

GEOGRAPHIC.
INFORMATION.
SYSTEMS.
CAPABILITY

GEOGRAPHIC. INFORMATION. SYSTEMS.



Geographic Information Systems (GIS) is a diverse yet intelligent technology that can be applied to a wide field of applications. GIS is fast becoming an increasingly important part of our lives, it helps us to understand how, where, when and why.

If you have a business there is a good chance there will be some form of spatial component that can be leveraged.

With a combined staff experience of over 20 years working with the ESRI ArcGIS and Pitney Bowes Mapinfo software, Environment Design and Heritage (EDH) provide the relationship and specialist advice between the technology and our clients.

Environmental Modelling

GIS modelling integrates a complex set of data sources to predict behaviours for a given environmental setting. GIS models typically serve as dynamic decision-making tools for planners and resource specialists.

Database Design and Implementation

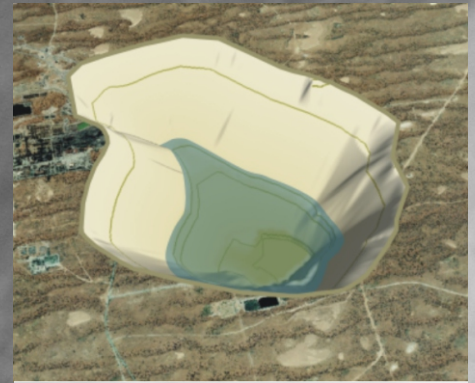
GIS databases typically integrate information from numerous disciplines that are shared by multiple users within a project team. GIS databases are often comprised of multiple data sets:

- Linework (line, polygon and point data)
- Aerial photography and satellite imagery,
- Tabulated data with quantitative and qualitative aspects.

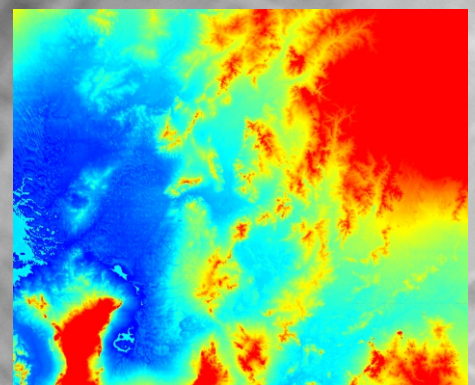
Geographic Data Management

GIS Data management and analysis has become a commonly accepted environmental planning and resource management tool/program program. EDH utilise GIS to provide:

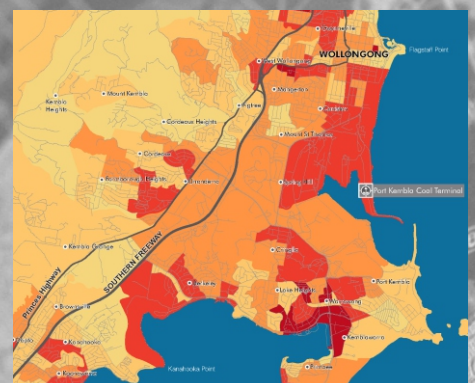
- Sophisticated data conversion support to over 60 different formats,
- Automated conversion and scripting,
- Geocoding of real estate address to point location
- CAD data to GIS, GIS data to CAD
- QA/QC data checking for consistency



Mine pit visualisation



Topography analysis



Demographics

Spatial Analysis

When confronted with large amounts of spatial data obtained from various sources it is essential to simplify and integrate this data into simple geographic representations. EDH uses a wide variety of analysis techniques such as:

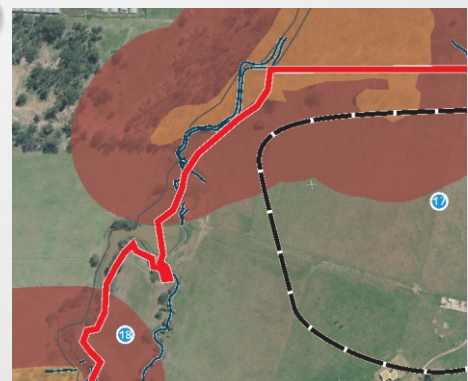
- Spatial selection
- Proximity analysis
- Buffering
- Cross section generation
- Viewshed analysis
- Drainage network tracing
- Constraints analysis
- Weighted composite and weighted cumulative
- Least cost path
- Rapid catchment generation
- 3D line of sight analysis
- Custom point estimation
- Trade area analysis
- Location profiling
- Spatial weighted matrix
- Hot spot analysis
- Kriging/Inverse Distance Weighting/Natural Neighbour/Rectangular interpolation
- Slope and aspect
- Cut/Fill/Volume calculations
- Spatial autocorrelation and rectification



Viewshed analysis



Landform analysis



Bushfire analysis

Project Support Services - Data

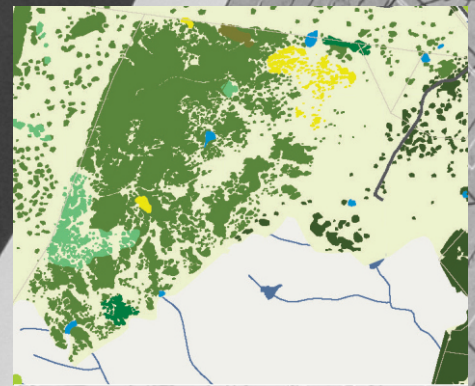
EDH has a comprehensive library of National and State GIS datasets. Below are an example that we can draw on:

- Roads
- Rivers and creeklines
- Topographic contours
- Cadastral boundaries
- Vegetation mapping
- Soil and Geology mapping
- Heritage
- Planning (LEP, Curtilages, Floor Space Ratio)
- Demographics
- Atmospheric and climate
- Marine and bathymetry
- Aerial and Satellite Imagery
- Geotechnical

Project Support Services - Mapping and Cartography

EDH can provide industry leading mapping and cartographic products, combining the science of GIS into an aesthetically pleasing product that communicates the information effectively.

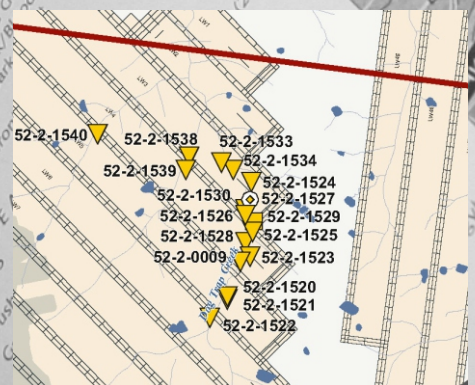
- High-end cartographic figure and map production for environmental reporting requirements
- Map compilation for stakeholder consultation, workshops and site visits
- Large format roll plots and display boards
- Custom formats to suit prospectus/IPO's



Vegetation Mapping



Planning



Heritage

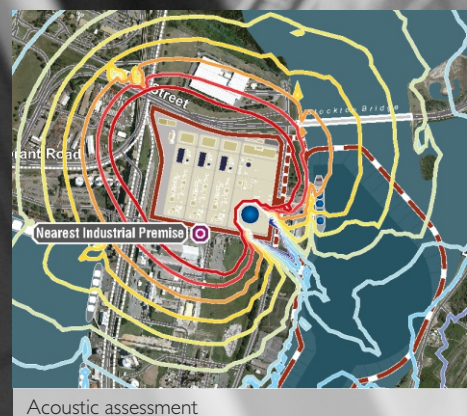
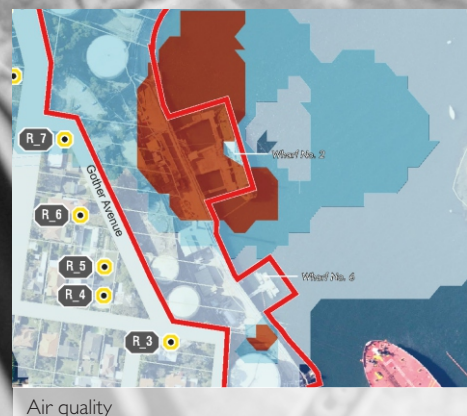
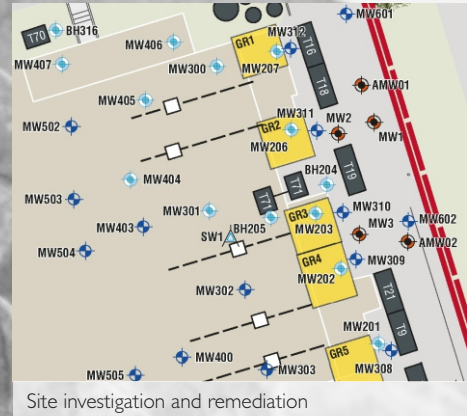
Project Experience

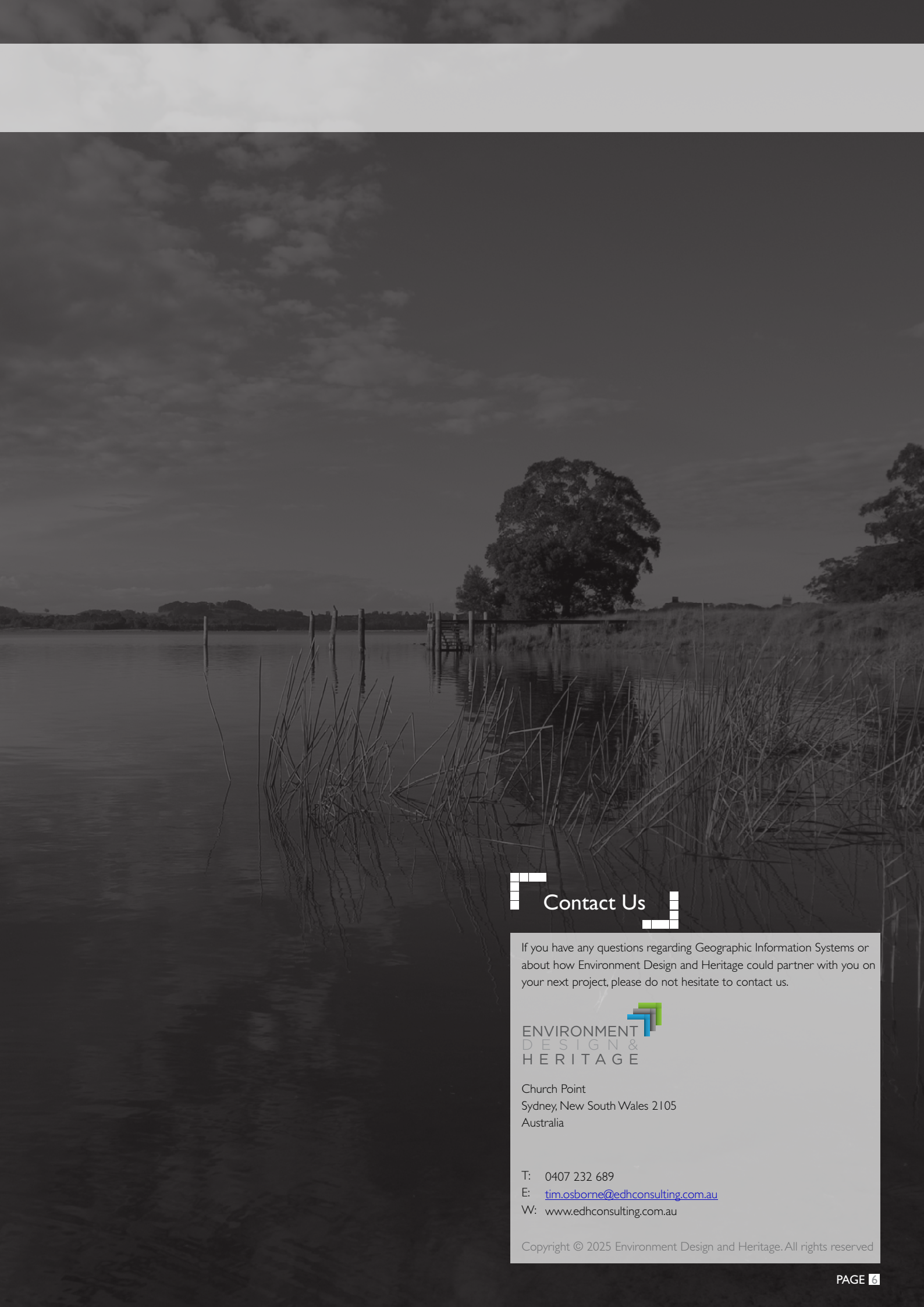
Our project experience has led EDH to provide the following GIS solutions for some of the largest mining/extractive industry and infrastructure projects both here in Australia and Internationally.

- Threatened species analysis
- Vegetation community mapping
- Indigenous/non-indigenous heritage
- Pipeline/powerline corridor selection
- Feasibility studies
- Demographics
- Soil and geological interpretation
- Environmental impact assessment
- Bushfire analysis
- Surface/groundwater investigations
- Air quality assessments
- Acoustic assessments
- Geospatial planning and consulting
- Landform analysis
- Constraints mapping

Our aim is to provide a seamless partnership with our clients, to work effectively alongside them, and maintain our focus on delivering results. These key themes are integral to our business, and help maintain our passion and commitment to both our clients and their stakeholders.

EDH is able to support your business and provide leadership, advice, planning, provision and coordination of GIS services.





Contact Us

If you have any questions regarding Geographic Information Systems or about how Environment Design and Heritage could partner with you on your next project, please do not hesitate to contact us.



Church Point
Sydney, New South Wales 2105
Australia

T: 0407 232 689
E: tim.osborne@edhconsulting.com.au
W: www.edhconsulting.com.au

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