



Stakeholder Submission

Department of Planning and Environment - Water
NSW Groundwater Strategy

Improve groundwater management decisions with
better information

Ontoto Pty Ltd

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1. Introduction

Ontoto designs, manufactures and supplies ultra-low power, low cost telemetry data logging solutions via NB-IoT and Satellite which is supported with a comprehensive cloud monitoring platform. We are located in the Southern Highlands of New South Wales and pride ourselves on offering solutions that are simple, cost effective and provide data with integrity.

Groundwater is such a vital resource, and we welcome the opportunity to be able to make this submission into such an important strategy.

Our submission relates to Strategic Priority 3: Improve groundwater management decisions with better information; Action 3.4. Expand our groundwater data collection; 3.4.1. Improve our groundwater monitoring infrastructure.

2. Improving our understanding of groundwater resources

To quote the draft groundwater strategy, “If you can’t measure it, you can’t manage it”.

Having access to reliable data enables appropriate and effective decisions and, most importantly, provides knowledge of the impact surrounding operations are having on the surrounding environment.

The key to mitigating the risk on groundwater resources is constant and effective monitoring and being able to respond to changes quickly. Traditionally data loggers have been devices that capture the data but required a site visit to gather that data. In remote areas this will mean a delay in understanding significant changes or events that are impacting the groundwater. By having access to regular data it's easy to be aware of changes that are happening and put into place immediate rectification solutions.

Providing monitoring solutions is not only about understanding the groundwater. More often monitoring is required in areas that are culturally and naturally sensitive. Therefore, there is a crucial need to minimise entry and works in these areas. Consideration should be given to implementation solutions that can be monitored and configured remotely which assists in protecting these sensitive areas.

3. Solutions for improving groundwater monitoring infrastructure

Improving the current groundwater monitoring infrastructure is a major undertaking however, the existing installations need not be completely replaced. By choosing the appropriate solutions, additional equipment can be retrofitted into existing assets.

Ontoto groundwater data loggers are designed to retrofit into current assets. We find this a most desirable attribute which our clients seek, as it allows them to maintain their current assets and extend their life into the future.

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New South Wales is vast with large areas that are remote and without urban infrastructure, such as accessibility to connectivity. Ontoto groundwater data loggers use either NB-IoT or satellite, via the Iridium constellation. Knowing that in many instances satellite is regarded as expensive both from a capex and operating expense aspect, we have designed our satellite data loggers to be similarly priced as the NB-IoT option. We provide satellite telemetry at a similar cost of cellular.

Suggestions of equipment that would be appropriate for the Department to optimise their existing monitoring network and align it with current and future management needs would be the following:

<p>Ontoto Solutions</p>	<p>Ontoto Astro</p> 
	<p>Ontoto Greyhound</p> 
<p>Product Overview</p>	<ul style="list-style-type: none"> • Compact and versatile datalogger • Ultra-low power consumption • Fully integrated cloud solution, ideal for long-term remote telemetry applications • Global coverage of the Iridium satellite constellation, the device can communicate in even the most remote environments • Designed to be easily installed at a greenfield site or as a retrofit • IP68 rating
<p>Benefits</p>	<ul style="list-style-type: none"> • Lifetime battery – 10 years plus • Bluetooth connectivity for device configuration via Ontoto Connect iOS/Android app • Optimised data usage with custom packet format to significantly reduce transmission costs • Real-time customer support and debugging via the Ontoto Connect mobile app

These solutions would assist the Department to meet their objective of asset maintenance to refurbish existing monitoring infrastructure with a manageable investment.

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4. Managing groundwater data

Data can only be useful if it is easily accessed and managed.

Ontoto data loggers gather rich and accurate information of the status quo. This information is relayed to a cloud-based database. The whole system is auditable, easy to maintain and transparent, and provides the current status of all sites.

To manage this data, the Ontoto Web Portal is a free cloud based suite of tools, which include data forwarding to SCADA and common third party vendors via API, csv, FTP, SFTP. The web portal has the following key features:

- Data visualisation
- Data transfer
- Device status
- Configuration of devices
- Email Alerts
- User Management

We offer device management portals for high level users, as well as on-site and off-site tech support. The features of the management portal are:

- Quality assurance
- Device production records
- Device commission records
- Device management
- SIM and data usage management
- Billing system
- Support ticketing system

5. Conclusion

We commend the Department on their approach to the development of this strategy so far. By the very nature of groundwater being unseen, it is often not realised how what we do above ground can affect this precious resource.

The tools that have been developed by Ontoto are to enable people to achieve the compliance easily and at a very affordable cost and at the end of the day that makes us all winners in protecting our environment.

Everything and everyone is dependent on the health of our environment. Clean water and abundance of natural resources is vital. At Ontoto we have designed our solutions to be so simple to use that there is no excuse to not protect our environment.

Ontoto would welcome the opportunity for further discussions with the Groundwater Team on this important strategy and how our devices could play a part.

