



# Geographical Information Systems

## Capability Statement

Litoria Consulting's approach to geographical information systems (GIS) stands out from the crowd. Unlike other firms who engage a GIS specialist, all our environmental scientists are proficient in the use of GIS systems – both in the field and in the office. This allows our environmental scientists in the field to accurately map locations of specific flora and fauna, indigenous archaeological artefacts/sites, vegetation extents and various ecological attributes to incorporate into reporting and assessment. With our mobile GIS technology, we can rapidly convert these field observations into spatial GIS data in the field or in the office to respond immediately to client information needs.

Vertical integration of GIS skills from Director to Environmental Scientist provides our clients with a unique resource – the same scientists that collect the data complete the spatial analysis. Our scientists can composite all relevant environmental and heritage features to rapidly identify potential development constraints, but more importantly, to identify opportunities to take our clients forward on schedule and on budget.

Our technology and dedicated GIS network infrastructure – including mobile and server - provide us with the ability to identify and solve complex spatial problems in the office and in the field, proving our clients with timely solutions. We utilise a range of the latest GIS and CAD software (ArcGIS, MapInfo, AutoCAD, Garmin MapSource, Integraph Imagine) ensuring compatibility with our clients and other consultants. Cross-platform compatibility allows us to provide data in numerous formats, more rapidly assess project impacts and provide feedback to engineers, planners, architects and surveyors who use alternative design software. Litoria Consulting also maintains the latest datasets, including:

- Digital cadastral database (DCDB) including tenure and easements for all Queensland local government areas;
- Catchments and hydrology including drainage, watercourses, groundwater, springs and wetlands;
- Water infrastructure including dams, bores and weirs;
- Soils and geology;
- Vegetation including current DERM regional ecosystems and regrowth mapping for all Queensland bioregions;
- Topography including digital elevation models for selected regions of Queensland and New South Wales;
- Coastal and marine including Erosion Prone Areas, Coastal Hazards, Areas of High Ecological Significance, Coastline, Maritime Development Areas, Fish Habitat Areas;
- Biodiversity and nature conservation including Queensland Protected Estate, Queensland Koala Habitat Value and Biodiversity Planning Assessments for all Queensland bioregions.

Litoria regularly update spatial datasets to have the most up-to-date data available in reporting and to improve efficiency of environmental data capture and reporting functionality. All maps and data are maintained and produced in accordance with AUSLIG and Geoscience Australia standards for spatial data to ensure data quality.

### Services

- Opportunities/constraints and thematic mapping
- Catchment management and land use studies
- Habitat features mapping
- Spatial optimisation of nature conservation efforts
- Coastal resource mapping
- Economic cost-benefit analysis for natural resource management
- Geostatistics
- Geospatial referencing and image rectification
- Data capture
- Database management



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