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MAY 2016

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CIVIL-ISED SURVEYING

COASTWIDE CIVIL, BASED IN ALBION PARK, SOUTH OF WOLLONGONG, NEW SOUTH WALES, 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.

In addition to the new marina, Coastwide Civil is also contracted for remodelling and plant relocation as part of the Bass Point Quarry expansion project, located just to the south of the Shell Cove site. The company is also running two subdivision projects adjacent to the new marina development, along with a major road upgrade that connects the new site with Shellharbour village.

Managing these five sites is Scott Rogers, Head Surveyor and a Director of the company. He and his team have invested in the latest survey and machine control technology to enable them to work as productively and



efficiently as possible while keeping track of progress across all projects simultaneously.

In addition to traditional survey equipment and machine control technology, Coastwide Civil is taking full advantage of new Remotely Piloted Aircraft System (RPAS) solutions as well as Position Partners' remote support

technology, Tokara Link telematics, to manage design updates and support machines running Topcon machine control.

Mr Rogers' team first invested in RPAS technology in 2014 with a multi-rotor solution, to enable them to document the Shell Cove project and survey inaccessible areas.

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THE BIGGER THE JOBS GET, THE BETTER THIS TECHNOLOGY IS FOR YOU.

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More recently, the company expanded its aerial mapping capabilities with the addition of a RTK-enabled fixed wing plane, the Sirius Pro by MAVinci, and is experiencing significant time savings and improved project documentation as a result.

"The marina project 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 said.

"The RPAS solutions caught my eye when I received a marketing email from Position Partners, who we've had a good business relationship with for many years. I thought they could be an ideal solution for this project and save a lot of time compared with traditional survey methods," he said.

Fast, efficient and safe surveying

Mr Rogers uses a Falcon 8 multi-rotor RPAS by Ascending Technologies to conduct daily stockpile volume reports across the site. The fixed wing Sirius Pro is used for site-wide end of month surveys for the marina project, quarry, sub-divisions and road upgrades.

"Both systems are equally good in terms of performance, but I find they are better suited to different applications," Mr Rogers said. "The Falcon 8 is perfect for conducting smaller aerial surveys and doing my daily volume reports. It saves my team a considerable amount of time as the stockpiles on the Shell Cove one of these systems and start using it. I attended a fast-track, 7-day course with Position Partners and once you've completed the training and got your licence you're all set.

Using the RPAS and extracting the data is a very simple process."

As with any new technology, receiving support and training is all-important. "We've been well looked after by Gavin and the team at Position Partners, they are always on hand if we need them. We had a technical fault with our first system and they kept us running by conducting surveys for us while the plane was getting repaired," he said.



Keeping machines on track

Another time-saver that keeps Scott and his team in the office and away from the heat and flies on site, is the use of telematics to remotely manage the designs on earthmoving machinery across the project.

"We use Topcon GPS systems across a number of dozers, excavators and graders on site and Position Partners' Tokara Link system enables us to login to each machine from the office to update the machine to a new design file or troubleshoot a problem," he said.

Tokara Link removes the need for surveyors to visit a machine in person and transfer a design file via a USB to the control box. Instead, they simply connect to the machine using the Internet and transfer the design remotely.

"Tokara is a great solution and it saves us a lot of time," he said. "If an operator is having technical problems, we try to solve it ourselves first but if we need help, the team at Position Partners in Sydney simply logs in from their office and most of the time we can resolve the problem without anyone actually needing to go out on site and visit the machine."

Looking at the plans for all five projects that decorate Mr Rogers' walls in the site office, it is impressive to see how he manages them simultaneously.

"The bigger the jobs get, the better this technology is for you," he said. "I couldn't do without it now and I simply wouldn't be able to run the projects in the same way without it. The RPAS technology in particular is a real game-changer – it's had a huge impact on our business for the better." □

