

Before You Dig Australia submission to the Productivity Commission's Interim Update no.1 on National Water Reform 2026

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About Before You Dig Australia (BYDA)

Before You Dig Australia (BYDA) is a national not-for-profit organisation that operates Australia's primary referral service for underground utility asset location information. BYDA has over 850 asset owner members across the water, electricity, oil, gas and telecommunications sectors, as well as local councils and some non-utility asset owners.

BYDA also has over 700,000 registered service users and processes more than 2.7 million requests for underground utility asset location plans annually.

BYDA's mission goals – Zero damage, Zero harm, Zero disruption – are directly relevant to this National Water Reform Interim Update no.1 as it addresses its own three inter-related goals for Australia's water services industry, namely:

- **Secure water services** that are available, safe, accessible and affordable, with water-related risks managed to acceptable levels.
- **Resilient water services** that adapt to adverse events (including infrastructure failures), recover quickly, and maintain minimum performance thresholds.
- **Sustainable water services** that meet current needs without creating costs that undermine future generations.

Overview

BYDA welcomes the opportunity to make this submission to the Productivity Commission's National Water Reform Interim Update no.1. The Commission explicitly identifies infrastructure failures — alongside cyber incidents, climate events and contamination — as a primary threat to water service continuity.

Critically, the Commission warns that deferred maintenance and under-investment in asset renewal potentially create larger future costs and poorer service outcomes for consumers and reduced welfare benefits for future generations.

This framing is directly relevant to BYDA's mission: excavation strikes on water assets are a leading cause of both sudden service disruption and cumulative infrastructure degradation.

1. Infrastructure failure as a central resilience risk

The Commission's definition of resilience - resistance, recovery and robustness - directly reflects the consequences of utility strikes on water infrastructure. Damage to water mains, sewer lines, stormwater assets and treatment infrastructure by excavation work – whether accidental or deliberate - causes immediate service disruption, triggers costly emergency repairs, and accelerates asset degradation.

Yet neither this Interim Update nor the broader national water reform agenda currently identify excavation damage prevention as a lever for improving infrastructure resilience.

2. Asset management, investment efficiency and data quality

Another recurring theme of this Interim Update no.1 is the need for better asset data, long-term capital planning, and proactive management of ageing infrastructure.

The Commission highlights that utilities often defer maintenance and investment under short-term pricing pressures but it does not address the compounding effect of third-party damage on asset condition and lifecycle costs. Unrecorded strike events, data gaps in utility asset location records and poor-quality building designs are all factors that inflate the cost of managing water infrastructure over time.

BYDA's research¹ shows that improving underground asset data quality and accessibility — including minimum standards and digital data sharing — **could save \$782 million annually** across the economy.

3. National data standards and reporting consistency

Similarly, the Commission rightly identifies the need for consistency of national data standards, sharing, management and reporting.

Chapter 4 of the Interim Update no.1 contains a detailed reform direction on nationally consistent reporting on drinking water quality, including a recommendation that reporting standards be legislated under the Water Act 2007 (Cth). The Commission recommends centrally collated, standardised, transparent data to drive investment prioritisation, public accountability and regulatory effectiveness.

This position is identical to BYDA's case **for national minimum data standards for underground asset location information**. The same drivers — inconsistency, fragmentation, poor public accountability, inability to compare across jurisdictions — that the Commission identifies in water quality data apply equally to the spatial data describing the location and condition of buried water assets.

¹ <https://portal.byda.com.au/wp-content/uploads/2024/11/BYDA-Economic-Assessment-of-Utility-Strikes-in-Australia-2024.pdf>

4. Regulatory burden, coordination and compliance gaps

The Commission acknowledges that water utilities operate under multiple regulatory regimes — environmental, public health, drinking water, planning and economic — and that poor coordination creates duplicated burdens, inconsistent signals and cost uncertainties.

BYDA's reform agenda² similarly addresses regulatory fragmentation: currently, only NSW mandates use of the BYDA referral service before excavation (and only for electricity and gas assets). **The absence of a national 'no plan, no dig' mandate is a significant systemic gap.**

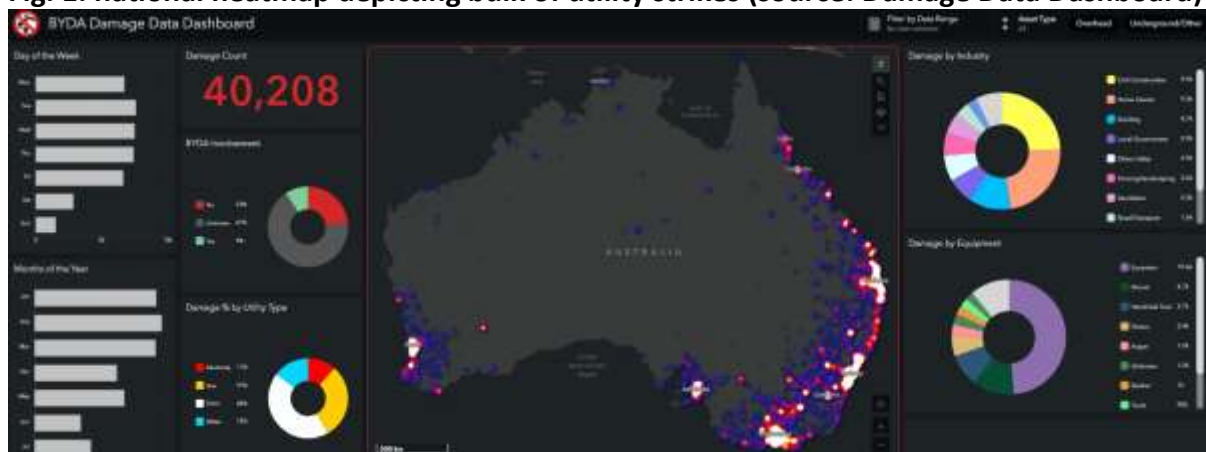
5. Governance, accountability and role clarity

The Commission identifies a need for clearer separation of roles between governments, regulators and utilities and for transparent, accountable decision-making on trade-offs.

A similar governance gap exists in the underground asset environment. Responsibilities for maintaining accurate utility asset location records, enforcing pre-excavation enquiry obligations and responding to utility strikes are distributed across multiple agencies with no clear national framework.

Again, this reflects the risk presented by a fragmented ecosystem with shared consequences in the event of utility strikes and underscores BYDA's headline concern that if nothing changes, the next fatality or outage will **not** be a surprise, but a choice.³

Fig. 1: national heatmap depicting bulk of utility strikes (source: Damage Data Dashboard)



²https://www.byda.com.au/wp-content/uploads/2026/03/Australias-Underground-Utility-Safety-Reckoning_BYDA_screen-preview.pdf

³https://www.byda.com.au/wp-content/uploads/2026/03/Australias-Underground-Utility-Safety-Reckoning_BYDA_screen-preview.pdf

6. Regional and remote vulnerability

Chapter 3 identifies that water services in regional and remote communities face structural barriers — smaller customer bases, ageing infrastructure, limited technical capacity and climate exposure.

With forecasts of significant population growth (such as the Victoria's Government's expectation of reaching 10 million people by mid-century, requiring substantially more infrastructure⁴), regional communities are also the least likely to benefit from voluntary damage prevention behaviours and are most exposed to undetected excavation damage to poorly mapped assets.

While the bulk of utility strikes unsurprisingly occur in urban and peri-urban built-up areas on Australia's eastern seaboard (Figure 1), the case for mandatory BYDA enquiries and minimum data standards is especially strong in the regional context.

To address the above concerns and drawing on BYDA's practical operational experience and evidence base, our submission makes four recommendations to expressly call out **excavation damage prevention and utility location data standards supremacy as missing pillars of national water infrastructure resilience.**

Recommendation 1: Express recognition of utility damage caused by construction, excavation and other ground-disturbing activity

The Commission's National Water Reform Interim Update no.1 does not specifically include excavation damage or any form of ground disturbance as a threat to the security, resilience or sustainability of Australia's water services.

Therefore, BYDA recommends that Interim Update no. 1 **expressly includes utility damage against critical water infrastructure caused by construction, excavation and other ground-disturbing activity** as a material risk to the security, resilience and sustainability of Australia's water services.

This risk is significant, foreseeable and well evidenced across infrastructure sectors. Current **BYDA data indicates that there are more than 15,000 reported utility strikes each year as a result of third-party construction and other excavation activity.** The true number is likely two to three times higher. This figure as evidenced in BYDA's 2024 Economic Assessment of Utility Strikes in Australia⁵ put the cost to the Australian economy of over \$4.6 billion per year in indirect and social costs, 32.4 times higher than direct repair costs.

⁴ https://www.planning.vic.gov.au/_data/assets/pdf_file/0033/739473/Final-Plan-for-Victoria-For-Web.pdf

⁵ <https://www.byda.com.au/wp-content/uploads/2026/02/BYDA-Economic-Assessment-of-Utility-Strikes-in-Australia-2024.pdf>

Fig. 2: key findings from the 2024 Economic Assessment of Utility Strikes in Australia report



Accidental or deliberate strikes to underground assets can damage or compromise physical critical components, including water and wastewater assets, alongside other buried utility services. The consequences can include disruption to essential services, public safety incidents, environmental harm, loss of asset availability or reliability, costly emergency repairs, and cascading impacts across interconnected infrastructure sectors.

Recommendation 2: National pre-excavation BYDA mandate before water infrastructure construction, renewals and maintenance

BYDA calls on the Productivity Commission to recommend that all Australian jurisdictions amend their WHS legislation, water industry acts and relevant planning and construction regulations to legally require a BYDA enquiry before any excavation work commences near buried water utility assets.

Specifically, BYDA recommends:

- Extension of mandatory pre-excavation enquiry requirements to all regulated utility asset classes, including water supply, wastewater, stormwater and recycled water infrastructure, across all jurisdictions.
- Alignment of this requirement with the National Water Agreement, to be included as a condition of Commonwealth funding support for water infrastructure.
- A national compliance framework that enables consistent enforcement by WHS regulators, water regulators and planning authorities.

Recommendation 3: Minimum data standards for underground water utility location

BYDA also calls on the Productivity Commission to recommend that the federal government legislates minimum data standards for underground water utility asset location information, consistent with the Commission's proposed approach to reporting standards governing - for example - drinking water quality.

These standards should:

- Require all water asset owners, including state utilities, local government water utilities, and small regional providers, to maintain digital, spatially accurate asset location records at defined minimum quality levels.

- Mandate provision of asset location data in digital, machine-readable formats through approved referral services, replacing static PDF plan delivery over a defined transition period.
- Adopt the existing Australian Standard AS5488:2013 (Classification of Subsurface Utility Information)⁶ as the national baseline for data quality classification, with a pathway to Quality Level B or above for all actively managed water assets.
- Establish a national underground asset register or federated data framework drawing on international models, including the UK's National Underground Asset Register, to enable consistent, secure and spatially integrated access to water utility location data.

BYDA further recommends that the National Water Reform recognises the **Before You Dig Australia process, including the BYDA Digital Utility Portal (BDUP)⁷, as an established mechanism** for achieving this goal.

For this objective to be achieved, responsible entities and water utility asset owners must ensure that accurate, current and usable utility location information is available through BYDA. This should include the sharing of digital utility location data with BYDA, including GIS-based asset location information where available, so that project owners, designers, contractors and excavators can identify the presence and approximate location of underground assets before construction or excavation activity begins.

The BYDA process and BDUP support responsible entities to reduce the likelihood of water utility damage, accidental or otherwise, by improving the availability and use of utility asset information at **the planning, design and delivery stages of works**. BDUP is particularly important because digital utility location information can support better integration of utility data into construction planning, design coordination, geospatial analysis, permit-to-dig processes, project risk assessments and field-based excavation controls.

BYDA recommends that the guidance identify both sides of the control mechanism:

1. **Asset owner / utility obligation:** utilities and responsible entities should provide BYDA with accurate, current and fit-for-purpose utility location data, including digital GIS location information where available, and maintain processes to update that data when assets are installed, modified, relocated, decommissioned or otherwise materially changed.
2. **Excavator / project delivery obligation:** project owners, contractors, designers and excavators should make BYDA enquiries and use BDUP information before undertaking excavation, construction or other ground-disturbing activity.

⁶ [AS 5488-2013 Classification of Subsurface Utility Information \(SUI\)](#)

⁷ <https://portal.byda.com.au/wp-content/uploads/2025/10/Boosting-productivity-strengthening-safety-The-BYDA-Digital-Utility-Portal.pdf>

Suggested controls for inclusion:

- Require responsible entities and utility asset owners to share accurate and current utility location data with BYDA, including digital GIS location information where available;
- Maintain internal processes to ensure BYDA records are updated when water utility assets are installed, altered, relocated, exposed, abandoned, decommissioned or otherwise materially changed;
- Require BYDA enquiries before excavation, construction or other ground-disturbing activity commences;
- Use the BYDA Digital Utility Portal to obtain, manage and apply utility asset information relevant to proposed works;
- Embed BYDA / BYDA Digital Utility Portal requirements in procurement, contractor management, permit-to-dig, construction approval, safe work method statements and project risk management processes;
- Ensure utility plans, digital utility information and relevant asset owner conditions are provided to designers, planners, supervisors, workers and contractors before works commence;
- Require appropriate site verification practices, such as electronic detection, potholing or other non-destructive location methods, where required by the asset owner or the risk profile of the works;
- Maintain escalation processes where utility information is unclear, incomplete, inconsistent, unavailable or indicates the presence of critical assets;
- Maintain incident response and notification processes for suspected or actual utility strikes; and
- Periodically test and review compliance with BYDA / BYDA Digital Utility Portal requirements as part of contractor assurance and audit activity.

Recommendation 4: National data insights to support regulation and enforcement

BYDA calls on the Productivity Commission to recommend that national data collected through mandatory pre-excavation enquiry services be made available to water and WHS regulators to enable targeted enforcement, performance benchmarking, and evidence-based policy development.

This would enable:

- Identification of high-risk excavation corridors and asset classes, allowing regulators to direct compliance activity where it will have greatest impact.
- Performance reporting on utility strike rates by jurisdiction, asset class and excavation type — consistent with the Commission's broader calls for transparent, comparable national data on water service outcomes.

- Integration of damage prevention metrics into economic regulatory frameworks, including as a condition of regulated asset base recognition and maintenance allowances for water utilities.

Conclusion

The Productivity Commission's National Water Reform 2026 Interim Update no.1 provides an important, timely platform for advancing the reforms Australia needs to protect its buried water infrastructure from preventable excavation damage. The Commission's own framework - secure, resilient and sustainable water services - is directly undermined by the current absence of national excavation safety mandates, minimum data standards and consistent regulatory oversight.

Our submission and recommendations are a broad response to the overall Interim Update, rather than addressing all individual questions posed by the Commission. Before You Dig Australia has the evidence, the platform and the national reach to support these reforms. With more than 15,000 reported utility strikes annually costing the economy \$4.6 billion, and with BYDA's research demonstrating that targeted reforms could return over \$1.1 billion in annual savings, the case for our recommended reforms is clear.

BYDA's four recommendations plus the additional inclusion of our Digital Utility Portal (BDUP) as an established mechanism for achieving the Commission's goals of secure, resilient and sustainable water services do not require building new systems. Instead, they call for the strengthening of the legal and regulatory environment to protect Australia's existing underground utility infrastructure ecosystem so it can operate effectively.

BYDA strongly encourages the Productivity Commission to include these reforms in its final report and recommend they be incorporated into the renewed National Water Agreement, relevant Commonwealth legislation and jurisdictional water industry and WHS legislation. We believe our submission is timely, evidence-based and strategically aligned with the Commission's own reform directions, strengthening the case for national legislative and data reform. We are only too happy to provide upon request further evidence, data, and expert input at any stage of the inquiry process.

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