WATER

SAFETY SECTOR FORUM

A BYDA SUMMARY AND RECOMMENDATION

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BEFORE YOU DIG
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Zero Damage - Zero Harm

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INTRODUCTION

For professionals within the construction and urban planning sectors, as well as homeowners contemplating home renovations, Before You Dig Australia (BYDA) has served as a foundational resource for safe excavation practices for over three decades. BYDA facilitates access to vital safety guidelines and utility maps, establishing itself as an indispensable intermediary among the general public, construction experts, and utility proprietors. The provision of maps and data, while crucial, represents only a fraction of BYDA's commitment.

BYDA is dedicated to enhancing community safety through the provision of complementary educational resources and essential safety updates, designed to meet the needs of both for anyone working near utility infrastructure. BYDA ensures that all parties, ranging from major contractors to individual homeowners, are well-informed about the subsurface conditions of their project sites, thereby promoting safer project planning and implementation.

The water industry is one of the major stakeholders of the BYDA service, with the various water authorities owning and operating a vast network of water supply and wastewater infrastructure across the country.

Nevertheless, the water industry encounters several obstacles in safeguarding its infrastructure from the impacts of construction and excavation activities. These challenges encompass the following aspects:

- Insufficient awareness and adherence to the Before You Dig Australia (BYDA) service among contractors, consultants, and property owners, who may neglect to submit enquiries or disregard the information and guidelines provided.
- A misguided perception that water is “safe” and that damage will create a mess but no imminent risk of injury or harm.
- Lack of accuracy and timeliness of the asset information provided by utilities through the BYDA service, which may not reflect the current condition, location, or depth of the water utility assets.
- Lack of adequate training and skills within the construction sector, contractors and consultants who perform the digging and excavation works, which results in damage.
- Lack of effective monitoring and reporting of the damage incidents and the performance of the BYDA service, which hinders the identification and implementation of improvement measures.

BYDA is currently hosting a series of sector forums covering Water, Electricity, Gas/Petroleum, and Telecommunications, with a commitment to leveraging the collective insights garnered from the collective industry expertise and experience. The aim is to develop a strategic roadmap for transformative change and improvements. This initiative seeks to cultivate a more unified and collaborative working ethos not only between sector-based utilities but across the utility industry as a whole, driven by the active involvement of our members from each respective industry.

The primary objective is to pivot our collective efforts towards tackling critical challenges, such as the exchange of digital plans and improving the quality of information for all stakeholders as well as longer term goals of improved skills development within the construction sector. By doing so, we strive to ensure that the utility industry support BYDA evolving in tandem with the changing needs of its users, while also fostering greater collaboration within and across the various industry groups. In turn, this approach will enable BYDA to underpin this collective shift, continuing to champion safety outcomes not only in the present but also for the future.

THE BYDA REFERRAL SERVICE AND ITS BENEFITS FOR THE WATER INDUSTRY

The BYDA referral service is a free online platform that allows anyone who intends to dig or excavate to lodge an enquiry and receive information on the location of underground utility assets within the area of interest. The BYDA service operates as a single point of contact for the enquirers, who can access the information from multiple asset owners with one enquiry. The asset owners, who are the members of the BYDA service, are responsible for providing information and instructions on how to safely work around their assets. The enquirers are required to follow the information and instructions and report any damage or discrepancy to the asset owners.

The BYDA service provides several benefits for the water industry, such as:

- Reducing the risk of damage to water utility assets, which can cause service disruptions, environmental impacts, safety hazards, and financial losses.
- Enhancing the reputation and customer satisfaction of the water utility companies, as the prevention of damage can improve the reliability of supply by minimising disruption.
- Strengthening the collaboration and cooperation between the water utility companies and the other stakeholders of the BYDA referral service, including other asset owners, contractors, and regulators.
- Supporting the compliance with the relevant laws and regulations that govern the protection of the underground utility assets and the safety of the workers and the public.

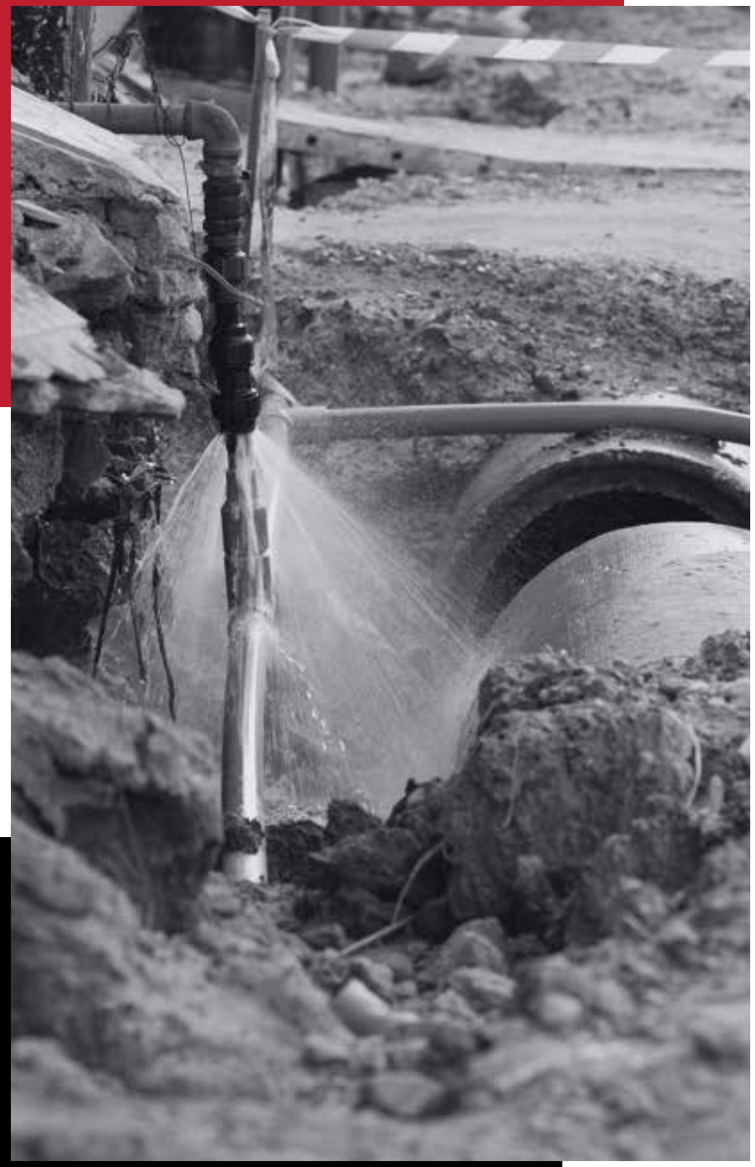
Despite the benefits of the BYDA service, the water industry still faces several challenges in preventing damage to its assets by construction and excavation activities. These challenges can be grouped into five categories: awareness and compliance, accuracy and timeliness, coordination and communication, training and skills, and monitoring and reporting.

AWARENESS AND COMPLIANCE

One of the main challenges facing the water industry is the lack of awareness and compliance with the BYDA referral service among the broader ground-breaking community which includes both construction and property owners who may not lodge enquiries or follow the provided information and instructions. This can result in the following problems:

- High risk of damage to water utility assets increases when excavation work/ground-breaking activity fails to adequately consider the location and proximity of these assets.
- Increased liability and financial burdens, when water utilities are covering the costs associated with repairing and restoring any damaged assets and services due to an inability to recover costs from those responsible for the damage.
- Reputational damage when the broader community experiences service disruption.

Discussed in depth during the BYDA water forum was the consensus that the broader community perceives water assets as “safe” or “low risk” - there is a complacency that is built on the assumption that damage to water pipes merely makes an inconvenient mess. One of the challenges that BYDA and the water sector can now focus on is showcasing the very real risks of injury and harm to workers as well as the environmental impacts when water and sewer assets are damaged. This can be done through case studies and shared incident information that can be promoted through BYDA education content, newsletters, and social media.



Similar to the challenges faced in the Electricity and Gas and Petroleum sectors, the Water industry also encounters difficulties due to the varied needs of BYDA's user base. The conventional approach of providing uniform information to everyone has contributed to user dissatisfaction with the BYDA referral service. Among the primary concerns are:

- The diverse requirements and preferences for data access and use across BYDA’s referral service user base, which ranges from residential DIY enthusiasts to Tier 1 construction experts. Currently, all users receive the same information in the same format, which does not cater to the specific needs of different groups.
- The lack of a representative voice for users means BYDA often acts as the advocate for the diverse needs of its referral service user groups, without a clear, unified direction.
- Establishing a more inclusive dialogue between asset owners and BYDA referral service users, is critical to ensure all parties are heard and to enhance the BYDA referral service as a trusted resource.

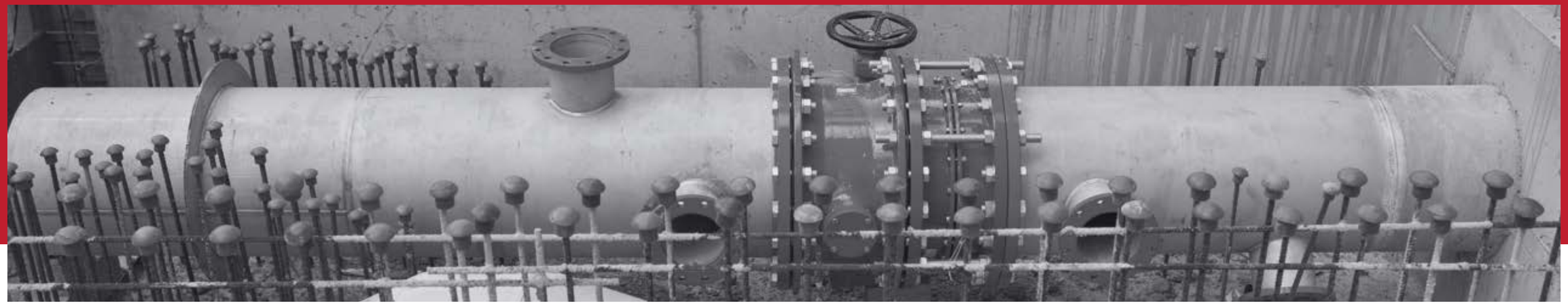
ACCURACY AND TIMELINESS

Another challenge facing the water industry is the lack of accuracy and timeliness of the asset information provided through the BYDA referral service resulting in plans which may not reflect the current condition, location, or depth of the water utility assets. This can result in the following problems:

- Increased risk of damage to the water utility assets, as the digging and excavation works may not be based on the correct or updated information on the asset location.
- Decreased confidence and satisfaction by users of the BYDA referral service, as they may not trust or rely on the information provided by the utilities.
- The issue of timeliness also applies to Water Authorities requiring plans from other asset owners, this is particularly critical when needing to respond to emergency repairs. Members attending the BYDA water forum raised concerns about some asset owners having a 6 hour wait time and beyond for plans to be issued through BYDA and a lack of clear process and support for emergency situations.

Some of the possible reasons for the lack of accuracy and timeliness of the asset information are:

- Lack of resources and capacity within the water utilities for updating and maintaining the asset information, including systems to collect, verify, or store the information.
- Lack of enforced standards, regulations, or policy to mandate the minimum accuracy for asset location plans.
- Lack of feedback and verification loops with the construction sector to assist in updating location accuracy where as builds, surveyor drawings or locator markings have shown the utility plans provided were incorrect.



The concerns raised by participants in the Water forum mirror the feedback BYDA has received. A survey of 200 frequent users of the Before You Dig Australia (BYDA) service calls for significant changes. Many users stressed the need for BYDA to move to digital delivery of information. At the same time, there's growing worry about the accuracy and consistency of the plans provided. Now, as new apps introduce digital and augmented reality views of assets, BYDA faces the threat of digital disruption in Australia.

The current situation jeopardises BYDA's role as a trusted information source, pushing users to choose digital convenience over vital safety information and asset owner support. This issue isn't just about digital adaptation; it's about service fragmentation, reduced transparency, and the dangers of uninformed asset-related activities, driven by outdated formats like PDFs. If BYDA fails to address plan accuracy, repetitive responses, and outdated format inefficiencies, the system's future is at risk. Decreased member engagement in change efforts makes BYDA even more vulnerable to digital competitors and open-source data.

The stakes of standing still are high. Asset owners might lose oversight over nearby operations, reducing their ability to communicate crucial safety protocols. This could lead to more asset damage, injuries, and operational inefficiencies. Now is the time for BYDA and its members to embrace proactive change, ensuring the system remains reliable, efficient, and focused on safety.

TRAINING AND SKILLS

Participants in the forum unanimously recognised the need for enhanced advocacy for skill development in the construction sector.

Key areas identified for improvement include:

- Integrating basic utility risk awareness, the use of the BYDA service, and reading plans of utility infrastructure into the standard White Card training for new entrants into the construction workforce.
- Incorporating basic damage prevention principles and utility plan reading into apprenticeships for key trades involving ground-breaking activities.
- Implementing a licensing program for excavator operators that covers training on utility risks, damage prevention, and plan reading. This area is notably a significant gap within the construction industry.

MONITORING AND REPORTING

A critical issue for the water industry is the lack of comprehensive monitoring and reporting of damage incidents and their effects on the BYDA service's performance. This deficiency may impede the identification and implementation of necessary improvements, leading to:

- An increase in both the frequency and severity of damages to water utility assets, as the underlying causes and ramifications of these incidents may not be thoroughly analysed or rectified.
- A decline in the efficiency and effectiveness of the BYDA service since its strengths and areas for improvement might not be adequately assessed or enhanced.
- Diminished opportunities for learning and innovation among water utility companies and other BYDA stakeholders, as the insights and potential advancements from analysing damage incidents and service performance are not fully captured or disseminated.

Potential factors contributing to the insufficient monitoring and reporting include:

- A shortage of resources and capacity among some water utility companies for collecting and analysing data on damage incidents and service performance. This includes limitations in systems for gathering, processing, or storing this data.
- An absence of uniform standards and consistency in how damage incidents and service performance data are recorded and reported among some water utility companies and other stakeholders. There might be variations in the format, frequency, or quality of the data shared.

BYDA has introduced a Damage Data Dashboard designed to collect data on damage incidents from members across the electricity, gas, telecommunications, and water sectors. The dashboard utilises a simplified template, requiring only seven anonymised fields that aim to document the essentials: "what, where, and when" of each incident.

This template has been distributed to all forum participants, with the objective of incorporating the collected incident data by June 2024. This inclusion is vital for ensuring that the water sector is represented in BYDA's forthcoming trend analysis report and economic impact modelling, scheduled for development in the latter half of 2024.

CONCLUSION AND FUTURE DIRECTIONS

BYDA is spearheading efforts to foster a culture of enhanced damage prevention to support the needs of the utility sectors. Prioritising the needs of end users and advancing digital innovation, all while holding the goal of zero damage and zero harm as paramount in its services. Recognising the vital role of the BYDA referral service as an essential safety tool, BYDA is committed to ensuring that its platform is valued by all its users no matter their motivation to break ground, from Tier 1 construction to DIY users and everyone in between.

Moving beyond the industry's traditional isolated operations, BYDA is advocating for a paradigm shift. It envisions a future where asset owners perceive themselves not merely as individual utility organisations but as integral parts of an expansive underground network. This shift towards a collective mentality is crucial for developing practical, experience-driven strategies for change as well as pathways for digital innovation.

Central to BYDA's strategic plan is not only a dedication to digital enhancement and user experience improvement but also a robust initiative to promote skills development within the construction sector. Recognising the need for specialised knowledge and competencies when it comes to safe work near utility infrastructure, BYDA is actively advocating for and supporting education programs. BYDA is committed to working with members to advocate for training programs that are designed to elevate the standard of work within the industry. Feedback from the sector forums suggest BYDA should focus advocacy efforts on improved white card training that encompasses basic utility risk awareness and damage prevention principles, as well as utility plan reading in key trade apprenticeships and a licensing program for excavators.

Furthermore, this year signifies a key milestone for BYDA with the launch of the Damage Data Dashboard. This innovative platform is set to revolutionise how damage incident data is collected from the Electricity, Gas, Telecommunications, and Water sectors. By employing a simplified template that captures the critical "what, where, and when" of incidents, the dashboard aims to foster widespread participation among members. This tool is instrumental in BYDA's strategy to include comprehensive incident data that supports trend analysis and economic impact models, enhancing the safety and efficiency of underground asset management.

Nonetheless, transformation is a collaborative endeavour; it cannot be achieved by BYDA in isolation. Success hinges on a shared commitment to digitisation and a concerted effort to enhance the end user experience by all member utility organisations. It is essential that members are willing and able to collaborate and provide support to BYDA through their expertise and insights, fostering a united front as an infrastructure industry in the pursuit of innovation and improved safety practices.

To learn more about how you can get involved with BYDA and its initiatives to work across the utility, infrastructure and construction industry to achieve zero damage – zero harm, please contact CEO Mell Greenall via mell.greenall@byda.com.au