



NATIONAL
INFORMATICS
CENTRE



BHU-NAKSHA "CADASTRAL MAPPING"

LAND RECORDS INFORMATION SYSTEM DIVISION (LRISD)
NATIONAL INFORMATICS CENTRE (NIC)

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INTRODUCTION

- ❑ Land plays a crucial role in our social and economic life, particularly in rural areas.
- ❑ The scheme of computerization of land records was started in 1988-89 with the aim of removing inherent flaws in the existing land records system. Basic work converting the Record of Rights (ROR) into digital form is complete in majority of States with computerized ROR being distributed to citizens from Tehsil computer centre.
- ❑ The scheme has been revamped and many new and related components have been included such as computerization of registration and its integration with Land Records, capacity building, survey, cadastral maps, modern record room. The new scheme is called **National Land Records Modernization Programme (NLRMP)** launched in 2008.
- ❑ The integrated programme would modernize management of land records, minimize scope of land/property disputes, enhance transparency in the land records maintenance system.

CONTD.

- ❑ The major components of the programme are **computerization of land records** including **mutations, digitization of cadastral maps and integration of textual and spatial data, survey/re-survey** and updation of all survey and settlement records.
- ❑ **Information technology** has brought **transparency in land records** and registration department by facilitating placing of property records on the public domain.
- ❑ While **Record Of Rights (ROR) data** has been converted to electronic form by many states long back, the preservation and manipulation of cadastral maps on electronic media had been eluding due to cost and technology constraints till recent past

NEED FOR COMPUTERISATION

- ❑ High volume of data being handled.
- ❑ Extensive public dealing.
- ❑ Requirement of regular maintenance of records .
- ❑ Information called for by different departments.
- ❑ Accuracy of the information extremely important.
- ❑ Importance of spatial (cadastral map) data.

OBJECTIVES OF LRIS

- ❑ The application will concentrate on the linking of both attribute(non-spatial) data with special reference to cadastral(spatial) data.
- ❑ Minimum duplication in land data maintenance.
- ❑ Data integrity, accuracy and timeliness in information processing is ensured.
- ❑ Automatic generation and issuance of Record of Rights.
- ❑ Helps to settle land disputes by providing accurate and effective information.
- ❑ Crop information maintained is useful for agricultural census work.

ROLE OF NIC

As a Monitoring group... As an Enabler...

- ❑ ..We keep track of the progress attained in every state.
- ❑ ..We operate online monitoring system.
- ❑ ..We conduct meetings through Video Conferencing with all stakeholders concerned to record performance and delays.
- ❑ ..we provide technical guidance and operational support towards offshoot requirements like Training on Computer, Awareness and Operational aspects of Land Records.
- ❑ ..Training of Revenue Officers on Application Software, Backup Techniques, Security Policies, Testing and Hand holding.

BHU-NAKSHA

- BHU-NAKSHA is a tool developed in-house by NIC using **Open source JAVA library 'GeoTools'** to facilitate **management of Digitized Parcel maps.**
- BHU-NAKSHA is suitable for the states where **Cadastral maps are in use.**
- With proper customization BHU-NAKSHA can be integrated with existing Land Records application of any such State.

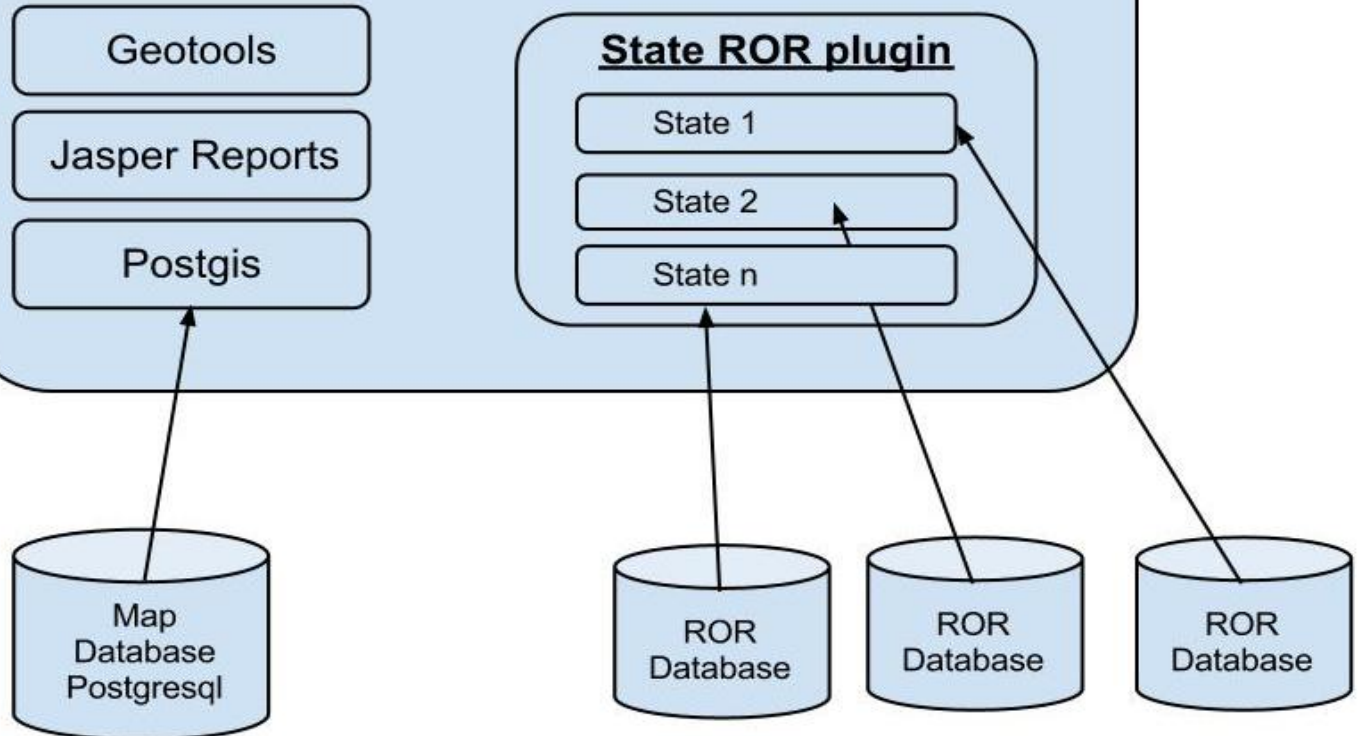
CONTD.

- It is a comprehensive tool to cater to all basic necessities of **Patwari** with regard to parcel map management.
- **BHU-NAKSHA** is a tool developed using Open source, JAVA library '**GeoTools**' to facilitate management of Digitized Parcel maps.
- BHU-NAKSHA can be **integrated with existing LR application** of any such State.
- **National Informatics Centre** is the nodal agency of Government Of India which is committed to provide state-of-art solutions for the Information Technology needs of the Government.

BHU-NAKSHA ARCHITECTURE

BHU-NAKSHA APPLICATION

BHU-NAKSHA FRAMEWORK



FEATURES

- ❑ Developed using Open source software.
- ❑ **Works in Windows and Linux**
- ❑ **Integration of spatial and textual data**
- ❑ **Scale** : Map can be displayed and printed to any scale.
- ❑ **Distance between two points can be measured**
- ❑ **Area calculation is automatic**
- ❑ **Layers on Plot map** : can be displayed and printed
- ❑ **Plot division Size & shape can be adjusted**
- ❑ **Merging** : of two polygons at a time
- ❑ **Map based Queries** (As many as required)
- ❑ **Import from multiple format** : Supports importing data from multiple sources like shape file, .adf file and ETS data.
- ❑ Display of **all maps of Khasras** owned by a person by clicking on any one single Khasra map.
- ❑ Grid to help in drawing segments.
- ❑ Print Khasra map along with adjoining Khasra maps and owner details.

SYSTEM REQUIREMENT

Software and Hardware requirement for running the application

❖ **SOFTWARE :-**

- ❑ Operating System : Windows/Linux etc
- ❑ Database : SQL Server/postgres

❖ **HARDWARE :-**

- ❑ RAM : 1 GB or Above
- ❑ Processor : Pentium IV or above
- ❑ Hard Disk : 160 GB Minimum

OPEN SOURCE SOFTWARE USED IN PROJECT

- ❑ NetBeans IDE
- ❑ Postgre SQL
- ❑ PostGIS
- ❑ Geotools
- ❑ iReport

POSTGRES SQL

- ❑ PostgreSQL, often simply Postgres, is an object-relational database management system(ORDBMS).
- ❑ It is released under an MIT-style license and is thus free and open source software.
- ❑ PostgreSQL evolved from the Ingres project at the University of California Berkeley.
- ❑ In 1996, the project was renamed to PostgreSQL to reflect its support for SQL.
- ❑ **PostGIS** adds support for geographic objects to the PostgreSQL object-relational database.
- ❑ In effect, PostGIS "spatially enables" the PostgreSQL server, allowing it to be used as a backend spatial database for geographic information systems (GIS), much like ESRI's SDE or Oracle's Spatial extension.

GEOTOOLS

- ❑ GeoTools is a free software (GPL) GIS toolkit for developing standards compliant solutions.
- ❑ GeoTools is a contributor of the GeoAPI project :- a vendor-neutral set of Java interfaces derived from OGC specifications - and implements a subset of those.
- ❑ It is written in Java and currently is under active development.

GEOTOOLS CONTD.

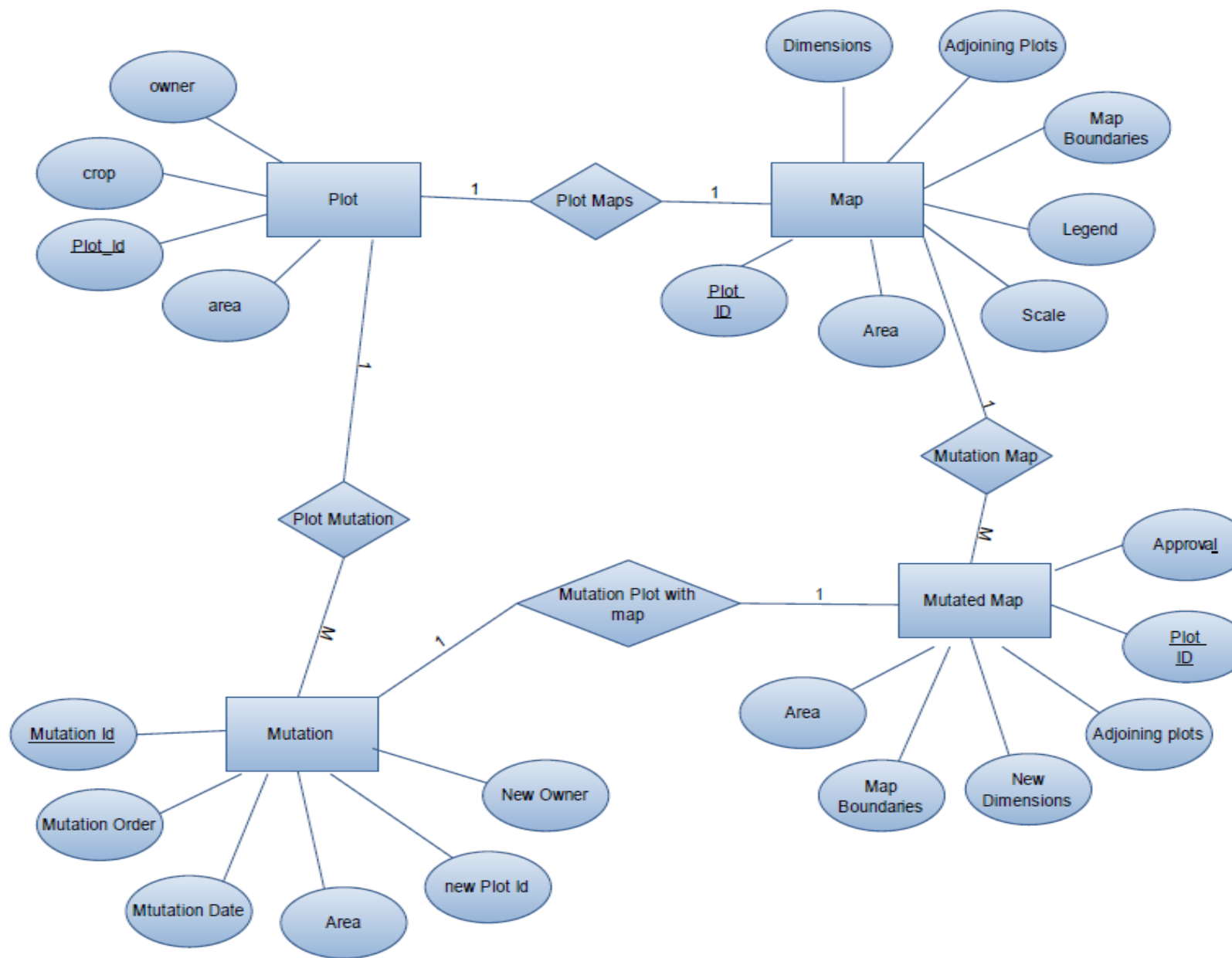
GeoTools library supports the following core features:-

- ❑ interfaces for spatial concepts and data structures.
- ❑ JTS Topology Suite Geometry:-The **JTS Topology Suite (JTS)** is an open source java software library that provides an object model for Euclidean, planar, linear geometry together with a set of fundamental geometric functions.
- ❑ Attribute, Spatial and Temporal filters
- ❑ Data access for feature support (transaction based with optional locking).
- ❑ spatial referencing (with coordinate reference system and coordinate transformation).
- ❑ Rendering with full style layer descriptor support.
- ❑ set of swing components.

METHODOLOGY

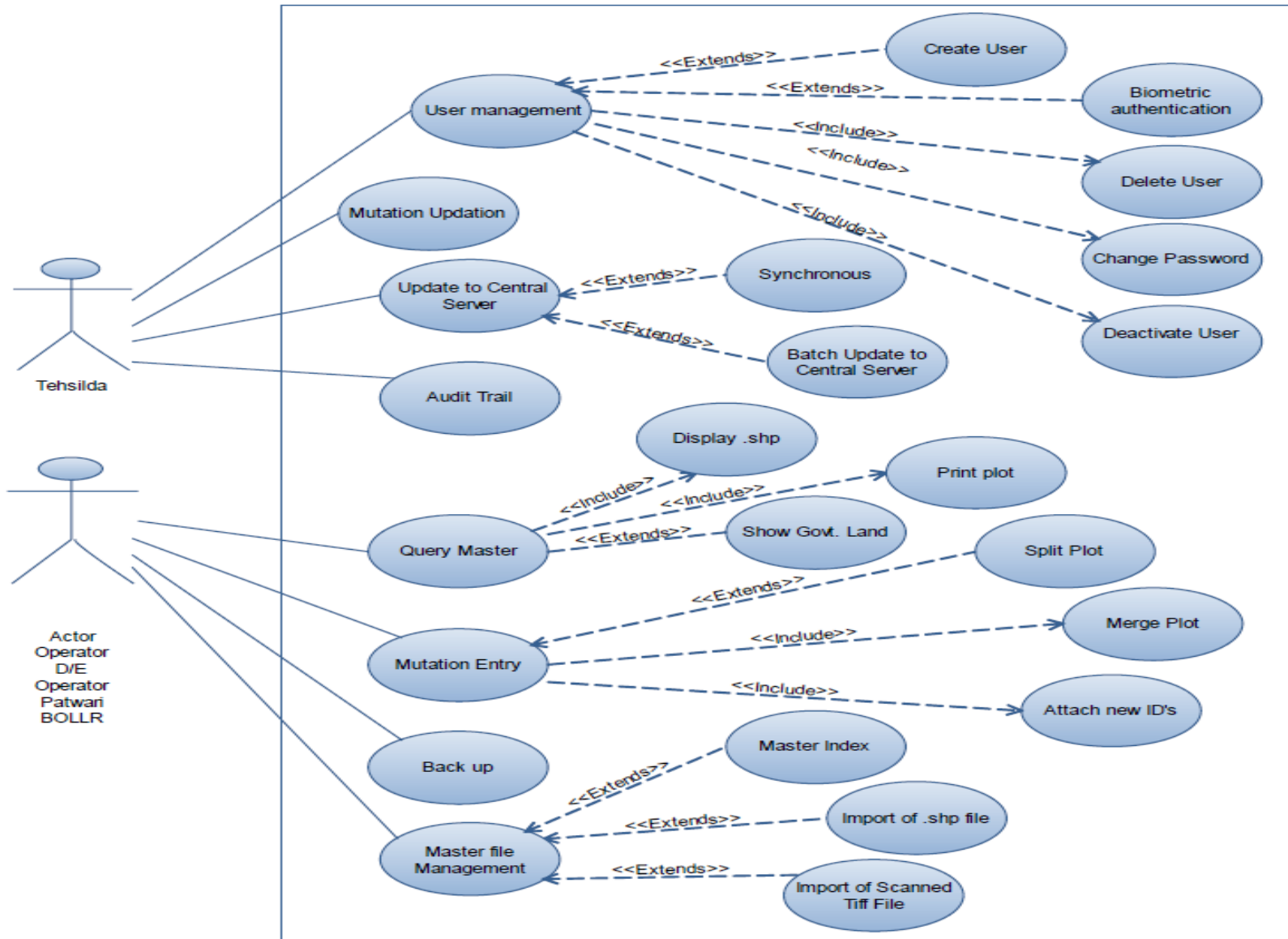
- ❑ Analysis of the current system adopted in the country.
- ❑ Preparation of the **SRS specification** of the system.
- ❑ Preparation of **E-R Diagram** of the system.
- ❑ Preparation of the **Use case** of the system based on different actors and their goal to use the system.
- ❑ Preparation of the **Activity** of the system based on different activity performed by the personnel.
- ❑ Designing the system.
- ❑ Coding of the System.
- ❑ Testing of the system.

E-R DIAGRAM OF THE SYSTEM



USE CASE DIAGRAM

Use Case Diagram



ACTIVITY DIAGRAM

RUNNING THE APPLICATION

RUNNING THE APPLICATION

Before running the application do the following:-

- 1) Install postgresql.
- 2) Install postgis
- 3) Create bhunaksha database in postgres. Please specify template as postgis when you create database(This can be done through Bhunaksha Settings -> Restore Database or PGAdmin3).
- 4) Restore the blank database provided on top of bhunaksha database(This can be done through Bhunaksha Settings -> Restore Database or PGAdmin3).

Open the Bhunaksha folder and double click on the **bhunaksha.exe**.



conf



Java



lib



log



PGBackup



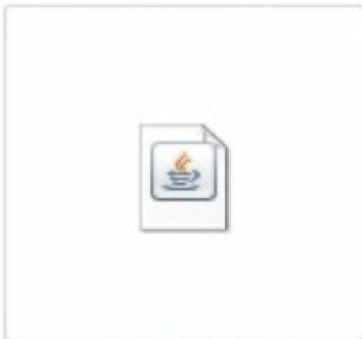
pgsql



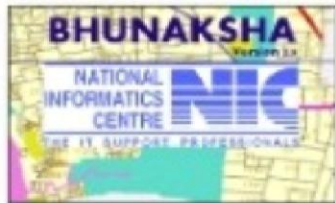
Bhunaksha.cfg



Bhunaksha.exe



Bhunaksha.jar



splash.png



TODO.txt

DOUBLE CLICK ON Bhunaksha.exe to run the application

DATABASE CONNECTION SETTINGS

Bhunaksha 2.0

File Reports Settings Help

Village Map x Settings x

General | Vector Database | Non Vector Database

DB Profile: demo

Menu Language: Default

Non Vector Data Char Set: ISCII8

Non Vected Data Language: hi_IN

OK

Cancel

Chhattisgarh admin (Administrator)

VECTOR DATABASE CONNECTION

The screenshot shows the 'Vector Database' tab of the 'Settings' dialog in Bhunaksha 2.0. The dialog contains the following fields and controls:

- Database Connection: PostgreSQL - org.postgresql...
- Database Driver: org.postgresql.Driver
- Host: localhost
- Port: 5432
- Database Name: bhunaksha_demo1
- User Name: postgres
- Password: [masked]
- URL: jdbc:postgresql://localhost:5432/bhunaksha_demo1
- Buttons: OK, Cancel, Test Connection

Four red arrows point from the dialog fields to callout boxes on the right:

- From the Port field to a box labeled "Port No. of Postgres database".
- From the Database Name field to a box labeled "Database name".
- From the User Name field to a box labeled "User Name of Postgres".
- From the Password field to a box labeled "Password of the Postgres".

The bottom status bar shows the location "Chhattisgarh" and the user "admin (Administrator)".

General Vector Database Non Vector Database

Database Connection PostgreSQL - org.postgresql...

Database Driver org.postgresql.Driver

Host localhost

Port 5432

Database Name bhunaksha_demo1

User Name postgres

Password


URL jdbc:postgresql://localhost:5432/bhunaksha_demo1

Test Connection

OK

Cancel

Message

 Successfully connected with PostgreSQL database.

OK

NON-VECTOR DATABASE CONNECTION

The screenshot shows the 'Non Vector Database' configuration window in Bhunaksha 2.0. The window has a menu bar with 'File', 'Reports', 'Settings', and 'Help'. Below the menu bar, there are tabs for 'General', 'Vector Database', and 'Non Vector Database'. The 'Non Vector Database' tab is active, showing the following fields:

- DB Functions jar: DBServiceDemo.jar (with a note: "It has to be available in conf folder")
- Database Connection: PostgreSQL - org.postgresql...
- Database Driver: org.postgresql.Driver
- Host: localhost
- Port: 5432
- Database Name: bhunaksha_demo1
- User Name: postgres
- Password: [masked]
- URL: jdbc:postgresql://localhost:5432/bhunaksha_demo1

Red arrows point from these fields to callout boxes on the right:

- DB Functions jar points to 'Jar Name (available in conf folder)'
- Host points to 'Host Name'
- Port points to 'Port no. of SQL Server'
- Database Name points to 'Database Name'
- User Name points to 'Sql Server User Name'
- Password points to 'SQL Server password'

The window also includes 'OK' and 'Cancel' buttons, and a 'Test Connection' button at the bottom. The system tray at the bottom shows 'Chhattisgarh' and 'admin (Administrator)'.

General Vector Database Non Vector Database

DB Functions jar DBServiceDemo.jar (File has to be available in conf folder)

Database Connection PostgreSQL - org.postgresql...

Database Driver org.postgresql.Driver

Host localhost

Port 5432

Database Name bhunaksha_demo1

User Name postgres

Password


URL jdbc:postgresql://localhost:5432/bhunaksha_demo1

Test Connection

OK

Cancel

Message

 Successfully connected withdatabase.

OK

General Vector Database Non Vector Database

DB Functions jar DBServiceDemo.jar (File has to be available in conf folder)

Database Connection PostgreSQL - org.postgresql...

Database Driver org.postgresql.Driver

Host localhost

Port 5432

Database Name bhunaksha_demo1

User Name postgres

Password


URL jdbc:postgresql://localhost:5432/bhunaksha_demo1

Test Connection

OK

Cancel

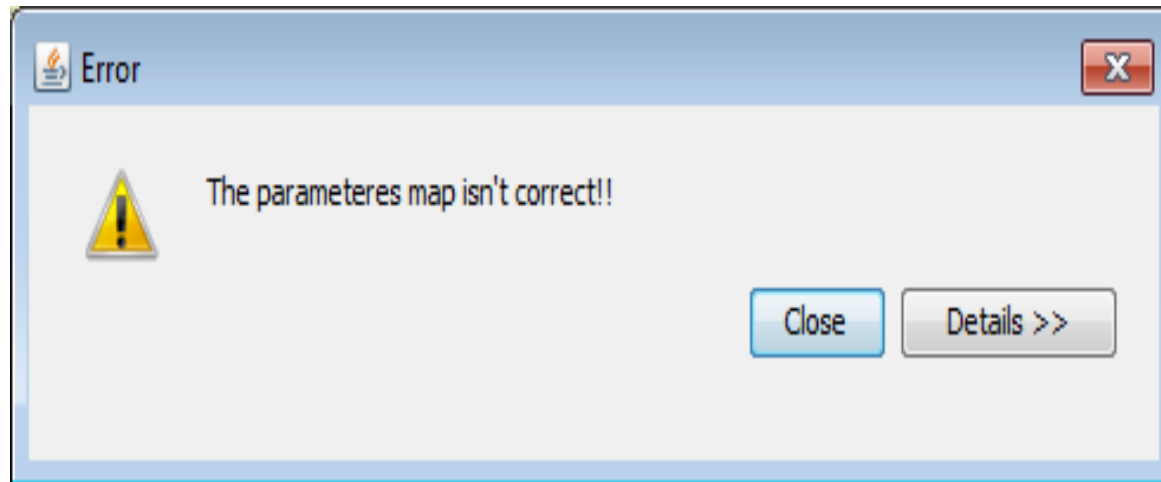
Message

 Application will try to restart to apply new settings

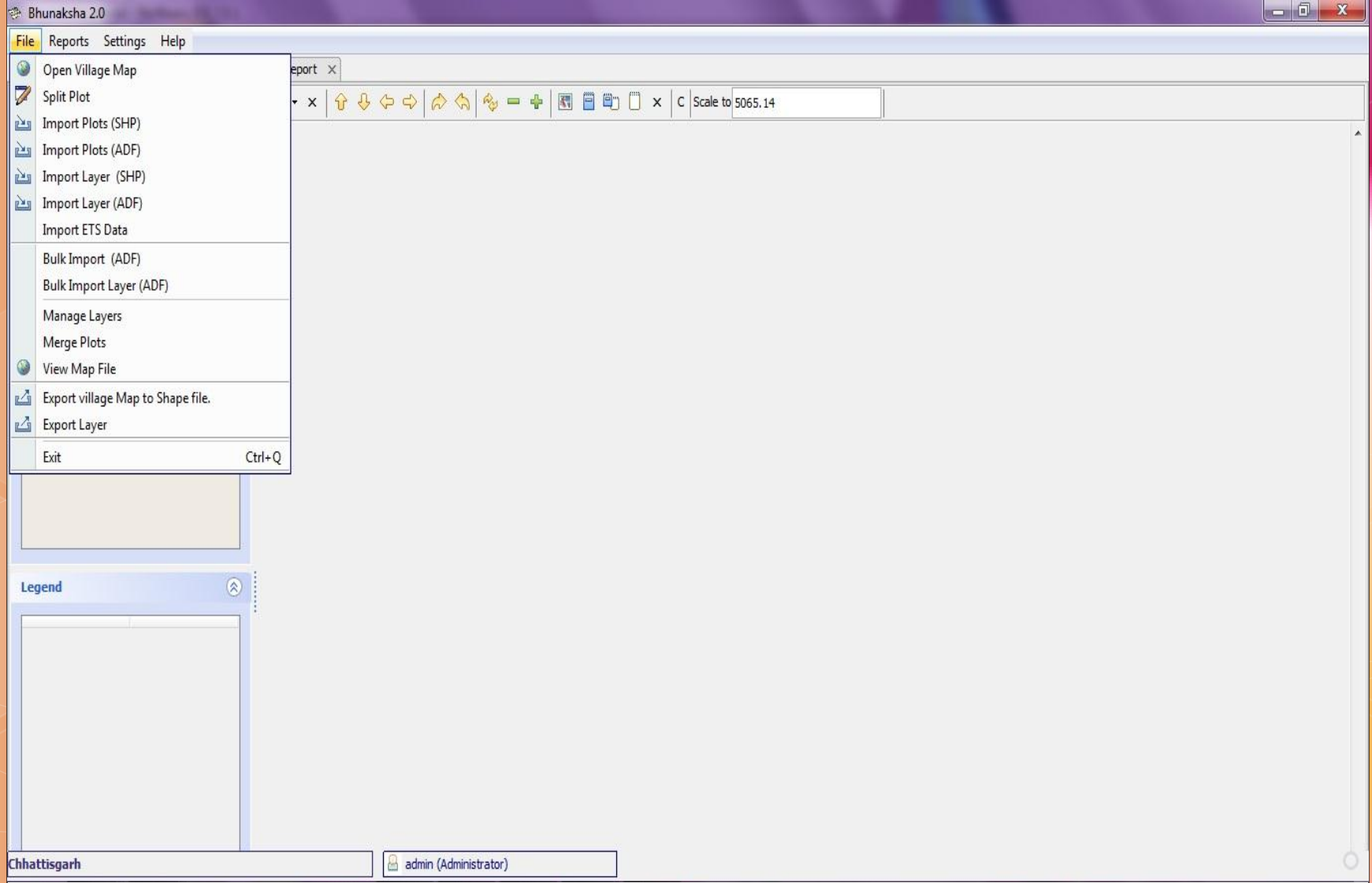
OK

Some times you may get some message like the one given below. If so click the **close** button. This is because database connection is not yet saved.

Since database connection settings are not set it will automatically open the DB Settings window.



DIFFERENT OPERATION UNDER FILE TAB



DIFFERENT OPERATION UNDER REPORTS TAB

The screenshot displays the Bhunaksha 2.0 software interface. The main window title is "Bhunaksha 2.0". The menu bar includes "File", "Reports", "Settings", and "Help". The "Reports" menu is open, showing the following options:

- Plot Report
- Plot Information
- Imported Villages
- Missing Plot Report
- Mutation Details
- Mutation Report
- Village Map Print

The interface also features a toolbar with various icons for navigation and editing, and a "Scale to" field set to 5065.14. On the left side, there are several panels:

- Plot Information**: A panel with a large empty area for displaying plot details.
- Legend**: A panel with a large empty area for displaying the legend.

At the bottom of the window, there are two status bars: "Chhattisgarh" on the left and "admin (Administrator)" on the right.

DIFFERENT OPERATION UNDER SETTINGS TAB

The screenshot displays the Bhunaksha 2.0 software interface. The title bar reads "Bhunaksha 2.0". The menu bar includes "File", "Reports", "Settings", and "Help". The "Settings" menu is open, showing options: "DB Connection", "Application Settings", "Backup Database", and "Restore Database".

On the left sidebar, there are several sections:

- Village Map**: Includes a "Plot No" field.
- Village: हथबंद**: A dropdown menu.
- District:** A dropdown menu with "44 - रायपुर" selected.
- Tehsil:** A dropdown menu with "07 - रायपुर" selected.
- RI:** A dropdown menu with "03 - रायपुर - एक" selected.
- Village:** A dropdown menu with "214 - हथबंद" selected.
- Plot Information**: A section with a large empty box.
- Legend**: A section with a large empty box.

The main workspace shows a toolbar with navigation and editing tools, and a scale bar indicating "Scale to 6622.97". The status bar at the bottom left shows "Chhattisgarh" and the bottom right shows "admin (Administrator)".

HELP TAB

The screenshot displays the Bhunaksha 2.0 software interface. The title bar reads "Bhunaksha 2.0". The menu bar includes "File", "Reports", "Settings", and "Help". The "Help" menu is open, showing options: "Bhunaksha Help", "Check for Updates", and "About...". The main window title is "Village Map". Below the title bar is a toolbar with navigation icons and a scale indicator set to "Scale to 6622.97". On the left side, there are several panels: "Village: हथबंद", "District: 44 - रायपुर", "Tehsil: 07 - रायपुर", "RI: 03 - रायपुर - एक", and "Village: 214 - हथबंद". Below these are "Plot Information" and "Legend" panels, both currently empty. The status bar at the bottom left shows "Chhattisgarh" and the bottom right shows "admin (Administrator)".

The image shows the Bhunaksha 2.0 software interface. The main window has a menu bar with 'File', 'Reports', 'Settings', and 'Help'. Below the menu bar is a 'Village Map' tab and a 'Plot No:' input field. The left sidebar contains several sections: 'Village: हयबंद', 'District: 44 - रायपुर', 'Tehsil: 07 - रायपुर', 'RI: 03 - रायपुर - एक', 'Village: 214 - हयबंद', 'Plot Information', and 'Legend'. A 'Bhunaksha Help' window is open in the foreground, displaying the following content:

Bhunaksha Help

- About Bhunaksha
- Postgres Installation
- Postgres DataBase Restore
- Bhunaksha DataBase Setup
- Import map/layers
- Bhunaksha Features
- Edit Map
- Command Line Parameter

BHU-NAKSHA

For editing the map in its digitized form NIC CG State Centre has developed a tool, named BHU-NAKSHA, with all features required so as to divide, join, print, zoom in & out, calculate area of map etc. The details of this module are presented in the subsequent paragraphs.

The tool for editing GIS Khasra maps has been developed using open source GIS tools. It comprise of a front-end application in JAVA and back-end spatial database in PostGIS.

Important features of the application are:

- Developed using Open source software.
- This application can be used in LINUX as well as WINDOWS platforms.
- Import option to import spatial data from Shape format to PostGIS.
- Display of all maps of Khasras owned by a person by clicking on any one single Khasra map.
- Single polygon can be split into multiple polygons in a single operation.

At the bottom of the main window, the text 'Chhattisgarh' is visible on the left, and 'admin (Administrator)' is shown in the user profile area on the right.

SELECTION OF PLOT BY MOUSE CLICK

Bhunaksha 2.0

File Reports Settings Help

Village Map

Plot No: 136/1 Scale to 10629.44

Village: हृचबंद

District: 44 - रायपुर

Tehsil: 07 - रायपुर

RI: 03 - रायपुर - एक

Village: 214 - हृचबंद

Plot Information

Legend

Chhattisgarh admin (Administrator)

The screenshot displays the Bhunaksha 2.0 software interface. At the top, the title bar reads 'Bhunaksha 2.0'. Below it is a menu bar with 'File', 'Reports', 'Settings', and 'Help'. A toolbar contains various navigation icons. The main window is titled 'Village Map' and shows a map of a village with numerous plots. Plot 136/1 is highlighted in blue. The left sidebar contains filter options for 'Village: हृचबंद', 'District: 44 - रायपुर', 'Tehsil: 07 - रायपुर', 'RI: 03 - रायपुर - एक', and 'Village: 214 - हृचबंद'. Below these are sections for 'Plot Information' and 'Legend'. The bottom status bar shows 'Chhattisgarh' and 'admin (Administrator)'. A north arrow is visible in the top right corner of the map area.

SELECTION OF PLOT BY ENTERING PLOT NO.

The screenshot displays the Bhunaksha 2.0 software interface. At the top, the title bar reads "Bhunaksha 2.0" and the menu bar includes "File Reports Settings Help". Below the menu bar, the "Village Map" window is active, showing a toolbar with various navigation and zooming tools. The main map area displays a yellow background with several plots outlined in black. One plot, labeled "155", is highlighted in blue. To the left of the map, there is a sidebar with several sections: "Village: हथबंद", "District: 44 - रायपुर", "Tehsil: 07 - रायपुर", "RI: 03 - रायपुर - एक", and "Village: 214 - हथबंद". Below this is the "Plot Information" section, which is currently empty. At the bottom of the sidebar is the "Legend" section. A red arrow points from the "Plot No: 155" input field to a green callout box that says "Enter Plot No. Here". The bottom status bar shows "Chhattisgarh" and "admin (Administrator)".

Village: ह्यबंद

District:

44 - रायपुर

Tehsil:

07 - रायपुर

RI:

03 - रायपुर - एक

Village:

214 - ह्यबंद

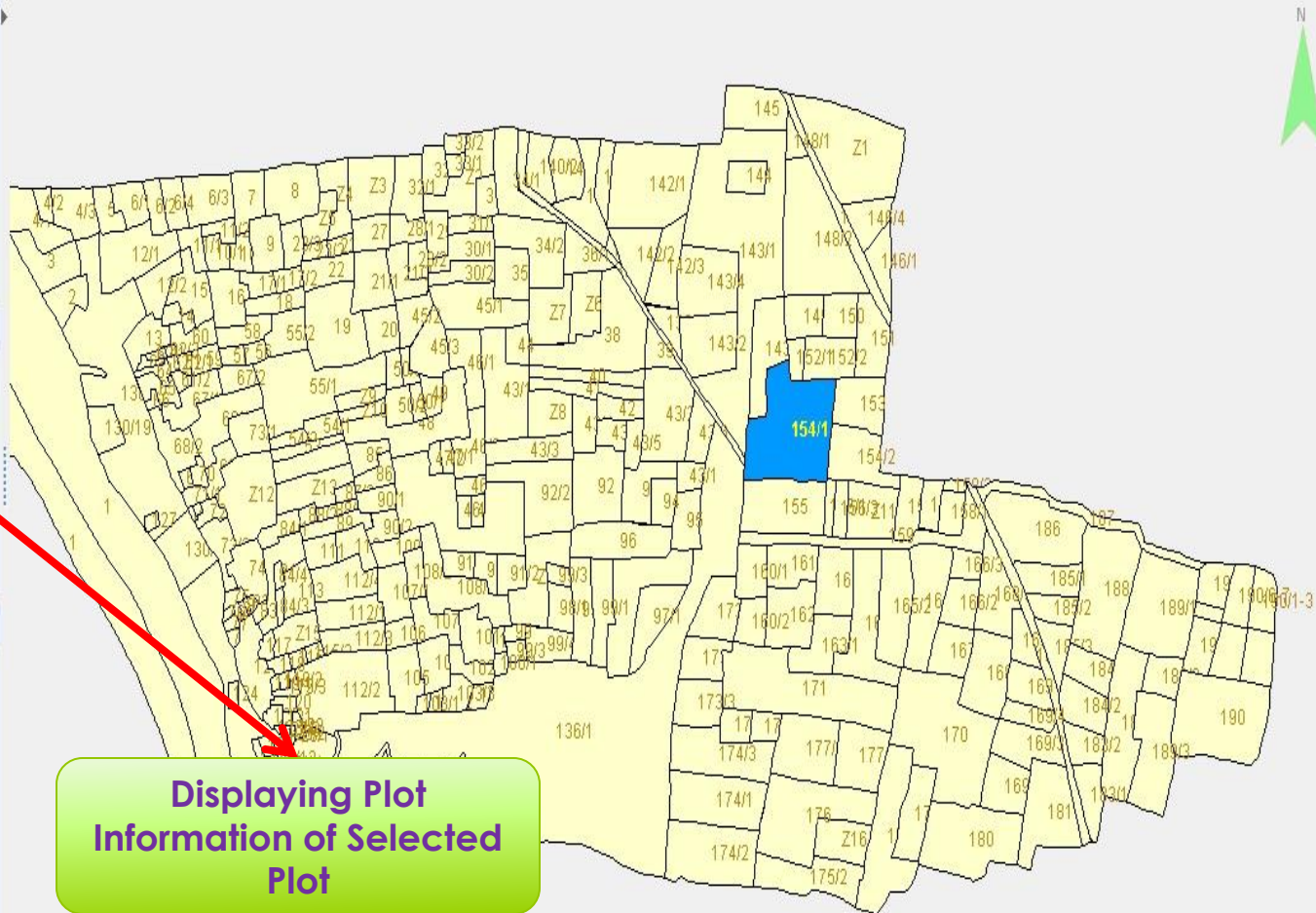
Plot Information

Area : 0.421 Hectare
Irrigated Area : 0.000
Unirrigated Area : 0.421

Name : शिवकुमार,मतिबाई व. उदेराम वो.जे
Father's Name : व. धरवा केकर

Legend

--	--



Displaying Plot Information of Selected Plot

Village: ह्यूबंद

District:
44 - रायपुर

Tehsil:
07 - रायपुर

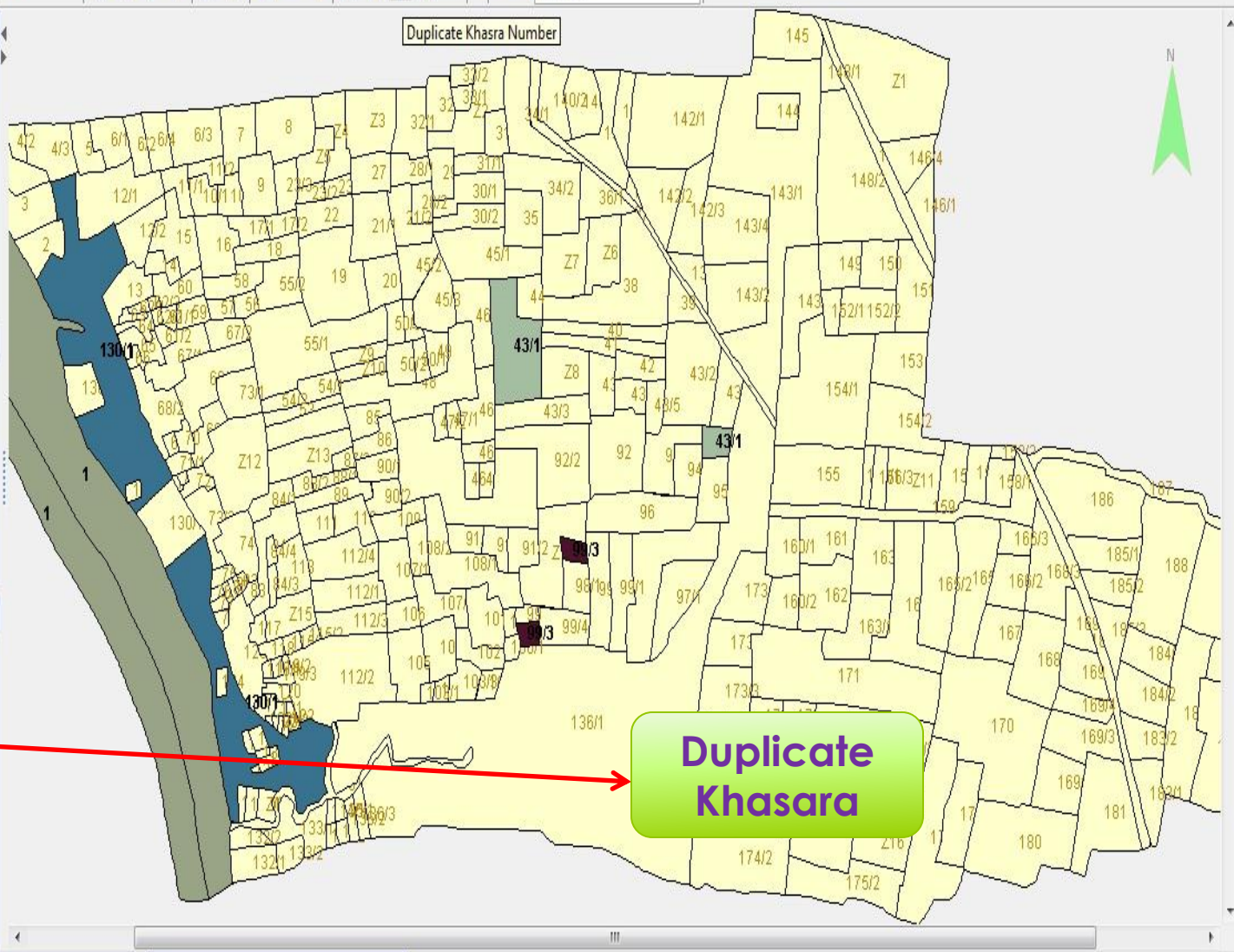
RI:
03 - रायपुर - एक

Village:
214 - ह्यूबंद

Plot Information

Legend

	43/1
	130/1
	99/3
	1



BLANK PLOT IN MAP

Bhunaksha 2.0

File Reports Settings Help

Village Map x

Plot No: More... x [Navigation Icons] Scale to 8830.63

Village: हृद्यबंद

District: 44 - रायपुर

Tehsil: 07 - रायपुर

RI: 03 - रायपुर - एक

Village: 214 - हृद्यबंद

Plot Information

Legend

Without Khasara Number

Blank Plot No.

Showing Blank Khasara in Map

The screenshot displays the Bhunaksha 2.0 software interface. The main window shows a map of land plots, each labeled with a Khasara number (e.g., 142/1, 143/1, 144, 145, 146/1, 148/1, 148/2, 149, 150, 152/1, 152/2, 153, 154/1, 154/2, 155, 156/3, 156/2, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166/3, 166/2, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185/1, 185/2, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000). A blue box highlights a specific plot labeled 'Z12'. A red arrow points from this box to a callout box that says 'Showing Blank Khasara in Map'. The callout box is green with white text. The map also shows a north arrow and a scale of 8830.63. The software interface includes a menu bar (File, Reports, Settings, Help), a toolbar with various icons, and a sidebar with filters for Village, District, Tehsil, RI, and Village. The bottom status bar shows the user is 'admin (Administrator)'.

DISPLAYING DIFFERENT LAYERS OF THE MAP

Bhunaksha 2.0

File Reports Settings Help

Village Map

Plot No: More... x

Scale to 8830.63

Village: हथबंद

District: 44 - रायपुर

Tehsil: 07 - रायपुर

RI: 03 - रायपुर - एक

Village: 214 - हथबंद

Plot Information

Legend

Without Khasara Number

admin (Administrator)

Chhattisgarh

Show Layers

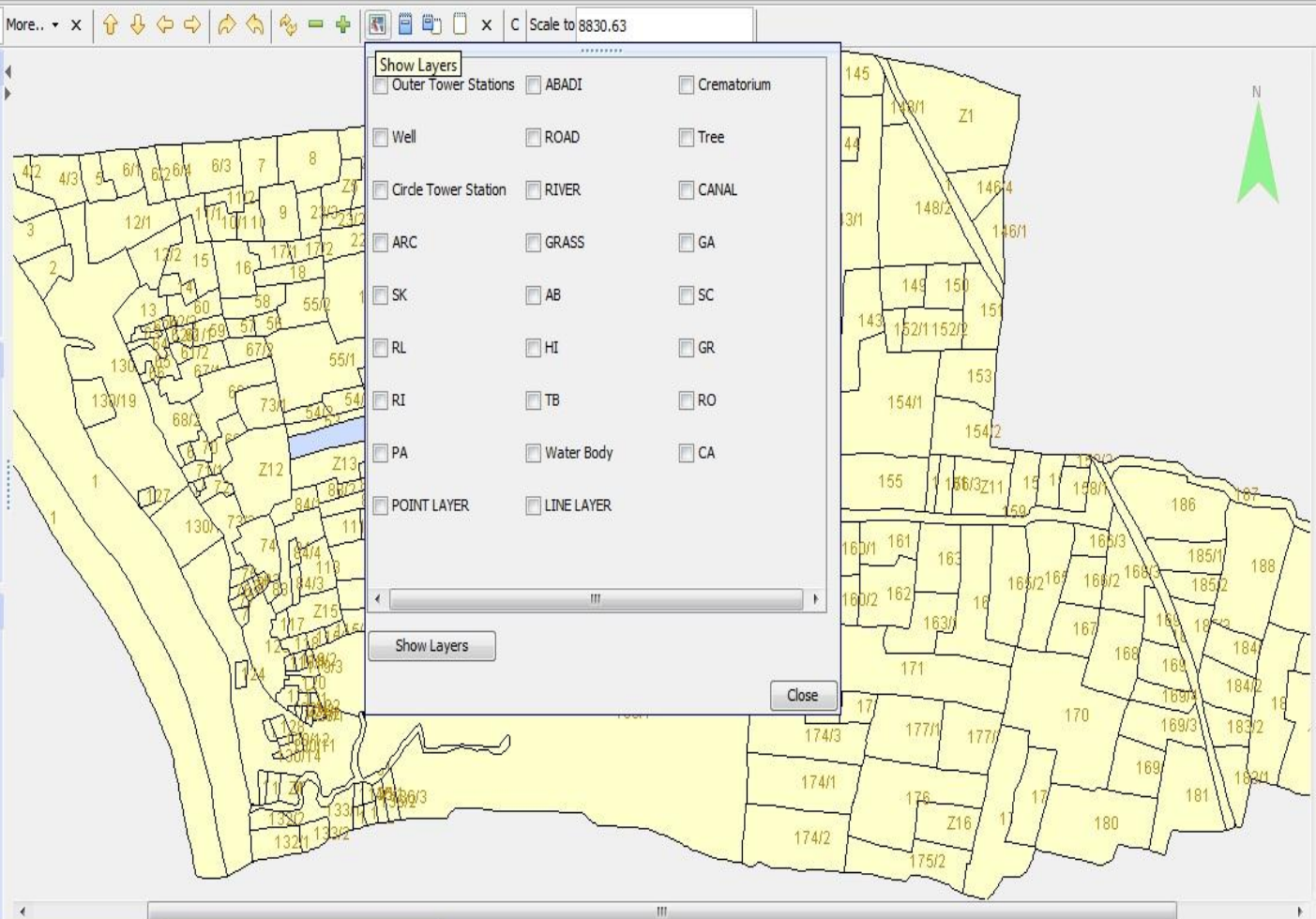
- Outer Tower Stations
- Well
- Circle Tower Station
- ARC
- SK
- RL
- RI
- PA
- POINT LAYER

- ABADI
- ROAD
- RIVER
- GRASS
- AB
- HI
- TB
- Water Body
- LINE LAYER

- Crematorium
- Tree
- CANAL
- GA
- SC
- GR
- RO
- CA

Show Layers

Close



The screenshot displays the Bhunaksha 2.0 software interface. The main window shows a map of a village with various plots and features. A 'Show Layers' dialog box is open, listing various layers that can be displayed on the map. The layers are organized into three columns. The first column includes 'Outer Tower Stations', 'Well', 'Circle Tower Station', 'ARC', 'SK', 'RL', 'RI', 'PA', and 'POINT LAYER'. The second column includes 'ABADI', 'ROAD', 'RIVER', 'GRASS', 'AB', 'HI', 'TB', 'Water Body', and 'LINE LAYER'. The third column includes 'Crematorium', 'Tree', 'CANAL', 'GA', 'SC', 'GR', 'RO', and 'CA'. The dialog box has a 'Show Layers' button at the bottom left and a 'Close' button at the bottom right. The map in the background shows a grid of plots with various numbers and labels, including 'Z1', 'Z12', 'Z13', 'Z16', and 'Z17'. The software title bar indicates 'Bhunaksha 2.0' and the user is logged in as 'admin (Administrator)'. The location is identified as 'Chhattisgarh'.

Village: ह्यूबंद

District:
44 - रायपुर

Tehsil:
07 - रायपुर

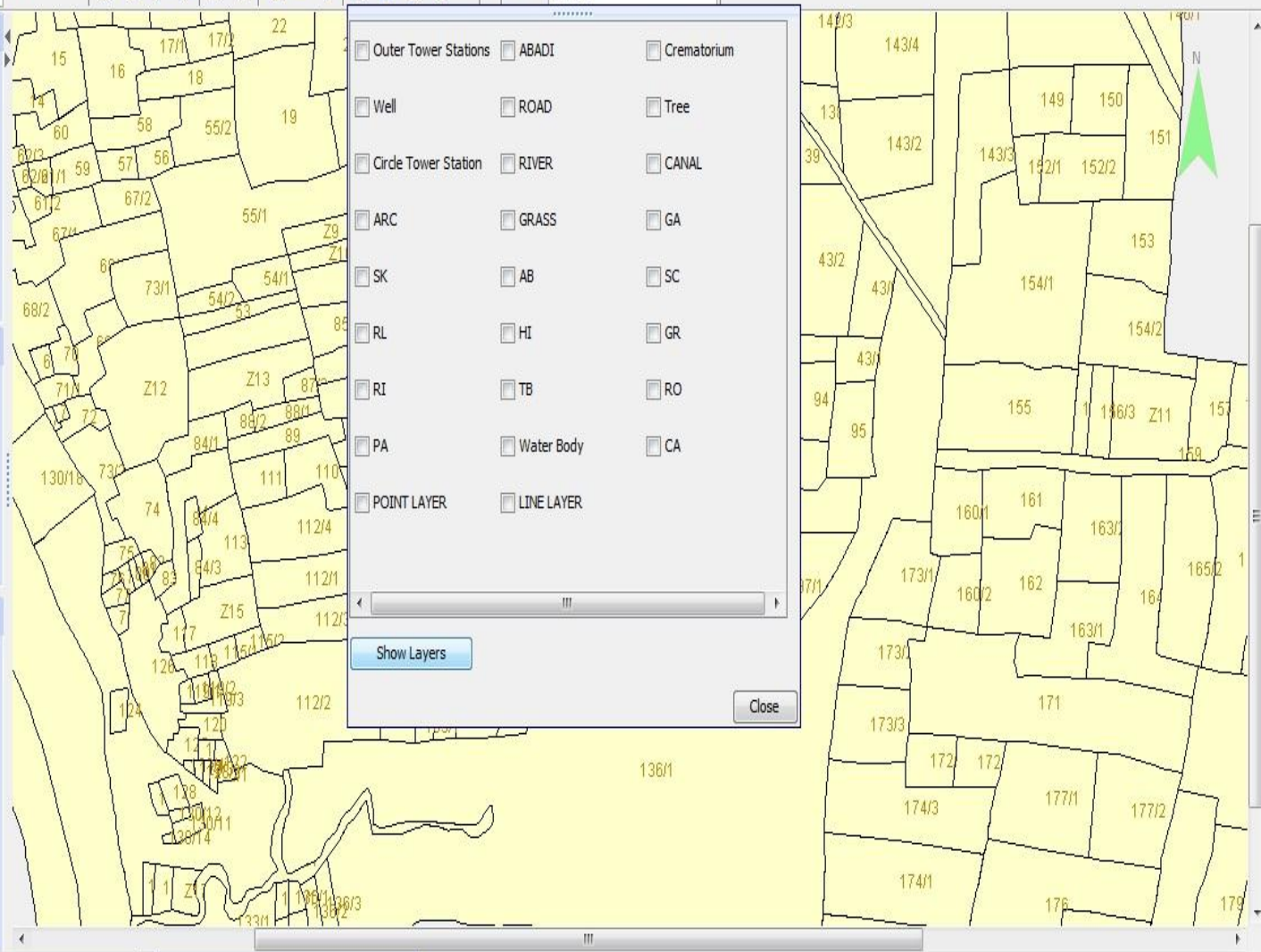
RI:
03 - रायपुर - एक

Village:
214 - ह्यूबंद

Plot Information

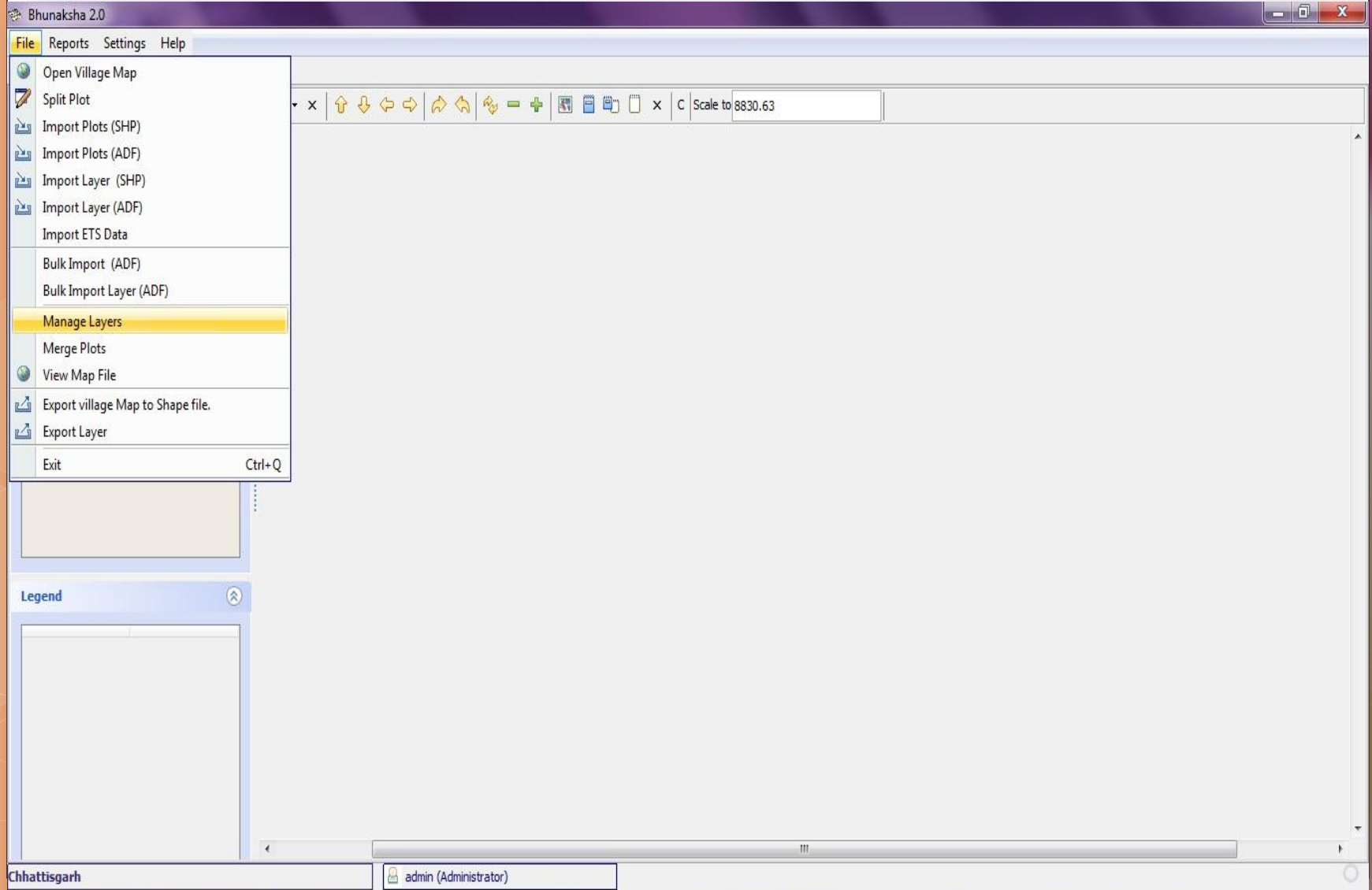
Legend

- Outer Tower Stations
- ABADI
- Crematorium
- Well
- ROAD
- Tree
- Circle Tower Station
- RIVER
- CANAL
- ARC
- GRASS



Outer Tower Stations ABADI Crematorium
 Well ROAD Tree
 Circle Tower Station RIVER CANAL
 ARC GRASS GA
 SK AB SC
 RL HI GR
 RI TB RO
 PA Water Body CA
 POINT LAYER LINE LAYER

MANAGING LAYERS



Select Layer:

- (New Layer)
- (New Layer)
- OUTER TOWER STATIONS - MultiPoint
- ABADI - MultiPolygon
- CREMATORIUM - MultiPoint
- WELL - MultiPoint
- ROAD - MultiLineString
- TREE - MultiLineString
- CIRCLE TOWER STATION - MultiLineString

Layer Color:

Pick Color

Attach Symbol:

Browse Image

Clear Image

Save Delete Close

Select Layer:

-(New Layer) ▾

Layer Code:

Layer Type:

MultiPoint ▾
MultiPoint
MultiLineString
MultiPolygon

Layer Color:

Attach Symbol:

Select Layer:

-(New Layer) ▾

Layer Code:

Layer Type:

MultiPoint ▾

Layer Name:

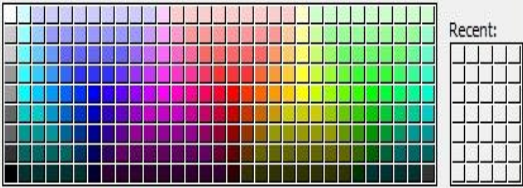
Layer Color:




Attach Symbol:

Choose Color


Swatches HSB RGB



Recent:



Preview



IMPORTING PLOTS FROM .SHP FILE

Browse the shape file containing plots.

- 1) Select Bhucode(Village code) column from Shape File.
- 2) Select Plot No (Khasara) column from shape file.
- 3) Select the village to which the Shape File belongs.
- 4) Type sheet no or keep it blank if the sheets are mosaiced to one shapefile during digitization.
- 5) Type Scale factor if the measurements in shape file is different from that of ground.

(In almost all states 1 unit in shape file corresponds to 1 meter(unit) on ground. In case of **Uttar Pradesh** 1 unit in shape file was equal to 1 unit on printed paper map which is in 1:4000 scale. So UP has to set scale factor 4000. In case of **Himachal** units on ground is in Karam and digitization is done in centimeters and map is printed by scaling each inch to some karam. HP has to set scale factor 22 because by multiplying each unit in shape file with 22 we will get 1 karam on ground)

Click Import to import plots from shape file to Postgres database and to attach it with the selected village.

- Open Village Map
- Split Plot
- Import Plots (SHP)**
- Import Plots (ADF)
- Import Layer (SHP)
- Import Layer (ADF)
- Import ETS Data
- Bulk Import (ADF)
- Bulk Import Layer (ADF)
- Manage Layers
- Merge Plots
- View Map File
- Export village Map to Shape file.
- Export Layer
- Exit Ctrl+Q

Navigation icons: Home, Up, Down, Left, Right, Previous, Next, Refresh, Undo, Redo, Scale to 8830.63

Legend

Legend content area (currently empty)

Browse Shape File

Select Bhucode

Select Khasara Column

Village: हयबंद

District:

44 - रायपुर

Tehsil:

07 - रायपुर

RI:

03 - रायपुर - एक

Village:

214 - हयबंद

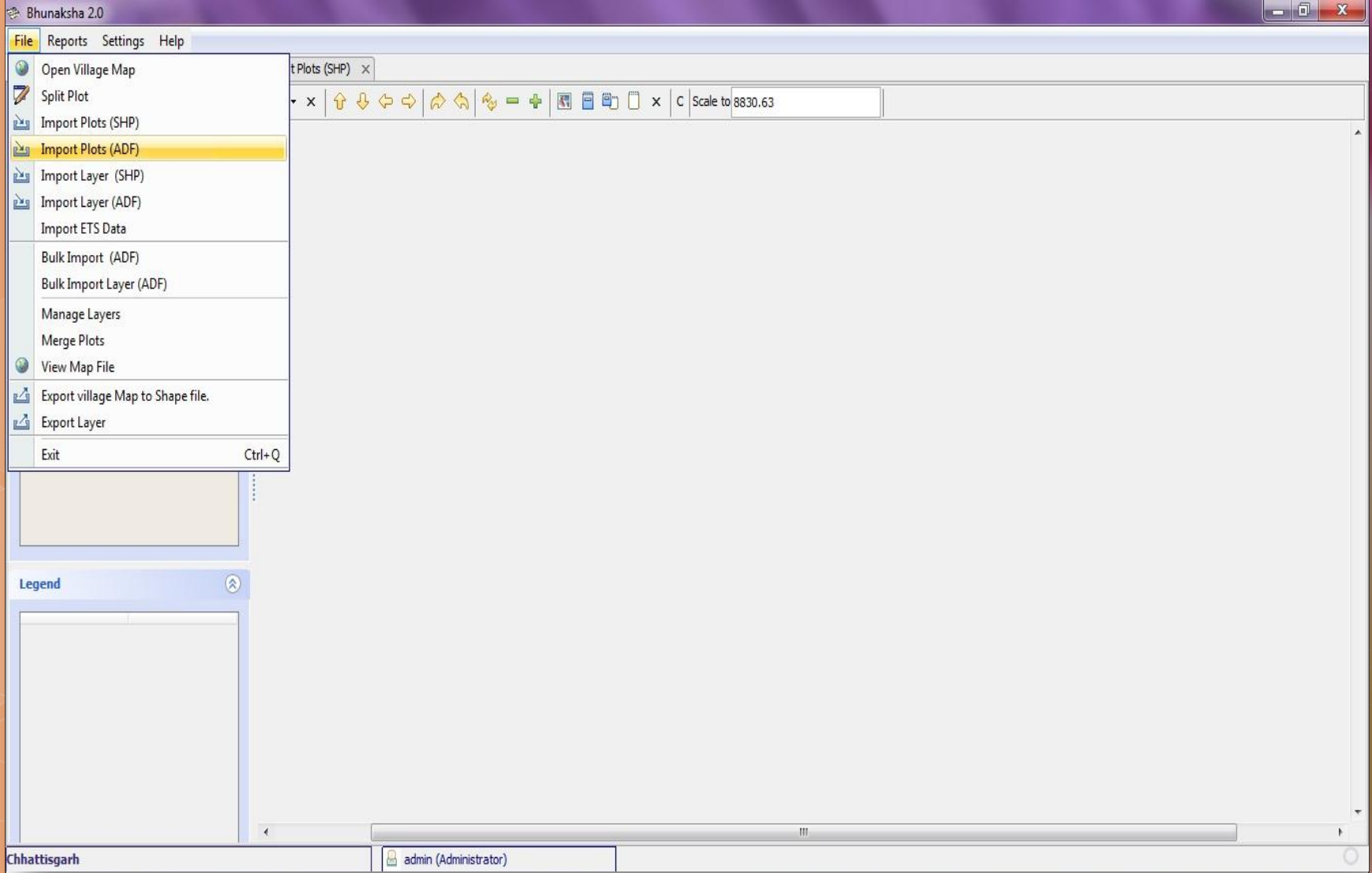
Sheet No. (Keep it blank if there is only single shape file per village)

(Import operation will overwrite existing map of the village)

Import

Close

IMPORTING PLOTS FROM .ADF FILE



Browse folder

Browse..

Layers

Village Code

Khasra Number

Village: ह्यबंद



District:

Tehsil:

RI:

Village:

Map Scale 1:

IMPORT LAYER

The screenshot displays the Bhunaksha 2.0 software interface. The title bar shows the application name and standard window controls. The menu bar includes File, Reports, Settings, and Help. The File menu is open, listing various actions such as 'Open Village Map', 'Split Plot', 'Import Plots (SHP)', 'Import Plots (ADF)', 'Import Layer (SHP)', 'Import Layer (ADF)', 'Import ETS Data', 'Bulk Import (ADF)', 'Bulk Import Layer (ADF)', 'Manage Layers', 'Merge Plots', 'View Map File', 'Export village Map to Shape file.', 'Export Layer', and 'Exit'. The 'Import Layer (SHP)' option is highlighted in yellow. The main workspace shows a map area with a toolbar and a scale indicator set to 8830.63. The status bar at the bottom indicates the user is logged in as 'admin (Administrator)'.

Bhunaksha 2.0

File Reports Settings Help

- Open Village Map
- Split Plot
- Import Plots (SHP)
- Import Plots (ADF)
- Import Layer (SHP)
- Import Layer (ADF)
- Import ETS Data
- Bulk Import (ADF)
- Bulk Import Layer (ADF)
- Manage Layers
- Merge Plots
- View Map File
- Export village Map to Shape file.
- Export Layer
- Exit Ctrl+Q

t Plots (SHP) x Import Plots (ADF) x

Scale to 8830.63

Chhattisgarh admin (Administrator)

Shape File

Layer **OUTER TOWER STATIONS**

ID Column

Village: हथबंद

District:

44 - रायपुर

Tehsil:

07 - रायपुर

RI:

03 - रायपुर - एक

Village:

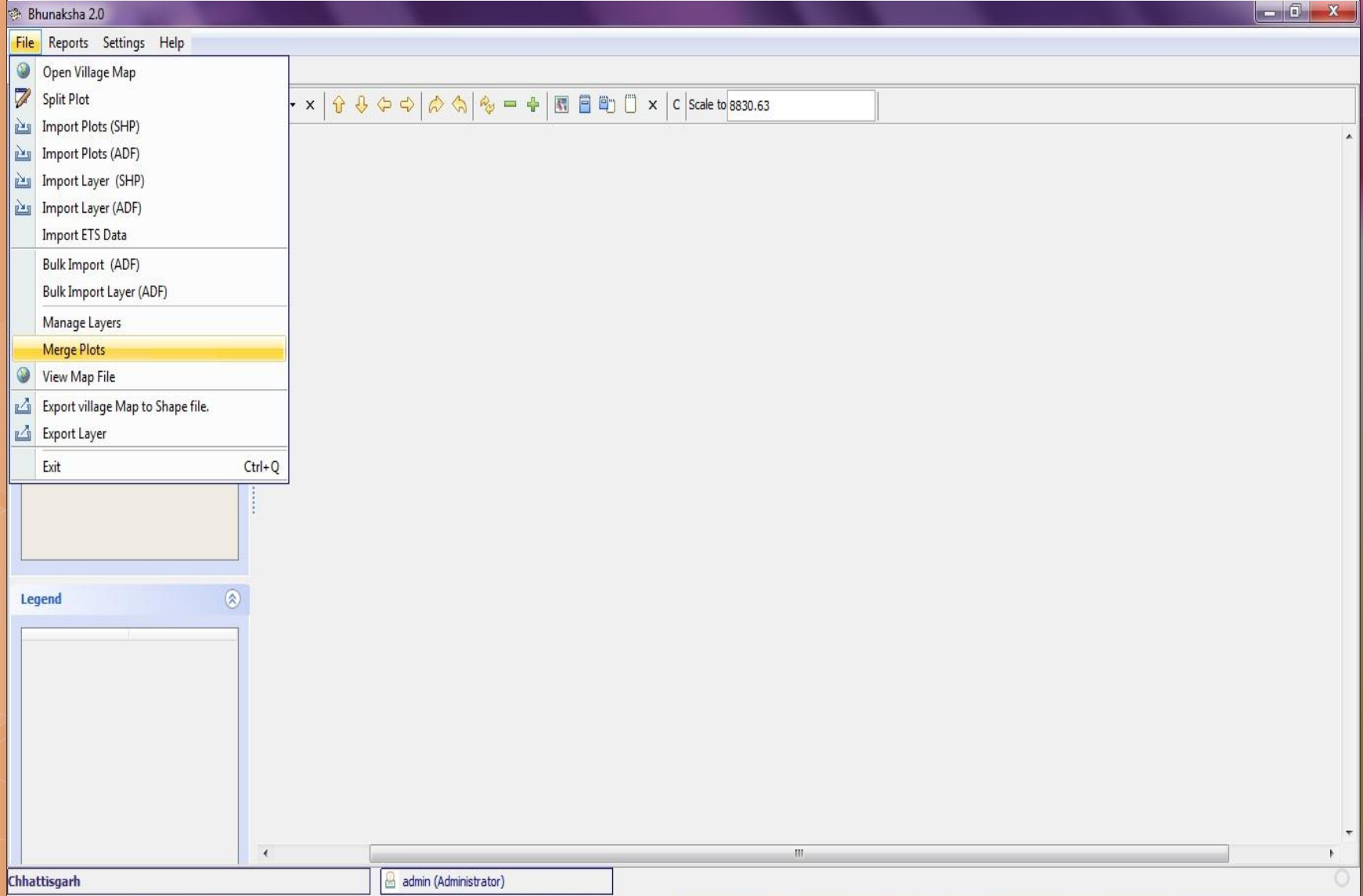
214 - हथबंद

- OUTER TOWER STATIONS
- ABADI
- CREMATORIUM
- WELL
- ROAD
- TREE
- CIRCLE TOWER STATION
- RIVER

Sheet No. (Keep it blank if there is only single shape file per village)

(Import operation will overwrite existing map of the village)

MERGING THE PLOTS



Village: हयबंद

District:

44 - रायपुर

Tehsil:

07 - रायपुर

RI:

03 - रायपुर - एक

Village:

214 - हयबंद

Khasara No 1

Khasara No 2

New Khasara No.

Merge

Close

PLOT INFORMATION

Bhunaksha 2.0

File Reports Settings Help

Village Map

Plot No: 154/1 Scale to 6622.97

More...
Divide Plot
Plot Info
Print plot

Village: हचबंद
District: 44 - रायपुर
Tehsil: 07 - रायपुर
RI: 03 - रायपुर - एक
Village: 214 - हचबंद

Plot Information
Name : शिवकुमार, मतिबाई व. उदेराम वो. जो.
Father's Name : व. भुवा केवट
Address : सा. देह

Legend

Chhattisgarh admin (Administrator)

Village: हबबंद

Plot No:

Plot Area:

Area : 0.421 Hectare
Irrigated Area : 0.000
Unirrigated Area : 0.421

Plot Owner:

Name : शिवकुमार, मतिबाई व. उदराम वो. जोतबा
Father's Name : व. भुरवा केवट
Address : सा. देह

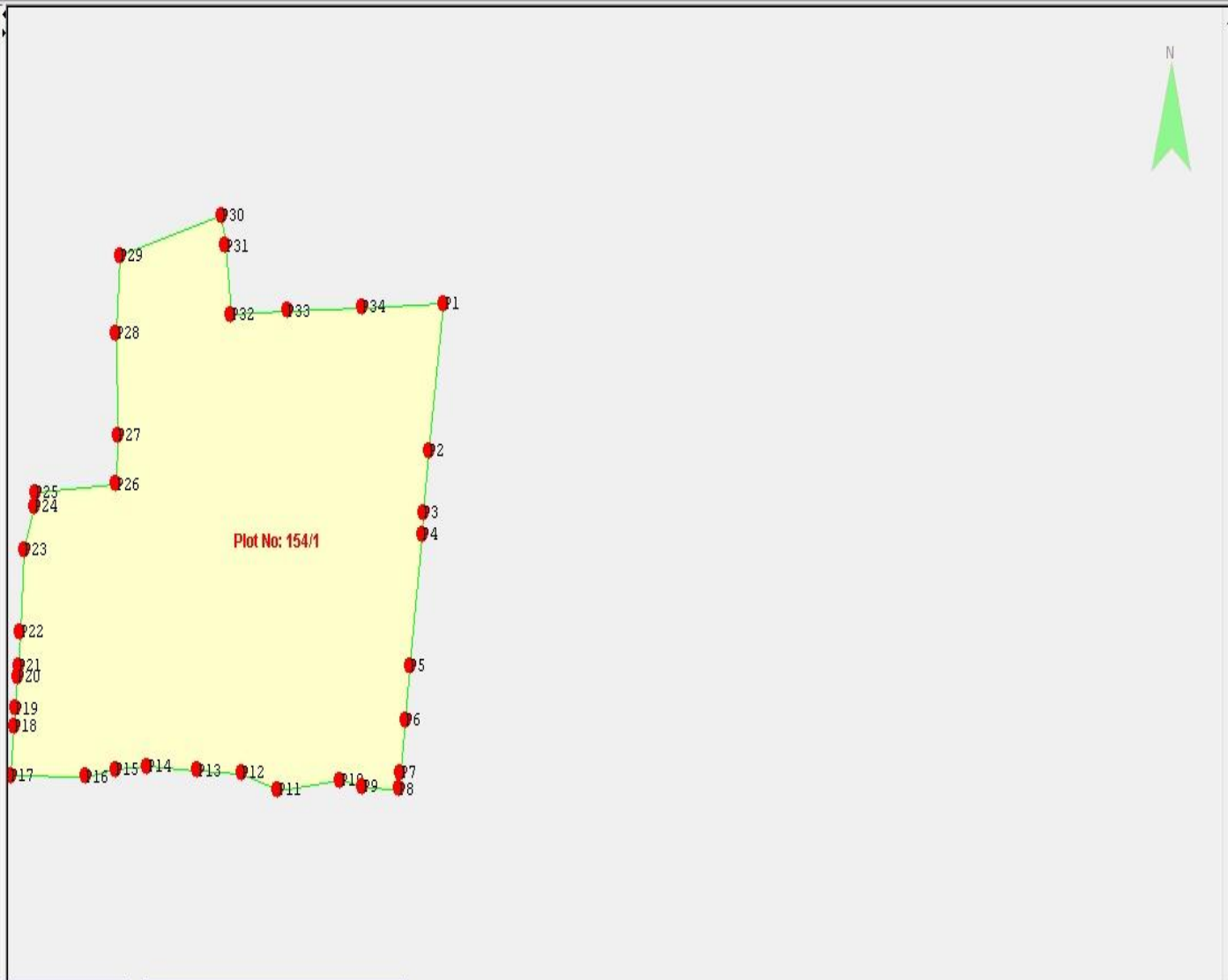
Information

SNo	Vertices	Distance
1	P1 --> P2	39.216
2	P2 --> P3	16.489
3	P3 --> P4	5.74
4	P4 --> P5	35.045
5	P5 --> P6	14.148

Change Plot No

New Plot No:

Change



PRINTING PLOT REPORT

Bhunaksha 2.0

File Reports Settings Help

Village Map x Plot Information x Plot Report x

Plot No: 154/1

More... x

- Divide Plot
- Plot Info
- Print plot

Scale to 5065.14

Village: हचबंद

District: 44 - रायपुर

Tehsil: 07 - रायपुर

RI: 03 - रायपुर - एक

Village: 214 - हचबंद

Plot Information

Unirrigated Area : 0.421

Name : शिवकुमार, मतिबाई व. उदेराम वो. जो.
Father's Name : व. भुरवा केचर
Address : सा. देह

Legend

Chhattisgarh

admin (Administrator)

Village: हथबंद

Plot No:

154/1

Scale : Best Fit

2000

Show Single Plot

Show All Plots of Owner

Show Vertex Layer

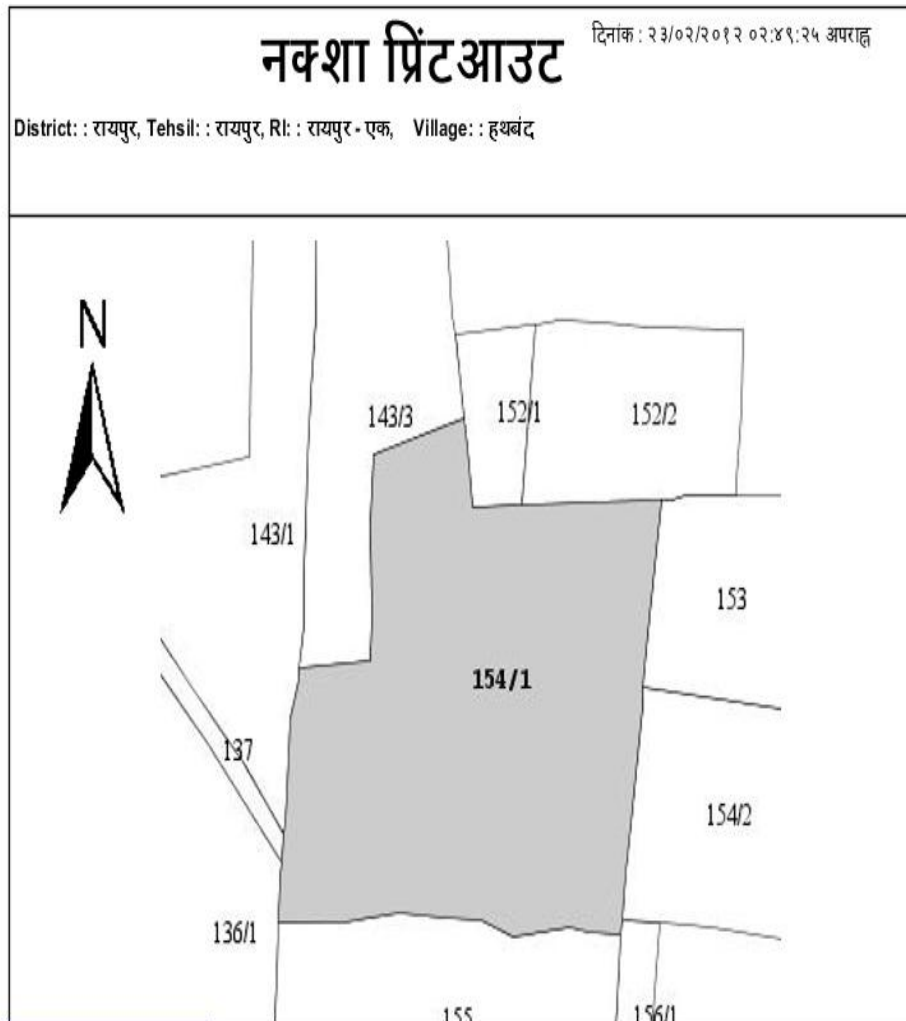
Select Layers:

Select

Show

Export JPEG

Close



Village: हथबंद

Plot No:

154/1

Scale : Best Fit

2000

Show Single Plot

Show All Plots of Owner

Show Vertex Layer

Select Layers:

Select

Show

Export JPEG

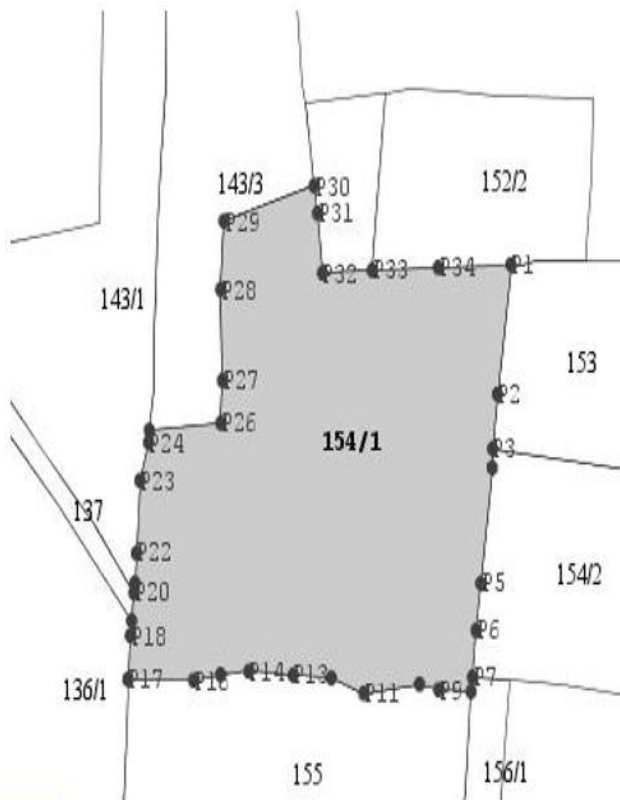
Close



नक्शा प्रिंटआउट

दिनांक : २३/०२/२०१२ ०२:५०:५२ अपराह्न

District : रायपुर, Tehsil : रायपुर, RI : रायपुर - एक, Village : हथबंद



Village: हबबंद

Plot No:

154/1

Scale : Best Fit

4000

Show Single Plot

Show All Plots of Owner

Show Vertex Layer

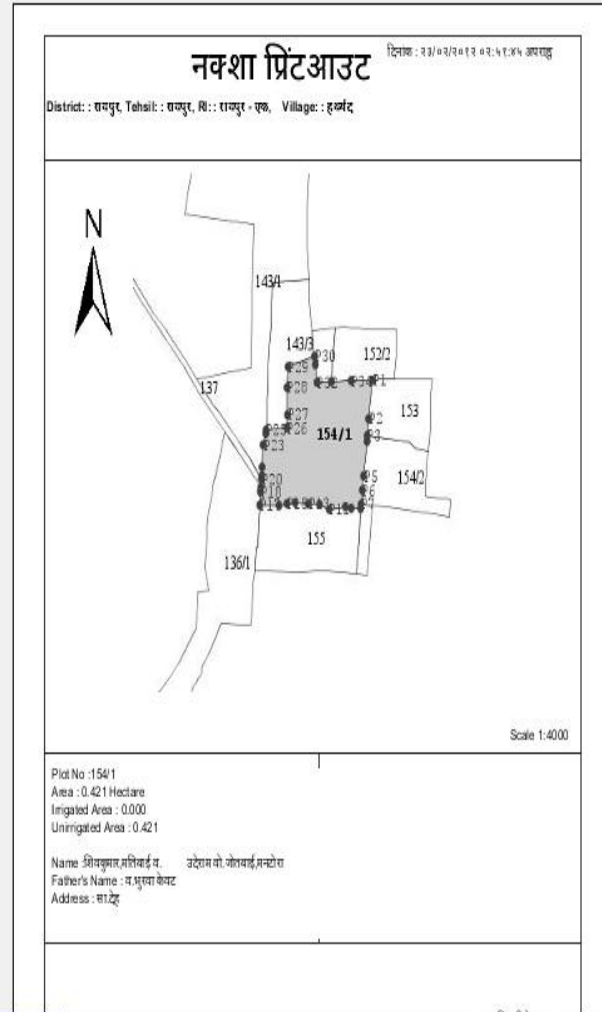
Select Layers:

Select

Show

Export JPEG

Close



Village: हथबंद

Plot No:

154/1

Scale : Best Fit

2000

Show Single Plot

Show All Plots of Own

Show Vertex Layer

Select Layers:

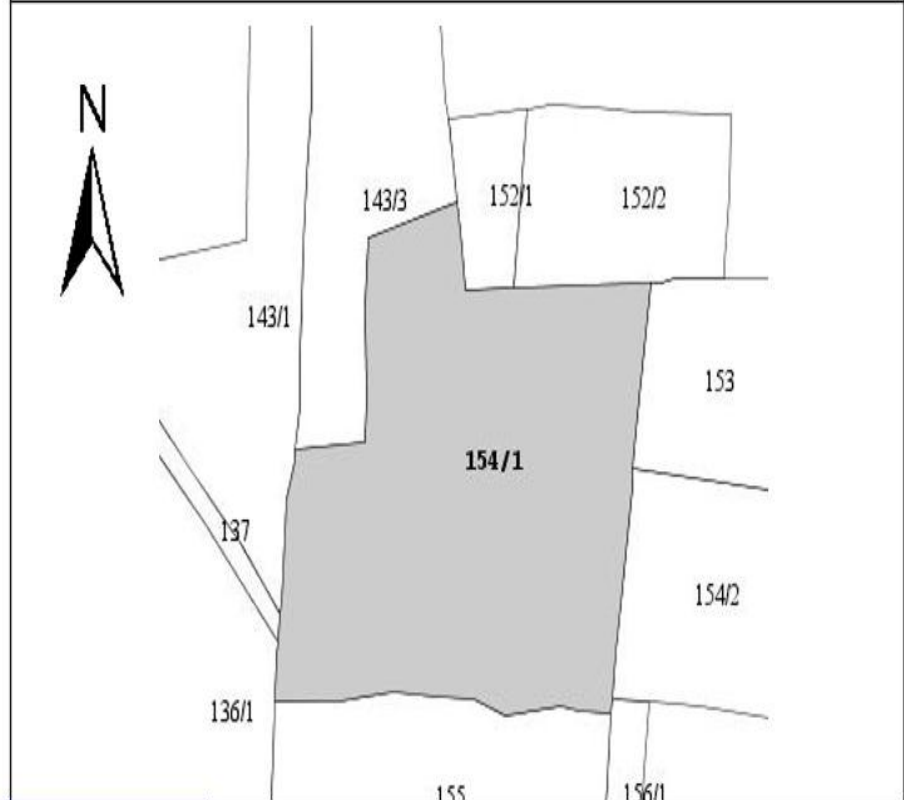
- Select All
- OUTER TOWER STATIONS
- ABADI
- CREMATORIUM
- WELL
- ROAD
- TREE
- CIRCLE TOWER STATION
- RIVER
- CANAL
- ARC
- GRASS
- GA
- SK
- AB
- SC
- RL
- HI
- GR
- RI
- TB
- RO
- PA
- WB
- CA

Navigation icons: Print, Refresh, Home, Previous, Next, Stop, Zoom In, Zoom Out, 100%

नक्शा प्रिंटआउट

दिनांक : २३/०२/२०१२ ०२:५३:१७ अपराह्न

District : रायपुर, Tehsil : रायपुर, RI : रायपुर - एक, Village : हथबंद



REPORT

The screenshot displays the Bhunaksha 2.0 software interface. The title bar shows the application name and standard window controls. The menu bar includes File, Reports, Settings, and Help. The Reports menu is open, listing several options: Plot Report, Plot Information, Imported Villages (highlighted), Missing Plot Report, Mutation Details, Mutation Report, and Village Map Print. The main workspace is currently blank, with a toolbar at the top containing navigation and editing tools. On the left side, there are several panels: a tree view showing a hierarchy of Villages, Districts, Tehsils, and RIs; a dropdown menu for RI (03 - रायपुर - एक); a dropdown menu for Village (214 - हथबंद); a Plot Information panel; and a Legend panel. The status bar at the bottom shows the location as Chhattisgarh and the user as admin (Administrator).

Bhunaksha 2.0

File Reports Settings Help

- Plot Report
- Plot Information
- Imported Villages
- Missing Plot Report
- Mutation Details
- Mutation Report
- Village Map Print

More.. x [Navigation Icons] C Scale to

Village

District

44

Tehsil

07

RI:

03 - रायपुर - एक

Village:

214 - हथबंद

Plot Information

Legend

Chhattisgarh

admin (Administrator)

Show Report

Close



List of Imported Villages

Date : 23/02/2012 03:09:41 PM

	Village Code	Village	No. of plots
1	440701.142	,, , , , , ,	525
2	440701.143	,, , , , , ,	307
3	440701.144	,, , , , , ,	853
4	440701.145	,, , , , , ,	457
5	440701.146	,, , , , , ,	942
6	440701.147	,, , , , , ,	1065
7	440701.148	,, , , , , ,	488
8	440701.149	,, , , , , ,	1109
9	440701.150	,, , , , , ,	491
10	440701.151	,, , , , , ,	478
11	440701.152	,, , , , , ,	683
12	440701.153	,, , , , , ,	1392
13	440703.214	District: रायपुर , Tehsil: रायपुर , RI: रायपुर - एक , Village: हथबंद ,	334
14	440703.215	District: रायपुर , Tehsil: रायपुर , RI: रायपुर - एक , Village: जख्वाय ऊर्फ	1207
15	440703.216	District: रायपुर , Tehsil: रायपुर , RI: रायपुर - एक , Village: अटारी ,	476
16	440703.217	District: रायपुर , Tehsil: रायपुर , RI: रायपुर - एक , Village: चंदनडीह ,	251
17	440703.218	District: रायपुर , Tehsil: रायपुर , RI: रायपुर - एक , Village: टाटीबिंध ,	687
18	440703.219	District: रायपुर , Tehsil: रायपुर , RI: रायपुर - एक , Village: स्रोना ,	775

MISSING PLOT REPORT

The screenshot displays the Bhunaksha 2.0 software interface. The title bar shows 'Bhunaksha 2.0' and standard window controls. The menu bar includes 'File', 'Reports', 'Settings', and 'Help'. The 'Reports' menu is open, showing options: 'Plot Report', 'Plot Information', 'Imported Villages', 'Missing Plot Report' (highlighted), 'Mutation Report', 'Khasra Information', and 'Village Map Print'. The left sidebar contains a tree view with 'Village' selected, and sub-items for 'Distr' (44), 'Tehs' (07), 'RI' (03 - रायपुर - एक), and 'Village' (214 - हयबंद). Below the sidebar are sections for 'Plot Information' and 'Legend'. The main workspace is empty, with a toolbar at the top containing navigation and zoom icons, and a 'Scale to' input field. The status bar at the bottom shows 'Chhattisgarh' and 'admin (Administrator)'.

Village: हयबंद

District:
44 - रायपुर

Tehsil:
07 - रायपुर

RI:
03 - रायपुर - एक

Village:
214 - हयबंद

- Missing Khasras in Textual Data
- Missing Khasras in Map
- Duplicate Khasras

Show Cancel

Navigation icons: Save, Print, Refresh, Home, Back, Forward, Page 1, Copy, Paste, Find, Zoom 100%

Khasra Information Report

Missing Khasras in Attribute Data

District : रायपुर, Tehsil : रायपुर, RI : रायपुर - एक, Village : हयबंद

..., 3, 7, 9, 16, 18, 19, 29, 38, 46, 48, 53, 55/1, 55/2, 56, 68/3, 69, 72, 74, 77, 78, 83, 91, 92, 99, Z1, Z2, Z3, Z4, Z5, Z6, Z7, Z8, Z9, 101, 105, 106, 117, 121, 123/3, 123/4, 124, 125, 136/1, 140/1, 140/2, 141, 142/3, 149, 151, 155, 161, 164, 169, 170, 171, 176, 178, 180, 186, 188, 190, 190/1-3, 190/6-7,

Village: हथबंद

District:

44 - रायपुर

Tehsil:

07 - रायपुर

RI:

03 - रायपुर - एक

Village:

214 - हथबंद

Missing Khasras in Textual Data

Missing Khasras in Map

Duplicate Khasras

Show

Cancel



Khasra Information Report

Missing khasaras in map

District : रायपुर, Tehsil : रायपुर, RI : रायपुर - एक, Village : हथबंद

186/6, 78/2, 186/4, 9/3, 9/4, 19/13, 55/25, 56/2, 55/14, 24/2, 24/1, 38/3, 16/2, 18/5, 186/5, 83/1, 55/4,
18/7, 24/4, 25/1, 4394/2, 87/1, 130/10, 132/3, 12/3, 3/1, 72/2, 67/3, 55/23, 73/8, 91/8, 134/3, 3/2,
91/5, 29/2, 190/5, 4381/285, 29/1, 136/1/9501, 38/6, 38/7, 73/9, 71/4, 135/3, 16/1, 24/3, 130/20,

Village: हथबंद

District:

44 - रायपुर

Tehsil:

07 - रायपुर

RI:

03 - रायपुर - एक

Village:

214 - हथबंद

Missing Khasras in Textual Data

Missing Khasras in Map

Duplicate Khasras

Show

Cancel



Khasra Information Report

List of Duplicate Khasara numbers In Map:

District : रायपुर, Tehsil : रायपुर, RI : रायपुर - एक, Village : हथबंद

43/1, 130/1, 99/3, 1.

MUTATION DETAILS

Bhunaksha 2.0

File Reports Settings Help

Report x Missing Khasra Report x

More... x [Navigation icons] Scale to []

- Plot Report
- Plot Information
- Imported Villages
- Missing Plot Report
- Mutation Details**
- Mutation Report
- Village Map Print

Distr: 44
Tehs: 07

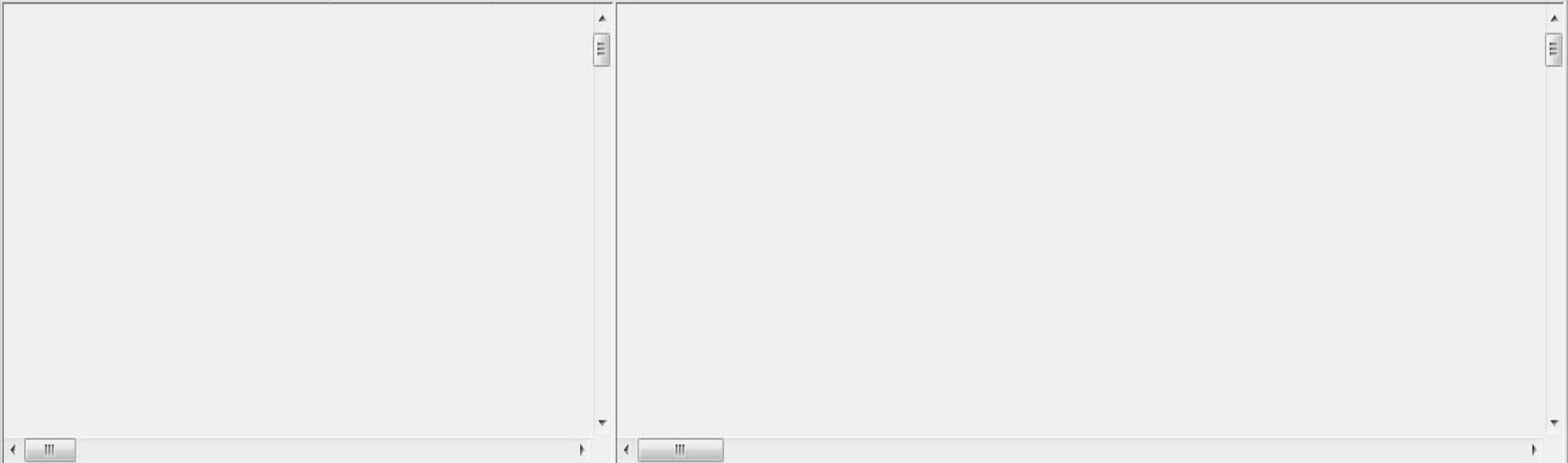
RI: 03 - रायपुर - एक
Village: 214 - ह्यबंद

Plot Information

Legend

Chhattisgarh

admin (Administrator)



Village: हयबंद 

District:
44 - रायपुर

Tehsil:
07 - रायपुर

RI:
03 - रायपुर - एक

Village:
214 - हयबंद

Plot No:

Mutation No:

Area information at time of mutation:



Village: हथबंद

District:

44 - रायपुर

Tehsil:

07 - रायपुर

RI:

03 - रायपुर - एक

Village:

214 - हथबंद

Plot No:

34

Mutation No:

35356 - 12/06/2010

View

Area information at time of mutation:

Area of new plots:

34/1 : 149.59999

34/2 : 195.40001

VILLAGE MAP PRINT

Bhunaksha 2.0

File Reports Settings Help

Report x Missing Khasra Report x Mutation Details x

More... x [Navigation Icons] x C Scale to 8830.63

Plot Report
Plot Information
Imported Villages
Missing Plot Report
Mutation Details
Mutation Report
Village Map Print

District: 44
Tehsil: 07
RI: 03 - रायपुर - एक
Village: 214 - ह्यबंद

Plot Information

Legend

Chhattisgarh | admin (Administrator)

Village: हयबंद

District:

44 - रायपुर

Tehsil:

07 - रायपुर

RI:

03 - रायपुर - एक

Village:

214 - हयबंद

Scale : Best Fit

Show

Close



Village: ह्यबंद

District:

44 - रायपुर

Tehsil:

07 - रायपुर

RI:

03 - रायपुर - एक

Village:

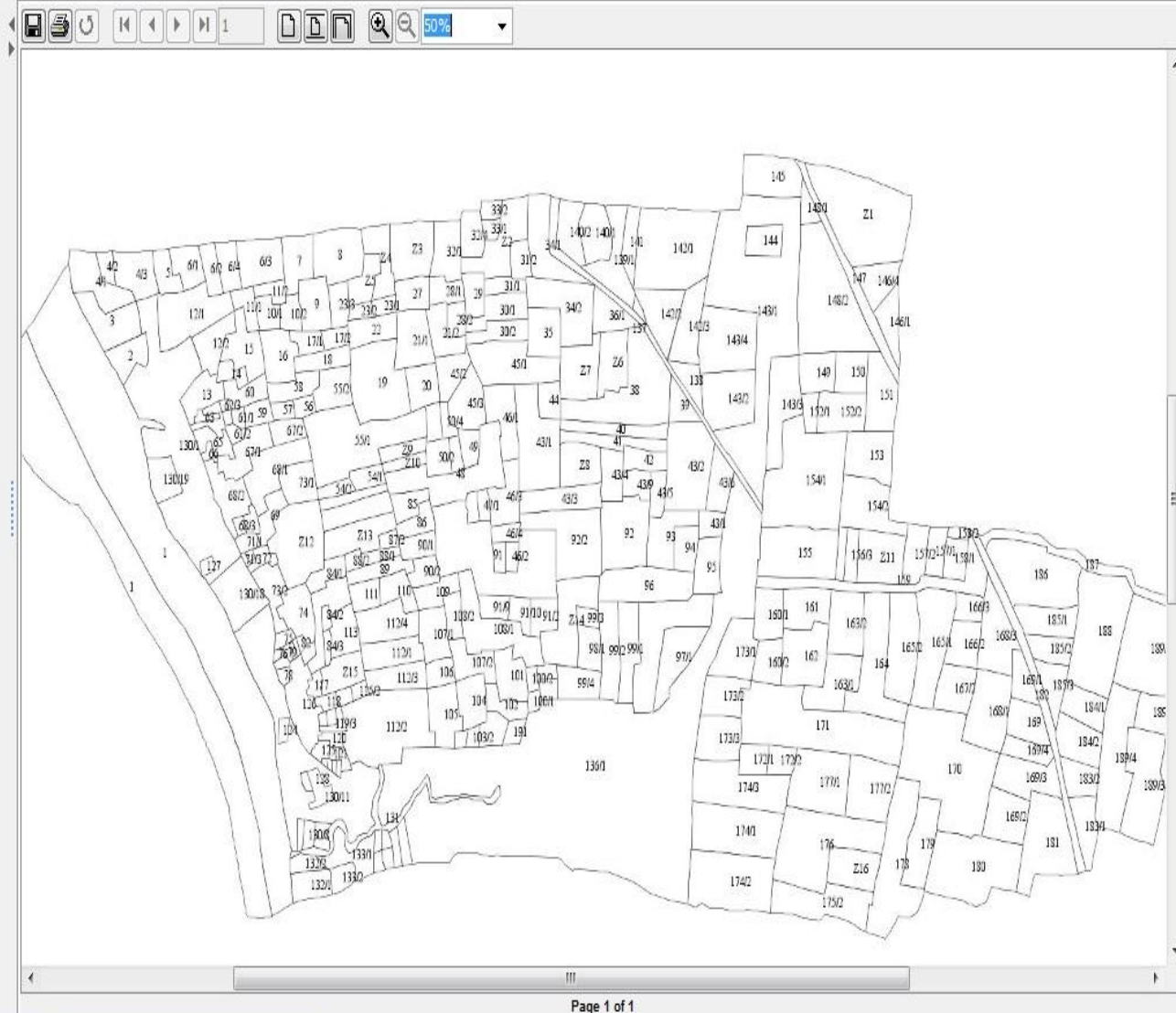
214 - ह्यबंद

Scale : Best Fit

4000

Show

Close



SPLITTING A PLOT

There are two ways to invoke Split Window.

1. From Menu File -> Split Plot.

If invoked from this option then you will have to Select a village and type plot number to load map of the plot for splitting.

2. From Village Map.

Select a plot and click Split Window menu from More..

There are two ways available to split a plot:-

1. Distance Angle Method
2. Arc Method (Adjacent Side)

Village: हयबंद

District:

44 - रायपुर

Tehsil:

07 - रायपुर

RI:

03 - रायपुर - एक

Village:

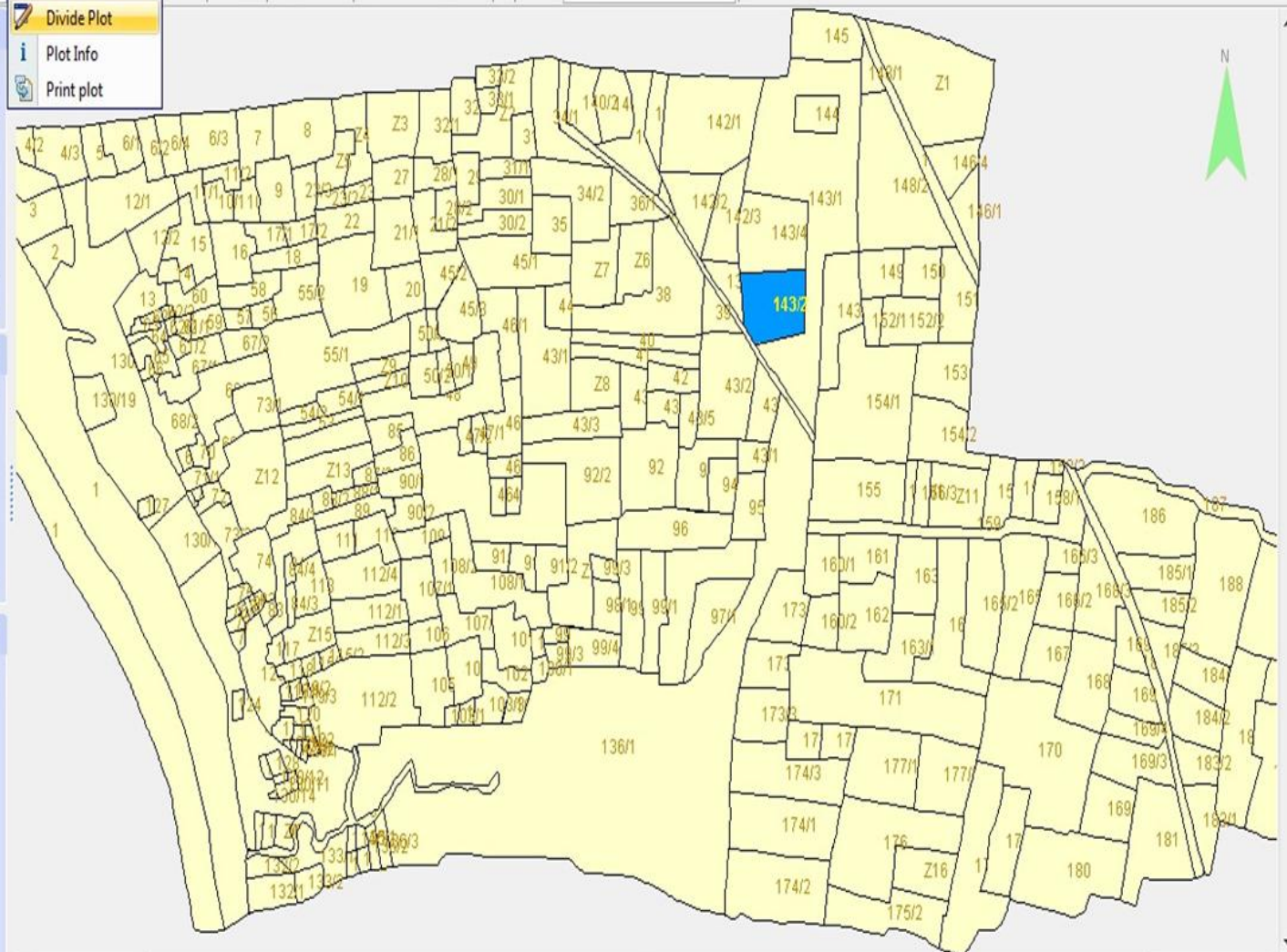
214 - हयबंद

Plot Information

Area : 0.809 Hectare
Irrigated Area : 0.000
Unirrigated Area : 0.000

Legend

- Divide Plot
- Plot Info
- Print plot





Village: बडेरा

Plot Info

Plot Number:

Area (ROR):

Mutation No:

Mutation Date:

Scale 1:

Dimensions

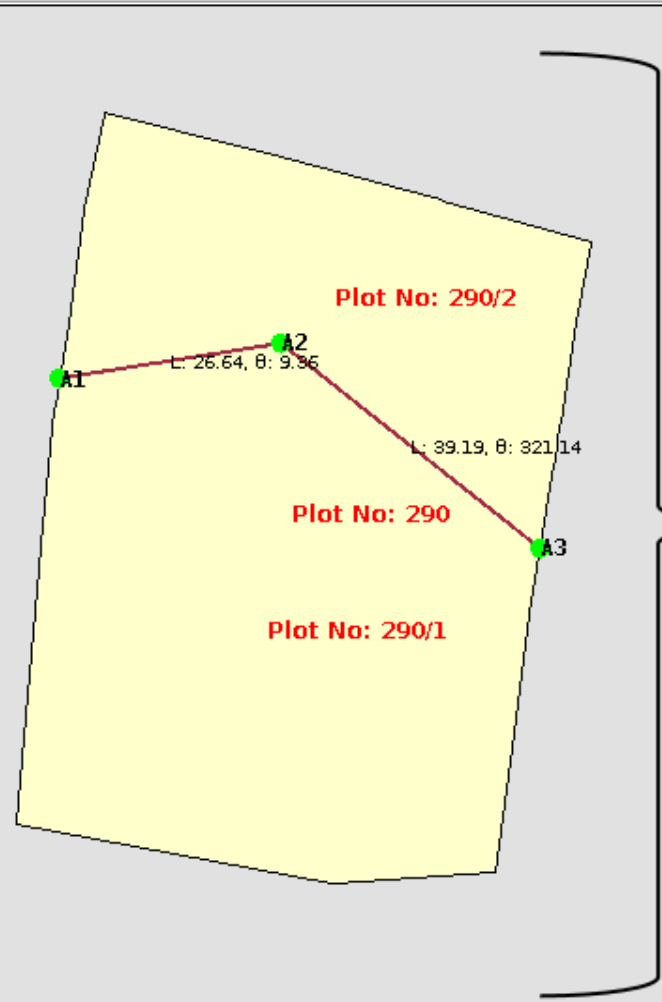
New Partitions of Plot No 290

Name	Area	KID
290/1	0.3327	290/1
290/2	0.1773	290/2

Details of plot to divide

Dimensions of plot

Details of new divisions



Map o plot for splitting



Village: ह्यबंद

Plot Info

Plot Number:

Area in Hectare:

Mutation No:

Mutation Date:

Scale 1:

Dimensions

New Partitions of Plot No 143/2

Name	Area	KID





Village: ह्यबंद

Plot Info

Plot Number:

Area in Hectare:

Mutation No:

Mutation Date:

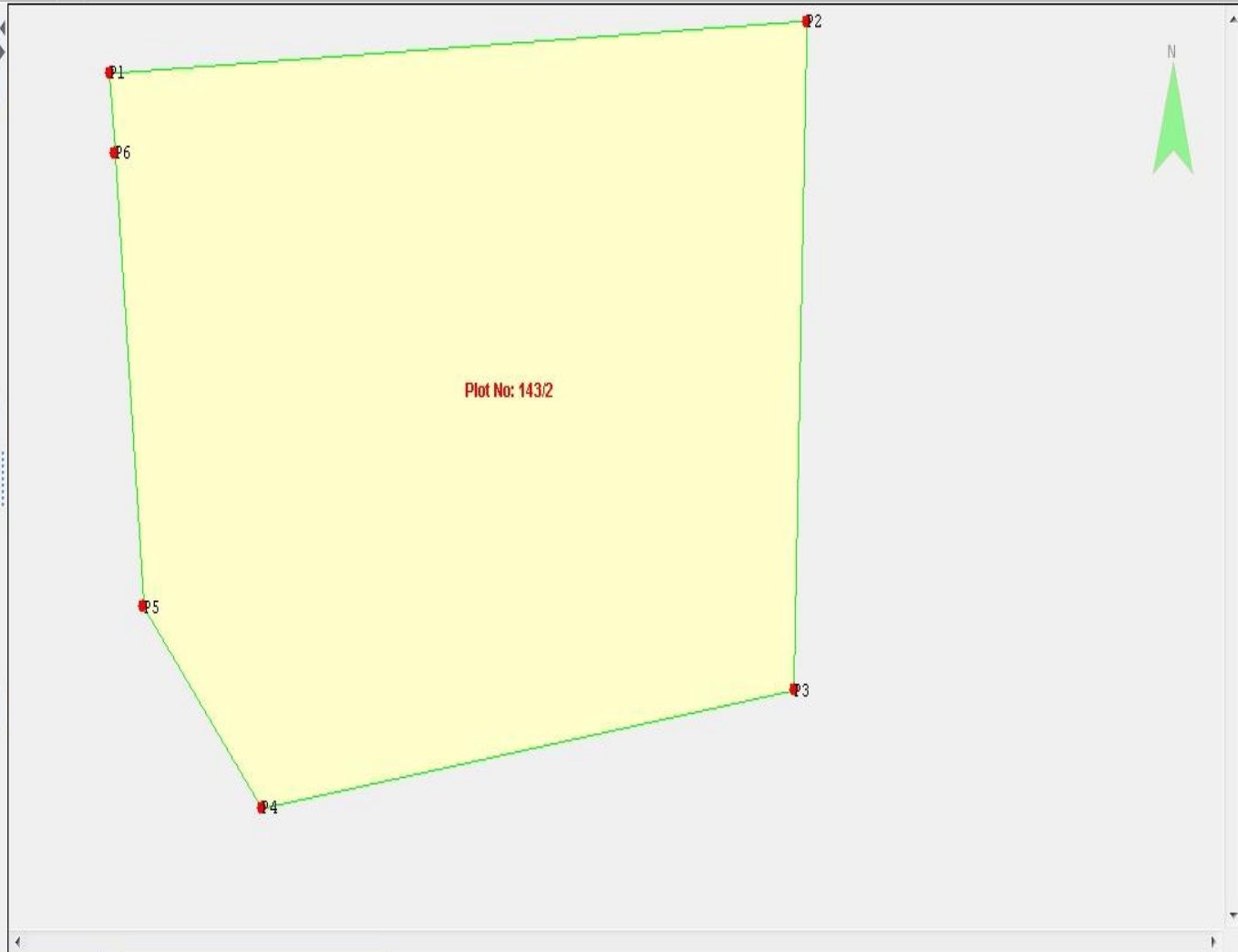
Scale 1:

Dimintions

SNo	Vertices	Distance
1	P1 --> P2	100.577
2	P2 --> P3	68.831
3	P3 --> P4	77.779
4	P4 --> P5	26.772
5	P5 --> P6	46.831
6	P6 --> P1	8.296

New Partitions of Plot No 143/2

Name	Area	KID





Village: हयबंद

Plot Info

Plot Number:

Area in Hectare:

Mutation No:

Mutation Date:

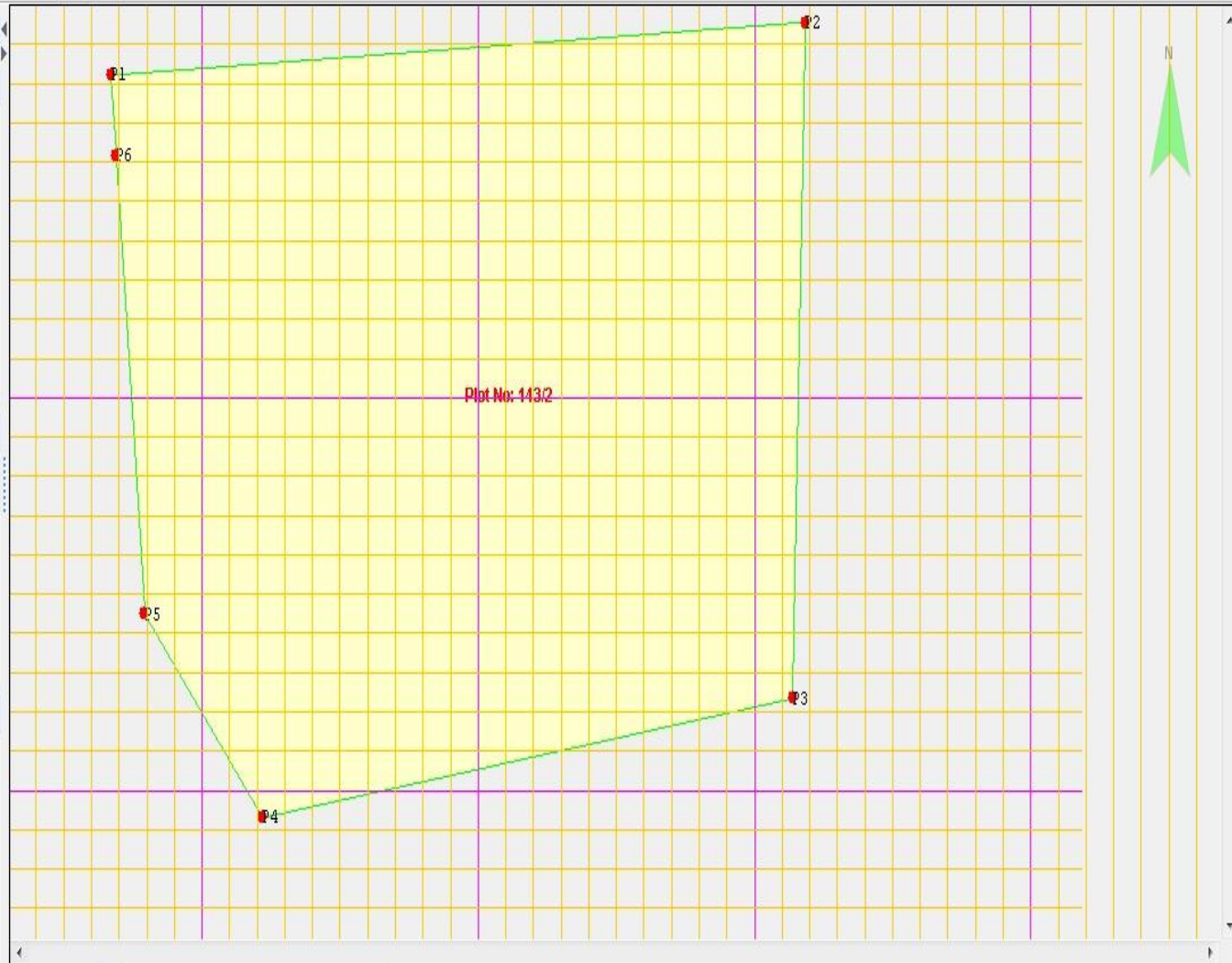
Scale 1:

Dimensions

SNo	Vertices	Distance
1	P1 --> P2	100.577
2	P2 --> P3	68.831
3	P3 --> P4	77.779
4	P4 --> P5	26.772
5	P5 --> P6	46.831
6	P6 --> P1	8.296

New Partitions of Plot No 143/2

Name	Area	KID



CREATING A DIVISION LINE

Bhunaksha 2.0

File Reports Settings Help

Village Map x Edit Map x

Village: हृदबंद

Plot Info

Plot Number: 143/2

Area in Hectare: 0.809

Mutation No:

Mutation Date:

Scale 1: 830.40

Dimensions

SNo	Vertices	Distance
1	P1 --> P2	100.577
2	P2 --> P3	68.831
3	P3 --> P4	77.779
4	P4 --> P5	26.772
5	P5 --> P6	46.831
6	P6 --> P1	8.296

New Partitions of Plot No 143/2

Name	Area	KID

Chhattisgarh

admin (Administrator)

The screenshot displays the Bhunaksha 2.0 software interface. The main window shows a yellow-shaded plot with six vertices labeled P1 through P6. A 'Draw Line' tool is active, indicated by a green line and a 'Draw Line' label above the plot. The plot is labeled 'Plot No: 143/2'. The left sidebar contains several panels: 'Village: हृदबंद', 'Plot Info' (with fields for Plot Number, Area in Hectare, Mutation No, Mutation Date, and Scale 1), 'Dimensions' (with a table of distances between vertices), and 'New Partitions of Plot No 143/2' (with a table for recording new partitions). The bottom status bar shows 'Chhattisgarh' and 'admin (Administrator)'. The top menu bar includes 'File', 'Reports', 'Settings', and 'Help'. The top toolbar contains various navigation and editing tools.



Village: ह्यनंद

Plot Info

Plot Number:

Area in Hectare:

Mutation No:

Mutation Date:

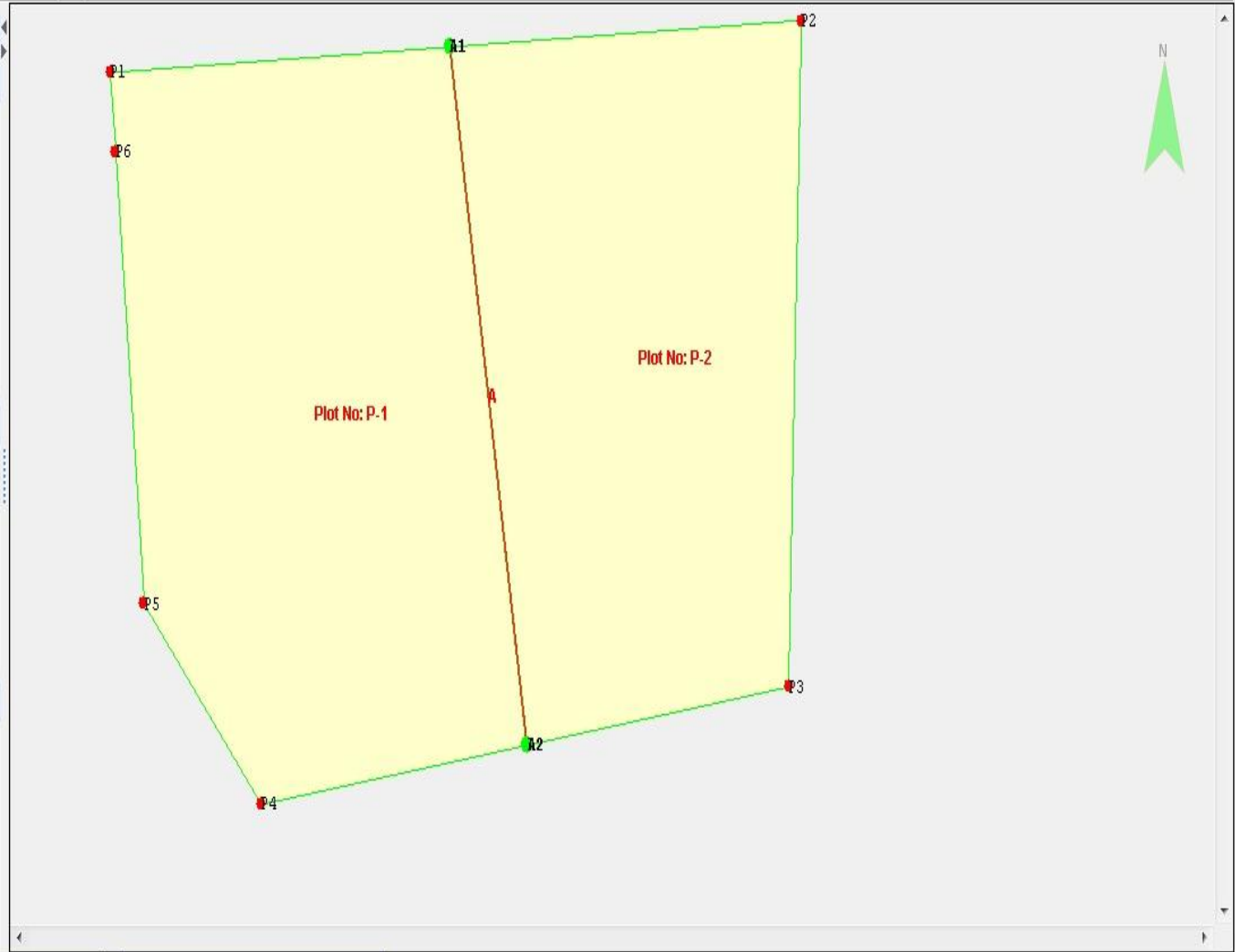
Scale 1:

Dimensions

SNo	Vertices	Distance
1	P1 --> P2	100.577
2	P2 --> P3	68.831
3	P3 --> P4	77.779
4	P4 --> P5	26.772
5	P5 --> P6	46.831
6	P6 --> P1	8.296

New Partitions of Plot No 143/2

Name	Area	KID
P-1	0.43896	143/2
P-2	0.37004	143/



CREATE DIVISION LINE USING DISTANCE ANGLE METHOD

creating division line by inputting distance and angle measurements

The window has three parts:-

- ❑ First and last terminal points of the division line should intersect an edge of the plot.
- ❑ Terminal points can be either an existing vertex point or a point between two vertex points.

For existing vertex point select the vertex from the combo box.

For point between two existing vertices select the set of two points and specify distance from the first point in the set. The total distance between the set of points will be displayed on screen.

The middle part is to place intermediate points of the division line.

- ❑ A series reference points and distance and angle from the reference point has to be typed in the middle table.

It will show the resulting division line when you feed the values. Click OK to accept the line created.



Village: ह्यनंद

Plot Info

Plot Number: 143/2

Area in Hectare: 0.809

Mutation No:

Mutation Date:

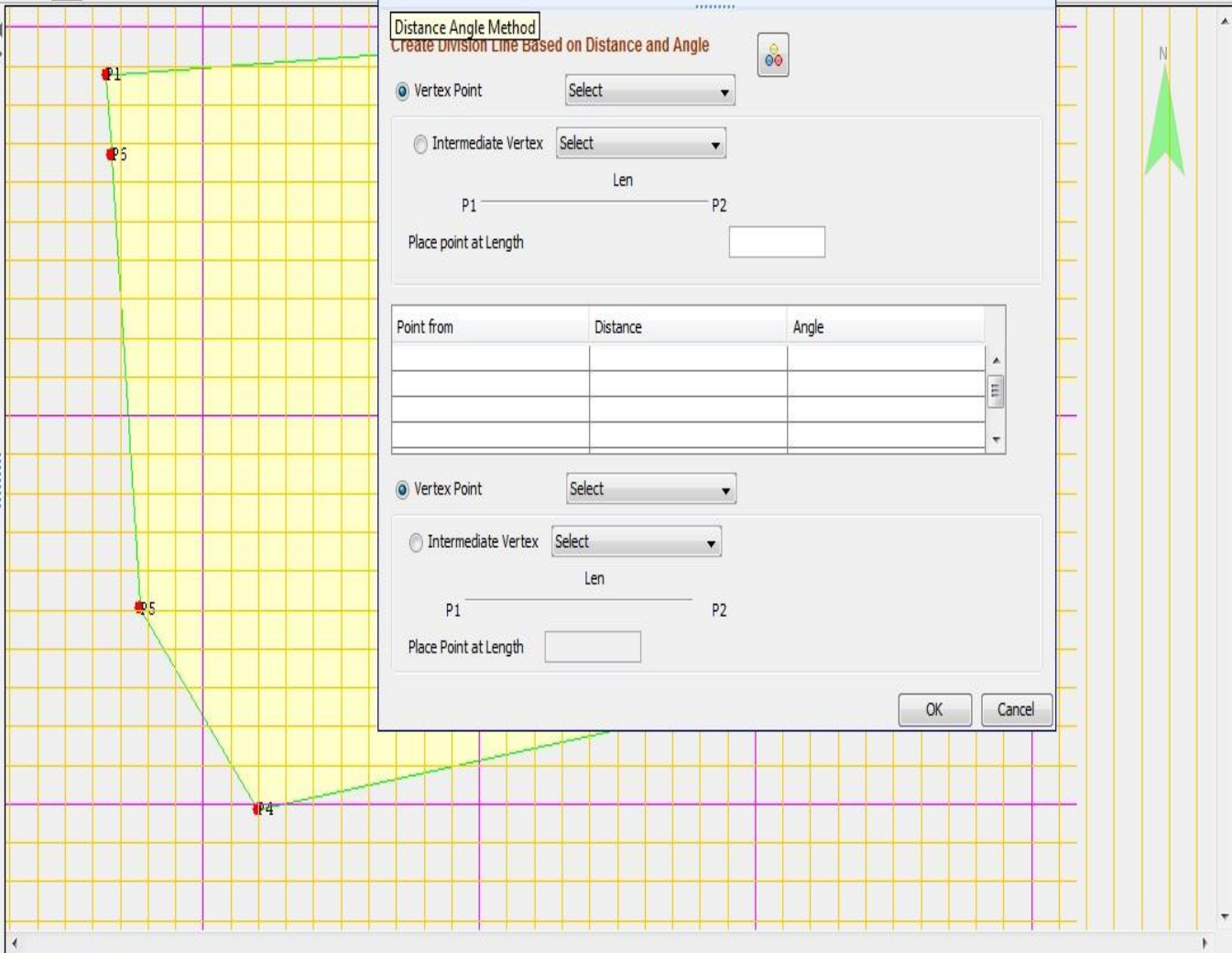
Scale 1: 830.40

Dimensions

SNo	Vertices	Distance
1	P1 --> P2	100.577
2	P2 --> P3	68.831
3	P3 --> P4	77.779
4	P4 --> P5	26.772
5	P5 --> P6	46.831
6	P6 --> P1	8.296

New Partitions of Plot No 143/2

Name	Area	KID
P-1	0.809	143/2



Distance Angle Method
Create Division Line Based on Distance and Angle

Vertex Point

Intermediate Vertex

P1 ————— Len ————— P2

Place point at Length

Point from	Distance	Angle

Vertex Point

Intermediate Vertex

P1 ————— Len ————— P2

Place Point at Length



Village: हयबंद

Plot Info

Plot Number 143/2

Area in Hectare 0.809

Mutation No

Mutation Date

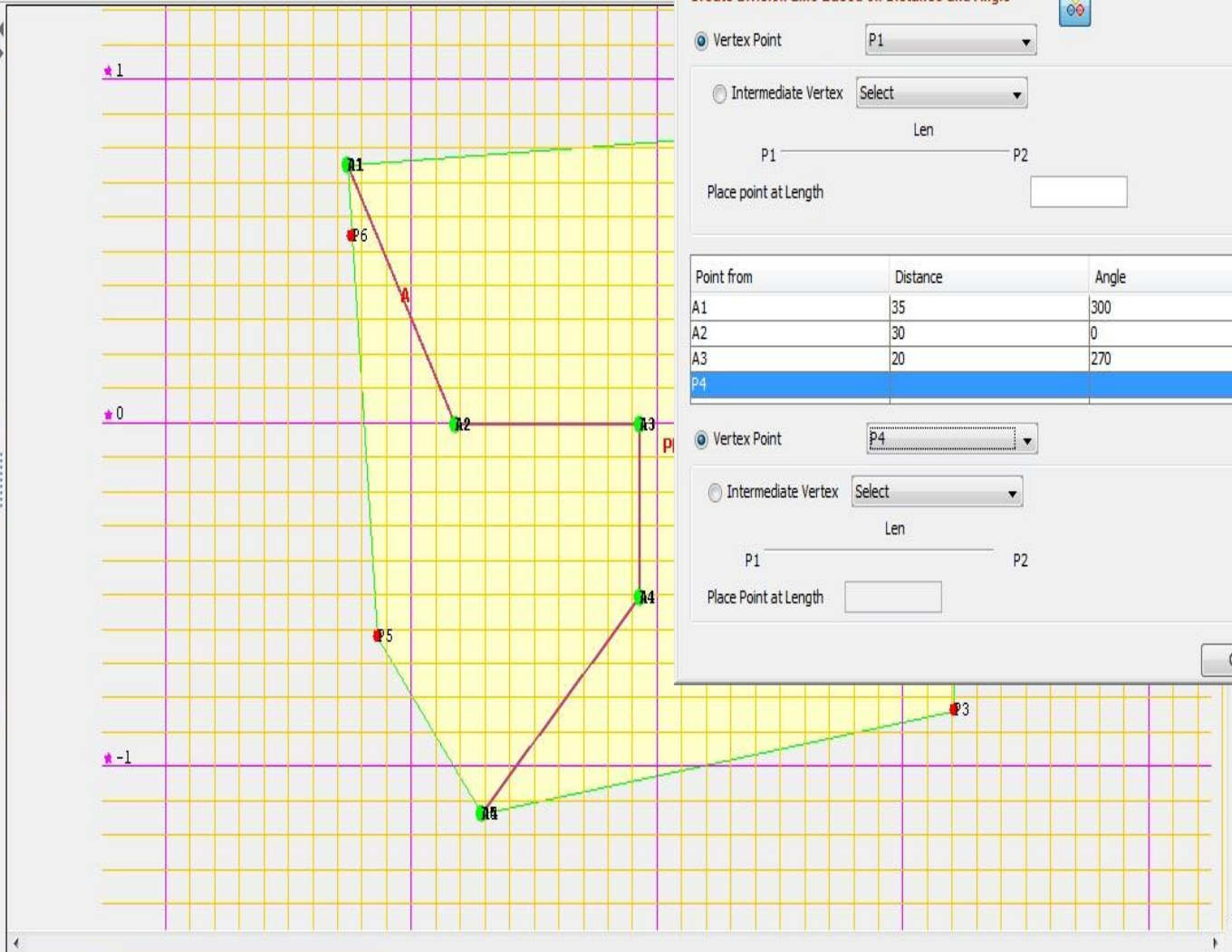
Scale 1: 704.74

Dimensions

SNo	Vertices	Distance
1	P1 --> P2	100.577
2	P2 --> P3	68.831
3	P3 --> P4	77.779
4	P4 --> P5	26.772
5	P5 --> P6	46.831
6	P6 --> P1	8.296

New Partitions of Plot No 143/2

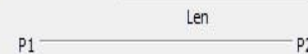
Name	Area	KID



Create Division Line Based on Distance and Angle

Vertex Point P1

Intermediate Vertex Select



Place point at Length

Point from	Distance	Angle
A1	35	300
A2	30	0
A3	20	270
P4		

Vertex Point P4

Intermediate Vertex Select



Place Point at Length

OK



Village: हनुबंद

Plot Info

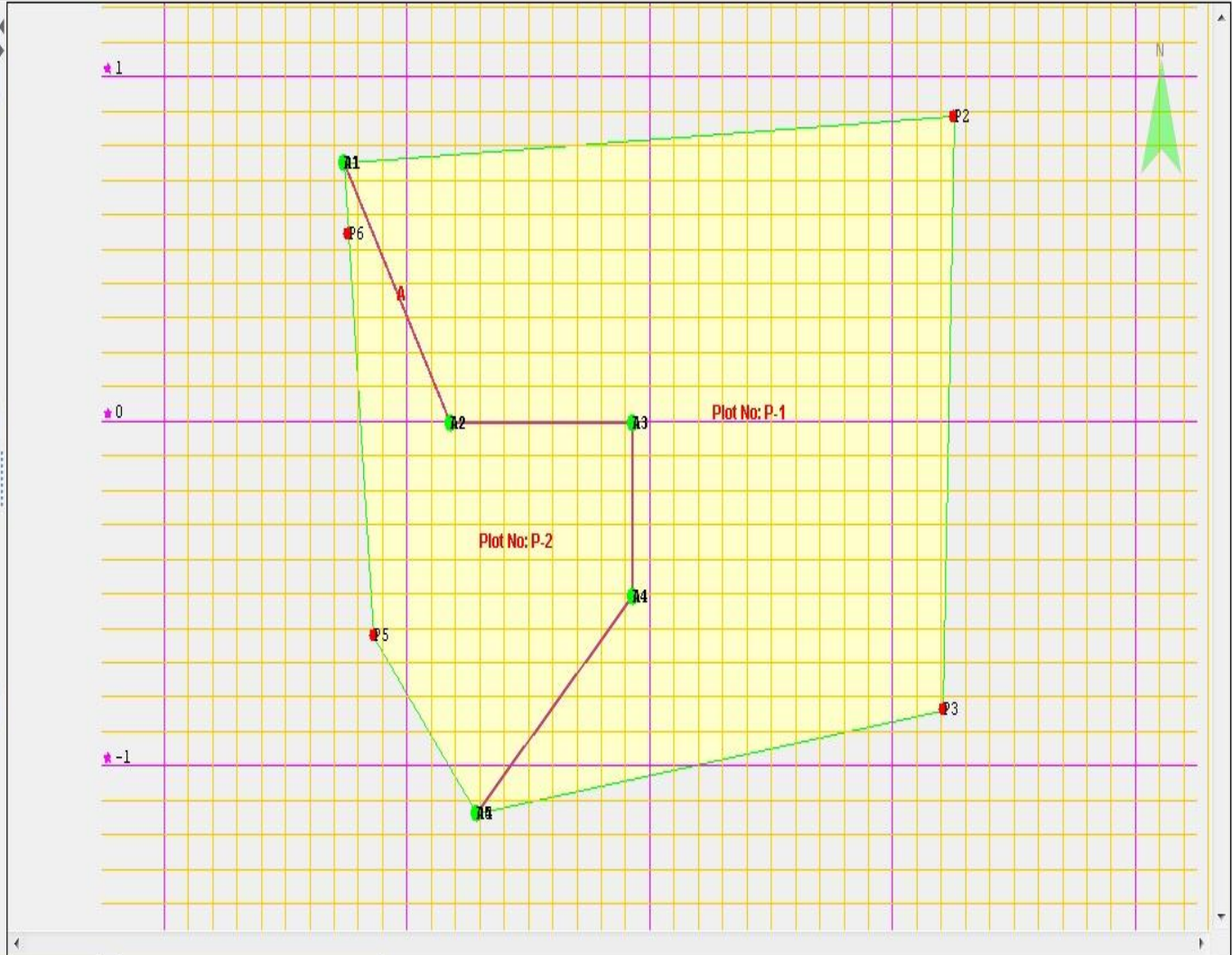
Plot Number: 143/2
Area in Hectare: 0.809
Mutation No:
Mutation Date:
Scale 1: 704.74

Dimensions

SNo	Vertices	Distance
1	P1 --> P2	100.577
2	P2 --> P3	68.831
3	P3 --> P4	77.779
4	P4 --> P5	26.772
5	P5 --> P6	46.831
6	P6 --> P1	8.296

New Partitions of Plot No 143/2

Name	Area	KID
P-1	0.61189	143/2
P-2	0.19711	143/





Village: हयबंद

Plot Info

Plot Number: 143/2

Area in Hectare: 0.809

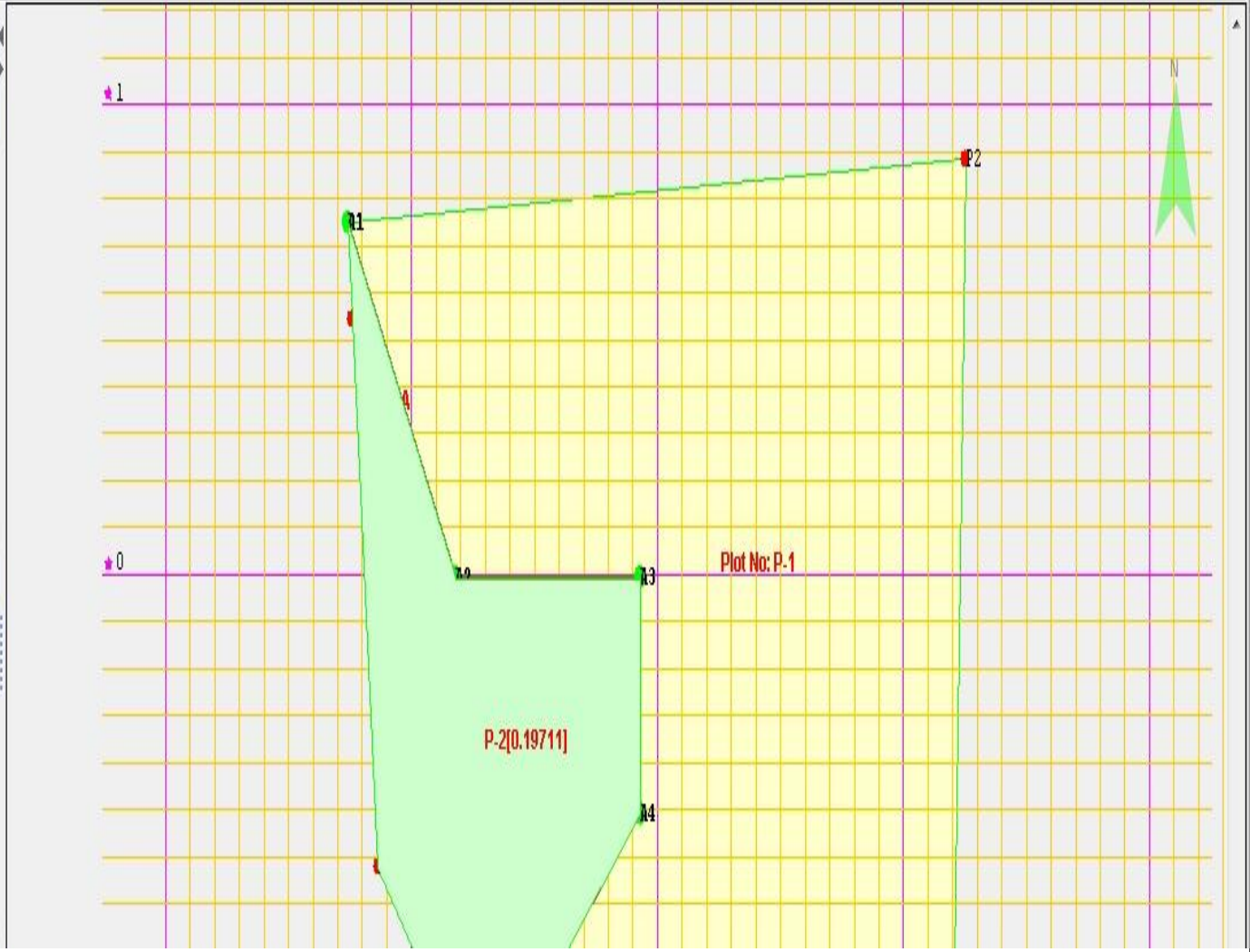
Mutation No:

Mutation Date:

Scale 1: 704.74

Dimensions

SNo	Vertices	Distance
1	P1 --> P2	100.577
2	P2 --> P3	68.831
3	P3 --> P4	77.779
4	P4 --> P5	26.772
5	P5 --> P6	46.831
6	P6 --> P1	8.296





Village: हयबंद

Plot Info

Plot Number

Area in Hectare

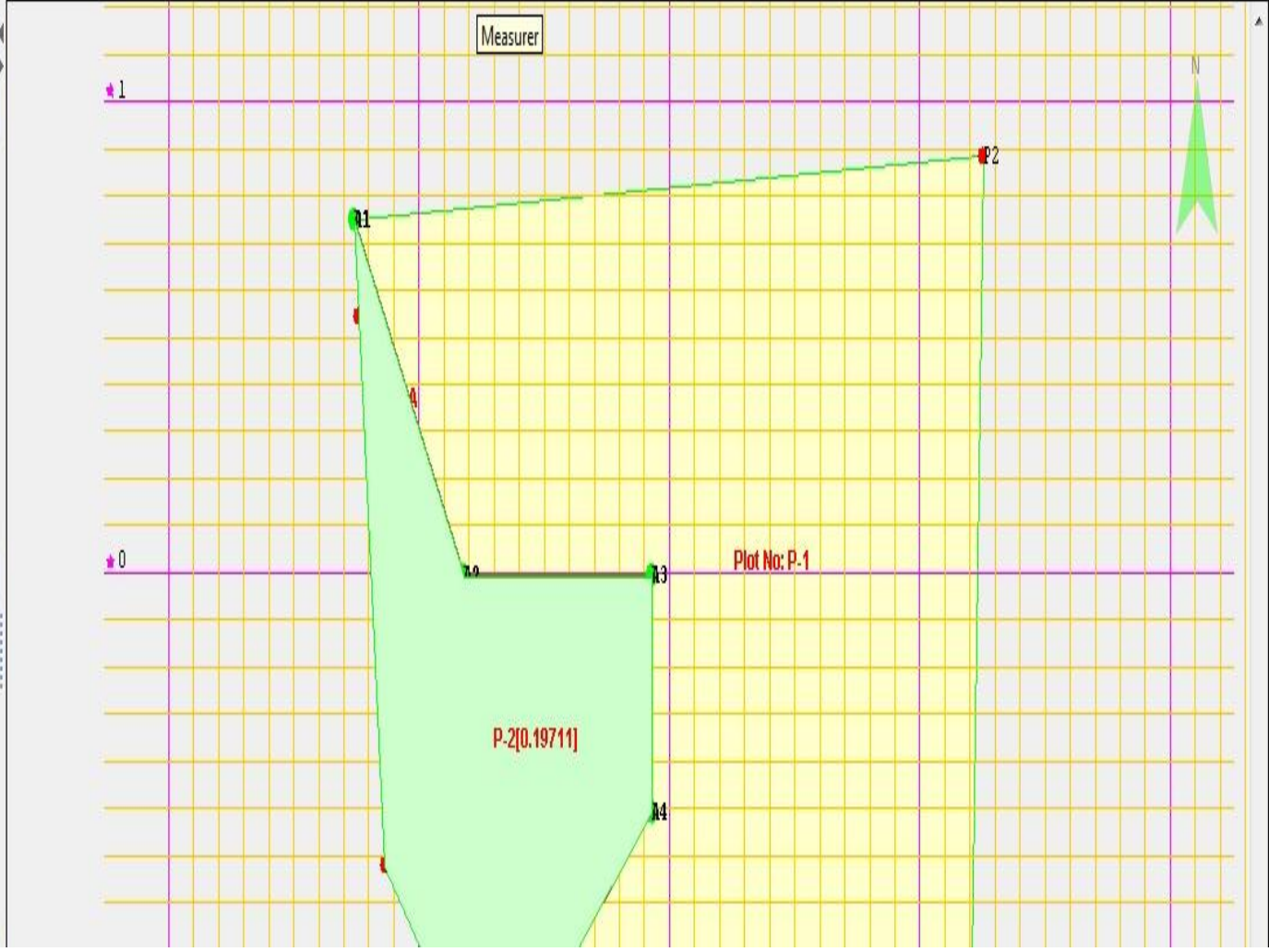
Mutation No

Mutation Date

Scale 1:

Dimensions

SNo	Vertices	Distance
1	P1 --> P2	100.577
2	P2 --> P3	68.831
3	P3 --> P4	77.779
4	P4 --> P5	26.772
5	P5 --> P6	46.831
6	P6 --> P1	8.296





Village: हयबंद

Plot Info

Plot Number 143/2

Area in Hectare 0.809

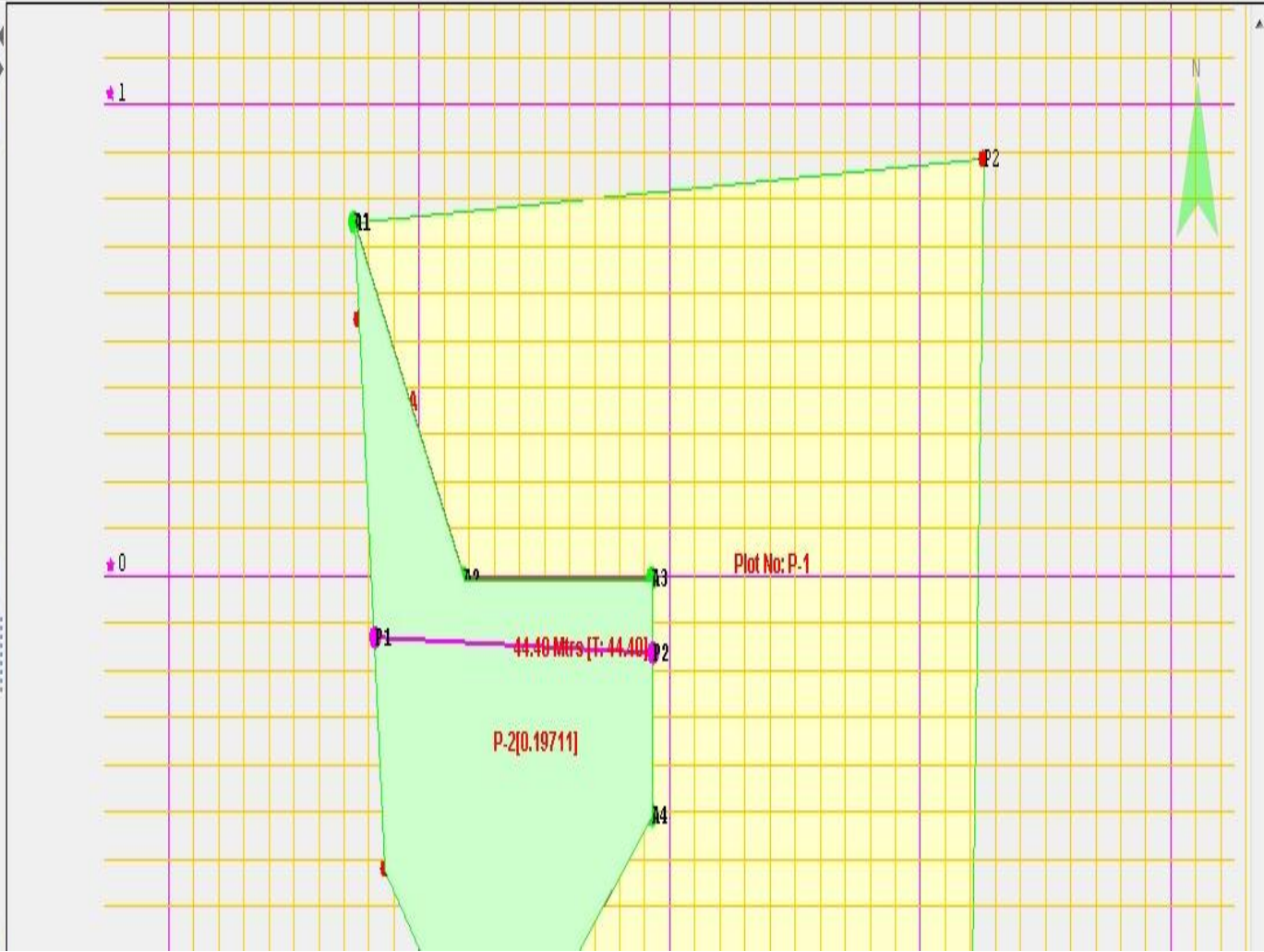
Mutation No

Mutation Date

Scale 1: 704.74

Dimensions

SNo	Vertices	Distance
1	P1 --> P2	100.577
2	P2 --> P3	68.831
3	P3 --> P4	77.779
4	P4 --> P5	26.772
5	P5 --> P6	46.831
6	P6 --> P1	8.296



CREATE DIVISION LINE USING ARC METHOD(ADJACENT SIDE)

create division line using Arc method taking a corner point as initial reference.

In this approach define the following parameters:

1. Select the first corner point.
2. Define the distance towards second point.
3. Define the distance towards last point.
4. Define arc radius from first point.
5. Define arc radius from second point.
6. Since there are two intersecting points for the Arcs you have to select the actual point of interest.

It will show the division line being created when you enter the values.

Click OK to accept the line created.



Village: हयबंद

Plot Info

Plot Number: 143/2

Area in Hectare: 0.809

Mutation No:

Mutation Date:

Scale 1: 699.68

Dimensions

SNo	Vertices	Distance
1	P1 --> P2	100.577
2	P2 --> P3	68.831
3	P3 --> P4	77.779
4	P4 --> P5	26.772
5	P5 --> P6	46.831
6	P6 --> P1	8.296



Arc Method (Adjacent side)

Cornor Point
P1

Distance of first point towards P2:

Distance of last point towards P6:

Arc radius from first point

Arc radius from second point

Select Intersecting Point

OK Cancel



Village: हयबंद

Plot Info

Plot Number 143/2

Area in Hectare 0.809

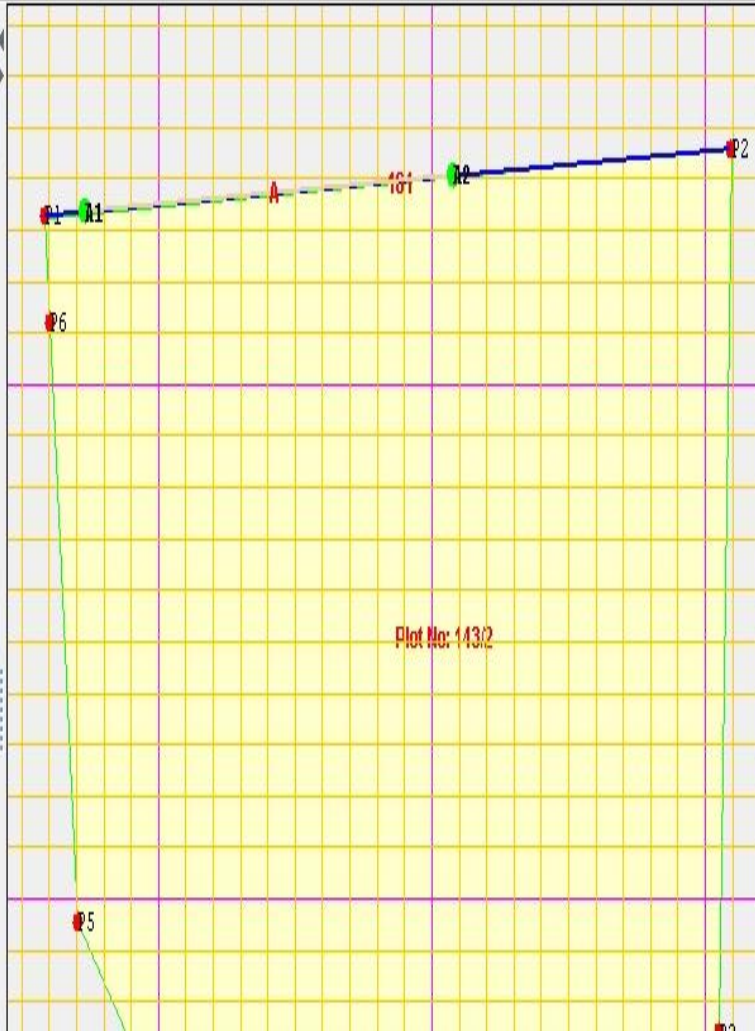
Mutation No

Mutation Date

Scale 1: 699.68

Dimensions

SNo	Vertices	Distance
1	P1 --> P2	100.577
2	P2 --> P3	68.831
3	P3 --> P4	77.779
4	P4 --> P5	26.772
5	P5 --> P6	46.831
6	P6 --> P1	8.296



Corner Point

P1

Distance of first point towards P2: 60

Distance of last point towards P6:

Arc radius from first point

Arc radius from second point (Minimum: 70)

Select Intersecting Point

OK Cancel



Village: हयबंद

Plot Info

Plot Number: 143/2
Area in Hectare: 0.809
Mutation No:
Mutation Date:
Scale 1: 699.68

Dimensions

SNo	Vertices	Distance
1	P1 --> P2	100.577
2	P2 --> P3	68.831
3	P3 --> P4	77.779
4	P4 --> P5	26.772
5	P5 --> P6	46.831
6	P6 --> P1	8.296



Corner Point
P1

Distance of first point towards P2:
60

Distance of last point towards P6:
110

Arc radius from first point

Arc radius from second point
 (Minimum: 70)

Select Intersecting Point

OK Cancel



Village: हयबंद

Plot Info

Plot Number: 143/2

Area in Hectare: 0.809

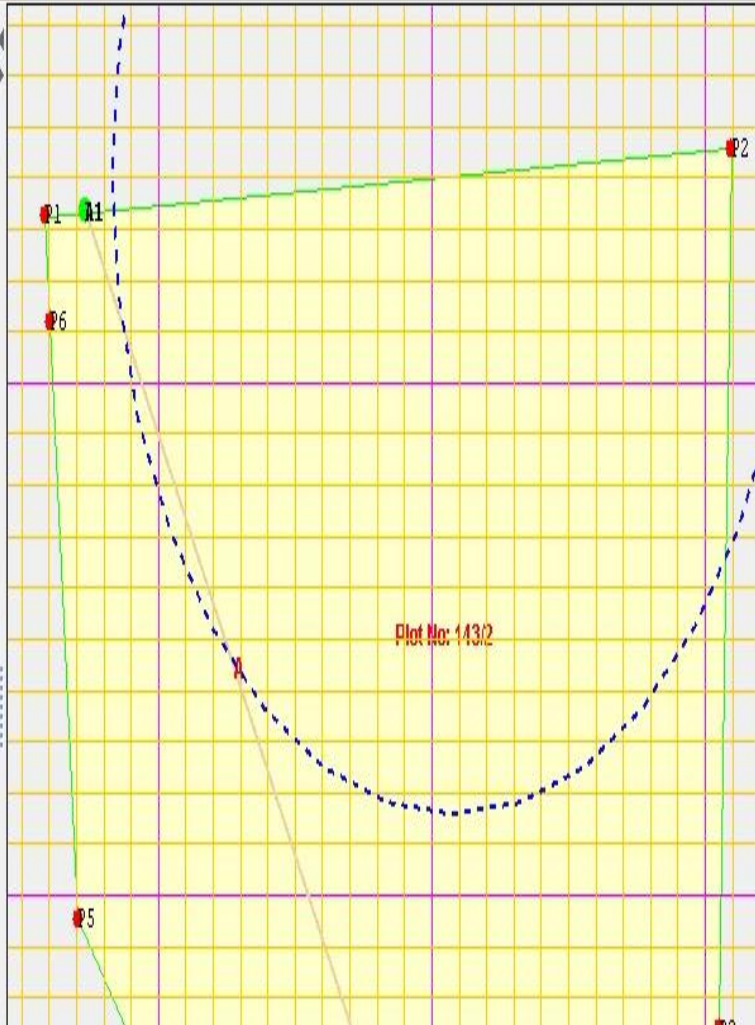
Mutation No:

Mutation Date:

Scale 1: 699.68

Dimensions

SNo	Vertices	Distance
1	P1 --> P2	100.577
2	P2 --> P3	68.831
3	P3 --> P4	77.779
4	P4 --> P5	26.772
5	P5 --> P6	46.831
6	P6 --> P1	8.296



Corner Point

P1

Distance of first point towards P2:

60

Distance of last point towards P6:

110

Arc radius from first point

50

Arc radius from second point

(Minimum: 34)

Select Intersecting Point

OK Cancel



Village: हनुबंद

Plot Info

Plot Number: 143/2

Area in Hectare: 0.809

Mutation No:

Mutation Date:

Scale 1: 699.68

Dimensions

SNo	Vertices	Distance
1	P1 --> P2	100.577
2	P2 --> P3	68.831
3	P3 --> P4	77.779
4	P4 --> P5	26.772
5	P5 --> P6	46.831
6	P6 --> P1	8.296



Corner Point
 P1

Distance of first point towards P2:
 60

Distance of last point towards P6:
 110

Arc radius from first point
 50

Arc radius from second point
 40 (Minimum: 34)

Select Intersecting Point

OK Cancel



Village: हनुबंद

Plot Info

Plot Number: 143/2

Area in Hectare: 0.809

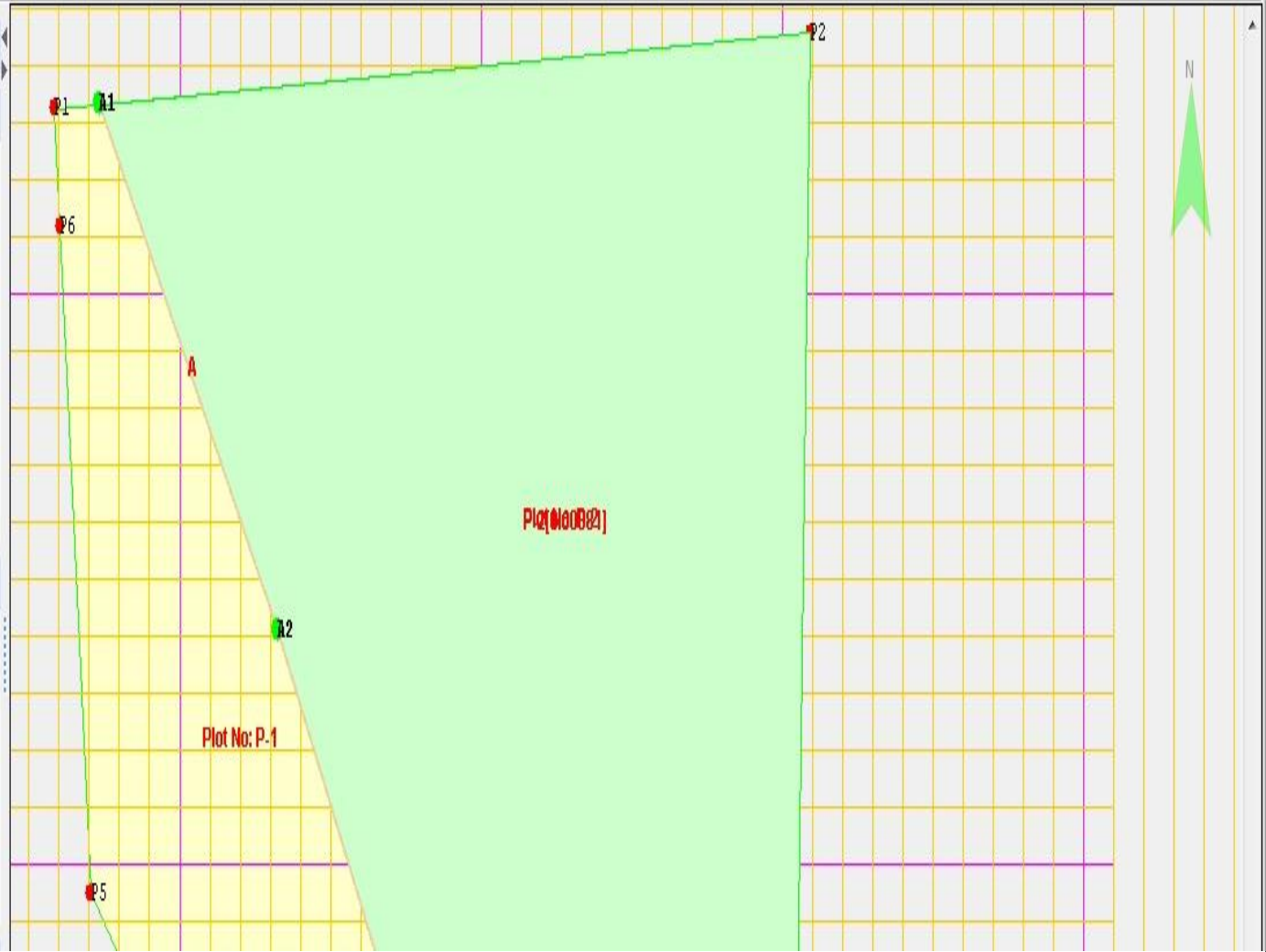
Mutation No:

Mutation Date:

Scale 1: 581.28

Dimensions

SNo	Vertices	Distance
1	P1 --> P2	100.577
2	P2 --> P3	68.831
3	P3 --> P4	77.779
4	P4 --> P5	26.772
5	P5 --> P6	46.831
6	P6 --> P1	8.296



CONCLUSION

- ❑ **Bhu-naksha** can serve as a design of a **national cadastral mapping system**.
- ❑ Presently BHU-NAKSHA application implemented in different tehsils of states like Chattishgarh, Madhya Pradesh, Himachal Pradesh, Assam, Sikkim, Uttar pradesh.
- ❑ Any changes in the ROR data can be displayed on the map this can **save the time of modification of the map**.as it uses the updated ROR data.
- ❑ Map can be printed in **any scale as per user requirement**.
- ❑ **Multi-Lingual support** of **Bhunaksha** provides to print and display the owner's information as per region.
- ❑ **ROR Data** is the main data for any type of Property claim.
- ❑ Bhunaksha can serve for Land information for those states which uses the **cadastre technique** for Land record management.

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- iii. <http://www.postgresql.org>
- iv. <http://postgis.refrations.net>
- v. <http://geotools.org>
- vi. <http://www.nic.in>
- vii. <http://www.dolr.nic.in>
- viii. <http://www.nlrmpp.nic.in>
- ix. <http://www.nlrmppportal.nic.in>

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- I. Enemark, S. (1997) *Concepts of Cadastral Systems – General Overview and Examples from throughout the World*. Department of Development and Planning, Publication Series no 214, Aalborg University, Denmark.
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- V. NLRMP Capacity building training courseware, 2009 and 2011.