



# CAPABILITY STATEMENT



# Unmanned Aerial Vehicle Mapping

BOXALL are early adapters of technology and have been for many years. Similarly, when robotic total stations and GPS became available, BOXALL jumped at the chance to make our field parties more efficient and cost effective. In more recent years BOXALL have adopted UAV technology to deliver surveying services.

Our surveyors are CASA certified and utilise the state of the art survey grade Sensefly eBee with on board Real Time Kinematic GPS corrections. Boxall are qualified surveyors for EPA NSW certification requirements being Registered Land Surveyors under the Surveying and Spatial Information Act 2002.

## What is UAV Mapping?

An Unmanned Aerial Vehicle (UAV), commonly known as a drone, is an aircraft without a human pilot on board. Its flight is controlled either autonomously by computers in the vehicle, or under the remote control of a pilot on the ground or in another vehicle.

BOXALL Aerial Surveying complements our traditional surveying services with aerial surveying using AUVs, delivering orthorectified imagery and digital elevation models in all common CAD and GIS formats. UAV technology has a variety of applications using;

- Topographic Survey
- Infrastructure Mapping
- Waste Management
- Disaster Management
- Stockpile Surveys
- Asset Management
- Vegetation Monitoring
- Safety Assessment
- and many more

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## Key benefits of UAV solutions

### Flexibility

The UAV technology can be applied to a number of surveying projects.

### Scale

UAV technology is well suited to large scale projects due to its ability to cover large areas in a relatively short time compared to other traditional surveying techniques.

### Safety

UAV is a fantastic technology for surveying inaccessible, dangerous areas remotely and autonomously.

### Fast response

Quick and easy deployment compared to deployment of a fixed wing aeroplane.

### Turnaround

DEM and orthophotography in days, rather than weeks.

### Imagery

A key benefit of a UAV solution is the provision of high resolution digital imagery as well as highly accurate survey data.





## Quarry Pricing Guide 2016

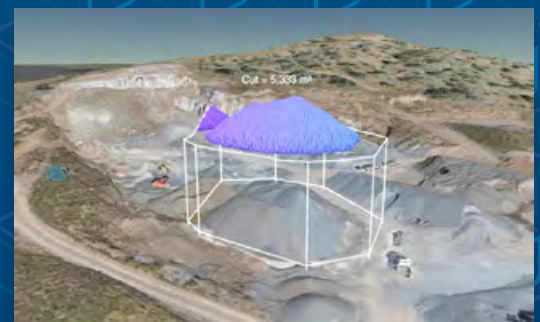
SIZE	INCL. STOCKPILES	BOXALL
25ha	30	\$4,400 + GST
50ha	60	\$4,900 + GST
75ha	80	\$5,400 + GST
75ha	80+	POA

## Deliverables

Text to come from drew and to be placed here, still do not know how long or how much so format and layout might change.

## Accuracy

Sensefly eBee has a minimum Ground Sample Distance (GSD) of 30mm which provides absolute horizontal/vertical accuracy of 30-50mm providing full confidence in the accuracy of our deliverables. By measuring the terrain at much closer intervals the resultant model better represents the actual terrain compared to conventional survey techniques.



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## Quarry / Waste Pricing Guide 2016

Sites within 50km of Sydney CBD includes travel.

Sites greater than 50km from Sydney CBD have additional travel rates below:

	RATES
Travel rates commence at 50km from Sydney CBD	\$240 Hr
Overnight accommodation Requiredd after 250 km from Sydney	\$320 Hr

For sites over 50km from Sydney are determined using Google maps from Sydney CBD.

Site Access & Induction – 1 hour included additional time charged at standard hourly rates.



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# Request for Survey

Company Name

Address

Contact Name  Phone  Mobile

Contact Email  Date of Request

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**Site Number**

Site Name  Site Address

Site Activity

Site Contact  Phone  Mobile

Site Contact Email  Preferred Flight Date  Frequency Per Year

## Surveys to be Performed

Aerial Survey  Contour Map  Stock Pile Measurement  EPA Volumetric Survey  3D Modelling

RML  Approx. number of Stockpiles  Google Earth Image  Please attach Google Earth Image

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**Signature**  **Date**