



ASANSOL DURGAPUR DEVELOPMENT AUTHORITY

A Statutory Authority of the Government of West Bengal
(Under Urban Development & Municipal Affairs Department)
1st Administrative Building
City Centre, Durgapur -713216
email : adda.dgpr@gmail.com

Memo No.: ADDA-11018(99)/11/2025-DGP-OSDL(ADDA)-ADDA/IT/1004/25-26

Date:12.12.2025

NOTICE INVITING TENDER

Comprehensive GIS Based Land Information System (GLIS)

By

THE CHIEF EXECUTIVE OFFICER
ASANSOL DURGAPUR DEVELOPMENT AUTHORITY
1st ADMINISTRATIVE BUILDING
CITY CENTRE, DURGAPUR -713216
EMAIL: - adda.dgpr@gmail.com

SCHEDULE OF BIDDING PROCESS

Sl. No	Particulars	Date & Time
1	Date of publication of Tender	15.12.2025 at 10.00A.M.
2.	Date of Availability of Tender Document	15.12.2025 at 11.00AM
4.	Last Date/Time for receipts of bids (Online along with Hard Copy of Technical Bids)	29.12.2025 at 04.00PM
6.	Date of Technical Bid opening	02.01.2025 at 11.00 AM
7.	Date of Financial Bid Opening	To be intimated later
8.	Announcement of Selected Bidder	To be intimated later

ASANSOL DURGAPUR DEVELOPMENT AUTHORITY (ADDA) invites e-tender from the reputed and bonafied agencies for providing Comprehensive GIS based Land Information System (GLIS) of this as per Terms & Condition mentioned below.

Bidders are requested to follow all the instructions/guidelines carefully while participating in the Bidding process.

- 1) A complete list of items for which a Comprehensive GIS Based Land Information System is based is detailed in the Scope of Work.
- 2) Bidders should quote for all the items, failing which the bid will be rejected in the Financial Evaluation stage.
- 3) The contract shall be for complete comprehensive project including Digitization of Cadastral Records, Drone Survey, Ground Control Information, and incorporation of map with its attributes and Integration of Geo-referenced data base combined with data management. Elaborately it is Geo-referencing and Attribute Joining of Mouza maps (LR, RS and CS) with Recorded/ Un-recorded data, Plans, Master plans and Maps for Durgapur Sub-division comprising an area of around 10,000 acres of ADDA acquired land.
- 4) The Bidder shall be allowed to inspect the available records before submission of bid. It will be presumed that the bidders have offered their prices after review of the entire position and knowing fully about the assets to be covered. No price escalation request shall be allowed after placement of work order.
- 5) Opening and evaluation of financial bids will be carried out only for those bidders who have qualified in the technical evaluation stage.
- 6) The selected bidder is required to have a qualified manpower to carry out the specific work.
- 7) The timeline for completion is 3(Three) months from the date of Signing of Contract. The bidders should submit a project plan adhering to the timeline during the submission of Technical Bid.
- 8) Intended vendors should quote the rates as per BOQ provided.
- 9) The Bidder submitting the lowest rate will be awarded with the contract. However the Authority reserves the right to accept or reject the lowest rate without assigning any reason for non-acceptance.
- 10) The Authority reserves to right to amend or withdraw any of the terms and condition in the notice or to accept or reject any or all the bids without assigning any reason whatsoever and the decision of the Authority in this regard shall be final and binding on all.
- 11) Any evidence of unfair practice, including overcharging, price fixing, etc as defined in various statues, will automatically disqualify the parties. Repeated occurrence of such

evidence of above bidders may be viewed seriously by the authority and penal measures as deemed fit would be imposed on such bidders.

- 12) The Bidder shall not assign this agreement or any part, there of or any benefit there under without the written consent of the Authority to another party.
- 13) In case of any breach of contract, Authority may also proceed to get work completed by any other means including through other agencies. The excess expenditure, if any, due to such a step would be recoverable from the unpaid bills/security deposit of the bidder. This is without prejudice to any other measure the Authority may take, including blacklisting of the contractor and /or forfeiture of earnest money.
- 14) No person below the age of 18 years shall be deputed/posted to this office by the selected bidder.
- 15) The bidder, whose bid will be accepted, will be informed through "Letter of Intent" The successful bidder will then submit a "Letter of Acceptance" prior to commencement of work. An Agreement to be carried out between the successful bidder and the Authority on receipt of the Letter of Acceptance and Performance Security.
- 16) The area of coverage will initially be Durgapur Area of this Authority. The terms may be extended for Asansol area on mutual agreement between the successful bidder and the Authority regarding value and other terms and conditions of the Project also on the successful performance of the accepted bidder. In the event of bid validity extension, it is up to the bidder to accept the same or not. However, the bidder will have no right to change its price bid if a bid validity extension offer has been accepted by them.
- 17) The contract is subject to review after each month and the Authority reserves the right to terminate the contract with a week's notice, if the service provided is found unsatisfactory.
- 18) In case the service is cancelled on the aforesaid ground, future payment due if any, shall lapse and the firm shall have no right to claim such dues.
- 19) The selected bidder will at all times adhere to the security and confidentiality policies of the Authority.
- 20) Any Conditional/customised tender submitted by a Bidder, will not be entertained

21) Payment:

- a. Payment will be made in 4 (Four) installments considering upon the volume of the work to be depicted on the Work Order that will be issued.
- b. Request for advance payment will not be entertained in any case.
- c. Payment shall be made on pro-rata basis, on satisfactory rendering of services during the billing period.

- d. The Net amount will be paid after deduction of TDS as applicable from time to time.
- e. No increase in amount shall be considered at all during the tenure of the project. No other charges like transportation fare etc. will be payable for execution of work.

22) Loss & Damage: - Cost of all loss (es) and damage(s) caused to the Government's assets and goods due to contractor's negligence shall be recovered from the agency's bill or the agency may be asked to replace the damaged assets/goods with new ones on his own cost.

23) Performance Security:

- a. Performance Security amounting to 5% of the Bid Value of the successful bidder in the form of Bank Guarantee or Demand Draft in favour of Asansol Durgapur Development Authority payable at Durgapur using standard format, has to be submitted by the successful bidder within 7 days working days of the receipt of notification of award from the Authority.
- b. Failure to submit the performance security within the stipulated time-frame will be construed as 'non-compliance' and the Purchaser shall have the rights to terminate the contract and offer the service to the other qualified vendor.
- c. The Performance Security shall remain valid for the entire contract period plus sixty days.
- d. The Performance Security will be released only after successful completion/expiry of the contract. Penalties and other amounts due, if any, shall also be deducted from the Performance Security Deposit.

24) Eligibility Criteria:

- a. The Firm/Agency/Company must be a company registered under Companies Act, 1956 and / or Indian Partnership Act, 1932 and must possess valid Trade License & Professional Tax Enlistment in West Bengal and must be in Operation for the last 1(one) year. Documentary evidence of above must be enclosed. Consortium or Joint Ventures or Sub Contract in any form is not allowed. Startups registered under DPIIT Startup India are eligible to participate provided necessary documents the same is submitted.
- b. The Agency / any of its Directors/ Partners etc. should have not been blacklisted by any Govt. / Semi Govt. Organizations / Departments or have not been convicted for any offence by any court of law as on date. (Affidavit on stamp paper of Rs.100/- purchased in West Bengal must be enclosed).
- c. The Bidders must have valid PAN, GST, and Service Tax.

- d. The Firm/Agency/Company shall have a Minimum Annual Turnover, of Rs. 10 Lakhs (Ten Lakhs) in any one of the financial year during last 3 years of operation 2022-23, 2023-24, 2024-25 of the last 3 financial years. Audited Balance Sheet & / Audited Profit & Loss Accounts for the last three (3) financial years are to be enclosed.
 - e. The Bidder must have atleast 10(Ten) employees on its Roll with qualified personals of at least two having experience of working more than 5 years with works related to GIS and Web-GIS (necessary certificate from bidder is to be enclosed in technical bid), subsequently signed by the qualified personnel.
 - f. The Bidder must have experience of completing at least one project that includes Digitization of Maps, Drone Survey, DGPS Survey, GIS / Web GIS in Government/Government U.T.(PSU) organizations during last 3 Financial Years ending 2024-25.
 - g. The bidder must have registered setup at West Bengal.
- 25) **Earnest Money (EMD):** The amount of Earnest Money is Rs.50,000/- (Rupees Fifty Thousand) In the event of e-filling, intending bidder may download the tender documents from the website:- <http://wbtenders.gov.in> directly with the help of Digital Signature Certificate. The process of deposit of earnest money through offline instruments like Bank Draft, Pay Order etc. has been stopped for e-tender procurement vide memorandum no 3975-F(Y) dated 28.07.2016. Necessary Earnest Money will be deposited by the bidder electronically: online-through his net banking enabled bank account, maintained at any bank or: offline-through any bank by generating NEFT/RTGS challan from the e-tendering portal. Intending Bidder will get the Beneficiary details from e-tender portal with the help of Digital Signature Certificate and may transfer the EMD from their respective Bank as per the Beneficiary Name & Account No., Amount, Beneficiary Bank name & IFSC Code and e-Procurement Ref No. Intending bidder who wants to transfer EMD through NEFT/RTGS must read the instruction of the Challan generated from E-Procurement site. Bidders are also advised to submit EMD of their bid, at least 3 working day before the bid submission closing date as it requires time for processing of Payment of EMD. Bidders eligible for exemption of EMD as per Govt. Rule may avail the same and necessary documents regarding the exemption of EMD must be uploaded in the EMD folder of Statutory bid Documents.
- 26) **Submission of Tenders:** Tenders are to be submitted through online to the website stated in two folders at a time for each work, one in technical proposal and the other in financial proposal before the prescribed date & time using the Digital Signature Certificate (DSC). The documents are to be uploaded (virus scanned only) digitally signed. The documents will get encrypted (transformed into non-readable format).

- 27) **Opening of Technical Proposal:** Technical Proposals will be opened by Authority at ADDA, Durgapur Office. This will be done electronically from the website stated using their Digital Signature Certificate. Intending tenderer may remain present if they so desire. Apart from necessary documentary evidences Technical Proposal should contain the methodology to be followed by Bidder along with Flow Chart and Time Frame of completion.
- 28) **Bid Clarification:** If deemed necessary, the Authority may seek clarifications on any aspect from the bidder. However, that would not entitle the bidder to change or cause any change in the substance of the tender submitted or price quoted. The Authority may, if so desired, ask the bidder to give a presentation for the purpose of clarifying the tender. Such a presentation shall be made by the bidder only. All expenses for this purpose, as also for the preparation of documents and other meetings, will be borne by the bidders.
- 29) **Opening of Financial Proposal:** Financial Proposals will be opened by the Chief Executive Officer, ADDA or his representatives as per the terms of e-tendering process. This will be done electronically from the website stated using their Digital Signature Certificate.
- 30) **Award of Contract:** After the notification to the successful Bidder by way of a LoI the Bidder must submit an acceptance of the LoI within 7 days. The successful Bidder shall furnish the Performance Guarantee and execute the Agreement with the Authority within 10 working days from issue of LoI. If the successful bidder fails to furnish the Performance Guarantee and/or execute the Agreement within 10 working days of issue of LoI and/or refuses to accept the LoI within 7 days or as specified, the Authority reserves the right to forfeit the EMD and cancel the tender process and call for a fresh tender or issue LoI to the L2 Bidder. The Authority also reserves the right to blacklist/debar the Bidder from participating in any future tender process of the Department. Notwithstanding anything to the contrary mentioned above, the Authority at its sole discretion shall have the right to extend the timelines for execution of Agreement on the request of the successful Bidder, provided the same is bona fide.
- 31) **Arbitration:** In the event of any question, disputes or differences arising between the parties relating to the interpretation and application these provisions of this agreement such disputes or differences shall be referred to the Chief Executive Officer, ADDA. The decision of the arbitration to the agreement in this regard shall be final and binding upon both the parties. The party shall continue to perform their obligations under this Agreement during Arbitration Proceedings. The Courts at Durgapur shall have the exclusive jurisdiction in cases of any dispute on any account arising between the parties.

SCOPE OF WORK

1. The primary objective of this project is to develop and implement a comprehensive GIS-Based Land Information System (GLIS) for Asansol Durgapur Development Authority (ADDA). The system aims to modernize land administration through GIS Mapping & preparation of Geo Database for the land parcels through Detailed FME Digitization of Land parcels and Integration of drone survey data, cadastral maps Land Use Maps and develop and implement a comprehensive GIS Based Land Information System to the Authority. This initiative will enable ADDA to have accurate ground control information, digitized cadastral records, and a customized web-based GIS platform. This initiative will enable ADDA to achieve accurate land mapping efficient data management, enhanced transparency, and improved decision-making for planning and development activities across its jurisdiction.
2. **Area of Interest:** The area for this project covers approximately 10,000 acres of land distributed around two sub-divisions of Durgapur and Asansol within the jurisdiction of Asansol Durgapur Development Authority. The area includes urban, semi-urban, industrial, residential, and rural land parcels falling under various mouzas and administrative boundaries managed by ADDA. This area comprises diverse land-use categories such as built-up zones, open land, infrastructure corridors, water bodies, and government-owned properties.
3. **Data Collection:**
 - a. Collection of certified LR/RS/CS cadastral maps from the West Bengal Land Records & Survey Department or other authorized government sources where such sheets are not available with the Authority.
 - b. Ensuring that maps are complete, updated, and correspond to the correct mouzas, khatians, and jurisdictional boundaries under ADDA.
 - c. Maintenance of proper documentation, receipts, and indexing of all obtained sheets. Creation of an inventory register of all acquired revenue maps for verification and record-keeping.
 - d. ADDA will provide the survey number detail of the land parcels. Sourcing of all other documents required for GIS mapping and GEO Database shall be the responsibility of the bidder.
 - e. Delivery of combined Field Mapping Block maps with survey numbers of the identified site in DWG format (AutoCAD drawing-polyline with separate layers for each classification) and Excel/ CSV Format also.
4. **Digitization of LR/RS/CS Cadastral Maps :**
 - a. High-resolution scanning of hard-copy cadastral sheets (minimum 300–600 DPI), where digital copies are not available with the Authority.

- b. Digitization of plot boundaries, mouza boundaries, roads, water bodies, public properties, and other relevant cadastral features using standard GIS digitization techniques.
- c. Preparation of vector layers with appropriate topology rules to ensure no overlaps, gaps, or slivers.
- d. Assigning unique identifiers such as Mouza, JL No., plot number, khatian number, and mouza code.

5. **Drone Survey Data Processing :**

- a. Directorate General of Civil Aviation (DGCA) approved drone should be used for survey of the sites. Ensure safe and compliant drone operations, adhering to local regulations and airspace restrictions.
- b. Preparation of drone flight plan for establishment of suitable numbers of GCP using DGPS.
- c. Aerial survey through execution of drone flight over the Areas of Interest (AOI) i.e, project site to capture the GCP for generation of ortho-image through implementation of photogrammetric processing.
- d. All collected data should be processed using advanced photogrammetric software to generate high-quality deliverables
- e. The detailed accuracy requirements for each output are as follows:
 - i. ***Orthomosaic (Geo-Referenced Aerial Imagery)***
 1. Imagery shall be captured at a Ground Sampling Distance (GSD) of 5 cm or better to ensure clarity and suitability for parcel boundary interpretation.
 2. Orthomosaic must be seamless, color-balanced, and radiometrically corrected, with no distortions, shadows, or stitching anomalies.
 3. Planimetric (XY) Accuracy: ± 10 cm or better after adjustment with DGPS-acquired Ground Control Points (GCPs).
 4. The orthomosaic shall be delivered in both TIFF and web-optimized tile formats suitable for integration into the LRIMS.
 - ii. ***Digital Surface Model (DSM)***
 1. The DSM shall represent all surface features such as buildings, vegetation, utilities, and general terrain.
 2. Vertical Accuracy: $\pm 15-20$ cm.
 3. Must be generated at a resolution that matches the orthomosaic (5 cm or better).
 4. DSM shall be filtered to remove spikes, noise, and artifacts commonly produced during photogrammetric stitching.
 - iii. ***Digital Elevation Model (DEM)***
 1. The DEM must accurately depict the bare-earth terrain, free from structures and vegetation.
 2. Vertical Accuracy: $\pm 15-20$ cm after appropriate filtering and

classification.

3. DEM must be hydrologically conditioned, ensuring proper flow paths for drainage and topographic modeling.
4. Suitable for use in slope, contour, elevation profiling, and infrastructure planning.

6. **Boundary Survey & Geo-referencing of maps :**

- a. Geo-referencing the maps with the real-world coordinates to locate the boundary stone within the site. Delivery of Geo-reference maps in DWG (AutoCAD drawing-poly line) and GDB format.
- b. Differential Global Positioning System (DGPS) Survey - Ground Control Points (GCP) transfer. Minimum two Permanent Bench Markings reference points should be established according to the guidelines and standards set by Survey of India and validate the observation for a duration of 8 hours.
- c. Fixed features should be located such as boundary markers, i.e buildings, utility infrastructure, roads or any physical features on the boundary.
- d. Ground Control Points (GCPs) and Check Points (CPs)
 - i. To be established using dual-frequency DGPS/RTK equipment ensuring reliable positional accuracy.
 - ii. Horizontal Accuracy of GCPs: $\pm 2-3$ cm.
 - iii. Vertical Accuracy: $\pm 3-5$ cm.
 - iv. GCPs shall be used to geo-reference the imagery, while CPs shall be used for independent accuracy verification.
 - v. All points must be documented with photographs, coordinates, field logs, and marker sketches.
 - vi. All Ground Control Points (GCPs) and Check Points (CPs) shall be connected to the nearest Survey of India (SOI) benchmark or Continuously Operating Reference Station (CORS) network to ensure superior positional accuracy and reliability of the project outputs.

7. **Deliverables:**

- a. Submission of Data Collection of LR Plots with corresponding CS & RS are to be submitted in .XLS / .CSV format and Digitized Maps of the same to be submitted as well as clearly marked in the WEB-GIS.
- b. Overlay the converted Digitized maps onto drone images including Plot Boundary Layout.
- c. Analyzing the existing land use patterns and generate updated land use maps.
- d. Integration of Geo reference map with the ortho- image in GIS environment for generation of geo-referenced map layers from Ortho-image, Contour and DEM.
- e. Deliverable of physical features map of appropriate readable scale in Soft Copies (GDB format and DWG format) with area statement and detailed

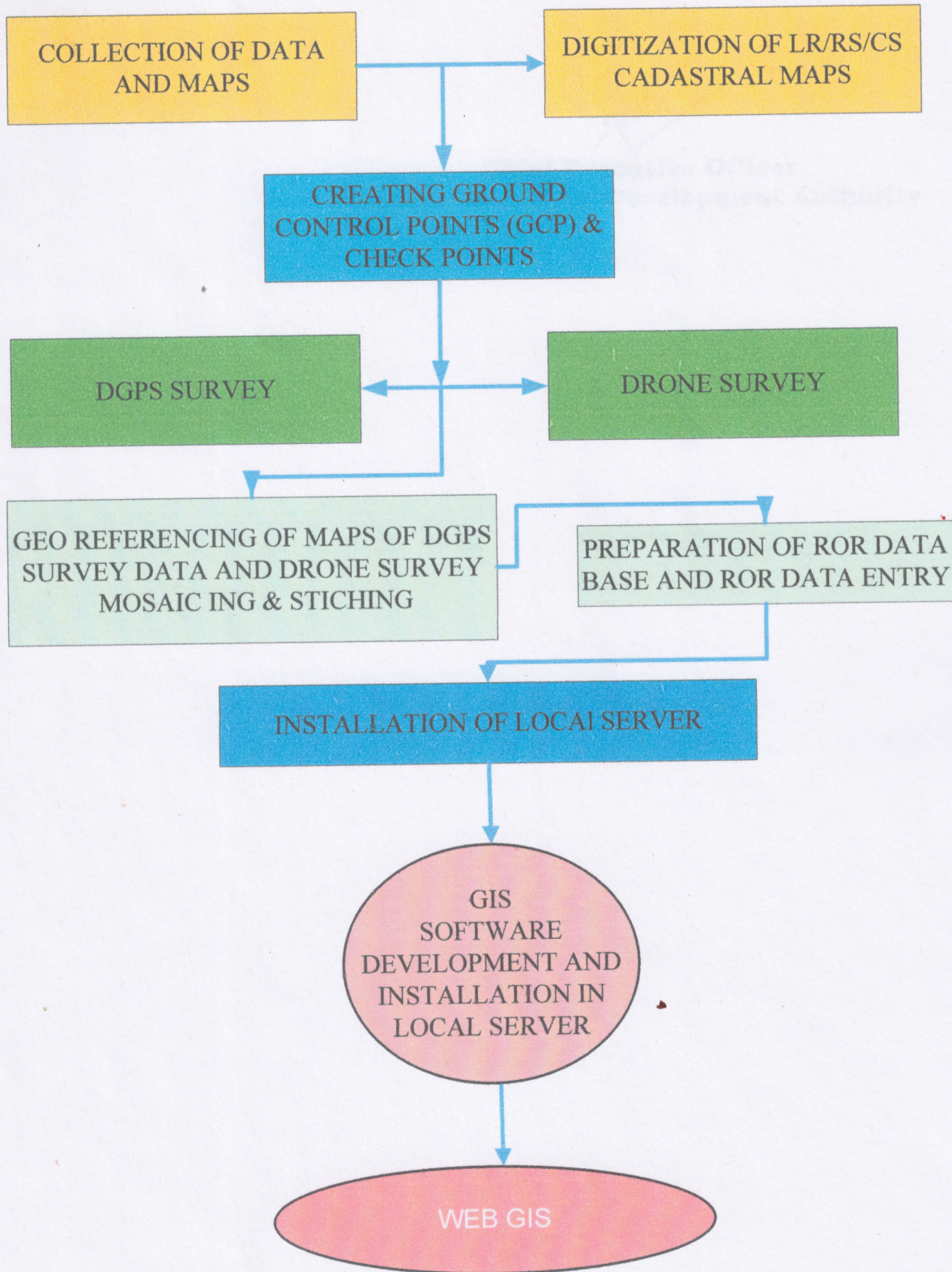
legend. The details are as follows:

- i. Site survey drawings with all physical features of the site
- ii. Approach roads, roads traversing through site and abutting roads.
- iii. Existing infrastructure networks (electrical, sewerage, telephone, water supply, drainage etc.)
- iv. Street furniture & other facilities (light poles, hoardings, kiosks, medians etc.)
- v. Vegetation (trees and shrubs)
- vi. Built-up features such as temples/shrines/other buildings.
- vii. Other physical features like damp areas, pits, rocky areas, hillocks/hills, natural drains, streams and other water bodies etc.,
- f. Deliverable of Digital Elevation Model, Digital Surface Model, Digital Terrain Model with the aerial drone images through photogrammetric processing.
- g. Deliverable of base map for the project site in (CAD & GDP file format) in compatible with the Web-GIS with the following details:
 - i. Site boundary with the Field Mapping sketches in Ortho Image as obtained from the Topographic Survey
 - ii. Existing settlements in the vicinity and within the Site (if any)
 - iii. Existing road network within and in the vicinity of the Site
 - iv. Existing physical features in Ortho Image such as water bodies, streams, hills/hillocks, rocky areas, etc.
 - v. Administrative boundaries of villages / Taluks / districts that fall within the Site
 - vi. Built up features such as temples/shrines etc.
- h. Contour Map with levels of 0.5 m intervals using plot levels taken at site based on MSL as directed by the Authority.
- i. The Authority will carry out sample checking of the deliverables to ensure the accuracy and quality of the images. The sample size will be determined by the Authority, however for all the samples checked by the Authority the positional accuracy, RMSE error should be within the defined threshold and the quality of the mosaicking in terms of seamless edge match and colour balancing should be satisfactory. The following checks will be verified and if required the Authority may include additional verification parameters.
 - i. Manual checking of entire region of mono images to identify any gaps.
 - ii. Checking of edge-matching between tiles and proper colour balancing, approved by the authority
 - iii. Sample area checking for proper colour tone and texture.
 - iv. During geo-referencing if any portion of images are stretched those tiles will be rejected.
 - v. Seam line checking to ensure that it does not cross/cut important features.
- j. Final QC report verifying the accuracy and consistency of RoR data linked to

the updated plot numbers.

8. **Web Application Development:** ADDA intends to develop and implement a robust web GIS based Land Information System with a user friendly and comprehensive geo-spatial interface using open-source stack. The system will manage spatial and attribute cadastral data, imagery, surveys and provide tools for search, reporting, editing (controlled), visualization, audits and secure access for multiple user roles.
- a. Develop a GIS-based Land Information System to manage land records and integrate the updated maps and RoR data.
 - b. Design, Development, Hosting, maintaining a CMS based, GIGW Compliant, GIS based (tools like zoom-in and zoom-out, fit to screen, pan, search, measure, display mouse/cursor position in terms of latitude, longitude, overly of different layers etc) and Database oriented dynamic website.
 - c. The platform should be accessible to users with role-based access controls.
 - d. Basic Functionalities:
 - i. Parcel Visualization: Display updated land parcels on a GIS map, with zoom and navigation options.
 - ii. Search & Retrieval: Enable search based on plot numbers, ownership details, and geographical coordinates.
 - iii. Data Management: Facilitate the attachment of RoR data and management of land records within the system.
 - iv. User Management: Implement role-based access control for departmental users.
 - v. Report Generation: Provide tools for generating reports (ownership changes, boundary adjustments, etc.).
 - vi. Initially the GIS to be installed in the local server to be provided by the agency thereafter the final data to be hosted in the WEB-GIS.
 - vii. The minimum Server that is to be installed locally is as follows:
 - Processor: 2X INTEL® Xeon 2.0 Ghz and above (minimum 4 core
 - Chipset: Intel
 - Memory: Minimum 128GB (upgradable to 1.5TB) with Memory Type DDR4 with higher frequency.
 - Storage Controller: Smart Array Controller
 - Network Card: Integrated 1GB Ethernet or higher
 - Hard Disk: Minimum 128TB along with minimum 2TB(SAS/SATA Drives supported)
 - Form/Factor : Rack (2U) / Tower
 - OS : Microsoft Windows Server (latest version)
 - Warranty : 3 years onsite warranty coverage
 - Preferable : HP/DELL
 - viii. Host the Web-GIS Portal at SDC (State Data Centre), West Bengal with necessary security.

- ix. Hardware solution (3-tier design) proposed to be in clustering for HA (Active – Passive) mode for accessing concurrent users of website.
- x. Any other work/development/design/requirement etc which is not mentioned here in this document but are operationally essential and may arise during the execution of work/ design / development / testing / hosting/ maintenance of the website.
- xi. The successful Bidder is required to provide a turn-key solution, which would include supply / installation / development of the required software, hardware and other accessories & services thereof, for commissioning of the system (Website with integrated Mobile App, related hardware and software).
- xii. Provision of interpolating other utility services such as drainage, pipeline, cables, etc in the Web-GIS
- xiii. Development of API's in order to share data with third party developer.
- xiv. All license software, source code, project documents, website details used for the GIS /Web GIS is to be handed over to Authority on completion of the project and before release of Performance Security..
- xv. Annual Maintenance and support services for the WebGIS Portal for a period of 1 year. On satisfactory completion the AMC may be renewed for further period of 1 year with mutually agreed terms and conditions.



9. **Training and Knowledge Transfer:** Conduct onsite training sessions on interpreting and managing the digital maps and data. Provide user guides and technical support documents for ongoing data management and integration with land records.

Aditi

**Chief Executive Officer
Asansol Durgapur Development Authority**

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A Company, formed by the Government of West Bengal,
Under the Durgapur & Asansol Municipal Areas Amendment
& Administration Building,
City Centre, Durgapur - 713219,
West Bengal, India.

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NOTICE INVITING TENDER

Comprehensive GIS Based Land Information System (GLIS)

THE CHIEF EXECUTIVE OFFICER,
ASANSOL DURGAPUR DEVELOPMENT AUTHORITY,
1/ ADMINISTRATIVE BUILDING,
CITY CENTRE, DURGAPUR - 713219,
WEST BENGAL, INDIA.