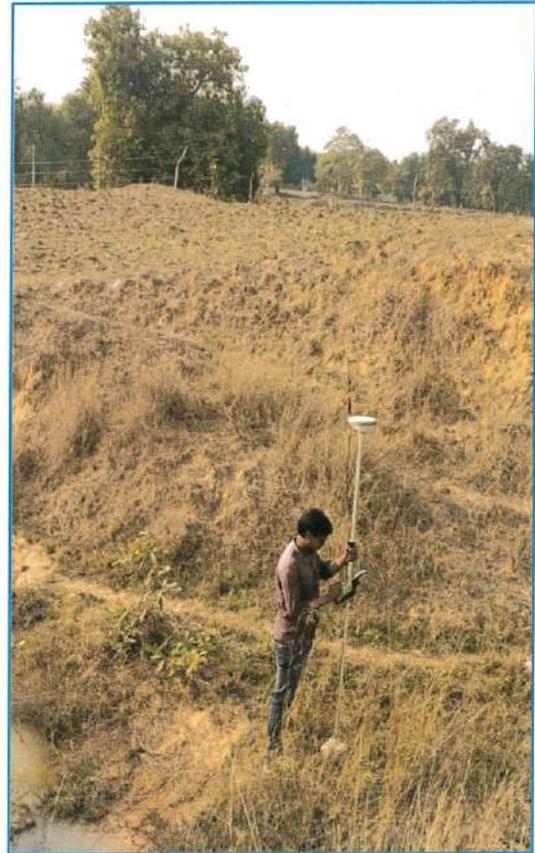
Annexure-II

(A,B,C,D)

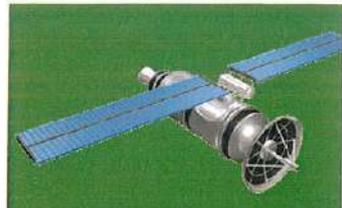
DGPS Surveyed Pillar Point and boundary Superimposed on Satellite Image
(1:5000)

Annexure-III

(A,B,C,D)



**** Glimpses of Field ****



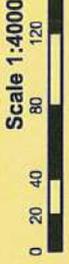
छत्तीसगढ़ अंतरिक्ष उपयोग केन्द्र

**CHHATTISGARH SPACE APPLICATIONS CENTRE
CHHATTISGARH COUNCIL OF SCIENCE AND TECHNOLOGY
VIGYAN BHAWAN, VIDHAN SABHA ROAD, DALDAL SEONI,
492014, RAIPUR C.G.**

Annexure -
REVENUE FOREST AREA OF APPROACH ROAD FOR COAL TRANSPORTATION OF TALAIPALLI COAL MINING PROJECT SUPERIMPOSED ON TOPOSHEET,
TEHSIL - GHARGHODA, DISTRICT - RAIGARH, CHHATTISGARH
TOPOSHEET No. - 64 N/08



MAP SHOWING REVENUE FOREST AREA IN KANCHANPUR VILLAGE UNDER COAL TRANSPORTATION ROAD WIDNING FOR TALAIPALLI COAL MINING PROJECT, VILLAGE - KANCHANPUR, TEHSIL - GHARGHODA, DISTRICT - RAIGARH, CHHATTISGARH



COORDINATES OF ROAD CENTER LINE					
POINT ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE		
	LATITUDE	LONGITUDE	NORTHING	EASTING	
C60	22° 11' 0.04778" N	83° 19' 50.99585" E	2454967.48600	740327.68900	
C61	22° 10' 59.50272" N	83° 19' 50.54301" E	2454950.51770	740314.97180	
C62	22° 10' 58.79156" N	83° 19' 49.82866" E	2454928.32425	740294.83990	
C63	22° 10' 58.33149" N	83° 19' 49.25210" E	2454913.91630	740278.53770	
C64	22° 10' 58.15781" N	83° 19' 48.43068" E	2454908.21154	740255.08386	
C65	22° 10' 58.06822" N	83° 19' 47.60925" E	2454905.09350	740231.59015	
C66	22° 10' 58.05425" N	83° 19' 46.94187" E	2454904.36991	740212.47447	
C67	22° 10' 58.05398" N	83° 19' 46.32524" E	2454904.09034	740194.80645	

COORDINATES OF REVENUE FOREST BOUNDING POINTS					
POINT ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE		
	LATITUDE	LONGITUDE	NORTHING	EASTING	
1	22° 10' 59.17350" N	83° 19' 50.74049" E	2454940.47624	740320.78581	
2	22° 10' 58.68607" N	83° 19' 50.25645" E	2454925.26721	740307.14731	
3	22° 10' 58.21831" N	83° 19' 49.74459" E	2454910.65111	740292.70209	
4	22° 10' 58.01115" N	83° 19' 49.42667" E	2454904.13800	740283.69100	
5	22° 10' 57.87747" N	83° 19' 48.97343" E	2454899.82550	740270.76742	
6	22° 10' 57.78296" N	83° 19' 48.31855" E	2454896.62976	740252.04820	
7	22° 10' 57.69954" N	83° 19' 47.64488" E	2454893.76692	740232.78519	
8	22° 10' 57.69617" N	83° 19' 47.11611" E	2454893.43027	740217.63620	
9	22° 10' 57.69322" N	83° 19' 46.65443" E	2454893.13634	740204.40917	
10	22° 10' 58.40850" N	83° 19' 46.69437" E	2454915.15969	740205.21563	
11	22° 10' 58.42522" N	83° 19' 47.58834" E	2454916.06762	740230.82225	
12	22° 10' 58.12540" N	83° 19' 48.53401" E	2454907.25992	740258.05984	
13	22° 10' 58.57244" N	83° 19' 48.79270" E	2454921.12698	740265.26055	
14	22° 10' 58.68565" N	83° 19' 49.13447" E	2454924.76030	740274.99985	
15	22° 10' 58.87468" N	83° 19' 49.37711" E	2454930.68257	740281.86271	
16	22° 10' 58.87097" N	83° 19' 49.89436" E	2454930.79611	740296.68505	
17	22° 10' 59.11314" N	83° 19' 49.91867" E	2454938.25737	740297.26713	
18	22° 10' 59.19548" N	83° 19' 50.29494" E	2454940.95613	740308.00924	
19	22° 10' 59.91720" N	83° 19' 50.40201" E	2454963.20727	740310.73577	
20	22° 11' 0.36009" N	83° 19' 50.76829" E	2454976.99389	740321.02117	
BASE STATION	22° 11' 1.15144" N	83° 19' 51.68939" E	2455001.74565	740347.03876	

मीलान शीट नं.-2

Legend

- BOUNDING POINT
- ▲ BASE STATION
- ROAD CENTER POINT
- ROAD
- REVENUE FOREST

S.No.	VILLAGE	KHASRA No.	AREA (IN Ha.)
1	Kanchanpur	709	0.250
Total			0.250

वन मण्डलाधिकारी
रायगढ़, वनमण्डल

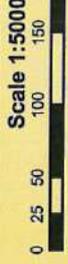
वन परिक्षेत्र अधिकारी
घरघोडा

वन परिक्षेत्र अधिकारी
घरघोडा



DGPS Survey Conducted & Map Prepared By: **RAAMESH KUMAR**
 Chief Geomatics Engineer / Chief Geomatics Manager
 Chhattisgarh Council of Science & Technology / NITCO Limited
 Vignyan Bhavan, Vidhan Sabha, Road, Dajal, Seoni
 Raipur, (CG) Pin 492014
 Contact: 9826014371, 9826014372, 9826014373

REVENUE FOREST AREA IN KANCHANPUR VILLAGE UNDER COAL TRANSPORTATION ROAD WIDNING FOR TALAIPALLI COAL MINING PROJECT SUPERIMPOSED ON SATELLITE IMAGE, VILLAGE - KANCHANPUR, TEHSIL - GHARGHODA, DISTRICT - RAIGARH, CHHATTISGARH

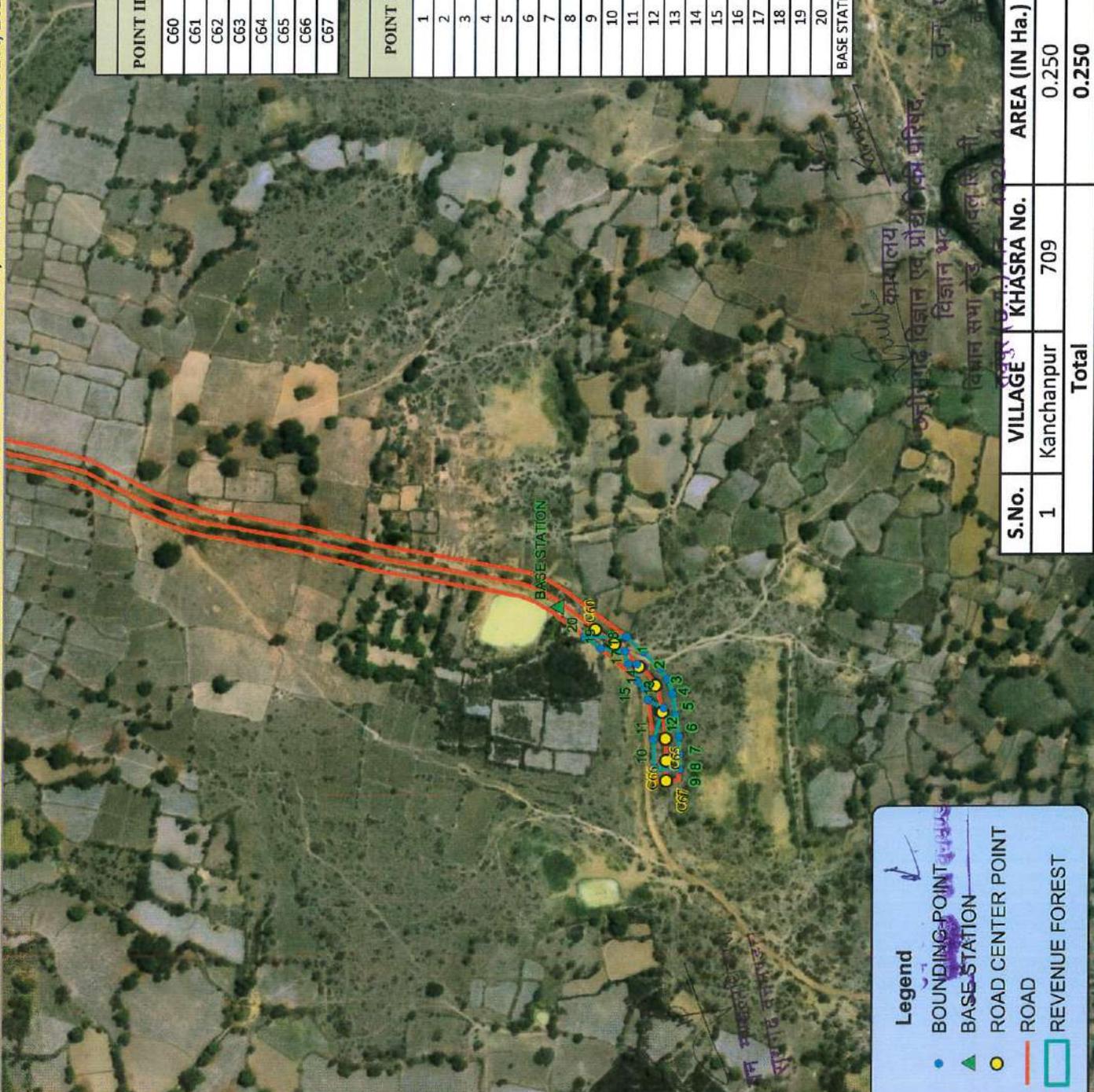


COORDINATES OF ROAD CENTER LINE

POINT ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE	
	LATITUDE	LONGITUDE	NORTHING	EASTING
C60	22° 11' 0.04778" N	83° 19' 50.99585" E	2454967.48600	740327.68900
C61	22° 10' 59.50272" N	83° 19' 50.54301" E	2454950.51770	740314.97180
C62	22° 10' 58.79156" N	83° 19' 49.82866" E	2454928.32425	740294.83990
C63	22° 10' 58.33149" N	83° 19' 49.25210" E	2454913.91630	740278.53770
C64	22° 10' 58.15781" N	83° 19' 48.43068" E	2454908.21154	740255.08386
C65	22° 10' 58.06822" N	83° 19' 47.60925" E	2454905.09350	740231.59015
C66	22° 10' 58.05425" N	83° 19' 46.94187" E	2454904.36991	740212.47447
C67	22° 10' 58.05398" N	83° 19' 46.32524" E	2454904.09034	740194.80645

COORDINATES OF REVENUE FOREST BOUNDING POINTS

POINT ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE	
	LATITUDE	LONGITUDE	NORTHING	EASTING
1	22° 10' 59.17350" N	83° 19' 50.74049" E	2454940.47624	740320.78581
2	22° 10' 58.68607" N	83° 19' 50.25645" E	2454925.26721	740307.14731
3	22° 10' 58.21831" N	83° 19' 49.74459" E	2454910.65111	740292.70209
4	22° 10' 58.01115" N	83° 19' 49.42667" E	2454904.13800	740283.69100
5	22° 10' 57.87747" N	83° 19' 48.97343" E	2454899.82550	740270.76742
6	22° 10' 57.78296" N	83° 19' 48.31855" E	2454896.62976	740252.04820
7	22° 10' 57.69954" N	83° 19' 47.64488" E	2454893.76692	740232.78519
8	22° 10' 57.69617" N	83° 19' 47.11611" E	2454893.43027	740217.63620
9	22° 10' 57.69322" N	83° 19' 46.65443" E	2454893.13634	740204.40917
10	22° 10' 58.40850" N	83° 19' 46.69437" E	2454915.15969	740205.21563
11	22° 10' 58.42522" N	83° 19' 47.58834" E	2454919.06762	740230.82225
12	22° 10' 58.12540" N	83° 19' 48.53401" E	2454907.25992	740258.05984
13	22° 10' 58.57244" N	83° 19' 48.79270" E	2454921.12698	740265.26055
14	22° 10' 58.68565" N	83° 19' 49.13447" E	2454924.76030	740274.99985
15	22° 10' 58.87468" N	83° 19' 49.37711" E	2454930.68257	740281.86271
16	22° 10' 58.87097" N	83° 19' 49.89436" E	2454930.79611	740296.68505
17	22° 10' 59.11314" N	83° 19' 49.91867" E	2454938.25737	740297.26713
18	22° 10' 59.19548" N	83° 19' 50.29494" E	2454940.95613	740308.00924
19	22° 10' 59.91720" N	83° 19' 50.40201" E	2454963.20727	740310.73577
20	22° 11' 0.36009" N	83° 19' 50.76829" E	2454976.99389	740321.02117
BASE STATION	22° 11' 1.15144" N	83° 19' 51.68939" E	2455001.74565	740347.03876



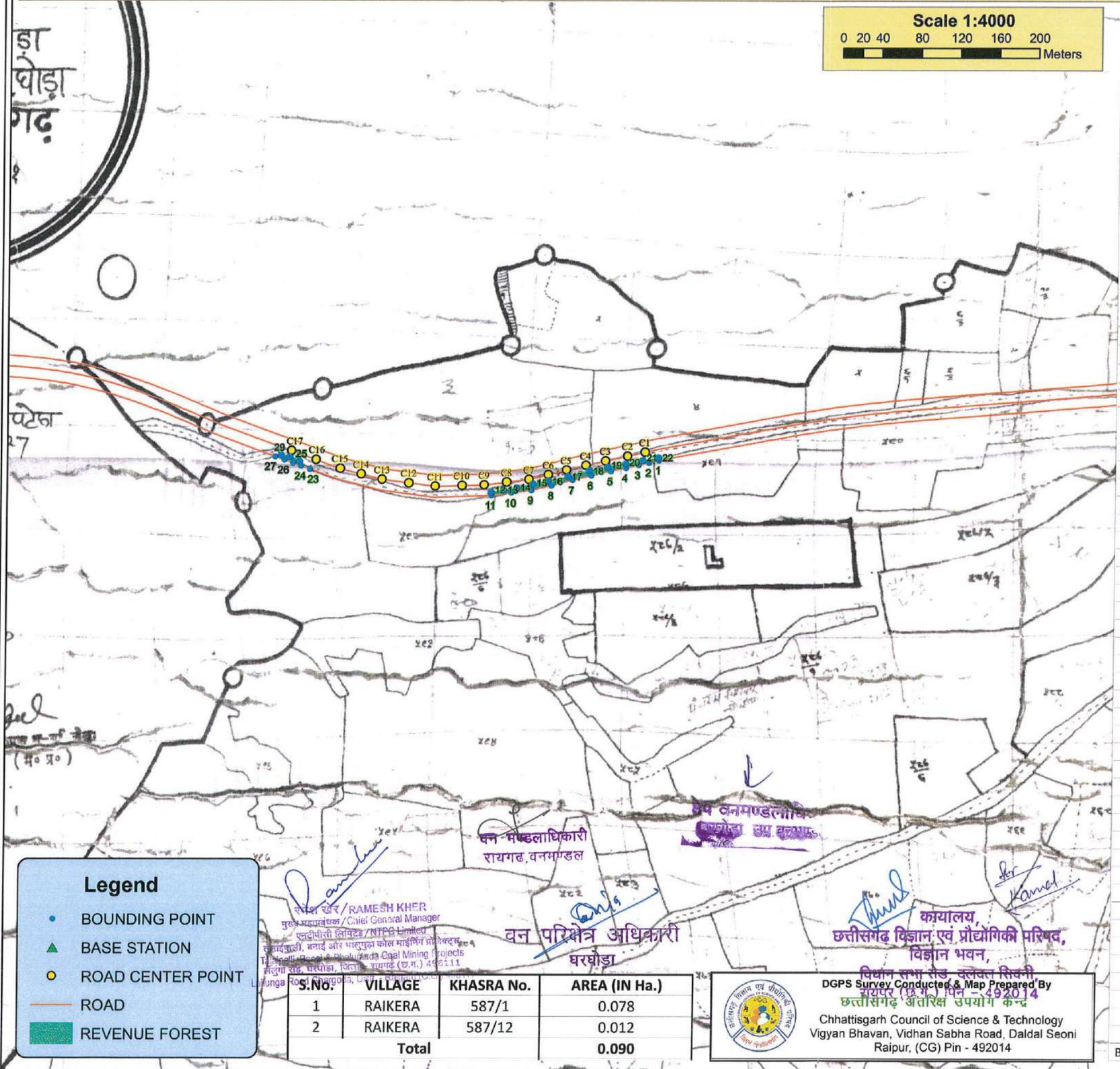
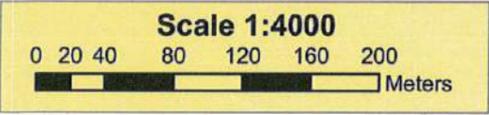
Legend

- BOUNDING-POINT
- ▲ BASE-STATION
- ROAD CENTER POINT
- ROAD
- REVENUE FOREST

S.No.	VILLAGE	KHÁSRA No.	AREA (IN Ha.)
1	Kanchanpur	709	0.250
Total			0.250

DGPS Survey Conducted & Map Prepared By
छत्तीसगढ़ अंतरिक्ष सुधार केंद्र
 Chhattisgarh Council of Science & Technology
 Vigyan Bhawan, Vichem Sapha, Raop, Dairaj, Seoni
 रायचौपुर (C.G.) Pin - 492014

MAP SHOWING REVENUE FOREST AREA IN RAIKERA VILLAGE UNDER COAL TRANSPORTATION ROAD WIDNING FOR TALAIPALLI COAL MINING PROJECT, VILLAGE - RAIKERA, TEHSIL - GHARGHODA, DISTRICT - RAIGARH, CHHATTISGARH



COORDINATES OF ROAD CENTER LINE

POINT ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE	
	LATITUDE	LONGITUDE	NORTHING	EASTING
C1	22° 13' 44.82650" N	83° 25' 1.79009" E	2460176.55908	749152.04297
C2	22° 13' 44.70758" N	83° 25' 1.17239" E	2460172.61784	749134.40766
C3	22° 13' 44.55628" N	83° 25' 0.38648" E	2460167.60337	749111.97014
C4	22° 13' 44.41914" N	83° 24' 59.68995" E	2460163.06548	749092.08573
C5	22° 13' 44.27448" N	83° 24' 58.99172" E	2460158.29550	749072.15638
C6	22° 13' 44.13061" N	83° 24' 58.36240" E	2460153.58119	749054.20032
C7	22° 13' 43.98718" N	83° 24' 57.67304" E	2460148.85321	749034.52442
C8	22° 13' 43.90781" N	83° 24' 56.87926" E	2460146.04817	749011.82602
C9	22° 13' 43.82843" N	83° 24' 56.08548" E	2460143.24313	748989.12762
C10	22° 13' 43.81818" N	83° 24' 55.28554" E	2460142.56222	748966.21858
C11	22° 13' 43.80603" N	83° 24' 54.33727" E	2460141.75507	748939.06189
C12	22° 13' 43.93289" N	83° 24' 53.39883" E	2460145.22922	748912.11844
C13	22° 13' 44.05975" N	83° 24' 52.46039" E	2460148.70337	748885.17499
C14	22° 13' 44.25080" N	83° 24' 51.71786" E	2460154.24207	748863.81201
C15	22° 13' 44.44185" N	83° 24' 50.97534" E	2460159.78076	748842.44903
C16	22° 13' 44.74984" N	83° 24' 50.11956" E	2460168.86537	748817.78455
C17	22° 13' 45.05782" N	83° 24' 49.26378" E	2460177.94998	748793.12007

COORDINATES OF REVENUE FOREST BOUNDING POINTS

POINT ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE	
	LATITUDE	LONGITUDE	NORTHING	EASTING
1	22° 13' 44.55930" N	83° 25' 2.27110" E	2460168.55830	749165.95250
2	22° 13' 44.48618" N	83° 25' 1.91533" E	2460166.14593	749155.79767
3	22° 13' 44.41404" N	83° 25' 1.54382" E	2460163.75648	749145.19135
4	22° 13' 44.32741" N	83° 25' 1.09382" E	2460160.88525	749132.34375
5	22° 13' 44.22369" N	83° 25' 0.55506" E	2460157.44769	749116.96228
6	22° 13' 44.08706" N	83° 24' 59.85915" E	2460152.92592	749097.09530
7	22° 13' 43.94891" N	83° 24' 59.18796" E	2460148.36847	749077.93739
8	22° 13' 43.78254" N	83° 24' 58.45006" E	2460142.91250	749056.88230
9	22° 13' 43.63390" N	83° 24' 57.73561" E	2460138.01247	749036.49026
10	22° 13' 43.56302" N	83° 24' 57.02685" E	2460135.50785	749016.22280
11	22° 13' 43.49193" N	83° 24' 56.31594" E	2460132.99565	748995.89410
12	22° 13' 43.58501" N	83° 24' 56.31866" E	2460135.86060	748995.92640
13	22° 13' 43.65022" N	83° 24' 56.76854" E	2460138.07260	749008.78080
14	22° 13' 43.71543" N	83° 24' 57.21841" E	2460140.28460	749021.63520
15	22° 13' 43.83846" N	83° 24' 57.79851" E	2460144.33495	749038.19159
16	22° 13' 43.94085" N	83° 24' 58.34678" E	2460147.73583	749053.84624
17	22° 13' 44.07636" N	83° 24' 59.04485" E	2460152.22412	749073.77533
18	22° 13' 44.25926" N	83° 24' 59.80274" E	2460158.19790	749095.39490
19	22° 13' 44.36207" N	83° 25' 0.44946" E	2460161.65692	749113.86936
20	22° 13' 44.46511" N	83° 25' 1.09758" E	2460165.12342	749132.38380
21	22° 13' 44.56123" N	83° 25' 1.70225" E	2460168.35757	749149.65723
22	22° 13' 44.64981" N	83° 25' 2.25944" E	2460171.33770	749165.57400
23	22° 13' 44.44715" N	83° 24' 49.89567" E	2460159.45038	748811.51992
24	22° 13' 44.56110" N	83° 24' 49.57902" E	2460162.81179	748802.39378
25	22° 13' 44.66342" N	83° 24' 49.29471" E	2460165.82989	748794.19970
26	22° 13' 44.77117" N	83° 24' 48.98999" E	2460169.00587	748785.41808
27	22° 13' 44.88284" N	83° 24' 48.66722" E	2460172.29418	748776.11790
28	22° 13' 44.91890" N	83° 24' 48.88778" E	2460173.50428	748782.41801
29	22° 13' 44.86612" N	83° 24' 49.19721" E	2460172.02168	748791.30733
30	22° 13' 44.70371" N	83° 24' 49.53178" E	2460167.17762	748800.97069
B1	22° 13' 48.12316" N	83° 24' 39.10759" E	2460267.62361	748500.70002
B2	22° 13' 48.18907" N	83° 24' 38.16930" E	2460269.22321	748473.79100
B3	22° 13' 48.00263" N	83° 24' 38.16040" E	2460263.48322	748473.62750
B4	22° 13' 47.95844" N	83° 24' 39.05064" E	2460262.52983	748499.14938
BASE STATION	22° 14' 01.22811" N	83° 26' 39.91910" E	2460726.33106	751954.76778

Legend

- BOUNDING POINT
- ▲ BASE STATION
- ROAD CENTER POINT
- ROAD
- REVENUE FOREST

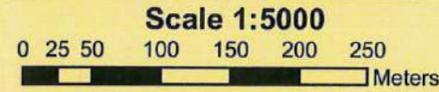
रमेश खेर / RAMESH KHER
मुख्य महाप्रबंधक / Chief General Manager
एनटीपीसी लिमिटेड / NTPC Limited
तालापल्ली कोयला खनन परियोजना
Talaipalli Coal & Mineral Projects
मलुंगा रोड, घर्घोडा, जिला - रायगढ़ (छ.ग.) 492111
Lalunga Road Ghargoda, Dist - Raigarh (CG)

S.No.	VILLAGE	KHASRA No.	AREA (IN Ha.)
1	RAIKERA	587/1	0.078
2	RAIKERA	587/12	0.012
Total			0.090

क्यायालय,
छत्तीसगढ़ विज्ञान एवं प्रौद्योगिकी परिषद,
विज्ञान भवन,
विधान सभा रोड, दालदाल सेनी
Raipur, (CG) Pin - 492014

DGPS Survey Conducted & Map Prepared By
छत्तीसगढ़ अंतरिक्ष उपयोग केंद्र
Chhattisgarh Council of Science & Technology
Vigyan Bhavan, Vidhan Sabha Road, Daldal Seoni
Raipur, (CG) Pin - 492014

REVENUE FOREST AREA IN RAIKERA VILLAGE UNDER COAL TRANSPORTATION ROAD WIDNING FOR TALAIPALLI COAL MINING PROJECT, SUPERIMPOSED ON SATELLITE IMAGE, VILLAGE - RAIKERA, TEHSIL - GHARGHODA, DISTRICT - RAIGARH, CHHATTISGARH



POINT ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE	
	LATITUDE	LONGITUDE	NORTHING	EASTING
C1	22° 13' 44.82650" N	83° 25' 1.79009" E	2460176.55908	749152.04297
C2	22° 13' 44.70758" N	83° 25' 1.17239" E	2460172.61784	749134.40766
C3	22° 13' 44.55628" N	83° 25' 0.38648" E	2460167.60337	749111.97014
C4	22° 13' 44.41914" N	83° 24' 59.68995" E	2460163.06548	749092.08573
C5	22° 13' 44.27448" N	83° 24' 58.99172" E	2460158.29550	749072.15638
C6	22° 13' 44.13061" N	83° 24' 58.36240" E	2460153.58119	749054.20032
C7	22° 13' 43.98718" N	83° 24' 57.67304" E	2460148.85321	749034.52442
C8	22° 13' 43.90781" N	83° 24' 56.87926" E	2460146.04817	749011.82602
C9	22° 13' 43.82843" N	83° 24' 56.08548" E	2460143.24313	748989.12762
C10	22° 13' 43.81818" N	83° 24' 55.28554" E	2460142.56222	748966.21858
C11	22° 13' 43.80603" N	83° 24' 54.33727" E	2460141.75507	748939.06189
C12	22° 13' 43.93289" N	83° 24' 53.39883" E	2460145.22922	748912.11844
C13	22° 13' 44.05975" N	83° 24' 52.46039" E	2460148.70337	748885.17499
C14	22° 13' 44.25080" N	83° 24' 51.71786" E	2460154.24207	748863.81201
C15	22° 13' 44.44185" N	83° 24' 50.97534" E	2460159.78076	748842.44903
C16	22° 13' 44.74984" N	83° 24' 50.11956" E	2460168.86537	748817.78455
C17	22° 13' 45.05782" N	83° 24' 49.26378" E	2460177.94998	748793.12007

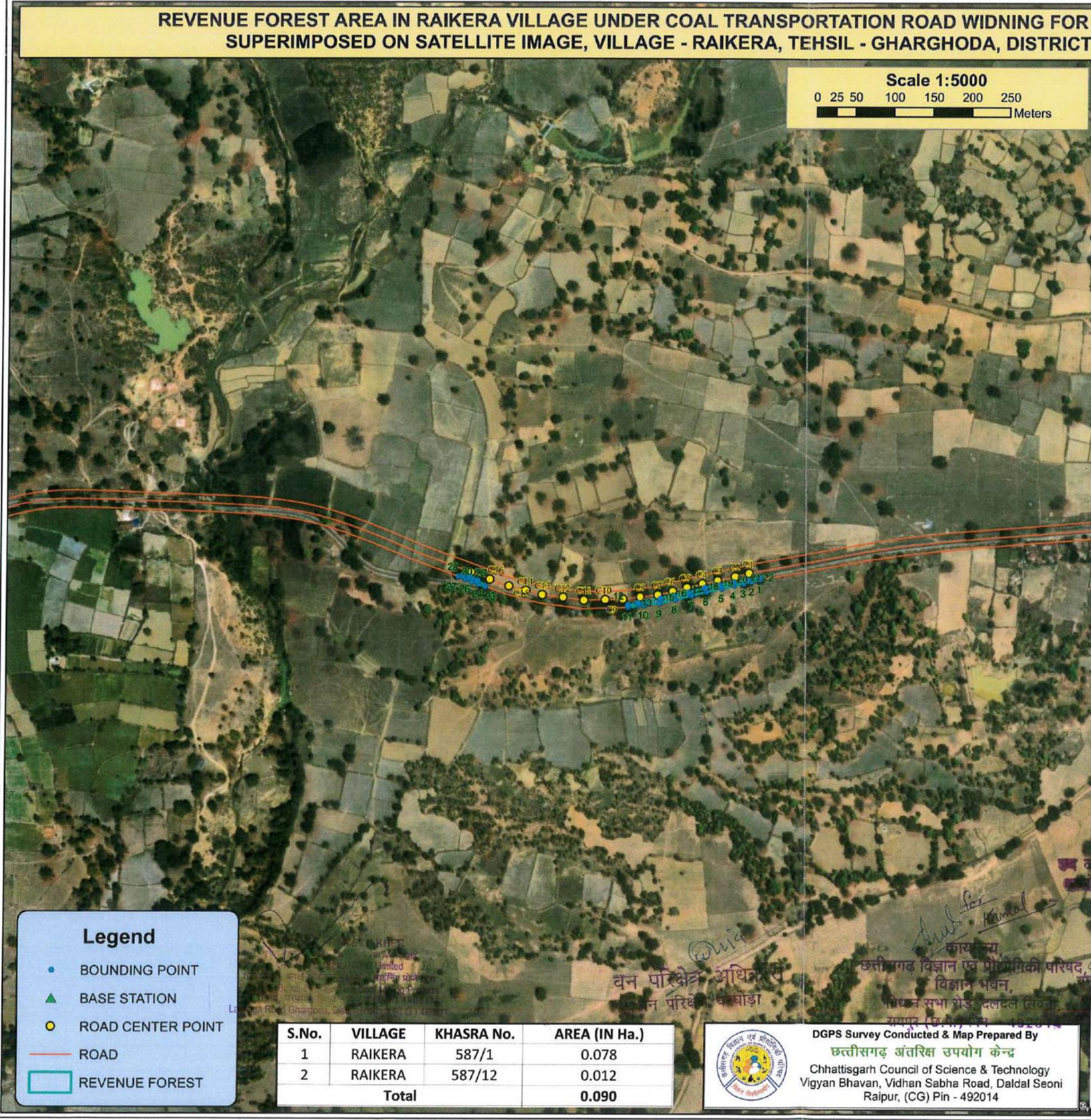
POINT ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE	
	LATITUDE	LONGITUDE	NORTHING	EASTING
1	22° 13' 44.55930" N	83° 25' 2.27110" E	2460168.55830	749165.95250
2	22° 13' 44.48618" N	83° 25' 1.91533" E	2460166.14593	749155.79767
3	22° 13' 44.41404" N	83° 25' 1.54382" E	2460163.75648	749145.19135
4	22° 13' 44.32741" N	83° 25' 1.09382" E	2460160.88525	749132.34375
5	22° 13' 44.22369" N	83° 25' 0.55506" E	2460157.44769	749116.96228
6	22° 13' 44.08706" N	83° 24' 59.85915" E	2460152.92592	749097.09530
7	22° 13' 43.94891" N	83° 24' 59.18796" E	2460148.36847	749077.93739
8	22° 13' 43.78254" N	83° 24' 58.45006" E	2460142.91250	749056.88230
9	22° 13' 43.63390" N	83° 24' 57.73561" E	2460138.01247	749036.49026
10	22° 13' 43.56302" N	83° 24' 57.02685" E	2460135.50785	749016.22280
11	22° 13' 43.49193" N	83° 24' 56.31594" E	2460132.99565	748995.89410
12	22° 13' 43.58501" N	83° 24' 56.31866" E	2460135.86060	748995.92640
13	22° 13' 43.65022" N	83° 24' 56.76854" E	2460138.07260	749008.78080
14	22° 13' 43.71543" N	83° 24' 57.21841" E	2460140.28460	749021.63520
15	22° 13' 43.83846" N	83° 24' 57.79851" E	2460144.33495	749038.19159
16	22° 13' 43.94085" N	83° 24' 58.34678" E	2460147.73583	749053.84624
17	22° 13' 44.07636" N	83° 24' 59.04485" E	2460152.22412	749073.77533
18	22° 13' 44.25926" N	83° 24' 59.80274" E	2460158.19790	749095.39490
19	22° 13' 44.36207" N	83° 25' 0.44946" E	2460161.65692	749113.86936
20	22° 13' 44.46511" N	83° 25' 1.09758" E	2460165.12342	749132.38380
21	22° 13' 44.56123" N	83° 25' 1.70225" E	2460168.35757	749149.65723
22	22° 13' 44.64981" N	83° 25' 2.25944" E	2460171.33770	749165.57400
23	22° 13' 44.44715" N	83° 24' 49.89567" E	2460159.45038	748811.51992
24	22° 13' 44.56110" N	83° 24' 49.57902" E	2460162.81179	748802.39378
25	22° 13' 44.66342" N	83° 24' 49.29471" E	2460165.82989	748794.19970
26	22° 13' 44.77117" N	83° 24' 48.98999" E	2460169.00587	748785.41808
27	22° 13' 44.88284" N	83° 24' 48.66722" E	2460172.29418	748776.11790
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B3	22° 13' 48.00263" N	83° 24' 38.16040" E	2460263.48322	748473.62750
B4	22° 13' 47.95844" N	83° 24' 39.05064" E	2460262.52983	748499.14938
BASE STATION	22° 14' 01.22811" N	83° 26' 39.91910" E	2460726.33106	751954.76778

Legend

- BOUNDING POINT
- ▲ BASE STATION
- ROAD CENTER POINT
- ROAD
- ▭ REVENUE FOREST

S.No.	VILLAGE	KHASRA No.	AREA (IN Ha.)
1	RAIKERA	587/1	0.078
2	RAIKERA	587/12	0.012
Total			0.090

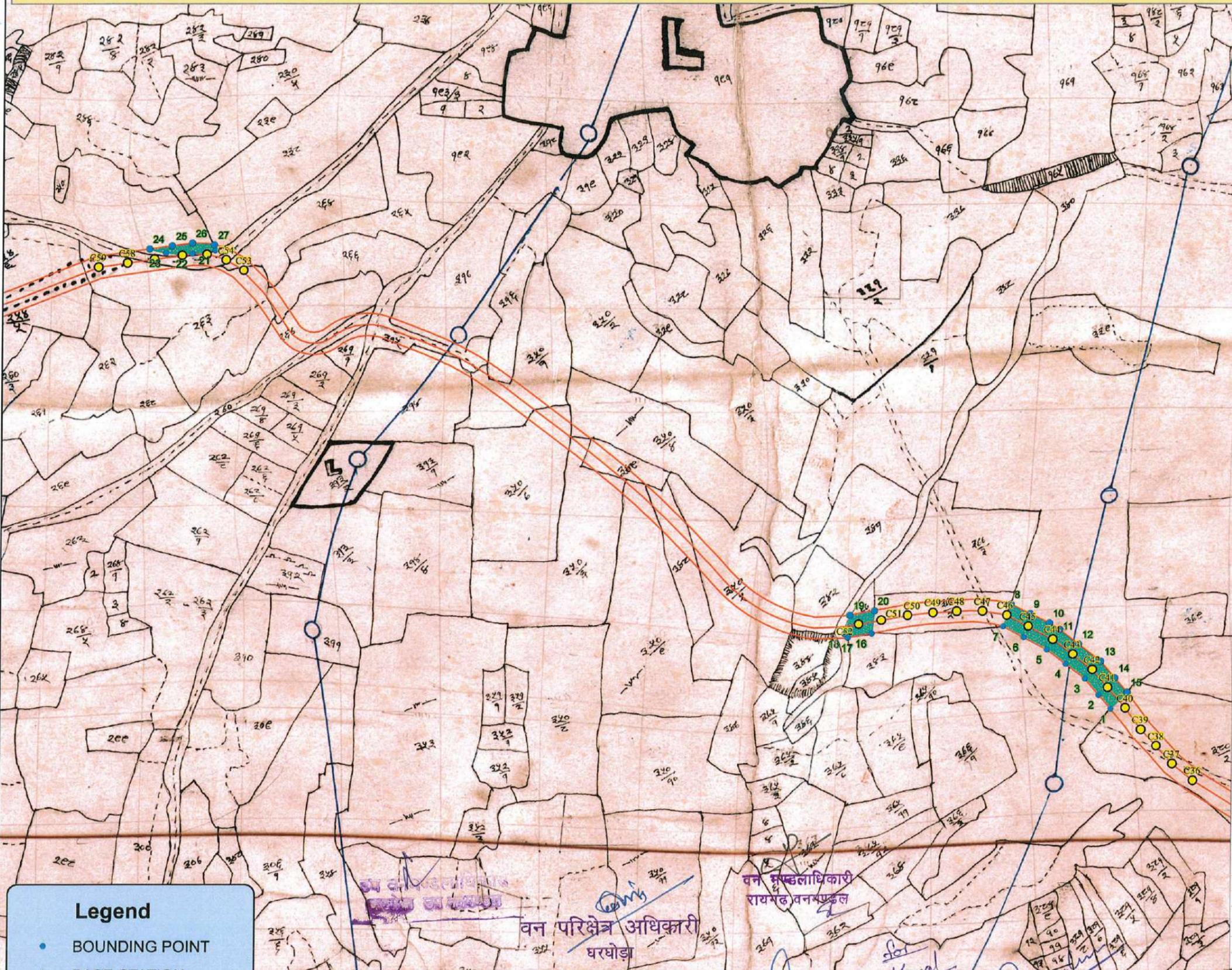
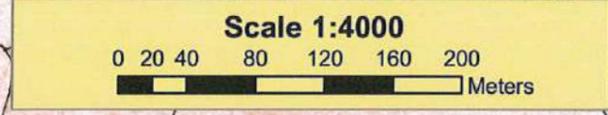
DGPS Survey Conducted & Map Prepared By
छत्तीसगढ़ अंतरिक्ष उपयोग केन्द्र
 Chhattisgarh Council of Science & Technology
 Vigyan Bhavan, Vidhan Sabha Road, Daldal Seoni
 Raipur, (CG) Pin - 492014



वन परिक्षेत्र अधिकारी
 वन परिक्षेत्र, घर्घोड़ा

छत्तीसगढ़ विज्ञान एवं प्रौद्योगिकी परिषद
 विज्ञान भवन,
 विधान सभा रोड, दालदल सेनी
 रायपुर (छ.ग.) पिन - 492014

MAP SHOWING REVENUE FOREST AREA IN DHORAM VILLAGE UNDER COAL TRANSPORTATION ROAD WIDNING FOR TALAIPALLI COAL MINING PROJECT, VILLAGE - DHORAM, TEHSIL - GHARGHODA, DISTRICT - RAIGARH, CHHATTISGARH



COORDINATES OF ROAD CENTER LINE

POINT ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE	
	LATITUDE	LONGITUDE	NORTHING	EASTING
C36	22° 13' 12.01935" N	83° 22' 24.96384" E	2459096.12617	744675.71229
C37	22° 13' 12.56478" N	83° 22' 24.25217" E	2459112.58707	744655.06289
C38	22° 13' 13.14549" N	83° 22' 23.70229" E	2459130.20642	744639.03124
C39	22° 13' 13.68732" N	83° 22' 23.16340" E	2459146.63438	744623.33321
C40	22° 13' 14.39495" N	83° 22' 22.63342" E	2459168.16734	744607.81028
C41	22° 13' 15.06891" N	83° 22' 22.02405" E	2459188.62874	744590.02977
C42	22° 13' 15.65057" N	83° 22' 21.49814" E	2459206.28805	744574.68421
C43	22° 13' 16.15088" N	83° 22' 20.81328" E	2459221.37297	744554.82502
C44	22° 13' 16.65118" N	83° 22' 20.12842" E	2459236.45788	744534.96582
C45	22° 13' 17.07660" N	83° 22' 19.27879" E	2459249.16508	744510.42269
C46	22° 13' 17.45227" N	83° 22' 18.52853" E	2459260.38600	744488.75020
C47	22° 13' 17.59391" N	83° 22' 17.68995" E	2459264.36754	744464.66065
C48	22° 13' 17.59903" N	83° 22' 16.79446" E	2459264.12336	744439.00637
C49	22° 13' 17.56786" N	83° 22' 15.98086" E	2459262.79936	744415.71548
C50	22° 13' 17.48672" N	83° 22' 15.09896" E	2459259.90745	744390.49241
C51	22° 13' 17.34153" N	83° 22' 14.16645" E	2459255.02237	744363.85035
C52	22° 13' 17.21946" N	83° 22' 13.38239" E	2459250.91492	744341.44925
C53	22° 13' 28.96898" N	83° 21' 52.14915" E	2459602.88811	743727.57149
C54	22° 13' 29.31313" N	83° 21' 51.53108" E	2459613.19958	743709.70191
C55	22° 13' 29.50163" N	83° 21' 50.86920" E	2459618.70292	743690.65187
C56	22° 13' 29.48179" N	83° 21' 50.01451" E	2459617.71016	743666.17912
C57	22° 13' 29.37034" N	83° 21' 49.05386" E	2459613.85166	743638.71539
C58	22° 13' 29.26343" N	83° 21' 48.13234" E	2459610.15030	743612.37014
C59	22° 13' 29.14675" N	83° 21' 47.12663" E	2459606.11081	743583.61812

COORDINATES OF REVENUE FOREST BOUNDING POINTS

POINT ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE	
	LATITUDE	LONGITUDE	NORTHING	EASTING
1	22° 13' 14.37814" N	83° 22' 22.11478" E	2459167.41742	744592.96166
2	22° 13' 14.84063" N	83° 22' 21.69662" E	2459181.45845	744580.76031
3	22° 13' 15.37565" N	83° 22' 21.21287" E	2459197.70185	744566.64515
4	22° 13' 15.85765" N	83° 22' 20.55307" E	2459212.23490	744547.51248
5	22° 13' 16.33181" N	83° 22' 19.90401" E	2459226.53130	744528.69136
6	22° 13' 16.73644" N	83° 22' 19.09590" E	2459238.61750	744505.34765
7	22° 13' 17.09601" N	83° 22' 18.37778" E	2459249.35779	744484.60348
8	22° 13' 17.80816" N	83° 22' 18.68001" E	2459271.40331	744492.91799
9	22° 13' 17.49919" N	83° 22' 19.34665" E	2459262.19680	744512.16277
10	22° 13' 17.18623" N	83° 22' 20.00198" E	2459252.86228	744531.08580
11	22° 13' 16.97056" N	83° 22' 20.35284" E	2459246.38446	744541.24028
12	22° 13' 16.49173" N	83° 22' 21.00829" E	2459231.94715	744560.24690
13	22° 13' 15.92498" N	83° 22' 21.78387" E	2459214.85866	744582.73682
14	22° 13' 15.38637" N	83° 22' 22.27086" E	2459198.50640	744596.94658
15	22° 13' 14.91749" N	83° 22' 22.69480" E	2459184.27119	744609.31667
16	22° 13' 16.92425" N	83° 22' 13.81784" E	2459242.02788	744354.06532
17	22° 13' 16.79958" N	83° 22' 12.98728" E	2459237.81992	744330.33353
18	22° 13' 16.92472" N	83° 22' 12.87195" E	2459241.61829	744326.96951
19	22° 13' 17.53561" N	83° 22' 13.06924" E	2459260.50137	744332.32671
20	22° 13' 17.66652" N	83° 22' 13.92575" E	2459264.91279	744356.79880
21	22° 13' 29.64072" N	83° 21' 51.14548" E	2459623.10561	743698.49916
22	22° 13' 29.53763" N	83° 21' 50.34653" E	2459619.57648	743675.66292
23	22° 13' 29.57516" N	83° 21' 49.44519" E	2459620.32812	743649.82651
24	22° 13' 29.71113" N	83° 21' 48.88600" E	2459624.26117	743633.74353
25	22° 13' 29.80099" N	83° 21' 49.66055" E	2459627.37222	743655.88683
26	22° 13' 29.88119" N	83° 21' 50.35186" E	2459630.14890	743675.65070
27	22° 13' 29.81289" N	83° 21' 51.11682" E	2459628.38968	743697.59536

Legend

- BOUNDING POINT
- ▲ BASE STATION
- ROAD CENTER POINT
- ROAD
- REVENUE FOREST

S.No.	VILLAGE	KHASRA No.	AREA (IN Ha.)
1	Dhoram	377/1	0.336
2	Dhoram	377/4	0.058
3	Dhoram	251/1	0.048
Total			0.442

वन मण्डलाधिकारी
 रायपुर वनमण्डल

वन परिक्षेत्र अधिकारी
 धरघोड़ा

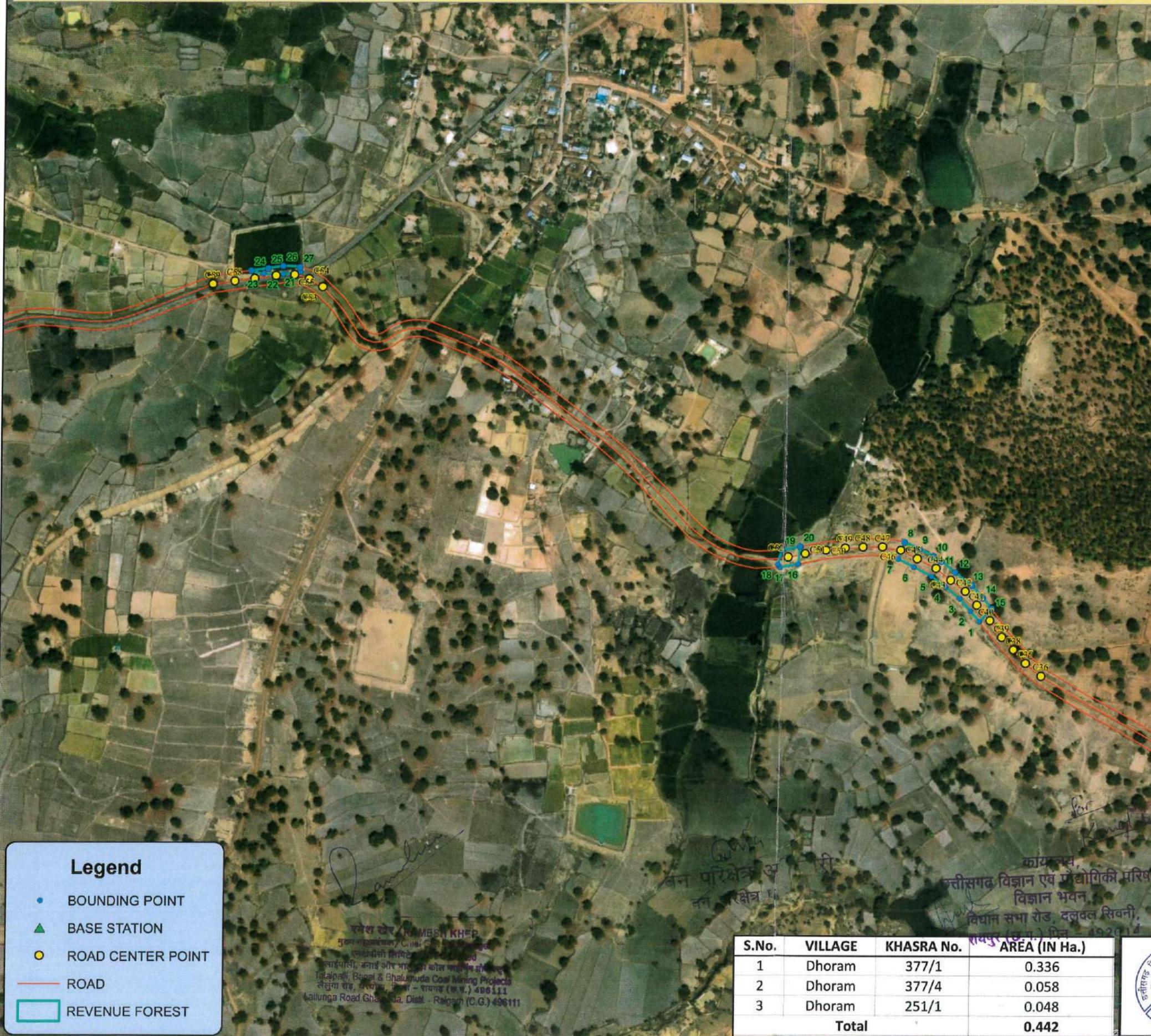
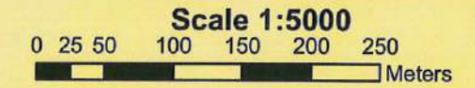
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 छत्तीसगढ़ विज्ञान एवं प्रौद्योगिकी परिषद,
 विज्ञान भवन,
 विज्ञान सभा रोड, दालदल सिक्की,
 रायपुर (छ.प्र.) पिन - 492014

रमेश खेर / RAMESH KHERR
 मुख्य महाप्रबंधक / Chief General Manager
 राष्ट्रीय कोयला लिमिटेड / NTPC Limited
 कोयला, रायपुर & Bhalumunda Coal Mining Project
 कोयला रोड, धरघोड़ा, जिला - रायपुर (छ.प्र.) 490111
 Coal Road, Gharghoda, Raigarh (C.G.) 490111



DGPS Survey Conducted & Map Prepared By
छत्तीसगढ़ अंतरिक्ष उपयोग केन्द्र
 Chhattisgarh Council of Science & Technology
 Vigyan Bhavan, Vidhan Sabha Road, Daldal Seoni
 Raipur, (CG) Pin - 492014

**REVENUE FOREST AREA IN DHORAM VILLAGE UNDER COAL TRANSPORTATION ROAD WIDNING FOR TALAIPALLI COAL MINING PROJECT
SUPERIMPOSED ON SATELLITE IMAGE, VILLAGE - DHORAM, TEHSIL - GHARGHODA, DISTRICT - RAIGARH, CHHATTISGARH**



COORDINATES OF ROAD CENTER LINE

POINT ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE	
	LATITUDE	LONGITUDE	NORTHING	EASTING
C36	22° 13' 12.01935" N	83° 22' 24.96384" E	2459096.12617	744675.71229
C37	22° 13' 12.56478" N	83° 22' 24.25217" E	2459112.58707	744655.06289
C38	22° 13' 13.14549" N	83° 22' 23.70229" E	2459130.20642	744639.03124
C39	22° 13' 13.68732" N	83° 22' 23.16340" E	2459146.63438	744623.33321
C40	22° 13' 14.39495" N	83° 22' 22.63342" E	2459168.16734	744607.81028
C41	22° 13' 15.06891" N	83° 22' 22.02405" E	2459188.62874	744590.02977
C42	22° 13' 15.65057" N	83° 22' 21.49814" E	2459206.28805	744574.68421
C43	22° 13' 16.15088" N	83° 22' 20.81328" E	2459221.37297	744554.82502
C44	22° 13' 16.65118" N	83° 22' 20.12842" E	2459236.45788	744534.96582
C45	22° 13' 17.07660" N	83° 22' 19.27879" E	2459249.16508	744510.42269
C46	22° 13' 17.45227" N	83° 22' 18.52853" E	2459260.38600	744488.75020
C47	22° 13' 17.59391" N	83° 22' 17.68995" E	2459264.36754	744464.66065
C48	22° 13' 17.59903" N	83° 22' 16.79446" E	2459264.12336	744439.00637
C49	22° 13' 17.56786" N	83° 22' 15.98086" E	2459262.79936	744415.71548
C50	22° 13' 17.48672" N	83° 22' 15.09896" E	2459259.90745	744390.49241
C51	22° 13' 17.34153" N	83° 22' 14.16645" E	2459255.02237	744363.85035
C52	22° 13' 17.21946" N	83° 22' 13.38239" E	2459250.91492	744341.44925
C53	22° 13' 28.96898" N	83° 21' 52.14915" E	2459602.88811	743727.57149
C54	22° 13' 29.31313" N	83° 21' 51.53108" E	2459613.19958	743709.70191
C55	22° 13' 29.50163" N	83° 21' 50.86920" E	2459618.70292	743690.65187
C56	22° 13' 29.48179" N	83° 21' 50.01451" E	2459617.71016	743666.17912
C57	22° 13' 29.37034" N	83° 21' 49.05386" E	2459613.85166	743638.71539
C58	22° 13' 29.26343" N	83° 21' 48.13234" E	2459610.15030	743612.37014
C59	22° 13' 29.14675" N	83° 21' 47.12663" E	2459606.11081	743583.61812

COORDINATES OF REVENUE FOREST BOUNDING POINTS

POINT ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE	
	LATITUDE	LONGITUDE	NORTHING	EASTING
1	22° 13' 14.37814" N	83° 22' 22.11478" E	2459167.41742	744592.96166
2	22° 13' 14.84063" N	83° 22' 21.69662" E	2459181.45845	744580.76031
3	22° 13' 15.37565" N	83° 22' 21.21287" E	2459197.70185	744566.64515
4	22° 13' 15.85765" N	83° 22' 20.55307" E	2459212.23490	744547.51248
5	22° 13' 16.33181" N	83° 22' 19.90401" E	2459226.53130	744528.69136
6	22° 13' 16.73644" N	83° 22' 19.09590" E	2459238.61750	744505.34765
7	22° 13' 17.09601" N	83° 22' 18.37778" E	2459249.35779	744484.60348
8	22° 13' 17.80816" N	83° 22' 18.68001" E	2459271.40331	744492.91799
9	22° 13' 17.49919" N	83° 22' 19.34665" E	2459262.19680	744512.16277
10	22° 13' 17.18623" N	83° 22' 20.00198" E	2459252.86228	744531.08580
11	22° 13' 16.97056" N	83° 22' 20.35284" E	2459246.38446	744541.24028
12	22° 13' 16.49173" N	83° 22' 21.00829" E	2459231.94715	744560.24690
13	22° 13' 15.92498" N	83° 22' 21.78387" E	2459214.85866	744582.73682
14	22° 13' 15.38637" N	83° 22' 22.27086" E	2459198.50640	744596.94658
15	22° 13' 14.91749" N	83° 22' 22.69480" E	2459184.27119	744609.31667
16	22° 13' 16.92425" N	83° 22' 13.81784" E	2459242.02788	744354.06532
17	22° 13' 16.79958" N	83° 22' 12.98728" E	2459237.81992	744330.33353
18	22° 13' 16.92472" N	83° 22' 12.87195" E	2459241.61829	744326.96951
19	22° 13' 17.53561" N	83° 22' 13.06924" E	2459260.50137	744332.32671
20	22° 13' 17.66652" N	83° 22' 13.92575" E	2459264.91279	744356.79880
21	22° 13' 29.64072" N	83° 21' 51.14548" E	2459623.10561	743698.49916
22	22° 13' 29.53763" N	83° 21' 50.34653" E	2459619.57648	743675.66292
23	22° 13' 29.57516" N	83° 21' 49.44519" E	2459620.32812	743649.82651
24	22° 13' 29.71113" N	83° 21' 48.88600" E	2459624.26117	743633.74353
25	22° 13' 29.80099" N	83° 21' 49.66055" E	2459627.37222	743655.88683
26	22° 13' 29.88119" N	83° 21' 50.35186" E	2459630.14890	743675.65070
27	22° 13' 29.81289" N	83° 21' 51.11682" E	2459628.38968	743697.59536

Legend

- BOUNDING POINT
- ▲ BASE STATION
- ROAD CENTER POINT
- ROAD
- REVENUE FOREST

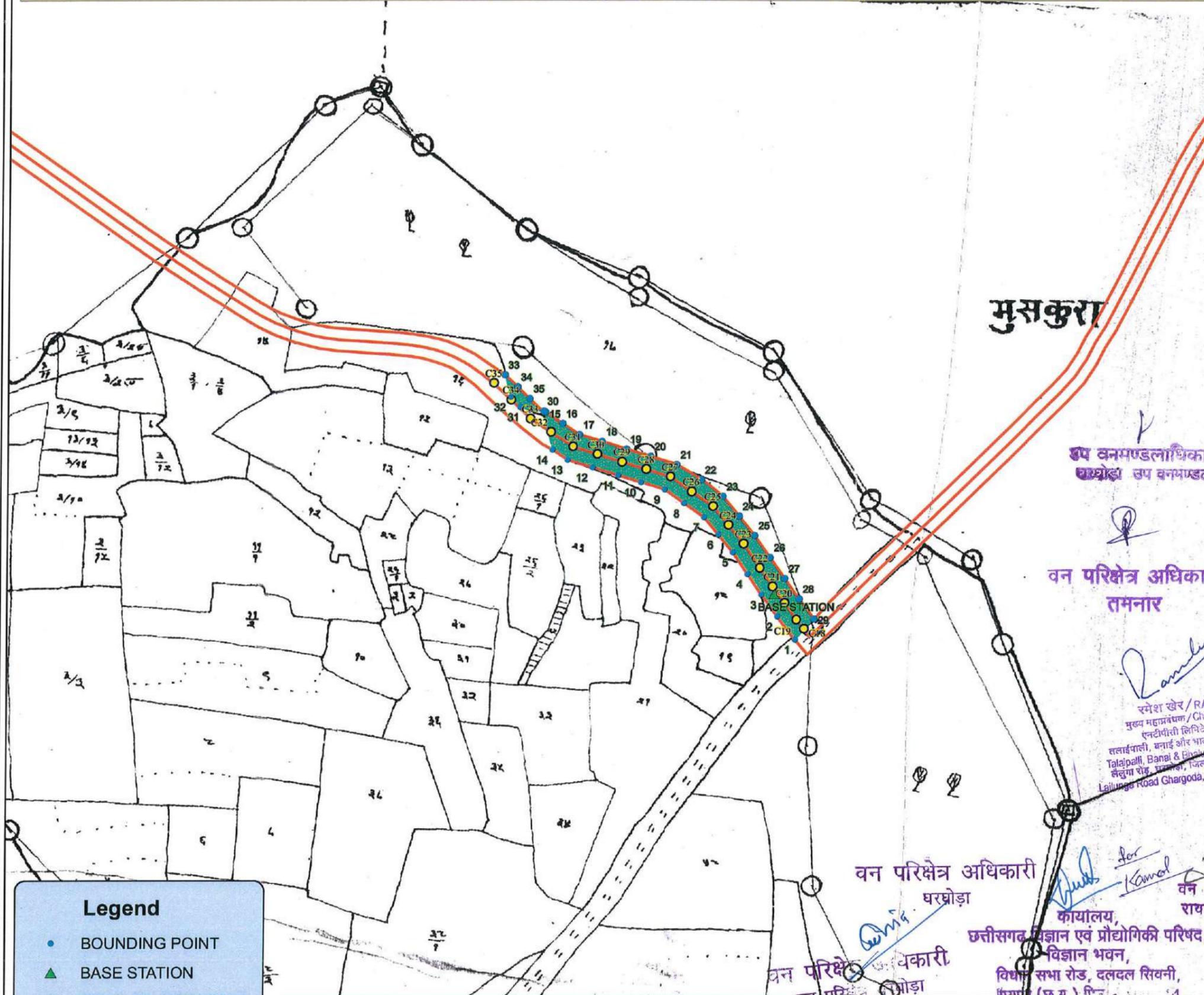
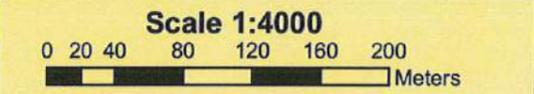
S.No.	VILLAGE	KHASRA No.	AREA (IN Ha.)
1	Dhoram	377/1	0.336
2	Dhoram	377/4	0.058
3	Dhoram	251/1	0.048
Total			0.442

DGPS Survey Conducted & Map Prepared By
छत्तीसगढ़ अंतरिक्ष उपयोग केन्द्र
 Chhattisgarh Council of Science & Technology
 Vigyan Bhavan, Vidhan Sabha Road, Daldal Seoni
 Raipur, (CG) Pin - 492014

रमेश खेर / RAMESH KHED
 मुख्य सर्वेक्षक / Chief Surveyor
 जलियाँवाडी विधिद्वारा
 तलापल्ली, बंगाल और भादवा कोयला खनन प्रोजेक्ट
 तलापल्ली, बंगाल और भादवा कोयला खनन प्रोजेक्ट (क.प.) 406111
 तालुगा रोड, घर्गहोडा, जिला - रायपुर (छ.प.) 492014

कायस्थ
 छत्तीसगढ़ विज्ञान एवं प्रौद्योगिकी परिषद
 विज्ञान भवन
 विधान सभा रोड, दलदल सेनी,
 रायपुर (छ.प.) पिन - 492014

MAP SHOWING REVENUE FOREST AREA IN AURAIMUDA VILLAGE UNDER COAL TRANSPORTATION ROAD WIDNING FOR TALAIPALLI COAL MINING PROJECT, VILLAGE - AURAIMUDA, TEHSIL - GHARGHODA, DISTRICT - RAIGARH, CHHATTISGARH



COORDINATES OF ROAD CENTER LINE

POINT ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE	
	LATITUDE	LONGITUDE	NORTHING	EASTING
C18	22° 12' 51.38213" N	83° 23' 0.14883" E	2458477.03205	745693.60545
C19	22° 12' 51.68146" N	83° 22' 59.89420" E	2458486.12647	745686.16621
C20	22° 12' 52.21744" N	83° 22' 59.48430" E	2458502.43156	745674.16423
C21	22° 12' 52.75341" N	83° 22' 59.07439" E	2458518.73665	745662.16225
C22	22° 12' 53.35074" N	83° 22' 58.65305" E	2458536.92399	745649.80302
C23	22° 12' 54.12992" N	83° 22' 58.10343" E	2458560.64854	745633.68098
C24	22° 12' 54.73362" N	83° 22' 57.58539" E	2458578.98873	745618.54862
C25	22° 12' 55.33733" N	83° 22' 57.06736" E	2458597.32891	745603.41626
C26	22° 12' 55.82139" N	83° 22' 56.34073" E	2458611.89427	745582.36666
C27	22° 12' 56.30546" N	83° 22' 55.61411" E	2458626.45962	745561.31706
C28	22° 12' 56.55551" N	83° 22' 54.78652" E	2458633.77998	745537.48834
C29	22° 12' 56.80557" N	83° 22' 53.95893" E	2458641.10033	745513.65961
C30	22° 12' 57.05731" N	83° 22' 53.12399" E	2458648.46916	745489.61967
C31	22° 12' 57.30904" N	83° 22' 52.28906" E	2458655.83798	745465.57972
C32	22° 12' 57.78444" N	83° 22' 51.53225" E	2458670.12333	745443.66978
C33	22° 12' 58.22558" N	83° 22' 50.82998" E	2458683.37916	745423.33886
C34	22° 12' 58.83252" N	83° 22' 50.17651" E	2458701.75780	745404.32578
C35	22° 12' 59.37469" N	83° 22' 49.59277" E	2458718.17538	745387.34147

COORDINATES OF REVENUE FOREST BOUNDING POINTS

POINT ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE	
	LATITUDE	LONGITUDE	NORTHING	EASTING
1	22° 12' 51.05960" N	83° 22' 59.81534" E	2458466.95871	745684.20802
2	22° 12' 51.80757" N	83° 22' 59.21930" E	2458489.70219	745666.77124
3	22° 12' 52.50440" N	83° 22' 58.68637" E	2458510.90069	745651.16723
4	22° 12' 53.17585" N	83° 22' 58.21267" E	2458531.34504	745637.27209
5	22° 12' 53.87199" N	83° 22' 57.72162" E	2458552.54127	745622.86815
6	22° 12' 54.44596" N	83° 22' 57.22911" E	2458569.97792	745608.48134
7	22° 12' 55.01592" N	83° 22' 56.74002" E	2458587.29290	745594.19485
8	22° 12' 55.46297" N	83° 22' 56.06897" E	2458600.74443	745574.75494
9	22° 12' 55.90911" N	83° 22' 55.39927" E	2458614.16871	745555.35440
10	22° 12' 56.15593" N	83° 22' 54.58240" E	2458621.39422	745531.83439
11	22° 12' 56.38821" N	83° 22' 53.81363" E	2458628.19432	745509.69920
12	22° 12' 56.65277" N	83° 22' 52.93614" E	2458643.93871	745484.33298
13	22° 12' 56.91071" N	83° 22' 52.08064" E	2458643.48898	745459.80211
14	22° 12' 57.23495" N	83° 22' 51.56448" E	2458653.23198	745444.85895
15	22° 12' 57.58424" N	83° 22' 51.34035" E	2458690.02841	745437.85837
16	22° 12' 58.07081" N	83° 22' 51.91891" E	2458679.10768	745454.60785
17	22° 12' 57.70737" N	83° 22' 52.49747" E	2458668.18695	745471.35733
18	22° 12' 57.47260" N	83° 22' 53.27615" E	2458661.31466	745493.77754
19	22° 12' 57.22293" N	83° 22' 54.10423" E	2458654.00630	745517.62001
20	22° 12' 56.97317" N	83° 22' 54.93086" E	2458646.69452	745541.42096
21	22° 12' 56.70181" N	83° 22' 55.82895" E	2458638.75052	745567.27974
22	22° 12' 56.20383" N	83° 22' 56.66265" E	2458623.80527	745591.40332
23	22° 12' 55.65874" N	83° 22' 57.39469" E	2458607.36492	745612.63767
24	22° 12' 55.03187" N	83° 22' 57.94500" E	2458588.32663	745628.70579
25	22° 12' 54.40314" N	83° 22' 58.47211" E	2458569.22066	745644.11024
26	22° 12' 53.69298" N	83° 22' 58.99035" E	2458547.60561	745659.29998
27	22° 12' 53.01273" N	83° 22' 59.48677" E	2458526.90077	745673.85009
28	22° 12' 52.35852" N	83° 22' 59.97942" E	2458506.99518	745688.27982
29	22° 12' 51.70466" N	83° 23' 0.48232" E	2458487.10539	745703.00288
30	22° 12' 58.47500" N	83° 22' 51.27546" E	2458691.25327	745435.97976
31	22° 12' 58.61231" N	83° 22' 50.46783" E	2458695.11426	745412.77755
32	22° 12' 58.94136" N	83° 22' 50.15264" E	2458705.09579	745403.58923
33	22° 12' 59.64886" N	83° 22' 49.96480" E	2458726.77799	745397.86610
34	22° 12' 59.25563" N	83° 22' 50.38818" E	2458714.87063	745410.18451
35	22° 12' 58.87382" N	83° 22' 50.79926" E	2458703.30901	745422.14523
BASE STATION	22° 12' 52.51883" N	83° 22' 59.13937" E	2458511.54872	745664.13722

Legend

- BOUNDING POINT
- ▲ BASE STATION
- ROAD CENTER POINT
- ROAD
- REVENUE FOREST

S.No.	VILLAGE	KHASRA No.	AREA (IN Ha.)
1	Auraimuda	17	0.950
Total			0.950

DGPS Survey Conducted & Map Prepared By
 छत्तीसगढ़ अंतरिक्ष उपयोग केन्द्र
 Chhattisgarh Council of Science & Technology
 Vigyan Bhavan, Vidhan Sabha Road, Daldal Seoni
 Raipur, (CG) Pin - 492014

उप वनमण्डलाधिकारी
 घरघोड़ा उप वनमण्डल

वन परिक्षेत्र अधिकारी
 तमनार

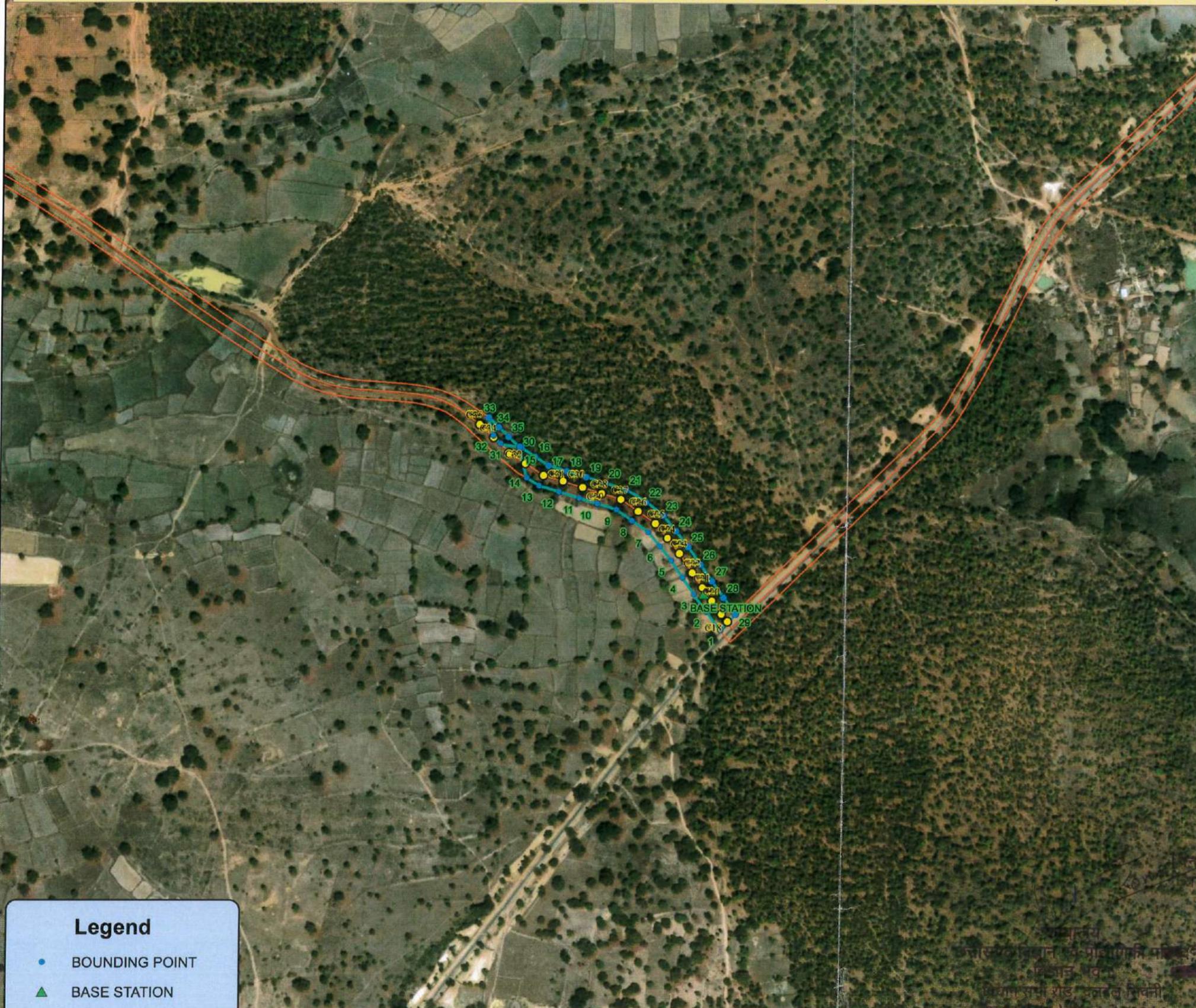
रमेश खेर / RAMESH KHERR
 मुख्य महाप्रबंधक / Chief General Manager
 एनटीपीसी लिमिटेड / NTPC Limited
 तलाइपाली, बनाई और भारमुंडा कोल माइनिंग प्रोजेक्ट
 Talaiपाली, Banai & Bharमुंडा Coal Mining Project
 बैलुंग रोड, घरघोड़ा, जिला - रायगढ़ (CG.) 496112
 Bailung Road Gharghoda, Dist. - Raigarh (C.G.) 496111

वन परिक्षेत्र अधिकारी
 घरघोड़ा

वन मण्डलाधिकारी
 रायगढ़ वनमण्डल

छत्तीसगढ़ विज्ञान एवं प्रौद्योगिकी परिषद,
 विज्ञान भवन,
 विधान सभा रोड, दालदल सेवनी,
 रायपुर (छ.ग.) पिन - 492014

REVENUE FOREST AREA OF AURAIMUDA VILLAGE UNDER COAL TRANSPORTATION ROAD WIDNING FOR TALAIPALLI COAL MINING PROJECT
SUPERIMPOSED ON SATELLITE IMAGE, VILLAGE - AURAIMUDA, TEHSIL - GHARGHODA, DISTRICT - RAIGARH, CHHATTISGARH



POINT ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE	
	LATITUDE	LONGITUDE	NORTHING	EASTING
C18	22° 12' 51.38213" N	83° 23' 0.14883" E	2458477.03205	745693.60545
C19	22° 12' 51.68146" N	83° 22' 59.89420" E	2458486.12647	745686.16621
C20	22° 12' 52.21744" N	83° 22' 59.48430" E	2458502.43156	745674.16423
C21	22° 12' 52.75341" N	83° 22' 59.07439" E	2458518.73665	745662.16225
C22	22° 12' 53.35074" N	83° 22' 58.65305" E	2458536.92399	745649.80302
C23	22° 12' 54.12992" N	83° 22' 58.10343" E	2458560.64854	745633.68098
C24	22° 12' 54.73362" N	83° 22' 57.58539" E	2458578.98873	745618.54862
C25	22° 12' 55.33733" N	83° 22' 57.06736" E	2458597.32891	745603.41626
C26	22° 12' 55.82139" N	83° 22' 56.34073" E	2458611.89427	745582.36666
C27	22° 12' 56.30546" N	83° 22' 55.61411" E	2458626.45962	745561.31706
C28	22° 12' 56.55551" N	83° 22' 54.78652" E	2458633.77998	745537.48834
C29	22° 12' 56.80557" N	83° 22' 53.95893" E	2458641.10033	745513.65961
C30	22° 12' 57.05731" N	83° 22' 53.12399" E	2458648.46916	745489.61967
C31	22° 12' 57.30904" N	83° 22' 52.28906" E	2458655.83798	745465.57972
C32	22° 12' 57.78444" N	83° 22' 51.53225" E	2458670.12333	745443.66978
C33	22° 12' 58.22558" N	83° 22' 50.82998" E	2458683.37916	745423.33886
C34	22° 12' 58.83252" N	83° 22' 50.17651" E	2458701.75780	745404.32578
C35	22° 12' 59.37469" N	83° 22' 49.59277" E	2458718.17538	745387.34147

POINT ID	GEOGRAPHICAL COORDINATE		UTM COORDINATE	
	LATITUDE	LONGITUDE	NORTHING	EASTING
1	22° 12' 51.05960" N	83° 22' 59.81534" E	2458466.95871	745684.20802
2	22° 12' 51.80757" N	83° 22' 59.21930" E	2458489.70219	745666.77124
3	22° 12' 52.50440" N	83° 22' 58.68637" E	2458510.90069	745651.16723
4	22° 12' 53.17585" N	83° 22' 58.21267" E	2458531.34504	745637.27209
5	22° 12' 53.87199" N	83° 22' 57.72162" E	2458552.54127	745622.86815
6	22° 12' 54.44596" N	83° 22' 57.22911" E	2458569.97792	745608.48134
7	22° 12' 55.01592" N	83° 22' 56.74002" E	2458587.29290	745594.19485
8	22° 12' 55.46297" N	83° 22' 56.06897" E	2458600.74443	745574.75494
9	22° 12' 55.90911" N	83° 22' 55.39927" E	2458614.16871	745555.35440
10	22° 12' 56.15593" N	83° 22' 54.58240" E	2458621.39422	745531.83439
11	22° 12' 56.38821" N	83° 22' 53.81363" E	2458628.19432	745509.69920
12	22° 12' 56.65277" N	83° 22' 52.93614" E	2458635.93871	745484.43398
13	22° 12' 56.91071" N	83° 22' 52.08064" E	2458643.48898	745459.80211
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16	22° 12' 58.07081" N	83° 22' 51.91891" E	2458679.10768	745454.60785
17	22° 12' 57.70737" N	83° 22' 52.49747" E	2458668.18695	745471.35733
18	22° 12' 57.47260" N	83° 22' 53.27615" E	2458661.31466	745493.77754
19	22° 12' 57.22293" N	83° 22' 54.10423" E	2458654.00630	745517.62001
20	22° 12' 56.97317" N	83° 22' 54.93086" E	2458646.69452	745541.42096
21	22° 12' 56.70181" N	83° 22' 55.82895" E	2458638.75052	745567.27974
22	22° 12' 56.20383" N	83° 22' 56.66265" E	2458623.80527	745591.40332
23	22° 12' 55.65874" N	83° 22' 57.39469" E	2458607.36492	745612.63767
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25	22° 12' 54.40314" N	83° 22' 58.47211" E	2458569.22066	745644.11024
26	22° 12' 53.69298" N	83° 22' 58.99035" E	2458547.60561	745659.29998
27	22° 12' 53.01273" N	83° 22' 59.48677" E	2458526.90077	745673.85009
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29	22° 12' 51.70466" N	83° 23' 0.48232" E	2458487.10539	745703.00288
30	22° 12' 58.47500" N	83° 22' 51.27546" E	2458691.25327	745435.97976
31	22° 12' 58.61231" N	83° 22' 50.46783" E	2458695.11426	745412.77755
32	22° 12' 58.94136" N	83° 22' 50.15264" E	2458705.09579	745403.58923
33	22° 12' 59.64886" N	83° 22' 49.96480" E	2458726.77799	745397.86610
34	22° 12' 59.25563" N	83° 22' 50.38818" E	2458714.87063	745410.18451
35	22° 12' 58.87382" N	83° 22' 50.79926" E	2458703.30901	745422.14523
36	22° 12' 59.18833" N	83° 22' 59.13937" E	2458511.54872	745664.13722

Legend

- BOUNDING POINT
- ▲ BASE STATION
- ROAD CENTER POINT
- ROAD
- REVENUE FOREST

S.No.	VILLAGE	KHASRA No.	AREA (IN Ha.)
1	Auraimuda	17	0.950
Total			0.950

DGPS Survey Conducted & Map Prepared By
छत्तीसगढ़ अंतरिक्ष उपयोग केन्द्र
Chhattisgarh Council of Science & Technology
Vigyan Bhavan, Vidhan Sabha Road, Daidal Seohi
Raipur, (CG) Pin - 492014

मण्डलाधिकारी
गढ़, कुसमण्डल
मण्डलाधिकारी
गढ़, कुसमण्डल
मण्डलाधिकारी
गढ़, कुसमण्डल

वन परिक्षेत्र अधिकारी
वन परिक्षेत्र अधिकारी
वन परिक्षेत्र अधिकारी