17th July 2025

BRIEFING - COSTS AND RISKS OF NEW ZEALAND UNDERGROUND ASSET REGISTER

Knowledge of the locations of underground assets, such as water pipes, internet cables, and power lines, is vital to maintaining our infrastructure, protecting the safety of workers, and ensuring works do not do inadvertent damage.

beforeUdig is a privately-developed, privately operated and commercially-funded online service that has been operating for more than 15 years. It enables anyone undertaking excavation works to obtain information on the location of underground pipes and cables in and around any proposed dig site.

The New Zealand Underground Asset Register is being developed by Wellington City Council with $4m in government funding (via the previous Labour Government's Three Waters Better Off programme) as a pilot for a nationwide system. The NZUAR seeks to duplicate the functions of the existing privately operated system, beforeUdig, but it takes a riskier approach to protecting underground infrastructure, is less comprehensive, will require legislation to be effective, and will come at significant cost to taxpayers and/or ratepayers.

We recommend that the Government back the use of the existing commercially-funded provider, beforeUdig, rather than putting taxpayer money into an inferior duplicate.

CURRENT APPROACH WORKS

beforeUdig has been providing its information to people planning excavations for 15 years. We developed and improved over the years by industry experts working directly with the utilities and others who own the underground assets. We cover 100% of major utilities outside of Christchurch (and are working to extend our coverage there). We cover 186 utilities and asset owners, handle nearly 200,000 dig site enquiries a year, and provide over 900,000 notifications annually to utilities and asset owners in response to those queries. beforeUdig operates similar services in Ireland, Luxembourg and Singapore and as part of a

joint venture in the UK called LinesearchbeforeUdig (LSBUD). Our service is free to use by anyone excavating and the costs are covered by the utilities and asset owners, who benefit from having their assets protected and keeping the general public safe from harm.

For information on underground assets, it is best to have a single source of information that people can rely upon. There is no need for a taxpayer-funded attempt to duplicate beforeUdig, especially not one that is being developed by government and council officials, without comprehensive sector buy-in.

beforeUdig has worked hard to establish standards in the industry with the introduction of the beforeUdig Locator Certification and has also provided seed funding to establish NULCA NZ (National Utility Locators Association). Additionally, Safe Digging Month campaign is an initiative of beforeUdig and has been supported by Chorus, Eon Fibre, Wellington Electricity, First Gas, PowerCo among other key utilities.

'FRICTIONLESS' APPROACH INCREASES RISKS

beforeUdig allows people to request information from asset owners about their assets below a specified area of land via an app or website portal. Asset owners receive the request and have up to two business days to respond, with many responding immediately using beforeUdig's automated plan response engine. This means those excavating for urgent and unplanned works can access cable and pipe location no matter the time of day or night.

This approach allows asset owners to be aware of impending works around their assets, assess risks and tailor their response if necessary. For example, special procedures may be notified to protect particularly important infrastructure, or a utility may want to send a person to the site to monitor the work.

The NZUAR approach forgoes that protection. Known information about assets is simply provided on a map on the app. While this instant access seems appealing at first, it means

asset owners are not made aware of works around their infrastructure and workers on the site will not be aware of any special requirements for that particular site. For example, some works may be relatively low risk, but for others a mistake could knock out internet access for hundreds of households. In these cases a utility provider may wish to send an inspector out to supervise the dig. The risk of something going wrong is much higher under the NZUAR approach.

This is a prime reason that utilities do not like to have detailed maps of their infrastructure in the public sphere - for instance, Chorus recently had a map of their assets removed from a website that posted it without permission.

MISLAID CONFIDENCE IN INCOMPLETE DATA

The NZUAR map is also likely to make users over-confident in the quality of the information provided when, in fact, the app does not cover all major utilities and may not be fully up to date. Just because the app shows there is nothing beneath a planned dig site does not make it so. Utilities often have incomplete information about their own networks, meaning an online map risks giving an unwarranted sense of certainty.

In the United Kingdom, internet providers are expressing concerns about the planned nationwide UAR, with questions about how frequently information will be updated and the costs of doing so.

Similarly, beforeUdig is enabling a function to let users inform asset owners about unregistered assets found underground, allowing the owners themselves to investigate and catalogue the information. NZUAR will allow any user to upload information from a dig site directly to the app. This risks lowering the quality of information and creating disparities between information in the app and what is held by asset owners.

DATA SECURITY RISKS

NZUAR's approach would effectively publish the data on New Zealand's underground infrastructure to the world. This creates obvious data security and physical security risks. The data itself could be corrupted or used for nefarious ends by unintended actors. The responsibility for data security will be shifted from the utilities and other asset owners who currently handle it to NZUAR, Wellington City Council, and, potentially, the Government.

INCOMPLETE NZUAR LIKELY TO REQUIRE LEGISLATION TO FUNCTION

The NZUAR is based on the National Underground Asset Register currently being developed in the United Kingdom. Legislation is currently being developed to enable the NUAR to mandate utilities and asset owners to provide information. As stated above, utility networks, in particular, are not in favour of providing public access to complete maps of their assets. A recent consultation by the UK Government found legislation will be necessary to achieve 100% participation in the NUAR by asset owners.

The New Zealand Government would similarly need to force asset owners to participate via legislation to achieve a comprehensive NZUAR; several major utilities are not joining the Wellington pilot. This is likely to be burdensome for asset owners, which will be added to regulatory compliance costs and added expense in converting data to be compatible with NZUAR. We do not believe this would pass the rigorous cost benefit analysis and economic efficiency tests laid out in the Government's coalition agreements.

COSTS TO TAXPAYERS AND INDUSTRY

The pilot NZUAR for Wellington is set to cost $4m from the central government alone. It will have ongoing operating costs for the council, which it intends to partially recoup by charging a one-off fee of $169 when an applicant applies for Corridor Access Request for excavation work. This fee may be outside of the authority of the Local Government Act. Further roll-out of NZUAR would carry significant costs to taxpayers. For comparison, the UK's NUAR has cost £50m so far and is still not fully operational.

There is no reason to go to the expense of creating an inferior tool and forcing asset owners to hand over their data to a public database, when beforeUdig already exists and is functioning to the satisfaction of users and asset owners.

BEFOREUDIG RECOGNISES THE VALUE OF THE UNDERGROUND ASSET REGISTER AS A SPATIAL PLANNING TOOL ONLY

BeforeUdig recognises the strategic value of an underground asset register as a resource for spatial planning. This register should only be used to assist infrastructure planners by providing early visibility of underground utilities during initial project investigations.

For instance, planners can quickly identify where utilities intersect with proposed work corridors or determine whether existing infrastructure can accommodate expansions, such as new hospitals, schools, and housing developments. However, if used as an excavation tool, the register will undermine existing processes implemented by asset owners and the majority of utility owners to enable safe digging near their assets and prevent damage to critical services.

beforeUdig has been working with and trusted by utility asset owners and the excavation industry since 2008 to prevent damages, keep workers safe from harm, and ensure a continuous supply of essential utility services to the community. Any change to the current system will not only increase the risk of further incidents of damage and outages but also put workers' lives at risk. Since its inception, beforeUdig has significantly reduced incidents of harm, fatalities, major incidents, and widespread outages caused by damage to underground utility infrastructure through excavation works.

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