



UAV Survey

A long-standing industry leader in mapping and surveying, Woolpert (formerly AAM) has built a global network of geospatial services and specialists, partnering with companies like Google and Esri to provide vital, accurate, and cost-effective solutions. In 2021, Woolpert acquired Asia-Pacific geospatial firm AAM to combine strengths and optimally support the region. Woolpert also offers architecture, engineering, and strategic consulting services, integrating geospatial capabilities for public, private, and government clients worldwide, fostering a culture of growth, inclusion, diversity, and respect with over 2,000 employees and more than 60 offices on five continents.

With over sixty years' experience in the Asia-Pacific region, Woolpert specializes in aerial mapping, land survey, and geospatial solutions. The company has built its success on pioneering innovations and technology for the geospatial industry, including lidar, digital aerial photography, oblique imagery, Web GIS, and high-resolution 3D models in support of digital twins.

Unmanned Aerial Vehicles (UAVs), also known Remotely Piloted Aircraft System (RPAS), provide a cost-effective and efficient alternative to traditional survey methods. We are a leading expert in UAV aerial mapping in Australia, offering highly accurate and reliable data sets using cutting-edge LiDAR technology and advanced data processing capabilities. With Woolpert's expertise, clients can save time and labour costs while improving the accuracy of their data compared to traditional surveying methods.

Our Core Areas of Expertise:

- Topographic LiDAR
- Aerial Imagery
- Satellite Imagery
- Bathymetric LiDAR
- Hydrographic Survey
- Land Survey
- UAV Operations
- Terrestrial Laser Scanning
- Scan to BIM
- Hosted and Managed GIS
- Digital Twins
- Consulting / Advisory



Our Expertise

Unmanned Aerial Vehicles (UAVs), also known as Remotely Piloted Aircraft System (RPAS), offer an efficient and cost-effective alternative to traditional survey methods such as ground surveys or aerial mapping with manned aircraft. UAVs reduce the time required for data capture and delivery for Visual Line of Sight (VLOS) projects, which provide a higher level of accuracy due to their lower flying heights.

By leveraging cutting-edge LiDAR and Imagery technology and Woolpert's data processing capabilities, our expert UAV surveying team can provide highly accurate and reliable data sets in a fraction of the time and cost of traditional survey methods. Save time, reduce labour costs, and improve the accuracy of your data with our UAV surveying solutions.

Why UAV Survey is Better

Cost-effective surveying:

- Project budgets are kept on track with cost-saving UAV surveys.
- Affordable and quick data capture enables you to survey more sites, more frequently.
- Rigorous systems to minimise errors.

Highly accurate data:

- Receive accurate results, including in the sub-decimeter range.
- UAVs also fly and capture data at much lower heights and speeds making it easier to collect high-resolution, precise images.

Quick turnarounds:

- Collect millions of data points and get your data in hand quicker with UAVs.
- Data can even be processed and ready for delivery on the same day, depending on the requested deliverables.

Safely map inaccessible areas:

- Access previously unreachable sites like steep and undulating terrain, sandpits, quarries, or stockpiles with ease.
- Expand your surveying capabilities with reliable UAV operations.

Our UAV Capability

As a leader in UAV aerial mapping in Australia, our qualified pilots and production teams are your trusted partner for all your drone surveying needs. Setting us apart is our aviation expertise and compliance - as regulated by the Civil Aviation Safety Authority (CASA) and privacy laws.



With a proud history of innovation, we were the first to introduce topographic LiDAR technology to our clients back in 2015. Today, we use state-of-the-art survey-grade LiDAR units to create highly accurate and detailed models of the earth's surface, that can provide a height accuracy of +/- 10cm. UAV surveying provides a range of useful data in the following areas:

Land Surveying

- Create precise topographical maps and 2D and 3D models of areas that are hard to access.
- Generate highly accurate representations of the terrain and physical features of the land.
- Develop a Digital Elevation Model (DEM), Digital Terrain Model (DTM), contour lines, break lines, ortho-mosaic/ortho-imagery, interactive 3D Model, and 3D reconstructions of land sites or buildings.

Land Management & Development

- Our topographical surveys provide informed land planning and management services.
- Our data assists in pre-construction planning for secure planning of private and government agencies.
- Our services cover site scouting, allocation, planning, design, and construction of roads, buildings, and utilities, with affordable aerial surveying available for monitoring construction progress and plans.

Stockpile Volumetric Measurements

- Utilise our skilled pilots and state-of-the-art surveying UAV, a widely accepted and conventional method, to measure stockpiles in various industries.
- Our drones capture in-depth topographical data points that traditional methods cannot detect due to irregular stockpile shapes, providing accurate volume measurements of stockpile variations.
- We offer photogrammetric information through contouring, digital surface models, and volume measurements with a high accuracy rate of nearly 99% for various stockpiles, including waste management, mining and resources, and agriculture.

Slope Monitoring

- Our expert mapping team uses Digital Terrain Modelling (DTM) and Digital Surface Modelling (DSM) to accurately monitor slopes.
- Slope monitoring is crucial for detecting slope failure early and maintaining safety.

- LiDAR survey data combined with our monitoring process helps to prevent landslides and slope failure.
- Aerial survey mapping, captured by our specialist team, is a valuable tool for tracking Earth's movement and predicting disasters.

Urban Planning

- Benefit from the remarkable advancements in UAV technology with our services for urban planning.
- UAV surveying enables the rapid collection of large amounts of data at a lower cost with AI processing and machine learning.
- Our expertise has been applied by many private builders and government agencies to plan and assess the social and environmental conditions of sites.
- Our success is largely attributed to capturing high-resolution aerial data, LiDAR surveys, and other crucial information using state-of-the-art drone technology.



woolpert.com
asiapacific@woolpert.com


WOOLPERT

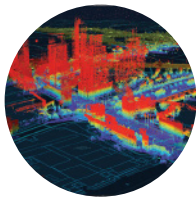
One-stop Geospatial Solutions Provider

Our UAV surveys provide accurate and comprehensive information, which can be used for a wide range of applications such as land development, urban planning, mining, and more.

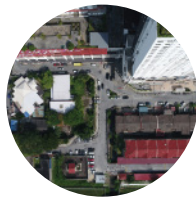
With Woolpert, you can trust that you will receive accurate and reliable survey outputs that will help you make informed decisions. From a single data capture exercise, we deliver:



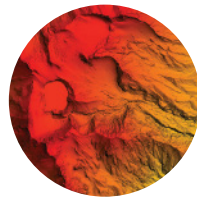
3D Models



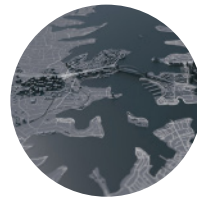
Point Clouds



Imagery



Terrain Models



GIS & Mapping

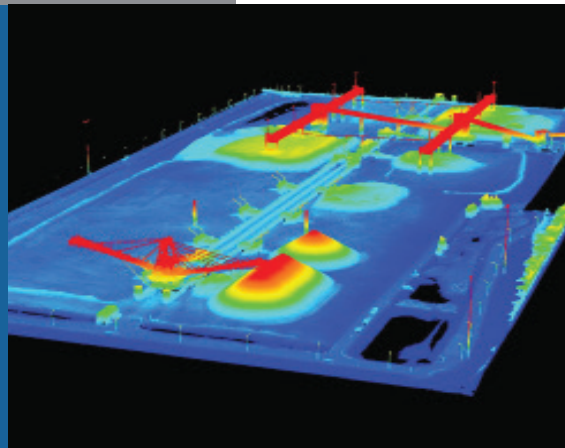


3D Photomesh

How we make a difference: Cross Hybrid Survey Solution – Mining

Woolpert was commissioned to complete recurring survey work for a mining company in South East Queensland. The company requires spatial survey information of three sites on a bi-annual basis, which include a mine, a coal handling processing plant, and a marine port.

The LiDAR and imagery datasets captured are used for stockpile volume calculation and audit reporting. To meet the tight three day deadline and avoid operational downtime, Woolpert deployed their LiDARUSA Surveyor32 UAV system and Sony a6000 camera with the Innoflight Scanlift800 platform at the Port site. The client was pleased with the outcome and planned to continue using this quick, flexible, and accurate approach.



Testimonials

Woolpert (formerly AAM) survey service provided exceptional support and efficiency. Their professional team exceeded my expectations and I highly recommend them for top-notch survey services

Project manager
Construction engineering company



A very successful imagery capture & delivery; the limited shadow in particular was exactly what we are after (the parameters of which would be ideal for all future captures). The colour temperature and overall quality of the mosaic is also excellent.

National sector lead
Architect firm



Our Clients



woolpert.com
asiapacific@woolpert.com

