



ECOSPATIAL SOLUTIONS LTD. G-CLOUD 15 CLOUD SUPPORT

Field Data Collection System Design Service Definition Document



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1 About EcoSpatial Solutions

EcoSpatial Solutions Ltd. is a UK-based environmental GIS consultancy specialising in the design, implementation, and optimisation of spatial data systems for the public sector. Founded with the purpose of improving the quality, accessibility, and intelligence of environmental and land-related data, EcoSpatial brings together deep technical expertise in ESRI technologies with a strong understanding of UK environmental legislation, biodiversity policy, and digital transformation needs across government and infrastructure sectors.

We are an ESRI Bronze Partner with established capability in ArcGIS Online, ArcGIS Enterprise, Experience Builder, Field Maps, Survey123, and enterprise geodatabase design. Our work spans end-to-end cloud GIS delivery, from data discovery and readiness assessment through to system architecture, application development, analytics, reporting dashboards, and long-term support.

Our consultancy model emphasises:

- **Data quality and governance:** ensuring that environmental, estates, and operational datasets are structured, validated, and maintained to support auditability, regulation, and long-term value.
- **Cloud-first architecture:** helping organisations get the fullest value from ArcGIS Online or ArcGIS Enterprise through scalable, secure, and user-friendly GIS solutions.
- **End-user accessibility:** creating intuitive applications, dashboards, and workflows that allow non-GIS specialists to explore, update, and act on spatial information confidently.
- **BNG and nature recovery expertise:** providing sector-leading capability in BNG data optimisation, habitat baselining, condition assessments, survey systems, and metric calculations.
- **Training and capability building:** empowering internal teams to maintain, grow, and leverage their spatial data systems independently.

EcoSpatial works with clients across utilities, local authorities, national agencies, charities, estates teams, and infrastructure owners, supporting both strategic and operational decision-making. We bring a strong track record in implementing geospatial systems that improve environmental compliance, streamline data workflows, reduce risk, and support nature recovery objectives.

Our valued clients



Partnerships



2 The Service

2.1 Service Overview

EcoSpatial supports organisations in designing and deploying high-quality mobile GIS solutions for field survey, inspection, monitoring, and operational data capture. Using the ArcGIS suite of mobile applications, we create robust, user-friendly tools that ensure accurate, validated, and consistent field data collection across environmental, estates, and operational contexts.

Our configurations are suitable for ecological surveys, asset inspections, estates updates, maintenance activities, and frontline operational reporting.

2.2 Service Scope

EcoSpatial delivers a wide range of cloud-based GIS applications, including:

ArcGIS Field Maps

A powerful all-in-one mobile mapping and data editing application.

Capabilities

- Custom map views for field teams
- Editable layers for asset, habitat, and site updates
- Location tracking (optional)
- Form-based data entry with validation
- Integration with offline mobile map packages (MMPKs)
- Synchronisation with ArcGIS Online or Enterprise

ArcGIS Survey123

A form-centric survey tool ideal for structured, standardised data capture.

Capabilities

- Smart forms with logic, constraints, required fields, and calculations
- Photo, document, coordinate, and inspection attachments
- Sector-specific templates (ecology, defects, maintenance, estates)
- Offline capability for remote working
- Dataflows fully integrated with enterprise geodatabases

Mobile Data Validation Rules

EcoSpatial ensures high-quality data capture from the moment it is collected.

Capabilities

- Domain, subtype, and rule configuration in geodatabases
- Real-time validation in Field Maps and Survey123
- Error-resistant logic for mandatory fields, ranges, and allowed values
- Geometry validation (snap rules, allowed feature types, topology support)

2.3 Supported Use Cases

EcoSpatial's mobile GIS configurations support a wide range of operational needs, including:

Environmental & Habitat Surveys

- UKHab mapping
- BNG assessment data capture
- Condition assessments
- Monitoring and repeat survey workflows

Asset Inspections

- Utilities, infrastructure, property, parks, or land assets
- Regulatory inspections, defect reporting, and condition grading

Estates Management

- Land ownership updates
- Boundary and parcel checks
- Estate maintenance logs

Operational Reporting

- Safety checks
- Site walkovers
- Routine field activities requiring georeferenced reporting

2.4 Technical Approach

Design & Configuration

- Requirements gathering with field teams and data owners
- Configuration of forms, editable layers, logic, and symbology
- Development of validation rules and controlled vocabularies
- Integration with enterprise geodatabases and web services

Testing & Deployment

- Field-ready prototypes
- Usability testing across different devices
- Deployment scripts or documentation for long-term management

Governance & Documentation

- Editing workflows and data governance guidance
- Metadata and lineage updates
- User training for surveyors and GIS administrators

2.5 Service Outputs

EcoSpatial provides the following as part of the service:

- Fully configured Field Maps or Survey123 applications
- Metadata templates and schema definitions
- QA/validation rule documentation
- Data workflows for Enterprise or Online environments
- Training materials and onboarding support
- Optional long-term maintenance and update service

2.6 Service Features

- Configuration of ArcGIS Field Maps
- Design of Survey123 mobile data forms
- Built-in mobile data validation rules
- Offline mapping packages (MMPKs) for remote work
- Connected editing workflows with enterprise geodatabases
- Support for habitat survey data capture
- Configured asset inspection workflows
- Estates update and field-editing tools
- Operational reporting integrations
- ESRI-aligned mobile data solutions

2.7 Service Benefits

- More accurate and consistent field data capture
- Improved efficiency for habitat and asset surveys
- Reliable data collection even in offline locations

- Reduced manual errors through validation rules
- Streamlined field-to-office workflows
- Faster updates to enterprise GIS databases
- Better visibility of estate and operational changes
- Stronger evidence for environmental reporting
- Increased productivity for field teams
- Embedded best practice within the ESRI ecosystem

3 Support

3.1 Cloud hosting service support

We will support you with upkeep and maintenance post implementation as set out in the project scope. Our team can assist with operational support and troubleshooting as required, as well as including ESRI technical support in the case of software-specific faults.

3.2 Email support

We provide email support with a response target of 4 hours if within office hours, otherwise the next working day– response within 1 working day if on weekend or bank holiday. Support may be continued via phone or web chat is suitable, however, support requests must first be made via email. This single tier of support is a consistent standard across our clients. The client has direct contact with the principal consultant on their project, giving clear and direct results. The support package is included in our day rate.

4 Social Value

EcoSpatial is committed to delivering high-quality cloud GIS services while generating broader social, economic, and environmental benefits aligned with the UK Government's Social Value Model. Our approach focuses on creating measurable, contract-specific contributions across four core areas that align strongly with both the original Social Value Model themes and the updated government missions under PPN 002.

4.1. Climate Action & Environmental Sustainability

As an environmental GIS consultancy, EcoSpatial is uniquely positioned to help public sector clients achieve climate-positive outcomes. We embed sustainability into our technical delivery by enabling data-driven carbon reduction, supporting biodiversity initiatives, and providing geospatial evidence for nature-based solutions.

4.2. Economic Growth, Digital Skills & SME Support

EcoSpatial contributes to economic resilience by supporting the growth of digital skills in the public sector and local communities. Through GIS and Python training, mentoring,

and strategic use of SME subcontractors, we strengthen local supply chains and improve digital capability.

4.3. Equality, Diversity & Inclusive Opportunity

We are committed to fair, inclusive, and accessible working practices. EcoSpatial promotes equitable recruitment, flexible working, and opportunities for individuals from underrepresented groups to enter or progress within the geospatial profession.

4.4. Wellbeing, Community Engagement & Responsible Delivery

EcoSpatial strengthens local communities and improves wellbeing by offering volunteered geospatial expertise to environmental and civil society groups. Internally, we uphold modern, healthy working practices that support mental wellbeing, flexible work, and high-quality work–life balance.