



PRODUCTS AND SERVICES

AERIAL SURVEYS SMART PHOTOS

Aerial Surveys delivers high quality aerial photography and LiDAR mapping services throughout New Zealand and the Pacific Islands

Flying and Aerial Photography:

Aerial Surveys has been in operation for over 35 years in this industry and has vast experience in aerial surveying and mapping.

We operate two specially configured fixed wing aircraft and have access to a third for higher workloads and backup.

Our aircraft utilise the latest GPS Airborne Flight Navigation system for accurate imagery capture.

We offer the latest in digital camera technology from Vexcel Imaging which delivers the highest quality imagery.

- ▶ *Digital aerial photography using the latest UltraCamLp camera system from Vexcel Imaging with simultaneous RGB colour/RGBI colour infrared capture*
- ▶ *Aerial photography using large format calibrated metric cameras with forward motion compensation capability*
- ▶ *Fully integrated airborne DGPS and flight navigation system*
- ▶ *Fully integrated end-to-end photogrammetric workflow system from image processing through to aerial triangulation, dense matcher and ortho pipeline*
- ▶ *Multi-Ray photogrammetry with high density point cloud for highly accurate DTM and DSM classification*

- ▶ *Digital reprint services*
- ▶ *Aerial photography to suit all industries (government, mining, utilities, transport, forestry, industrial, energy, water and hydrology, developers)*
- ▶ *Substantial historical library ideal for viewing change over time*

LiDAR Remote Sensing Surveys:

Aerial Surveys operates an Optech Orion H300 LiDAR Sensor to deliver high precision LiDAR products such as high accuracy, high density point data based DTM production as well as below canopy surface modelling.

Other Remote Sensing Surveys:

- ▶ *Airborne hyperspectral surveys for biosecurity, environmental and disease monitoring, water quality monitoring, detailed vegetation mapping and species identification (using a CASI II hyperspectral sensor)*
- ▶ *Airborne thermal imagery surveys for underground heat detection, underground pipeline leak detection, river temperature monitoring and urban housing insulation efficiencies*
- ▶ *Satellite imagery (GeoEye-1, WorldView 2, Pleiades1A/1B, RapidEye and Quickbird) for high resolution*



Quality Products ~ Timely Delivery ~ Latest Technology ~ Integrated Workflows ~ Open Communication ~ Project Management

Auckland Office

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AERIAL SURVEYS SMART PHOTOS

Aerial Surveys delivers both qualitative and quantitative photogrammetric information in 'fit for purpose' products for informed decision making

Photogrammetry and Mapping Products:

- ▶ Geo-referenced ortho imagery (high accuracy and GIS ready) with full colour balancing and feather mosaicking for seamless imagery tile production (colour or colour infrared)
- ▶ Digital terrain modelling (digital elevation models, high accuracy for precision planning and engineering purposes) and contour generation
- ▶ Slope and aspect maps for planning purposes
- ▶ High resolution ortho imagery: 0.03m (3cm) great for cemetery sites and 0.4m (40cm) for forestry and rural areas
- ▶ Topographical/feature mapping from digital imagery (vegetation polygons, buildings, hydrology, roads and tracks, fences etc.)
- ▶ Change detection mapping/time series mapping (monitor ground surface change over periods of time)
- ▶ DTM and DSM outputs for 3D modelling
- ▶ Multi-Ray for true ortho imagery (removal of building lean)
- ▶ Volumetric mapping to accurately quantify materials for audit and contract payment purposes



Typical Applications:

Territorial Local Authorities

Regional Councils

Town Planners

Engineers

Developers

Central Government

Mining

Forestry

Energy and Utilities

Environmental

Air/Sea Ports

Farming

- ▶ Council activities
- ▶ Assisting resource and land use consents
- ▶ Feature/asset capture for use with other GIS datasets
- ▶ Land use classification/environmental information/monitoring
- ▶ Emergency management/civil defence – flood modelling
- ▶ Engineering design
- ▶ Change detection mapping for monitoring mining operations, volumetric mapping, environmental impact analysis
- ▶ Forest stand mapping, pre- and post-harvest planning, tracks clearings, streams feature capture
- ▶ Coastal and foreshore management, change detection
- ▶ Sediment control for rivers and lakes
- ▶ Corridor mapping for roads, rail, pipeline and powerline management
- ▶ Farm management (paddock design, crop spraying, irrigation and waste management)
- ▶ Maritime activities

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