



ECOSPATIAL SOLUTIONS LTD. G-CLOUD 15 CLOUD SUPPORT

Data Management, Modelling and Governance 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

High-quality GIS systems rely on well-structured, validated, and consistently maintained data. EcoSpatial provides specialist data architecture and quality-assurance services to help organisations design, manage, and maintain geospatial datasets that are accurate, resilient, and aligned with industry best practice.

Our work ensures that enterprise GIS environments remain scalable, interoperable, and compliant throughout the full data lifecycle.

2.2 Service Scope

EcoSpatial supports clients in establishing strong data foundations across environmental, planning, asset management, and infrastructure sectors. Our services include:

Enterprise Geodatabase & Schema Design

We design enterprise-level geodatabases that support operational and strategic GIS use cases.

Key Capabilities

- Design of enterprise geodatabase schemas (file, mobile, or enterprise/ArcSDE).
- Normalisation and structuring of feature classes, domains, subtypes, and relationship classes.
- Alignment with Esri data architecture principles and enterprise GIS standards.
- Optimisation for performance, versioning workflows, and long-term maintainability.

Data Models Aligned to Esri Best Practice

EcoSpatial develops sector-appropriate, Esri-aligned data structures for seamless integration across ArcGIS platforms.

Key Capabilities

- Development of logical and physical GIS data models.
- Customisation of Esri solutions (utilities, local government, environmental management, planning).
- Integration with ArcGIS Online/Enterprise, ArcGIS Pro, and field data collection tools.

BNG & Sector-Specific Data Structures

We design data frameworks that support statutory reporting, monitoring, and ecological workflows.

Key Capabilities

- Data models for Biodiversity Net Gain (BNG) baseline, post-intervention, and monitoring datasets.
- UKHab-aligned data structures for habitat mapping and assessment.
- Custom schemas for ecologists, planners, land managers, and environmental consultancies.

Quality Assurance & Quality Control (QA/QC)

EcoSpatial establishes repeatable QA/QC frameworks that ensure data integrity throughout its lifecycle.

Key Capabilities

- Automated validation checks using geoprocessing tools.
- Integrity checks for geometry, attribution, topology, and compliance with standards.
- Development of repeatable QA workflows for field data capture, asset updates, or environmental monitoring.
- Integration of QA steps into enterprise data pipelines.

Metadata Standards, Lineage & Governance

We help clients embed strong governance practices to ensure transparency, traceability, and compliance.

Key Capabilities

- Development of metadata templates aligned to international and organisational standards.
- Data lineage tracking to document creation, updates, and processing history.
- Schema dictionaries, style guides, and data governance frameworks.
- Implementation of validation rules and automated enforcement mechanisms.

Data Migration, Transformation & Standardisation

EcoSpatial supports the transition from legacy or fragmented datasets into modern, standardised GIS environments.

Key Capabilities

- Data migration between formats, systems, or organisational structures.

- Transformation and cleaning of datasets for improved quality and consistency.
- Standardisation of attribute structures, naming conventions, and spatial reference systems.
- Consolidation of disparate data sources into unified enterprise datasets.

2.3 Collaborative Working

EcoSpatial works directly with:

- Internal data owners to establish governance and stewardship.
- Ecologists and environmental specialists to ensure biological and BNG datasets meet regulatory and scientific standards.
- Planners and asset managers to structure operational data for decision making.
- IT and GIS platform teams to ensure seamless integration with enterprise systems.

This collaborative approach ensures that datasets remain accurate, relevant, and compliant throughout their lifecycle.

2.4 Service Outputs

Depending on client requirements, deliverables may include:

- Enterprise geodatabase schemas and documentation
- Schema dictionaries and data model diagrams
- Metadata templates and guidance
- Validation scripts, tools, and automated QA workflows
- Data migration reports and curated output datasets
- Governance frameworks and lifecycle management recommendations

2.5 Service Features

- Design of enterprise geodatabase schemas
- ESRI best-practice data model development
- BNG-specific and sector-specific schema creation
- QA/QC workflow implementation
- Metadata and data lineage standards
- Data migration and transformation support
- Data standardisation and consolidation
- Collaboration with multi-discipline data owners
- Lifecycle-focused data governance guidance

2.6 Service Benefits

- Improved accuracy and reliability of core datasets
- Stronger compliance with environmental and organisational standards
- Reduced risk of data errors and inconsistencies
- Better integration across departments and systems
- More efficient GIS workflows and analysis
- Clear, auditable data lineage for governance
- Easier long-term data maintenance
- Enhanced support for BNG and environmental reporting
- Scalable structures for organisational growth
- Increased confidence in data-driven decision-making

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.