BEST PRACTICE GUIDE

Preventing Damage to Underground Services

Australia’s national referral service for information on infrastructure networks.
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1 The Dial Before You Dig Service

Dial Before You Dig is a Not for Profit organisation that delivers a vital national community service designed to assist in preventing damage and disruption to Australia’s vast infrastructure networks which provide essential services we use every day.

Most of Australia’s major infrastructure Asset Owners are Members of Dial Before You Dig. Our unique service offers a single point of contact to request information about the infrastructure networks at the planned project site without the need to contact utility organisations individually.

Dial Before You Dig is the Essential First Step in protecting Australia’s vital infrastructure networks.

2 General Responsibilities and Duty of Care

The Dial Before You Dig service is the Essential First Step of safe site practices and is the preferred method for obtaining information regarding the location of infrastructure assets. Using the service is referred to as best practice in numerous industry publications.

Organisations or excavators representing an organisation have a Duty of Care to locate underground assets that are within the vicinity of any worksite prior to any project commencement.

Irrespective of size, any excavation work has the potential to damage assets located around the worksite, leading to service interruptions, delays to the project, costly repairs and in the worst-case scenario, injury or death.

In order to avoid these incidents, it is essential to recognise the Duty of Care to:

- Comply with local State and Territory Work or Occupational Health and Safety (WHS or OHS) legislation and regulations, particularly the regulations that relate to Excavation Work Codes of Practice;

- Comply with any legislative requirements regarding the protection of particular asset owners’ licenced infrastructure such as gas pipelines and transmission infrastructure;
● Protect workers and the public from serious injury due to the rupture or strike of an underground asset such as a natural gas pipe, high voltage electricity cable, petroleum or industrial gas pipe. Any damage to these assets can cause very serious damage to structures and potential injury to many people; and

● Minimise the potential for damage and loss of service due to damage or rupture of the same assets. Extensive networks can be closed down for long periods with serious consequences of disruption and may incur penalties to the person causing the damage. The repair and replacement can be very costly.

Dial Before You Dig does not hold plans or detailed information regarding infrastructure assets. Enquiries are referred directly to our Asset Owner Members, who register and update their Area of Interest with Dial Before You Dig, who in turn respond directly to the excavator with the appropriate information.

To obtain more information about a particular infrastructure asset, refer to the Enquiry Confirmation Sheet or contact the Asset Owner Member directly.

**Underground services and assets registered with the Dial Before You Dig service include:**

● Services or assets within the road reserve that is from one property boundary line to another;

● Services or assets laid within public owned open space, or rights of way, or easements on public property; and / or

● Services or assets within an easement, and in some cases on private property.

Excavators should always use the Dial Before You Dig service before commencing any worksite activity. It is also prudent to investigate the site themselves for evidence of any surrounding infrastructure assets as information packs from Asset Owners may not take into account:

● The installation of a new main or service belonging to an asset owning Member of Dial Before You Dig that has not yet been included on the Asset Owner Member’s database and registered with the Dial Before You Dig service;

● An existing service or asset that has been altered or modified recently and has not yet been updated on the Asset Owner Member’s database;

● Construction plans that show the location of underground assets that may have been specified earlier by the project designer but are no longer applicable; and / or

● The chance that the owner of an asset may not be an Asset Owner Member of Dial Before You Dig, and will therefore, not have registered the asset with the Dial Before You Dig service.

Plans provided by the Asset Owner Member only indicate the presence of infrastructure assets within the vicinity of the project site and DO NOT pinpoint the exact location.
Unfortunately, not all of Australia’s infrastructure asset owners are Members of Dial Before You Dig and assumptions SHOULD NOT be made that the plans received represent the only infrastructure assets affected by the project worksite. If any infrastructure asset found at the worksite is not listed on the Enquiry Confirmation Sheet, the asset owner should be contacted directly. Notification to Dial Before You Dig of the location, type and owner of this asset will enable the relevant State to contact the asset owner and assist them with Dial Before You Dig registration in order to protect their asset from future damage.

3 The 5Ps - Industry Best Practice to Prevent Damage

To minimise the risk of damage, injury and potential loss of life, it is recommended as best practice to undertake the 5Ps of safe excavation.

Plan

Lodge a free Dial Before You Dig enquiry (page 7) to:

- Receive an Enquiry Confirmation Sheet from Dial Before You Dig listing all the affected Asset Owner Member’s assets for that area that are registered with Dial Before You Dig (includes their contact details).
- Receive plans and / or information from each of the listed Asset Owner Members. (Ensure you have all the responses listed on the Enquiry Confirmation Sheet prior to commencing any work, follow-up with any that have not responded).

Prepare

Prepare for your works by reviewing the utility plans and contacting the utility if you need assistance. Look for on site asset and infrastructure clues such as pit lids, marker posts and meters. These on site clues will assist you to identify the potential location of assets on site from the utility plans and also identify any other assets and infrastructure that may not be marked on utility plans or where the utility may not be a Dial Before You Dig Member.

It is then recommended, unless advised otherwise by the Asset Owner Member, to engage a DBYD Certified Locator (page 9). A DBYD Certified Locator can:

- Interpret plans;
- Identify and locate Dial Before You Dig Member assets;
- Where possible identify and locate any non-member or unrecorded assets existing on site (e.g. domestic gas /power lead-ins are generally not recorded on Dial Before You Dig utility plans even though the asset owner might be a Member);
- Provide results / maps / information on located services to AS5488 – 2013 specifications (page 11); and
- Provide locating assistance during potholing;
There may be a requirement to:

- Follow-up with any Asset Owner Members that have specific requirements e.g. No Go Zones or Exclusion Zones for high pressure gas and high voltage power; separate arrangements may have to be made in regard to those assets. (see No Go Zones and Exclusion Zones on page 11);

- Seek consent where required e.g. if planning to excavate in Road Reserves (page 14); or

- Follow-up with any Asset Owner Member and seek advice when the Dial Before You Dig information supplied for their asset is missing or inadequate for the purposes of locating.

There will be a requirement to:

- Comply with Safe Work Australia Codes of practice and any applicable state WHS or OHS Acts and Regulations applicable for undertaking excavation work.

This could include having:

- Traffic and / or pedestrian management plans
- SWMS (Safe Work Method Statements)
- JSA / JHA (Job Safety or Hazard Analysis)
- Work Permit Systems
- SOP (Safe Operating Procedures); and / or
- Work pre-start processes

Pothole

- Potholing (where permitted) must be carried out prior to excavation to validate the position of existing services.

- For design projects it is recommended to carry out potholing early to verify the position of services and to avoid potential conflicts and delays at construction stage.

- Follow any Asset Owner Member’s specific requirements in regard to working or potholing on or around their assets.

- The use of a DBYD Certified Locator when potholing will:
  - minimise the amount of exploratory potholing and save costs
  - assist in validating the correct asset when exposed

- When potholing only utilise non-destructive methods. Methods can include careful hand digging and hydro vacuum excavation (more details on page 10).

- On completion of potholing the reinstatement and restoration must meet the requirements (if any) of the Asset Owner Member and / or local authority. The site
must be left in a condition such that no safety hazards associated with the locating work activities remain.

**Protect**

- Located asset information should be communicated to all on site, the assets be clearly marked or flagged and if necessary have protective barriers, supports erected or other methods in accordance with the Asset Owner’s requirements.

- Any Asset Owner Member or industry regulated No Go Zones or Exclusion Zones must be adhered to and enforced on site.

- Utilise SWMS (Safe Work Method Statements) and/or JSA (Job Safety Analysis).

- All recorded information/measurements of any subsurface utilities (from locating, potholing etc.) should be recorded in accordance with AS5488 - 2013 and have the correct Quality Levels specified i.e. A, B, C or D (page 12) to prevent future damage.

- Isolate the work near underground assets from the public at all times.

**Proceed**

**You should only proceed with your excavation work after:**

- The first four steps above have been completed;

- You have verified that all the information in the preceding steps is still current. If the use by date of Dial Before You Dig plans have expired, you will need to obtain current plans and if necessary re-validate any changes that may have occurred;

- If requested by the Asset Owner Member advise them when works are to be undertaken near their asset or area of interest; and

- You have met all the requirements of Safe Work Australia Code of practice and any state WHS or OHS Acts and Regulations.

**Guide to Lodging a Dial Before You Dig Enquiry**
Lodging an enquiry is a simple process, which can be done in one of three ways:

- Online via the Dial Before You Dig website www.1100.com.au;
- Mobile website; or
- By phone call 1100 (toll free, during business hours).

To lodge an enquiry online is a simple process. If you are new to the Dial Before You Dig service, just register as a new User first.

You will then receive an email confirming your User name and password. Keep these details handy and use them each time you want to review past enquiries or lodge a new enquiry.

To lodge your enquiry online, follow these three simple steps:

1. **Enquiry Details**
   - Provide details of your project, including start and expected completion date, type of work and the location of your project.
   - Tell us if you are working on behalf of a utility, council or private entity. All information provided will help Dial Before You Dig Members provide you with the correct information to assist your project.

2. **Map Screen**
   - Use the search tools to locate your project location.
   - Use the mapping tools to draw your proposed project site.
   - Describe the project in detail so utilities can provide an accurate set of plans.
   - Submit enquiry.

3. **Enquiry Summary**
   - Review and confirm the information submitted.
   - View a list of Asset Owner Members and their contact details that Dial Before You Dig have informed.

**Receiving Information**
Plans are the most common form of information you will receive from infrastructure owners (generally within two business days) detailing the location of their assets.

Please note - these plans **DO NOT** come from Dial Before You Dig. Should you require further information or assistance, contact the Asset Owner Member directly.

It is important NOT to proceed until you have received the relevant information from ALL Asset Owner Members affected by your project.
DBYD Certified Locators have a nationally recognised industry qualification that distinguishes them from ‘DIY’ or self-authorised locators. With DBYD certification there is no need to guess whether the locator you are hiring is competent. Hiring locators that are not DBYD certified may be putting your business and the community at risk.

To gain DBYD certification, locators must pass a comprehensive theory exam and practical field test conducted by an industry assessor. The assessment includes auditing equipment for compliance as well as the user’s competence, workplace safety knowledge and compliance with safe WHS or OHS practices. The assessment also includes knowledge and understanding of AS5488 - 2013 (classification of subsurface utility information).

DBYD Certified Locators in many instances will have exclusive access to endorsed utilities for location purposes. For example, only Telstra Accredited Plant Locators with DBYD Certification have authorisation to access Telstra assets for location purposes.

A DBYD Certified Locator will engage best practice to:

- Interpret plans;
- Identify and locate Dial Before You Dig Member assets;
- Where possible identify and locate non-member or unrecorded assets (e.g. including any domestic gas/power lead-ins not normally shown on Dial Before You Dig utility plans);
- Provide results/maps/information on located services to AS5488 - 2013 specifications (page 11);
- Minimise the amount of exploratory potholing and save costs; and
- Assist in validating the correct asset when exposed.

DBYD Certified Locators in Australia can be identified in the industry by the distinctive DBYD Certified Locator branding and the DBYD Certified Locator ID card.

To find a DBYD Certified Locator near you visit www.dbydlocator.com.
**Potholing**

Potholing is the means to ‘validate’ buried assets by physically exposing them. All buried assets should be validated before commencing excavation. Validated assets (potholed and exposed) conform with AS5488 - 2013 Quality Level A in terms of location accuracy (See page 13 for details on quality levels).

Dial Before You Dig Member supplied plan information and assets located electronically (e.g. by a DBYD Certified Locator) need also to be potholed and exposed to meet Quality Level A accuracy which is required prior to any excavation. (In AS5488 - 2013 Dial Before You Dig Member plans are classified as Quality Level D, and electronically located assets are Quality Level B).

In all cases any work in the vicinity of a buried asset should be done in accordance with the Asset Owner's requirements and if applicable any relevant legislation.

When permitted, potholing needs to be undertaken with extreme care and by employing techniques least likely to damage assets. Remember if machinery is on site it can come into contact with overhead power. Refer to ‘look up and live’ on the following page.

Hand digging and hydro vacuum excavation methods are used in the industry for potholing, however both can cause damage if not done correctly. Mechanical aids such as backhoes should not be used for potholing.

**Hand digging:**

- For hand digging, use round edge spades and shovels (push, do not throw at ground);
- Do not use sharp pointed tools such as picks or crowbars;
- All tools used should be non-conductive for safety reasons;
- Dig adjacent to the asset to expose it from the side rather than digging down on top;
- Where possible dig parallel to the line rather than across it.

**Hydro vacuum excavation:**

Hydro Vacuum excavation is now widely used and is a very effective means of non-destructive digging. This method however should not be assumed to be 100% safe as it has been proven to cause damages. Asset Owner specific requirements and relevant State Guidelines and Codes of Practice should always be observed.
Factors contributing to damage by hydro vacuum excavation include:

- Pressure used
- Type of nozzle
- Proximity to the asset; and
- Duration of contact

Destructive water jet testing has been undertaken by Dial Before You Dig. The results can be viewed on YouTube - Dial Before You Dig Water Jetting Pressure Testing.

Using Locators when potholing:

The use of DBYD Certified Locators when potholing can help minimise the amount of exploratory potholing (save costs) and assist in validating that the correct asset has been found.

No Go Zones and Exclusion Zones

Guides and information are available from state-based authorities and asset owners that declare minimum clearance distances to a ‘No Go Zone’ or ‘Exclusion Zone’ around particular assets. These guides recommend the provision of a Safe Work Method instruction and excavation practices, be it hand or machinery, within the No Go Zone or Exclusion Zones. These can usually be found on the Duty of Care provided by Asset Owners.

It is critical that you assess the work requirements in the planning stages before beginning work and take necessary steps to minimise the risks involved with working near overhead powerlines. You are not necessarily protected from an electrical incident just because you are not touching powerlines. High voltage electricity can jump gaps. People, plant and vehicles can stray into Exclusion Zones so you must adopt suitable control methods.

For more information contact your local electricity utility or visit your relevant State Worksafe or State Energy Regulator website.

AS5488 - 2013 – Classification of Subsurface Utility Information (SUI)

Australian Standards and Australian/New Zealand Standards are developed by an independent organisation called Standards Australia. It prepares and publishes voluntary technical and commercial standards which are sometimes adopted by WHS or OHS legislation and regulations.
Where legislation or a regulation refers to a standard, workplace participants must comply with the standard.

AS5488 - 2013 Classification of Subsurface Utility Information (SUI) has been developed to provide utility owners, operators and locators with a framework for the consistent classification of information concerning subsurface utilities. The application of this Standard is intended to improve public safety and reduce costly property damage.

**AS5488 - 2013 aims to help reduce damages by:**

**Providing a national standard format for recording subsurface utility information.**
This includes codes, line types and colours. Having an industry standard will reduce confusion and misinterpretation by the end users of that information.

Examples of standard colours used to represent utilities:

<table>
<thead>
<tr>
<th>Utility</th>
<th>Colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications</td>
<td>White (or black when on white background)</td>
</tr>
<tr>
<td>Drainage</td>
<td>Green</td>
</tr>
<tr>
<td>Electricity</td>
<td>Orange</td>
</tr>
<tr>
<td>Fire Service</td>
<td>Red</td>
</tr>
<tr>
<td>Gas</td>
<td>Yellow</td>
</tr>
<tr>
<td>Water</td>
<td>Blue</td>
</tr>
</tbody>
</table>

**AS5488 - 2013 further helps reducing damages by:**

**Applying an accuracy classification to measurements relating to subsurface assets.**
Underground measurements can be obtained from different sources and subsequently can have different levels of accuracy. An un-classified or un-qualified subsurface measurement on its own does not indicate its accuracy. This can lead to damages and project delays if a wrong assumption is made.

By utilising accuracy classifications (Quality Levels), others using the information can recognise the accuracy (or inaccuracy) of the information when designing and constructing and avoid conflicts and damages.
AS5488 - 2013 Quality Levels
There are four accuracy levels which are defined as ‘Quality Levels’ in AS5488 - 2013. These range from ‘D’ being the lowest, to ‘A’ being the highest and most accurate.

To minimise the risk of damaging buried assets, all sub-surface measurements where shown in design or construction should have an AS5488 Quality Level defined and recorded. Any plans and information provided by DBYD Certified Locators following a location should indicate the Quality Level classification details of the asset locations undertaken. The default Quality Level for subsurface information without a Quality Level specified is ‘D’. Many Dial Before You Dig Asset Owner Members do not specify an AS5488 - 2013 Quality Level, therefore the default value of QL-D should apply.

To avoid damaging buried assets when excavating the subsurface information relating to the location must be to Quality Level ‘A’.

See below for a guide on interpreting the Quality Levels described in AS5488 - 2013. For full details refer to AS5488 - 2013, which is available for purchase from Standards Australia.

**Quality Level D** - (least accurate level and if used on its own has a high risk of damage)
QL-D information is generally obtained from existing records provided by utilities as a result of a Dial Before You Dig enquiry being lodged. In many cases the asset depicted on the plan is in a schematic format only and intended only to indicate its presence.

**Quality Level C** - (low accuracy and a high risk of damage)
Is described as a surface feature correlation or an interpretation of the approximate location and attributes of a subsurface utility asset using a combination of existing records and site survey of visible evidence – for example you can see the pit lids shown on the plan but the actual position of underground connection between pits is still assumed.

**Quality Level B** - (significant risk reduction)
Provides relative subsurface feature locations in three dimensions. The minimum requirement for QL-B is relative spatial position, this can be achieved via an electromagnetic frequency locating device. An electronic location provided by a DBYD Certified Locator to QL-B standard would have a maximum horizontal tolerance of plus or minus 300mm and a maximum vertical tolerance of plus or minus 500mm.

**Quality Level A** - (meets location accuracy standards for minimum risk when excavating)
Is the highest Quality Level accuracy and consists of positive identification of the attribute and location of a subsurface utility at a point to an absolute spatial position in three dimensions. It is the only quality level that defines a subsurface utility as ‘Validated’. 
9 Consent Requirements for Work within Road Reserves

Unless specifically exempt, excavations within the road reserve require the prior written consent of the coordinating road authority responsible for the particular road reserve. Consent may not be provided unless evidence that an enquiry has been made to the Dial Before You Dig service.

The road reserve is defined as the area between property boundary lines.

The organisation managing excavators and other entities responsible for undertaking the work must manage them in a manner that minimises damage to the road and surrounding road infrastructure, minimises disruption to road users and protects any significant roadside vegetation.

Further detail on the requirements when proposing to conduct excavations and other related work within the road reserve can be found by contacting the relevant state road authorities.

10 Locating Assets in Emergency Situations

Many utilities now provide fast automated responses which can be initiated on site using Dial Before You Dig phone apps. Responses can usually be delivered electronically on site within a very short time frame – often faster than a manual operator can achieve.

When automated responses are not available or are slow in responding there are alternative methods available. These include:

- Using the Enquiry Confirmation Sheet details to contact the Asset Owners while at the worksite;
- Utilising the Dial Before You Dig website to look up the relevant emergency contact details for Asset Owners in your area and contact them;
- Maintaining a contact list associated with the authorities that can be contacted for location and advice regarding infrastructure assets during out of hours periods; and
- Employing / engaging DBYD Certified Locators and have them available for emergencies.

11 What to do if an Infrastructure Asset is Damaged

Always have the correct procedures in place to act correctly, should a damage occur. This information should be included in the information that each Member sends out with their Dial Before You Dig plans including their contact details. Different asset types have different emergency procedures which, if not followed, may lead to serious injury or death.
For a major incident, where there is risk to life or property, and it is safe to do so, call 000.

In general:

- If any damage occurs to an infrastructure asset, immediately contact the relevant Asset Owner via the contact numbers provided on the Enquiry Confirmation Sheet, on the plans and information from the Asset Owner or via any other emergency contact details;
- Cease work immediately;
- Do not try to fix it yourself; and
- Damage to an infrastructure asset does not just mean rupturing a pipe or cable; it includes damage to tracer wires, marker tape or pipe coating; pipeline protection such as slabbing and casings; when you mistakenly bury valves; any street furnishings owned by an asset owner; manhole covers; removal of signage etc. Please report all damage however minor, as it may lead to catastrophic failure at a later date if not repaired.

If there is a potential for injury or death:

Always try to contact 000 or the Asset Owner if there is a potential for injury or death.

Gas damage
For urgent situations when contact cannot be immediately made with the Asset Owner or 000:

- Evacuate the area surrounding any gas escape without using a vehicle or any device that may create a spark including a mobile phone;
- Do not attempt to repair the damage;
• Do not use a naked flame or any other ignition source;

• Do not create sparks by using a vehicle, electronic device (mobile phones, tablets, cameras) matches or lighters or smoking;

• Warn others in the vicinity; and

• Do not attempt to re-enter the site until the relevant authorities have deemed the site safe to do so.

Electricity damage
Electricity will always find paths to earth including via equipment and through you. A fallen line or equipment (e.g. crane, excavator or vehicle) in contact with live powerlines will create a dangerous electric field of approximately ten metres from the contact point.

For urgent situations when contact cannot be immediately made with the Asset Owner or 000, the following actions should be taken:

• All work should cease immediately;

• If you are inside a vehicle all occupants should remain inside the vehicle until given the all clear to exit by the power authority;

• If it is essential to leave the vehicle due to fire or any other life-threatening reason, remember to jump clear of the vehicle landing with two feet together. Do not touch the vehicle and the ground at the same time;

• When moving away from the vehicle, you should shuffle or jump away from the vehicle (with feet together) until you are at least ten metres clear; and

• Do not enter a site where there has been an electrical incident if it has not been given the all clear by the power authority. You may end up as a victim.

For more information contact your local electricity supplier or visit your relevant State WorkSafe website.
12 Educational Training and Further Information

The Dial Before You Dig website has links to many additional references including:

- Codes of Practice
- National Legislation (Work or Occupational Health and Safety Acts)
- State based regulations and information
- Local Government Acts; and
- Australian Standards


Dial Before You Dig Awareness Presentations (no cost)
Dial Before You Dig can provide awareness presentations to field and office workers. The content includes:

- How to use the Dial Before You Dig service (lodging an enquiry);
- Asset damage awareness
- Major causes of damages
- Obligations – liability and repercussions
- The 5Ps and Best Practice
- Case Studies


Contact your relevant Dial Before You Dig State for additional education and training options or go to the Dial Before You Dig website.
Reinstatement and Rectification

All infrastructure assets must be restored to the condition required by the registered Asset Owner. You will generally be required to replace all embedment material with the same material and provide compaction if the embedment material is disturbed.

Please note the bedding and backfill requirements may be different to the construction standards when the asset was originally installed.

Written consent issued by road and other relevant authorities provide details of the requirements for backfilling and reinstatement of any excavated areas of roadway, pathway or roadside. Organisations or excavators representing an organisation must satisfy all these consent requirements.

Records of the consent history of any work undertaken and the reinstatement completed, should be filed with the job file. The excavator should close out the consent by advising the relevant road authority once the work has been completed.

For information in relation to State specific guidelines and codes of practice refer to the Dial Before You Dig website.
Appendix A: Glossary of Terms and Definitions

**Area of Interest**: The geographical area in which an Asset Owning Member has underground infrastructure and registers it with Dial Before You Dig. If an enquirer intends to excavate within this geographical area, a referral will be sent to the Asset Owning Member, who in turn contacts the enquirer.

**AS5488 - 2013**: Classification of Subsurface Utility Information (SUI) is an Australian Standard. The Standard provides a framework for the classification of subsurface utility location and attributes information in terms of specified quality levels and is available from Standards Australia.

**Asset Owner**: Any person, utility, municipality, authority, political subdivision or other person or entity who owns, operates or controls the operation of an asset.

**Asset Owner Member**: Is an Asset Owner that is a Member of Dial Before You Dig, i.e. that has an Area of Interest covering their assets registered with Dial Before You Dig. It should be noted that not all asset owners are Asset Owner Members.

**DBYD Certified Locator**: A person who has passed all the requirements of a DBYD Certified Locator and has a current DBYD Locator Certificate and a current DBYD Certified Locator ID card.

**Dial Before You Dig**: The Dial Before You Dig referral service is for anyone to make an enquiry for plans and documentation from registered Asset Owner Members to enable location of all utility services prior to excavations.

**Duty of Care**: is an obligation to take responsibility to avoid injury to another person and to avoid damaging assets owned by others. A breach of Duty of Care exists where it is proven that the person who is negligent has not provided the appropriate standard of care. Asset Owner Members can stipulate a ‘Duty of Care’ required when working near their asset.

**Enquiry Confirmation Sheet**: A confirmation email sent by Dial Before You Dig to the User as a result of an enquiry to Dial Before You Dig, detailing the job number, registered Asset Owners and their contact details.

**Exclusion Zone**: or No Go Zones are specific restrictions that apply to a zone surrounding an asset. The restrictions including the extent of the zone are set by safety regulators and Asset Owners to prevent damage and injury. The restrictions can be partial (i.e. conditional) or total exclusion.

**Excavate or Excavation**: Any operation using non-mechanical or mechanical equipment or explosives used in the movement of earth, rock or other material below existing grade. This includes, but is not limited to: auguring, blasting, boring, digging, ditching, dredging, drilling, driving-in, grading, ploughing-in, pulling-in, ripping, scraping, trenching, and tunneling.

**Five Ps**: The five steps recommended by Dial Before You Dig to prevent damages to underground services; Plan, Prepare, Pothole, Protect and Proceed.

**No Go Zone**: or Exclusion Zones are specific restrictions that apply to a zone surrounding an asset. The restrictions including the extent of the zone are set by safety regulators and Asset Owners to prevent damage and injury. The restrictions can be partial (i.e. conditional) or total exclusion.

**Not for Profit**: Not for profit organisations are organisations that provide services to the community and do not operate to make a profit.

**Pothole**: Exposure of an asset by careful hand digging to locate the precise horizontal and vertical position of underground infrastructure.
Quality Level: A classification reflecting the precision and accuracy of utility location and attribute information. AS5488 - 2013 (Classification of Subsurface Utility Information), defines four Quality Levels – A, B, C and D. Quality Level A is the most accurate and Quality Level D being the least accurate.

Regulations and Industry Codes: Work Health and Safety (WHS) Regulations being enacted across Australia to harmonise work health and safety laws, coordinated by Safe Work Australia. Industry Codes (or Codes of Practice) provide practical guidance to Project Owners and people doing excavation and construction work on how to meet legal regulatory requirements.

Road Reserve: The road reserve is the land controlled by the local or state road authority that is located between one property boundary line and the property boundary line on the other side of the road reserve.

User: Anyone who makes an enquiry to Dial Before You Dig with the intent of receiving information from registered Dial Before You Dig Asset Owner Members.

Validate, Validated, Validation: As defined in AS5488 - 2013 - direct physical access and verification of the absolute spatial position and detailed attributes of the utility infrastructure. Potholing is a means to validate a subsurface asset.

Vacuum Excavation: Vacuum excavation is defined as a means of soil extraction through vacuum; water or air jet devices and are commonly used for breaking ground.

Disclaimer

The information in this guide has been provided in the interests of preventing damage and injury. In all cases Users should comply with relevant state and national legislation and advice from the individual asset owners. Any decision by the User to use the information supplied is purely at the discretion of the User.

The Association of Australian Dial Before You Dig Services Ltd, its associated Dial Before You Dig entities, servants and agents shall not be liable for any loss or damage caused or occasioned using the advice supplied to the User, its servants or agents.

Accordingly, the User of the information agrees to indemnify the Association of Australian Dial Before You Dig Services Ltd and its associated Dial Before You Dig entities against any claim or demand for such loss or damage.
The Essential First Step.