Culhig
SURVEYING

PRECISION • RELIABILITY • EFFICIENCY



LASER SCANNING
CAPABILITY STATEMENT

Capture • Model • Deliver

Culhig Surveying delivers high-accuracy laser scanning and reality capture services across Australia. Our advanced technology and experienced team capture complex environments with speed, safety and millimetre-level precision.

Millimetre Accuracy
High-density point clouds with precise measurement outputs.

Fast Turnaround
Rapid mobilisation and efficient capture to keep projects moving.

Safer Data Capture
Capture hazardous or hard-to-reach areas remotely and safely.

Smart Deliverables
Deliverables ready for BIM, engineering, clash detection and asset management.

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SCANNING SERVICES

TERRESTRIAL LASER SCANNING
High-density 3D point cloud capture using Leica terrestrial laser scanners.
Accurate, reliable data for any environment, from open-cut mines to complex industrial facilities.

INDUSTRIAL & PLANT SCANNING
Detailed capture of process plants, piping, equipment, tanks, structures and supporting infrastructure. Ideal for engineering, upgrades, modifications and shutdown planning.

AS-BUILT DOCUMENTATION
Accurate as-built models and drawings derived from point cloud data. Verification of existing conditions to support design, construction and compliance requirements.

BIM & 3D MODELLING
Scan-to-BIM and 3D modelling services using Revit and other platforms. Intelligent models for design coordination, clash detection and asset management.

SHUTDOWN & MAINTENANCE SUPPORT
Rapid capture of critical plant and infrastructure during shutdown windows. Quick turnaround delivers the data you need to plan, execute and return to operations faster.

STRUCTURAL & PIPING SCANNING
High-accuracy scanning of steel structures, mechanical systems and piping networks. Comprehensive documentation for integrity assessments, modifications and lifecycle management.

DIGITAL TWINS & ASSET MANAGEMENT
Reality capture for digital twin creation and long-term asset management. Integrate spatial data into your systems for improved operations, maintenance and decision-making.

UAV & INTEGRATED SURVEY SOLUTIONS
Combine terrestrial scanning with UAV, GNSS and conventional surveying to deliver complete, integrated geospatial solutions across large and complex project scopes.

OUR DELIVERABLES

- REGISTERED POINT CLOUDS
- 3D MODELS & BIM FILES
- 2D DRAWINGS & SECTIONS
- 360° IMAGERY & TOURS
- ASSET DATA FOR INTEGRATION

REALITY CAPTURE IN ACTION



MINING PLANT SCANNING
Complete plant capture for engineering. upgrade and operational improvement projects.



CONVEYOR & INFRASTRUCTURE SCANNING
Detailed scanning of conveyors, drives, supports and transfer points for design and maintenance.



INDUSTRIAL FACILITY SCAN
High-detail capture of manufacturing and processing facilities for documentation and optimisation.



HERITAGE BUILDING SCAN
As-built documentation of heritage and commercial buildings for preservation and redevelopment.



PROCESSING PLANT DETAIL
Capture of complex process areas including vessels, platforms, piping and structural steel.



MULTI-SCAN REGISTRATION
Accurate registration of multiple scan positions to create complete, high-accuracy datasets.



CONVEYOR SYSTEMS CAPTURE
Reality capture of material handling systems for engineering and replacement planning.



TANK & VESSEL SCANNING
Precise capture of tanks, vessels and pipework for inspection, modification and compliance.



POWER STATION SCAN
Detailed scan of power generation assets for documentation, upgrades and lifecycle management.



COMMERCIAL INTERIOR SCAN
High-resolution capture of interiors for fitout, refurbishment and facilities management.

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CASE STUDY

PLANT SCAN & DIGITAL CAPTURE



Culhig Surveying was engaged to capture a comprehensive 3D representation of an existing processing plant to support detailed engineering and expansion design.

THE CHALLENGE

The existing plant was operational, complex, and contained dense pipework, structural steel, and multiple interconnected levels.

Accurate, reliable data was required to enable the design of future expansions while ensuring all information was captured safely, efficiently and delivered in a single, accurate coordinate system.

OUR APPROACH

- Deployed multiple high-speed laser scanners across the plant.
- Completed 380 individual scans to capture all areas.
- All scans registered within a traversed network for maximum accuracy and reliability.
- Achieved accuracy within 4mm throughout the entire dataset.
- Delivered fully registered point cloud data and 3D models to support engineering design.

THE RESULT

- A complete, high-density 3D point cloud of the entire plant.
- All scans registered into one coordinate system within a traversed network.
- Accuracy within 4mm across the dataset.
- Provided reliable data to support confident design and expansion planning.
- Reduced time on site and eliminated the need for traditional survey methods.
- Data delivered in formats compatible with design and modelling platforms.

PROJECT HIGHLIGHTS

380 SCANS COMPLETED
Comprehensive capture of all areas across the plant.

TRAVERSED NETWORK
All scans registered within a traversed network for maximum reliability.

ACCURACY WITHIN 4MM
High precision data captured and delivered across the entire site.

EFFICIENT DELIVERY
Fast turnaround without compromising safety or accuracy.

DESIGN READY DATA
Point cloud and 3D deliverables ready for engineering and modelling.

PROJECT VISUALS








ACCREDITATIONS

ISO 9001 QUALITY

ISO 45001 SAFETY

MAJOR CLIENTS

Fortescue. · NORTHERN STAR RESOURCES LTD · BELLEVUE GOLD

CATALPA · PARC ENGINEERING · Warrikal

TCD · PRIMERO · RPMA

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PRECISION DATA.
CONFIDENT DECISIONS.
BUILT TO SCALE.

High-accuracy 3D laser scanning delivers the reliable data you need to design, plan and expand with confidence.



PRECISION DATA

Our advanced laser scanning technology and rigorous processing ensure exceptional accuracy and reliability across every project.

HIGH ACCURACY
Millimetre-level accuracy with a proven accuracy within 4mm across the entire dataset.

380 SCANS COMPLETED
Comprehensive capture of all areas using high-speed laser scanners.

TRAVERSED NETWORK
All scans registered within a traversed network for maximum reliability and consistency.

COMPLETE DATASET
Fully registered point clouds and 3D models delivered to support engineering and expansion design.

RELIABLE RESULTS
Accurate, repeatable data you can rely on to make confident decisions.

OUR DELIVERABLES

- REGISTERED POINT CLOUDS
- 3D MODELS & BIM FILES
- 2D DRAWINGS & SECTIONS
- 360° IMAGERY & TOURS
- ASSET DATA FOR INTEGRATION

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