



Civil-ised surveying

Coastwide Civil's survey team is spending less time in the field and more in the air conditioned office thanks to Unmanned Aerial System (UAS) technology.

Coastwide Civil is the primary contractor on a complex harbour excavation project at Shellharbour, on the NSW south coast. The new boat harbour forms part of the Shell Cove development project and, upon completion, will include 300 wet berths and a platform for associated harbour-side development and facilities on the 20-hectare site.

Scott Rogers is Head Surveyor and a Director of the company, which specialises in marine and civil contracting and is based in Albion Park, south of Wollongong, New South Wales.

Mr Rogers' survey team recently made its first venture into aerial mapping with an Unmanned Aerial System (UAS) and is experiencing significant time savings and improved project documentation as a result.

"This is a large site that involves a number of different designs and a variety of materials, including excavation in an acid sulphate environment and old tip waste removal," Mr Rogers explained.

Fast, efficient and safe surveying

Mr Rogers uses a Falcon 8 multi-rotor UAS to conduct daily stockpile volume reports across the site and contracts Position Partners to conduct a full site survey using the fixed wing SIRIUS UAV once a month.

"The Falcon 8 is perfect for conducting smaller aerial surveys and doing my daily volume reports," Mr Rogers said. "The stockpiles are quite large, generally between 3,000 – 4,000 cubic metres, making them dangerous and difficult for field survey crew to climb over with GPS.

"I simply head out each day with the Falcon 8 and use the 'Quick Survey' feature to map the stockpile in five to ten minutes," he added. "There's no need for a laptop or any other equipment and as soon as I'm done the stockpile can be sent to the crusher. It's a very fast, efficient and safe way to survey."

Site-wide surveys

Each month, Mr Rogers enlists Position Partners' services to conduct a full site survey using the fixed wing SIRIUS UAV by MAVinci, which is better suited to large scale aerial mapping projects.

"Using UAS technology for the site survey gives us access to valuable data and accurate historical documentation at each stage of the project," Mr Rogers explains. "Because there are so many types of material on this site and the fact that we are over-excavating areas of the harbour floor in order to backfill it with waste material, keeping accurate records of what has been placed and where is important."

This level of visual documentation simply wouldn't be possible with traditional survey methods, Mr Rogers explains. "Traditionally you would document the material types and quantities, but having the ability to go back in time and visually look at any given stage of the project is very powerful.

"On this project there are many vertical faces on the harbour floor. It is important to keep accurate survey records of these as it impacts upon the future design harbour infrastructure. Because we have complete models from each month, it is easy to check that everything is constructed to design and we can easily show this data to the client at any stage, now or in the future."

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