



# Flexible Accuracy Adds Value to Environmental Services

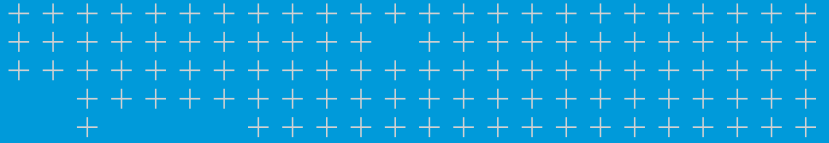


Real-time positioning improves efficiency in capturing environmental data.

A New Zealand company uses Trimble technology to adapt to varying conditions and requirements.

## Solution

Trimble Catalyst



# overview

In order to effectively manage and mitigate environmental problems, organizations need accurate information on the location and characteristics of site conditions. For many applications, environmental managers must rely on low-accuracy positioning techniques to collect data for site analyses. A low-cost, high-accuracy approach to GNSS positioning is transforming one company's work in solving environmental challenges.



Location  
NEW ZEALAND



Pattle Delamore Partners Ltd. (PDP) has used positioning for years. The New Zealand-based environmental engineering company works throughout the country on projects to quantify, manage and monitor environmental challenges. PDP engineers and scientists use GIS-based approaches to environmental monitoring. By combining position information with environmental data such as contaminants, water levels or soil conditions, they can develop comprehensive information about a client's site.

The ability to sample at the same location over time or determine approximate heights is a critical aspect of this environmental monitoring. Using GPS in smartphones was simply not accurate enough and surveying the locations using traditional survey methods was not economically viable. Given that for many projects centimeter level accuracy is not mandated, PDP sought a viable alternative to precision height surveys. What was needed was a cost effective solution that provided flexibility, required accuracy and accessible workflows for PDP's field crews.

## A FLEXIBLE SOLUTION

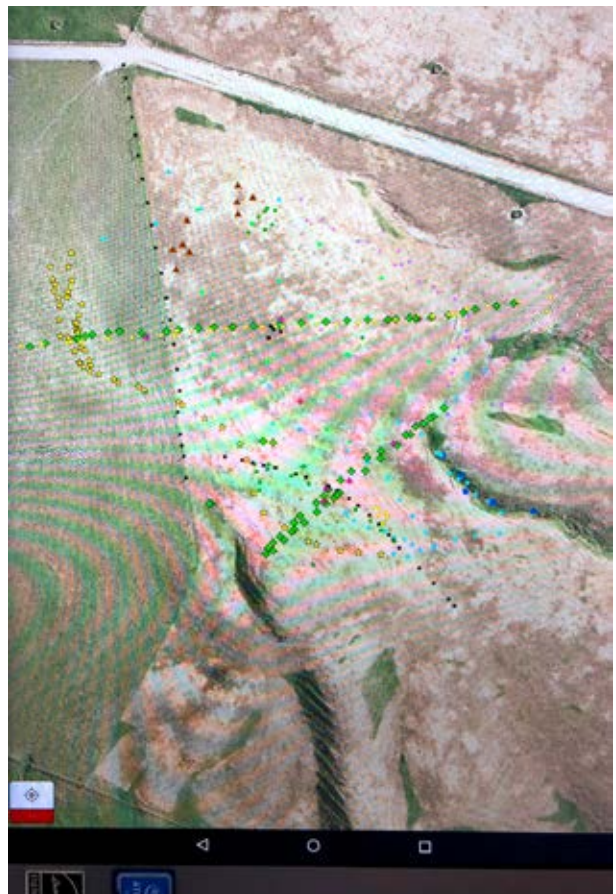
When Mat Darling, PDP's geospatial development leader, learned about Trimble® Catalyst™, an on-demand software based GNSS service, he recognized that it was an excellent match for the way their business operates. Catalyst allows crews to capture GNSS positions with high levels of confidence and reliability and at the level of accuracy required by their application. For example, when working on contaminated sites, access and revisits are tightly restricted and PDP technicians need to be sure they have accurate data and positions during the first (and often only) time on site. Using Catalyst and the Trimble DA1 antenna in conjunction with Esri® Collector for ArcGIS® running on an Android™ tablet or smartphone, they can obtain up to 2 cm accuracy, which is more than sufficient for their needs. Running in the background, Catalyst captures location data while technicians focus on collecting samples and information on toxic or hazardous materials, wells, sediments and other features.





PDP also works from historical aerial imagery to identify areas of interest. They can estimate a location from the imagery and then use Catalyst to navigate to the spot in the field. On-site examination and sensor readings can then pinpoint the location of abandoned underground tanks or other sources of contamination. Catalyst supports additional PDP projects including well monitoring, wetland ecology and geotechnical assessments.

In addition to locations, Catalyst provides positioning metadata that PDP stores with each dataset. The information enables PDP to enhance the quality of their services by documenting the time and accuracy of the GNSS positioning. "The added data helps us demonstrate a high level of innovation and performance to our clients," Darling said.





## SCALABLE ACCURACY

Accuracy plays a critical role in many PDP projects. For example, PDP often needs to locate groundwater or environmental monitoring wells that Darling says are “the size of a saucer.”

“It can take a long time to find them,” he explained. “Catalyst gives us in-field quality assurance that we’re all working the same location. We can quickly locate old sites and provide our clients accurate, high-quality data. We have 2 cm rather than 5 m accuracy.”

PDP can scale the Catalyst service to meet their accuracy requirements. The company shares its Catalyst licenses among its five offices across New Zealand, providing field teams with low-cost, high-accuracy GNSS capability when and where it is needed. The system doesn’t require extensive training or complex equipment and offers four levels of accuracy ranging from 2 cm to meter-level.

Once a job is completed PDP can deactivate its Catalyst subscriptions until the next project. “It’s quite easy to track the subscription and assign costs to a specific project,” Darling said. “Our clients see the value in speed, accuracy and confidence in the results.”



“With Catalyst we have better accuracy and more confidence in positioning. It gives us the ability to be more competitive and deliver superior service to our clients.”

— Mat Darling, Geospatial Development Leader, Pattle Delamore Partners Ltd.

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