



New Technology for Field Managers



New Technology for Field Managers Quickens Pulse Rates all over the Site

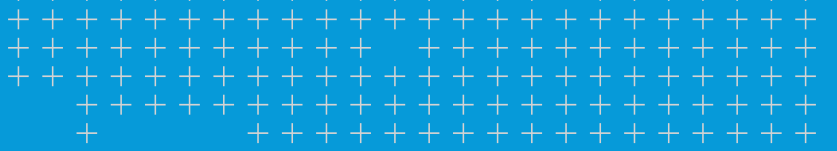
Western Earthmoving of Sydney, Australia, is empowering its field managers with access to the same digital positioning information used by its surveyors. Now the company's whole team is unified in eliminating uncertainty, saving time, and increasing productivity.

Solution

Trimble SitePulse System

Affordable and easy-to-use Site Positioning System

Find out more at [construction.trimble.com](https://www.construction.trimble.com)



overview

Western Earthmoving is a civil contractor that builds roads, subdivisions, services, and drainage. Most of their work is residential in Western Sydney and Wollongong in New South Wales. They currently have approximately 150 employees and 80 permanent subcontractors, and the business is growing all the time. At Western Earthmoving, Rhys Geerligs is one of four project surveyors.



Location
Sydney, Australia



CHALLENGE

Until recently, even though Western Earthmoving was utilizing a number of advanced site-positioning technologies, the company’s field managers couldn’t quickly determine current elevations on the job site. Rather, they had to rely on surveyors to provide the information.

SOLUTION

In order to equip its field managers with the same digital information, 3D constructible models, and GNSS positioning used by its surveyors; Western Earthmoving adopted the Trimble SitePulse system. This SitePulse system comprises easy-to-use software for a tablet device plus a GNSS receiver. The system enables field managers to locate features, navigate to points of interest, check issues, perform basic measuring tasks, and synchronize information in real time with the office. Western Earthmoving installed Trimble SitePulse on all its field managers’ vehicles, enabling staff to access the system’s benefits simply by driving around the job site. The company’s SitePulse systems are supported by its IBSS base station.

Success Means Getting Everyone Onboard

“We’re a civil contractor,” says Rhys Geerligs, project surveyor for Western Earthmoving. “Our clients give us an empty paddock and we give them lots they can sell.”

And there are more paddocks to carve up all the time—Western Sydney is experiencing sustained growth, and its train line and roads are being upgraded to further improve access to central Sydney and the CBD (central business

district). Western Earthmoving is just one of several similarly sized civil contracting companies working “flat out” on residential construction sites. For this reason, the company is always focused on maximum efficiency to complete jobs faster. Western Earthmoving uses GNSS and other positioning technology to enhance its productivity. Fourteen heavy machines use GNSS guidance onboard; an IBSS base station supports 43 systems, including GNSS rovers.

GNSS is an ideal positioning technology to use in Western Sydney due to the area’s wide-open space and each job site’s clear view of the sky. Each Western Earthmoving surveyor is equipped with a Trimble total station, but these are typically used only for fine work. All other tasks are GNSS based. Therefore, it made sense that when Western Earthmoving was seeking to improve the efficiency of field management, it would begin with a GNSS solution.



The Trimble SitePulse GNSS receiver sits on the vehicle’s bonnet, secured via a strong magnetic base. Inside the cab, the field manager and any passengers can view 3D digital site data on the field manager’s tablet device.



“The problem was that foremen didn’t have a clear idea what levels were like out on the paddocks,” says Rhys. “They were always asking surveyors to throw in a few pegs to have a look.”

The company was researching how to address this situation, when a visit by Rhys to their dealer, SITECH Solutions, unexpectedly coincided with the release of Trimble SitePulse.

Under instruction by the company accountant to research prices, Rhys was impressed that the Trimble SitePulse system was significantly cheaper than putting a full-blown system in a car. And the software would run on the existing tablet devices already being utilized by field managers.

Western Earthmoving adopted the system immediately, and within three months the workflow of their field managers was transformed, with the change impacting the wider team also. Trimble SitePulse allowed the company’s field managers to see all the information they need onscreen, for example, the linework of a road, the centerline, and lot boundaries. A 3D model of the finished surface level instantly showed how much cut or fill needed to happen onsite. “The system lets anyone easily picture where they are on a job,” says Rhys. “And it gives basic information only so non-techy people can see clearly because it’s very simple.”

Benefits

Trimble SitePulse has quickly become invaluable on Western Earthmoving job sites, and has surprised Rhys and his colleagues with unexpected additional benefits:

- ▶ Trimble SitePulse saves time for all members of the team.
- ▶ Field managers are less dependent on surveyors—they can determine current site levels and take rough measurements themselves.
- ▶ Not only field managers; but also engineers, machine operators, and other stakeholders now know what needs to happen and where. This increased understanding leads to fewer errors and delays, and increases productivity – teams can get to work straight away.
- ▶ Even non-technical personnel can easily read, interpret, and use Trimble SitePulse software.
- ▶ Site safety improves because personnel and visitors can monitor the site from inside a vehicle—away from machines and other hazards, and out of the intense Australian sun.
- ▶ The Trimble SPS585 GNSS receiver is flexible for use on a vehicle or rover pole.
- ▶ Soon Western Earthmoving will employ SitePulse reporting features, including geo-referenced photo taking, for even further benefits such as recording day-to-day tasks.



Each Western Earthmoving field manager is equipped with a company vehicle that can carry eight people. Now, all six vehicles have a Trimble SitePulse GNSS antenna mounted on the bonnet, and a tablet device is installed in the cab so that the driver and seven passengers, if necessary, can see the same information onscreen. Passengers can be anyone—from site engineers to operators, project stakeholders or other visitors.

“I just provide the site plan, the 3D model, and then the map of the job. The info is wirelessly uploaded to SitePulse through the Trimble Connected Community (TCC), then all three are overlaid on one screen,” says Rhys. Now, if anyone has a question about what needs to happen and where, field managers reply with, “Jump in and I’ll show you.”

Rhys estimates that Trimble SitePulse saves him at least a day and a half of time right from a job’s outset. “Normally at the start of each job I would have to peg the whole site just so everyone has an idea of what’s going on. Now I don’t have to.”

Machine operators save time also—an estimated half an hour every day. Rhys says the operators like having an idea before they start because “they don’t like doing the wrong thing”. They’re happier and more confident, and they get the work done faster. And with a lot less rework.

Full Adoption in a Few Short Weeks

Initially, reactions to the new Trimble SitePulse way of managing sites were mixed. Some field managers adopted the system in days, while others remained wary—they were unfamiliar with the new technology of 3D models and computerized linework. But once the early adopters were established with SitePulse, their enthusiastic recommendations persuaded colleagues. Within a month all of Western Earthmoving’s field managers were onboard.

“I was surprised how much our foremen use it,” says Rhys. “I thought they wouldn’t use it much, but one guy has it on in his car all day. He loves it. And the guys love jumping into the vehicle to look at the job.”

ONE TEAM, ONE DREAM

Western Earthmoving has a motto and it is “one team, one dream”. The unexpected result of adopting Trimble SitePulse is that it has strengthened the teams on each job site. Everyone has the information they need—the same information—in order to do their jobs more efficiently, more easily, and...just better.

Another of Western Earthmoving’s mottos is, “get rid of all the grey so it’s just black and white.” As far as Rhys is concerned, Trimble SitePulse has nearly gotten rid of all the grey. “No one’s confused. No one has to stop and ask questions,” he says.

Western Earthmoving’s use of the Trimble SitePulse system is set to evolve further as they incorporate the system’s reporting capabilities, including geo-referenced photographs for auditing day-today tasks. It’s possible that new unexpected benefits will reveal themselves...impacting, once more, the whole team.



Rhys Geerligns, center, with colleagues.

The company’s SitePulse-equipped vehicles carry up to eight people around the job site at one time.

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