Submission to Productivity Commission inquiry into infrastructure costs

Executive Summary

Costs of infrastructure projects in Australia, particularly in urban areas, are inflated by risks associated with existing underground networks, especially utility assets. Sometimes these risks are priced into tenders, sometimes they are not. Inevitably, though, incidents of damage to underground assets occasioned by excavation activities during construction projects lead to higher project costs. Failure of both construction contractors and network owners to implement correct processes to minimise risks of such incidents are common. The national Dial Before You Dig service is integral to safe excavation practices and should be incorporated into the processes of all parties involved in infrastructure construction projects and also the owners of underground networks which are vulnerable to such construction activity.

1. What is Dial Before You Dig

Dial Before You Dig is a nation-wide, member-based association that provides a free national community service, connecting contractors with infrastructure owners of underground services, via a fast and effective referral system. We provide a single point of contact for excavators to receive vital information about underground networks at their planned excavation site. Nationally, we receive more than 900,000 requests per year and disseminate more than 4 million referrals to our Members.

1.1 Who are Dial Before You Dig’s Members

Dial Before You Dig’s Members are owners and operators of (mostly) buried network infrastructure. Presently, over 500 such organisations protect their underground infrastructure through their membership of Dial Before You Dig. (View our full listing of Dial Before You Dig members on our website http://1100.com.au/assetowners/memberlinks)

However, as a member-based association, our service requires asset owners/operators to become Members.

1.2 Who are not Members of Dial Before You Dig

Non-membership of various state & local road authorities (including Vicroads and their vast buried road-related infrastructure), numerous local governments (road reserves, water, drainage, electrical & communications infrastructure), many water authorities (sewerage, mains & stormwater) and rail providers (electrical & communications), among others, continue to cause problems for construction contractors who try to do the right thing in meeting their duty of care to protect public assets. Non-membership of Dial Before You Dig effectively renders invisible the buried infrastructure owned by these network owners.

2. Impact of disruptions to underground services

Over a 3.25 year period until October 2012, recorded damages to telecommunications network alone, caused by civil construction and utilities’ contractors, totalled over 15,900 incidents. Community impact is massive, the dollar costs unquantifiable.
The majority of such incidents occur in public spaces and their impact is multifarious, including business disruptions due to service outages, extended road closures, project delays pending preliminary investigations and remediation, work safety issues, inflated insurance premiums and, ultimately, higher project costs.

2.1 Cost impacts on projects

Financial costs associated with disruptions to underground services arise from many factors and impact current or future project costs in different ways.

2.1.1 Remediation costs

Typically, network owners seek financial remedy, from either the actual perpetrator of damage or the principal contractor, by issuance of a demand letter or further legal action pursuant to common duty of care and negligence principles.

See Case Study 2 provided in the attached Appendix.

2.1.2 Project delays or re-designs

Disruptions to underground network caused during the course of construction activity typically create delays to works while investigation and remediation is performed on affected network services. Depending on the seriousness and scale of the incident, delays can range from hours to days or weeks.

On occasions, projects under construction are forced to be re-designed in whole or in part due to inadequate planning around pre-existing infrastructure.

See Case Study 4 and Case Study 7 provided in the attached Appendix.

2.1.3 Insurance costs and premiums / Risk-based pricing by insurers

The history of network disruptions and subsequent claims caused by excavations and civil construction activity has fed into costs of insurance premiums for like projects. OAMPS is known to have quoted $50,000 excess for claims made for damage to optic fibre network.

2.1.4 Contract failure 1

The failure of principal contractors and sub-contractors to identify the ‘Dial Before You Dig process’ in drafting of construction contracts is a frequent cause of poorly scoped agreements, leading to a range of problems in the latter stages of delivery.

A prime example of such a situation is seen in NBN construction projects around the country, where new optic fibre installations by construction contractors remain unprotected for several months between the remediation/construction and final testing/activation stages, a period generally of between four and eight months. This was due to neglect of the ‘Dial Before You Dig process’ by all parties to the contracts during their drafting. Subsequently, construction contractors have refused to undertake responsibility for providing design plans or as-built plans.
to 3rd parties undertaking separate works in the vicinity of recently installed or soon-to-be installed optic fibre network under nature strips and other public spaces. Given NBN Co’s policy to assume such responsibilities for network only at the testing/activation stage, there is frequently a period of 4 months or more where new optic fibre is installed underground yet no process exists to supply any information about its whereabouts to 3rd parties.

This oversight continues to cause significant complications for 3rd parties such as civil contractors, locating contractors and other utility operators who undertake works within proximity to new or impending NBN installations yet are frequently unable to obtain meaningful location information through normal channels (see Appendix 2 for a recent example).

In numerous cases to date, incidents of damage to recently installed NBN network by 3rd parties have resulted in the construction contractor meeting all costs associated with repair works.

2.1.5 Contract failure 2

The most common outcome of failing to consider the Dial Before You Dig process in contract specification is damage and disruption to buried networks caused by the principal contractor or sub-contractors during a project’s construction. In the absence of specified standards to follow proper safe excavation practices, contractors cut corners in delivery and damages to buried network frequently results. NBN construction projects have been common examples over recent months, with some construction contractors paying vast sums to repair damages caused by their staff or sub-contractors (see Appendix 3 for a recent example).

3. Conclusion

Contracting parties should be compelled to recognise safe excavation processes in the drafting of project specifications related to all infrastructure-related projects. This should include reference to a ‘designated information provider’, or similar, for provision of information about underground assets (for example, “Use of a designated information provider (eg. Dial Before You Dig) is required...”)

Additionally, a recommendation is warranted that all owners of extensive underground networks, including roads authorities, water authorities and local governments, be encouraged to engage the Dial Before You Dig process as the most effective and most widely recognised means of protecting underground network assets and other buried infrastructure from excavations and other activities related to civil construction and public infrastructure projects.

A delegation of Dial Before You Dig’s board and management would welcome the opportunity to meet with representatives of the Productivity Commission to discuss and explain these issues further.

Eamon Bowler
Sate Manager Vic/Tas
Case Study 2

Stormwater pipes

The plumber had the task of putting in a new 225mm stormwater pipe connecting a new building to the existing council storm water pipe in the footpath.

Dial Before You Dig plans had been ordered by the builder about a year before this damage. Neither the plumber nor the builder could find a copy of these plans, so excavation was carried out without any plans onsite.

The plumber came across three separate power cables with thick PVC marker strips on top. The strips were thrown out with the soil.

Continuing across the footpath, they found an old asbestos cement conduit and smashed it. They then discovered that telecommunications cable ran through this conduit and made the assumption they had found all telecommunications networks at the site.
They proceeded down another 1.2m and came across a concrete encasement. They made the assumption that it must have been spare concrete that had to be removed because it was in the way of their new stormwater pipe.
An excavator was called in with a jackhammer and the operator began to remove the concrete. In the process of removing the concrete they damaged multiple conduits and cables both copper and fibre feeding and servicing local, state and international telecommunications customers.
Case Study 4
Telecommunications

The State government had a project to expand and upgrade freight lines. The principal civil contractor had the task of clearing the land and making way for new tracks.

In the process of site preparation the civil contractor barricaded the telecommunications network, denying the telecommunications company access to their plant. The telecommunications network was also damaged three times.

As a result the telecommunications company took out an injunction on this site, stopping the civil contractor from working until full access was restored to telecommunications plant and a budget was put in place to relocate services that had been affected by their civil works.
Case Study 7
Poor Planning

A local builder had just completed a high rise building.

A major manhole was located in the footpath, right where the proposed new driveway was intended to be. When the builder approached the utility that owned the manhole, he was informed that it would extremely expensive to relocate it.

As a result of this poor planning the driveway had to be built to half the designed size with a traffic light to manage vehicle flow.