

terranean mapping technologies

- LiDAR
- Satellite Remote Sensing
- GIS Services
- Aerial Photography

growth

A resources boom fuelled by global demand and population growth is accelerating the need for new infrastructure. Quality mapping information can help us to plan and implement sustainable growth more intelligently than ever before.

Timely, quality mapping solutions that provide real value.

- ✎ Determining the visual impact of a new development;
 - ✎ Measuring the extent of an open cut mine;
 - ✎ Designing a new rail corridor;
 - ✎ Organising the plethora of spatial data used by an exploration company
- ... are all mapping problems.

Our Industries

- ✎ Infrastructure
- ✎ Local, State and Federal Government
- ✎ Environment and Agriculture
- ✎ Exploration and Mining
- ✎ Property Development

Terranean is an **award winning** company, which focuses exclusively on the **capture, analysis** and **management** of mapping information.

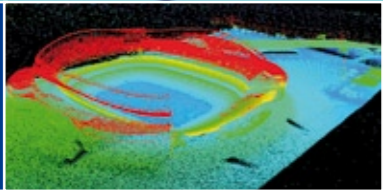
We offer the **unique ability** to choose from our core services of **Satellite Remote Sensing, Aerial Mapping, LiDAR** and **GIS Services** to provide the best **combination** of technologies to complete a project.

We are the mapping and GIS arm of **Conics**, a national development consultancy focused on urban growth and infrastructure. We provide flexibility and service, backed by the security of a large multi-disciplinary company.

Our people are passionate about mapping. We strive to extract the best from our technologies; however our approach is driven by outcomes rather than technology.

Our aim is to **insulate** you from technical complexities; **understand** your requirements and **deliver** the most appropriate solution in a minimum of time.

accuracy



LiDAR

LiDAR provides highly detailed **terrain, vegetation** and **infrastructure mapping** even in overcast conditions. This **air-borne** technology scans the ground with a mass of **laser pulses** which are recorded and processed to produce a **highly accurate** depiction of ground features.

Terranean's LiDAR scanner provides a new paradigm in the collection of data. The distinguishing features are:

- High laser pulse rate resulting in up to 30 points per square meter on the surface. This means a maximum of points pass through vegetation to reach the ground, creating a more accurate DEM and contours, even in rough or vegetated ground. It also accurately maps features such as power-line wires even at high flying speed.
- 100% eye safe which allows the aircraft to fly very low even over heavily populated areas, further enhancing accuracy and detail. The plane can also fly safely below the clouds in overcast conditions, where traditional systems may have to wait months for clear skies.
- Wave form digitising to clearly distinguish between the ground and features on the ground and also to provide three dimensional models of vegetation.
- The scanner is synchronised with a digital aerial camera which captures the same footprint. This allows terrain data and imagery to be recorded in the one flight, reducing costs and delivering a high quality digital ortho-photo that is integrated with the height model.

LiDAR is a cost effective and accurate mapping technology for:

- Ground contours and elevation models;
- Corridors of planned and existing infrastructure such as powerlines, pipelines, rail lines and roads;
- Mines, buildings and industrial sites;
- Vegetation including tree height, shape and density.

Skills



Satellite Remote Sensing

Satellite imagery is ideal for mapping large areas quickly and providing regular updates. It is becoming increasingly cost effective with improving resolutions, greater spectral ranges and decreasing costs.

However, the increasing number of satellites orbiting the earth provide users with a bewildering range of choices.

Terranean can assess if **satellite imagery** is appropriate for a situation and then:

- ↘ determine the best imagery for that situation, and
- ↘ extract exactly what information is required to meet project requirements.

Extracting information from satellite imagery often involves image interpretation techniques as well as GIS integration of other spatial data. Terranean uses its unique ability to integrate image analysis and GIS skills to provide the most accurate result, in the most efficient manner possible.

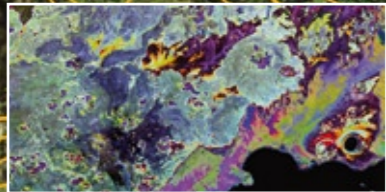
As a member of the Australian Government Geoscience and Defence Mapping Panel, Terranean works in partnership with Geoscience Australia. Terranean has applied its photogrammetric skills to extract height data (DEM's) from satellite imagery, creating an exciting new source of medium accuracy height data over any location in Australia.

Terranean's remote sensing methodologies draw heavily on our other skills in GIS, photogrammetry and cartography. As an integrated spatial services company we use the best combination of these technologies to meet your project needs.

Terranean has a large and dedicated Remote Sensing and GIS team with proven experience in:

- ↘ topographic mapping and revision, including road networks
- ↘ assessment and monitoring of vegetation types and their status
- ↘ mineral exploration
- ↘ land cover and land use mapping
- ↘ natural disaster assessment

efficiency



Aerial Photography

Aerial Photography remains one of the most effective methods of carrying out detailed mapping – ultimately a photograph remains the best method of getting an accurate image of the earth's surface.

Digital aerial photography has provided a paradigm shift in clarity, speed and cost, and we have fully embraced this shift by upgrading our cameras, software and team skills.

Terranean is one of the best resourced photogrammetric companies in Australia.

We have streamlined our highly competitive production processes over 15 years in the industry. Our processes are fully digital and based on the industry standard Socet Set software. The integrated nature of our services also allows us to use image processing and GIS software to further enhance efficiency.

We have particular **expertise** in creating **building models** and are capable of producing highly detailed models of city buildings in **short time frames**.

We utilise a range of digital and traditional cameras and state of the art software to produce:

- Large and small scale ortho-photography;
- Detailed features required for engineering design;
- Detailed contours and Digital Elevation Models (DEM's);
- Detailed building and city models;
- Infra-red mapping as a measure of plant health and vigour;
- Oblique marketing based shots.

GIS Services

The ultimate **integrity** of any GIS system is determined by the **quality** and **organisation** of its spatial data.

Terranean converts disparate data of varying quality to usable and structured information.

Processing

Converting data into a usable form is core Terranean business and includes data format conversion, co-ordinate transformations, raster to vector conversion, contour generation and geo-referencing.

Analysis

Is the process of extracting valuable information from data. For example, Scenic Amenity modelling integrates and analyses datasets such as terrain, land use, transport corridors and vegetation to produce maps that indicate areas of maximum scenic amenity. GIS analysis often integrates the use of satellite imagery and image analysis software.

Organisation

Managers of large projects often underestimate the importance and central nature of spatial data. Project partners each collect their own mapping data but find it virtually impossible to integrate the data and use it in a collective way. Terranean takes a holistic view of these datasets, and works with project partners to catalogue, structure and organise the data into a usable and accessible database.

Cartography

Quality digital and hard copy maps remain one of the most effective ways of presenting and using spatial information. Terranean has a large team of cartographers including experienced ex-army personnel. The selection process for our membership of the Australian Government Geoscience and Defence Mapping Panel involved a rigorous audit of our track record, staff, processes and quality systems.

- ▾ Topographical
- ▾ Aeronautical
- ▾ Geological
- ▾ Ecological
- ▾ Aboriginal Custodianship

OUR CLIENTS INCLUDE

AUSTRALIAN AGRICULTURAL
COMPANY

BURDEKIN DRY TROPICS
BOARD

SOUTHERN GULF
CATCHMENTS

SEQ CATCHMENTS

DEPARTMENT OF DEFENCE

GEOSCIENCE AUSTRALIA

DEFENCE IMAGERY &
GEOSPATIAL ORGANISATION

AIR SERVICES AUSTRALIA

IPSWICH CITY COUNCIL

SUTHERLAND SHIRE COUNCIL

ROCKHAMPTON CITY COUNCIL

HERVEY BAY CITY COUNCIL

HARMONY GOLD

NAUTILUS MINERALS

BECHTEL

BOEING AUSTRALIA

QUEENSLAND SOUTH NATIVE
TITLE SERVICES

NSW DEPARTMENT OF LANDS

QLD DEPT OF NATURAL
RESOURCES & WATER

DEPARTMENT OF
ENVIRONMENT & HERITAGE SA

QLD DEPARTMENT OF
INFRASTRUCTURE & PLANNING

BRISBANE AIRPORTS
CORPORATION

MULTIPLEX

ALINTA

POWERLINK

SUNSHINE GAS



phone 1800 632 973

email enquiry@terranean.com.au

www.terranean.com.au