ADDITIONAL INFORMATION FOR WORKING AROUND GAS INFRASTRUCTURE

GAS DIVISION

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1. INTRODUCTION

This document describes the ATCO requirements for planning and conducting works near the gas distribution network (Network) which is owned and operated by ATCO within Western Australia.

The document is intended to help proponents to understand the controls expected by ATCO, for planning work, and operating safely around ATCO's infrastructure.

The most important first action is to request Dial Before You Dig (DBYD) plans which cover the area in the vicinity of the relevant work site.

The second action is for the proponent to provide ATCO with their comprehensive work scope that will enable ATCO to assess the proposed works and provide detailed requirements for the proponent to safely work around the gas infrastructure.

Caution: You are solely responsible for ensuring that all safety precautions and measures on site are met, to ensure that no damage occurs to the gas pipeline and/or gas assets. **ATCO must be notified immediately 13 13 52** should any damage occur to gas assets.

This document is 'live' and therefore subject to change. You must always use the latest version, which is available by contacting ATCO, or visiting the ATCO Australia website.

1.1 Glossary

Table 1: Terms used within this document

Term	Reference
Approved Locator	ATCO approved Critical Asset location officers.
ATCO	ATCO, Gas Division Australia
DBYD	Dial Before You Dig, call **1100** or 1100.com.au
Engineering Services	The department of ATCO responsible for providing engineering advice relating to the safety of the Network.
Critical Asset	Previously HP gas pipeline. Refer to Table 4 for the current Critical Asset description.
Non- Critical Asset	Assets not described in Table 4.
Near	Defined in more detail in section 6.
Network	The gas distribution network which is owned and operated by ATCO. This includes high pressure gas pipelines, along with other gas mains, assets, services and facilities.
Proponent	Developer, Builder, Owner, Contractor or Customer planning or conducting works near the Network.

1.2 Further Information

- Refer to the **Related Documents** (section 7) for a list of standards and legislation.

2. SAFETY INFORMATION

2.1 Emergency Contact Details: 13 13 52*

In the event that you become aware of any gas leak or damage to a gas pipe, act immediately:

- Leave the area;
- Keep people clear of the area;
- Allow gas to vent into the air;
- Eliminate ignition sources (i.e., no smoking, do not light a match / lighter, extinguish any naked flames);
- Do not use any devices which may be an ignition source (this includes vehicle engines, mobile phones, power tools or appliances, electrical or light switches and torches);
- Where safe to do so, shut off all machinery, vehicles, tools and equipment in the area;
- Once clear of the area, immediately contact:

ATCO – Faults and Emergencies on 13 13 52* (24 hours).

Do not attempt to stop the flow of gas or repair gas infrastructure.

2.2 ATCO Contact Details

2.2.1 General Enquiries

For more information about ATCO and all general enquiries, visit www.atco.com.au and use the ATCO Self Service portal to contact us, or if unsure call 1300 926 755 (Monday to Friday, 8am to 4pm).

2.2.2 Engineering Services Enquiries

Engineering Service enquiries are required for works that may require alteration to the Network or for an Engineering Assessment of your proposed works within 15m of Critical Assets or have the potential to affect Critical Assets (refer to section 6). Email Engineering Services eservices@atco.com with all relevant information at the earliest stage of the design.

ATCO should be contacted at the above email address well in advance of your works, in order for assessment and (if necessary) relocation work to be planned and completed to ATCO's requirements.

To obtain a Notification for any works in the vicinity of non-critical ATCO gas Assets, use the ATCO website self-service portal *Notification Request Form* **and include all relevant work scope data.**

2.2.3 Critical Asset Enquiries

To obtain or modify a Notification for any works in the vicinity of ATCO Critical Assets, refer to section 6, use either the ATCO website self-service portal Critical Asset *Notification Request Form* (Link Here) or if unsure contact ATCO Critical Asset Enquiries on 1300 926 755 between 7:30am – 3:30pm weekdays.

A current ATCO DBYD Sequence Number must also be provided when calling.

2.3 Duty of Care for Working around Gas Assets

Working near any gas pipeline, especially Critical Assets (refer to Table 4), can be extremely dangerous. You should always exercise due care and caution when working near any gas infrastructure.

Further to your general duty of care, there may be other obligations under the *Occupational Safety and Health Act 1984* (and other relevant legislation) which require you to maintain safe practices.

In addition to any legal obligations that you may have under the *Occupational Safety and Health Act 1984* (and other relevant legislation), ATCO may prescribe specific requirements for working on and around its gas infrastructure. These requirements are designed to protect people who may be working on and around the gas infrastructure, the general public and the Network and other infrastructure.

Due care must be taken at all times not to damage the gas pipelines or the protective coating covering the gas pipelines. Any damage to gas pipelines, their protective coating, or other assets must be reported to ATCO Faults and Emergencies immediately.

Caution:	Unreported damage has the potential to endanger public safety and any wilful or negligent damage to ATCO pipelines or other infrastructure may be a prosecutable offence.

3. OUR NETWORK

3.1 About Us

ATCO is a private company delivering safe, reliable, cost-effective natural gas to West Australians. As a gas distribution company, ATCO builds, owns and maintains an underground network of pipelines that bring natural gas to approximately 750,000 West Australians.

ATCO along with building and maintaining the network, also undertake the work to connect your gas and read your meter.

ATCO's assets are located across the Perth greater metropolitan area, Albany, Brunswick Junction, Bunbury, Busselton, Capel, Geraldton, Harvey, Kalgoorlie, and Pinjarra. Throughout this document we refer to our assets and networks of gas infrastructure within Western Australia as "the Network".

ATCO, ACN 089 531 975 is part of the ATCO Group of Companies.

3.2 Gas Distribution Network Information

3.2.1 Gas Distribution Network Standards

ATCO pipelines are designed, constructed, tested and operated in accordance with the following relevant Australian Standards (AS):

- AS2885 Pipelines – Gas and Liquid Petroleum
- AS/NZS 4645 Gas Distribution Networks
- AS4799 Installation of Underground Utility Services and Pipelines within Railway Boundaries
- AS/NZS 4853 Electrical Hazards on Buried Metallic Pipelines

3.2.2 Gas Distribution Network Assets

The Network comprises both below ground and above ground assets including gas services, cabling, anode beds, concrete slabbing, vent poles, pits, test posts, signage and cabinets which may not be marked on the DBYD plans. Caution must be used at all times.

Gas services (and/or gas pipeline road crossings) to individual premises will often not be shown on the DYBD plan or gas asset drawings. As a matter of caution, you should assume that there are gas services present in the ground and take care to locate them prior to and during excavation and backfilling works.

With the exception of Albany, our Network reticulates Natural Gas from transmission pipelines to customers. The Albany network reticulates Liquefied Petroleum Gas (LPG) vapour from a storage facility. While Natural Gas is lighter than air, LPG is heavier than air and can pool in low lying areas like trenches or potholes. Additional caution should be used when working around the LPG network in Albany.

3.2.3 Pipeline Depth of Cover

Over time the ground profile, site conditions and other aspects of a location may change. Accordingly, it should not be assumed that any works will be safe based on the typical minimum depth of cover, the actual location of gas assets must first be proven as per Section 5.2. Furthermore, fittings are often installed on the pipes which may protrude above the general elevation of, or alongside, the pipeline. **Excavation in the vicinity of gas infrastructure must proceed with caution at all times.**

All Critical Assets require Notification to ATCO prior to changes to depths of cover, however alterations to the ground levels around ANY type of gas infrastructure must comply with the following, unless otherwise approved by ATCO Engineering Services:

- High Pressure (HP) gas pipelines , include both steel and polyethylene pipelines, require a minimum 1200mm depth of cover, particularly under roadways, traffic area or potential traffic areas. The maximum depth of cover over a HP gas pipeline must not exceed 1.8m unless otherwise approved. Refer to Table 4 for clarification of ATCO Critical Assets.
- Medium Pressure (MP) and Polyethylene High Pressure (PEHP) gas mains require a minimum 750mm depth of cover. Increased depth of cover may be required under roadways, traffic area or potential traffic areas. The maximum depth of cover over these gas mains must not exceed 1.5m unless otherwise approved. Refer to Table 7 for further details.

Where the existing depth of cover does not comply with the minimum levels indicated above, there is an increased risk of damage to gas infrastructure. Reduced depth of cover can impact on the safety of a wide variety of activities, including common works near ground level and vehicle crossings. In these instances, further advice should be sought by contacting Engineering Services.

3.2.4 Abandoned Assets

Engineering Services must approve removal of any abandoned (AB) assets in writing and in accordance with the following conditions:

- Prior to the removal of any abandoned pipelines, the pipes must be tested by ATCO to confirm the absence of gas. Gas testing can be arranged by Engineering Services once the request for removal has been received. The requesting party will be liable for all costs involved in conducting the gas testing.
- Where approval has been provided for asset removal, the requestor must supply an “As Removed” drawing (gas map) within 24 hours of removal, which will enable ATCO to update the Network mapping system.

Assets annotated as ABS (Abandoned Sold) on DBYD plans are assets that have been sold to a third party. These pipes may contain third party utility assets and should be treated with care. These are indicated on the DBYD for reference only, ATCO makes no assurances about their contents, condition, removal or otherwise.

4. WORKING NEAR GAS INFRASTRUCTURE – PLANNING WORKS

4.1 Working near ATCO’s Assets

Any activities occurring near gas infrastructure require due consideration of the risks and controls to ensure they can be conducted safely. At closer proximity to gas infrastructure the risk and extent of controls will increase accordingly, as indicated throughout this document. Unless stated otherwise, the depth or radial distance from the gas infrastructure relate to the horizontal distance from the pipeline alignment, not including any vertical separation.

Certain types of assets have additional risks that necessitate particular controls being imposed, such as HP gas infrastructure (Critical Assets) and metallic pipework. These controls will typically apply for works that are within **15m** of the gas infrastructure.

Activities likely to result in high vibration levels have an increased ranges of influence where they can impact the safety of the gas pipeline, particularly activities such as piling (within 30m) and

blasting (within 100m). High Voltage assets may also influence the safety of metallic assets over large distances. Refer to Section 5 regarding conducting these types of activities.

4.2 DBYD Plans

DBYD plans should be obtained and reviewed at the earliest stage of planning your works. These plans will help identify the presence of gas infrastructure and their approximate location. The gas pipeline annotation identified on the DBYD plans will help you to identify the type of gas pipeline and some key properties. Examples;

CRITICAL 300 ST 4.2 HP 1900kPa
CRITICAL 150 ST 1900kPa
CRITICAL 160 PE 1.5 HP 700kPa
CRITICAL 160 PE 1.5 350kPa
110 PE 1.5 PE CRITICAL 350kPa
100 PVC 1.5 MP 70kPa

Where,

CRITICAL	= Critical Asset, mandatory requirements apply
300	= Nominal Diameter of the pipe in mm (i.e. DN300mm)
ST	= Material of pipe (Steel, Polyethylene (PE), Polyvinyl Chloride (PVC), etc.)
4.2	= Approximate distance from property boundary in metres (as recorded)
HP	= Network descriptor (a full list is detailed in Section 6.1)
1900	= Maximum Allowable Operating Pressure (i.e. MAOP = 1900 kPa)

Guidance on the interpretation of the DBYD plans is provided within the DBYD cover sheet. Where the works will be in close proximity to the underground assets, a more accurate position will be required to facilitate further detailed design and construction works. In this instance, locating of the pipeline must be conducted in accordance with Section 5.2.

4.3 Design of Works around Gas Infrastructure

The most effective means of reducing the risks of working around gas infrastructure is to plan your works in locations where the gas infrastructure is not located, or locations where the impact can be minimised. Where this is not possible, risk can be minimised through accurate surveying of infrastructure and maximising separations between installations during the design phase. Design phases shall anticipate risk to gas infrastructure and clearly demonstrate that risk has been lowered as low as reasonably practicable.

Safety in design shall be paramount, with due consideration of safe methods for the construction of the work, the future maintenance of gas assets and the ability to apply adequate controls for these activities. The design documents must take into account the requirements outlined within this document, along with any other controls that may be required by ATCO.

Adequate lead times shall be provided in all project planning by the proponent for ATCO Engineering Assessment of the Proponent's works to be conducted, with further time to be allowed for if the works are complex, large scale or impose increased risk to gas infrastructure. Lead times must consider potential requests for further information, reports or risk assessments

that may be requested by ATCO. Refer to table 3 for the minimum lead time frames for requesting works.

4.3.1 Separation Distances

Guidance on separation distances are outlined in the following sections. You must consult with Engineering Services to confirm the separation and/or parallel distance (buffer zone) from the gas pipeline where these cannot be achieved.

You must receive approval from ATCO where new infrastructure will result in exclusion zones or other restrictions necessary for access to ATCO's assets, including restrictions on excavations within the vicinity of gas assets or requirements to impose upon the standard gas utility corridor.

4.3.2 Major Civil Construction and Alterations

Design and construction of new civil structures in the vicinity of gas infrastructure must be assessed by ATCO Engineering Services in the design and planning phases of projects. Installation of any civil infrastructure must not impact ATCO's existing accessibility to gas infrastructure to conduct regular maintenance and repairs. This includes the ability to excavate buried gas infrastructure as well as consideration to the safe access of above ground infrastructure such as pits and cabinets. Physical protection i.e. w-beams or bollards, may be required where road hazards increase risk to personnel and assets. Any changes to existing roadways such as alteration or widening of road surfaces must also consider these impacts.

Construction deemed to affect ATCO's accessibility may require alteration of gas infrastructure if no alternative solution is identified. Alterations to gas infrastructure may require long lead times and it is recommended ATCO Engineering Services is contacted as soon as possible in project design phases.

4.3.3 Underground Infrastructure

The installation of underground assets must not restrict access to ATCO's assets, including the prevention of, or restriction on excavation without shoring or other means of trench support. Infrastructure must not be installed in close proximity to gas assets where access restrictions are required, unless controls are installed to maintain access as approved by Engineering Services.

The installation of any underground infrastructure must be conducted in accordance with Sections 5.3 and 5.4.

4.3.4 Posts, Poles and Supports

Posts, poles and supports (including post/sleeves/bores for water monitoring points) must have suitable clearance to gas assets with appropriate shoring or restraints to protect and maintain access to gas assets. This generally requires a minimum clearance of 1.5m to Critical Asset Gas Pipelines, or 1m to other gas mains. For clearances less than these distances, approval from Engineering Services is required for each specific site. Exceptions may be considered for the replacement of existing poles.

Posts, poles and supports located within road reserve, such as those used for signage, lighting and w beams, must have adequate clearance to gas assets to prevent damage in the event of vehicle impact. Where approval for installation with reduced clearances has been requested, the party

conducting the works must demonstrate that the post, pole or support will not damage gas assets in event of a vehicle impact, through frangible post design or otherwise.

A minimum separation of 300mm from a pipeline for a post or pole replacement may be accepted, provided the required hole is created by vacuum extraction and the proponent provides acceptable controls to ensure the safety of the pipeline.

4.3.5 Pits, Structures and Footings

Separation distances from pits, walls, footings, retaining walls, gantry, hoardings or other structures must be maintained at typically a minimum of 1.5m to gas infrastructure. In general, no structure can be installed over any pipeline. No opening to an enclosed structure is allowable within 3m of any Critical Asset , or within 1m of any other gas asset. Any installation must consider future accessibility to gas infrastructure for maintenance or in case of emergency access, i.e., that adequate separation be maintained so that when excavating the gas pipe or other asset, that there is no risk of the installed structure toppling / collapsing or otherwise effecting the gas asset or the personnel working on that gas asset.

4.3.6 Safe Excavations

Large or deep excavations have the potential to increase risk to nearby gas infrastructure. All excavations within the vicinity of gas infrastructure must consider the impact to other utilities and ensure adequate mitigation is in place to avoid subsidence or other hazards.

4.3.6.1 Shoring

Where shoring or trench support is required when excavating in the vicinity of gas infrastructure, shoring must be installed and removed by a competent person who has been trained in erecting and removing shoring. Installation of shoring should ensure that gas infrastructure is supported throughout the process and risk of damage is minimised. Lifting of shoring equipment must not be carried out over gas infrastructure, particularly shallow or exposed gas mains.

Shoring must be maintained at gas infrastructure that will potentially be undermined by the works, unless controls are assessed and approved by Engineering Services.

A 300mm minimum separation of a shoring box from a pipeline may be accepted provided the proponent provides acceptable controls to ensure the safety of the pipeline.

4.3.6.2 Dewatering

The site contractor must ensure that any dewatering on-site does not result in soil subsidence that will impact gas infrastructure. The proponent is responsible for engaging specialist dewatering firms to submit relevant dewatering calculations and figures to ATCO for acceptance, indicating dewatering operations will have no detrimental impact to gas infrastructure and the surrounding soil.

Dewatering spears must not be installed within 1m of gas infrastructure unless controls are assessed and approved by Engineering Services.

4.3.7 Planting of Vegetation

In general, planting of vegetation around the gas assets is acceptable provided that the roots of the plant are not capable of causing damage to the Network and free passage is maintained along the pipeline route. Separation distances should be planned, and the expected height of the fully grown plant should be taken into account so that the plant cannot fall onto any compound fence or above ground asset, nor the roots interfere with the gas pipes or below ground assets. Damage and increased fire risk are issues for above ground assets, whilst breakages and damage to pipeline coating are issues for below ground assets.

Table 2 contains guidelines for the appropriate mitigation of roots to be followed when planting trees near gas pipelines. If further guidance is required, please contact Engineering Services.

Table 2: Root mitigation for planting of vegetation near gas pipelines

Distance from Gas Asset	Required Root Mitigation Methods
Greater than 3m	A minimum buffer of 3 metres is required between trees and gas mains for deep-rooted trees if root arrestors or other mitigation methods are not used.
1 – 3 metres	Inside the 3-metre buffer zone, specific tree types may be accommodated after further consultation with Engineering Services and the use of special root barriers that would mitigate any damage to gas pipelines and other services in the vicinity. Root arrestors, normally consisting of properly wrapped and secured robust polyethylene / nylon sheeting or solid concrete cylinders, must be employed to a minimum depth of 1m; or 250mm deeper than the gas pipeline, whichever is greater.
0.5 – 1 metres	With less than a 1-metre buffer to pipeline, additional robust physical root barriers are required. These must extend 250mm deeper than the gas pipe as a minimum and allow for a minimum 300mm lateral clearance between the root barrier wall and the gas pipe wall, after consultation with Engineering Services. In this case, heavy preformed concrete or polyethylene pipe / liners used as root barrier are mandatory (e.g., Rocla or similar type concrete pipe or PE stormwater / sewer pipe). Concrete soak wells used as a root barrier around the tree next to a gas main are another approved option subject to blocking all holes on the full half side facing the gas main.
0 – 0.5 metres	Planting directly over gas mains is not permitted in any location, as it prevents emergency and maintenance access. Local tree roots may eventually break the gas pipe and leaking Natural Gas will likely kill any vegetation in contact.

4.4 Tendering for Construction

It is not recommended to issue any construction tenders or commence any site-works, without first contacting ATCO to assess whether any ATCO assets may be affected by your proposed works. You should obtain advice in writing from ATCO regarding the separation distance required and any relevant conditions that may be imposed prior to calling for tenders.

You should specify in the tender / construction documentation that the successful site-contractor will need to comply with the requirements of this document (as a minimum). For works near Critical Asset Infrastructure the requirements of Section 6 will also apply. These include the use of an Approved Locator to search for, and visually identify, the existing gas pipelines on site immediately prior to commencing any site-construction or any site-works, to confirm and visually verify the accuracy and relevance of any proving results that were obtained during the design stage.

4.5 Engineering Services Enquiry

Where acceptable conditions for proposed works are not detailed within this document, enquire of Engineering Services to establish a suitable approach for proceeding with the works. Some scenarios requiring assessment by Engineering Services are listed throughout this document.

In most cases the works will be allowed to proceed with suitable controls in place. However, some cases require certain limitations or restrictions to be enforced to maintain the safety of the Network. Where adequate clearances or controls **cannot** be applied, relocation of either the proposed works or the gas infrastructure may be required to facilitate the proposed works. In each case, you must make a written request regarding the proposed works to, and obtain written approval from, Engineering Services prior to proceeding.

4.5.1 Required Lead Times

ATCO should be contacted at the earliest stage of the design, for assessment and to allow for any necessary relocation work to be planned and completed to ATCO's requirements, well in advance of your works (refer to Table 3 for typical timeframes). You should allow four weeks for an initial Engineering Assessment of the works, with further time required if the works are complex and/or further information is required to properly assess your works.

Where you require any works (including alterations / relocations) to be conducted on the Network to facilitate or otherwise allow your works to proceed, the minimum time frames for conducting the works should be allowed within your project from the time of the initial assessment.

Table 3: Minimum time frames when requesting works

Work Requested	Time Frame
Altering / relocating Critical Asset gas pipelines	12-18 months
Altering / relocating other gas mains	6 months
Gas check on abandoned assets (Section 3.2.4)	4 weeks
DCVG survey to inspect for pipeline coating damage (Section 5.9.1)	4 weeks

4.5.2 Making an Enquiry to Engineering Services

Please ensure that all relevant information relating to projects that may impact upon the Network are provided to:

ATCO – Engineering Services
E-mail to: eservices@atco.com

When submitting proposed works to Engineering Services for assessment, the following items may be requested depending on the nature of the work. Please have this information readily available for review by the Engineering Services team:

- scope of works, including all activities whether temporary or permanent;
- location of works / extent of site;
- plans / drawings showing the proposed works, including:
  - location of works / extent of site;
  - changes to the surface types / surface levels;
  - location of the gas infrastructure relative to the works;
  - depth of cover of the gas infrastructure and any proposed changes;
- safe work method statements, including the type and size of equipment to be utilised and the proposed clearances for the equipment;
- risk assessments relevant to the works / gas infrastructure, including controls in place to prevent damage to the gas infrastructure;
- relevant calculations for the works, such as surface loading from heavy vehicles and cranes; and
- proposed timing of the works / requested response time.

Pipeline alterations / relocations that are required are typically completed at the proponent's cost. ATCO will not be responsible for delays or liable for any costs associated with any potential delay due to issues with compliance to any requirements.

5. WORKING NEAR GAS INFRASTRUCTURE – CONDUCTING WORKS

You must not conduct any works / activities on-site within 15 m of Critical Asset infrastructure prior to obtaining a Critical Asset Notification relevant to the works, as detailed in Section 6.

- All construction personnel must be made aware of the presence of gas infrastructure at the daily pre-start meetings and the weekly toolbox meetings, with due consideration given to the gas infrastructure within the relevant Job Safety Assessment / Take 5.
- Gas pipeline marker danger signs must not be disturbed, relocated, removed, or altered without the prior written approval of Engineering Services.
- Sources of electrical current such as above and below ground electrical cables, earth rods, substations, generators, other machinery, transformers, or impressed current systems of pipelines must be designed to not create any electrical hazard on any ATCO metallic asset.

5.1 Current DBYD Plans

Current DBYD plans must be obtained immediately prior to any construction commencing within a project area. Current plans must be kept on site throughout the duration of the works (current means 30 days from the date of request).

DBYD plans must be available on site in **colour** and of a clearly legible size (either in hard copy or in electronic form).

5.2 Locating Gas Assets

Prior to works commencing, it is the responsibility of the manager of the works, the onsite supervisor and the machine operator to arrange for the location of all utilities that may be affected by the works to protect these assets during the work activities, and to conduct the works safely.

The presence of gas infrastructure can be readily determined by conducting a DBYD enquiry (Section 4.2). After receiving the DBYD plans, buried gas assets can be located through safe excavation methods (potholing) as detailed in the following sections.

Critical Asset gas pipelines (approximately 10% of the Network) will require location by an Approved Locator (refer to Table 4 and Section 6.1). For the rest of the Network, it is acceptable for the proponent to hand dig to identify the location of the gas pipelines. Where the operator is not familiar or confident working around gas assets, the use of an Approved Locator is recommended.

Table 4: Approved Locator is required for Critical Assets

Pressure	Acronym	Network Descriptor
350kPa	Critical PEHP	Polyethylene High Pressure
350kPa	Critical CHP	City High Pressure
500kPa -6900kPa	Critical HP	High Pressure

NOTE: On DBYD maps, the ATCO critical assets are notated 'Critical'.

When working near or above gas pipelines or services, the location of the gas assets must always be pegged or suitably visually indicated.

5.2.1 Locating Buried Assets (Potholing)

Potholing is the practice of hand digging or vacuuming a test hole to expose underground assets to ascertain their exact position and depth. Potholing must be carried out prior to any drilling or excavation that may impact these underground assets.

Potholing can be carried out with a hand shovel or by vacuum extraction. If using vacuum extraction, please note that water jetting at high pressures has the potential to damage buried assets. Care should be taken if water jetting and water pressures should be limited to 1500 psi (100bar) to avoid damage. Potholing should never be carried out with a mechanical excavator.

Prior to any potholing being carried out you must read the DBYD plans to fully understand what utilities are in the vicinity and identify any associated street furniture (access pits, test posts, etc.). You are not permitted to conduct any works (including potholing) within 15 metres of Critical Assets without a valid Critical Asset Notification being issued by ATCO, other utilities may have similar conditions for works around their assets.

It is common practice to utilise sections of PVC or other material to locate and mark the pipeline. Once the measurements have been made, the marker poles must be repositioned vertically to

ensure there is a minimum of 300mm clearance from the gas pipeline to the bottom of the marker pole.

Note: An end cap must be attached to the bottom of the marking pipe to prevent damage to the underground asset.

To determine the position of the pipe, you will generally need to locate the gas pipeline at 10m intervals along the parallel straight sections and physically locate all bends, junctions / laterals service offtakes and tappings / protrusions at entry and exit locations.

Some site conditions may require intervals of 5m or less for accurate location of services, if installation is to be within 1.5m of ATCO Infrastructure.

Clean fill must be replaced around the pipe and under the post in returning the soil to ground level. This will assist in preventing damage to the pipeline from vertical impacts to the marker posts, forcing the posts down onto the pipeline.

Consideration should be given to utilise qualified locators for all asset locations. For Critical Assets, an Approved Locator must be used in all cases, after a valid Critical Asset Notification has been issued (refer to Section 6).

In addition to potholing to locate the asset, strategic slip trenching should be considered for all drilling or excavation works. Slip trenching provides a visual separation to underground assets and is useful, and may be required, when drilling near gas assets or other high risk utilities.

If unable to locate the service, your supervisor must contact the utility provider and shall NOT proceed with any drilling or mechanical excavation.

5.2.2 Locating Assets under Slabbing

In some locations concrete slabbing (or other appropriate material) has been installed to protect the gas assets from damage. Protective slabs can often be identified through writing on the top of the slab (i.e ‘ HP Gas Pipeline’) or through the presence of yellow gas warning tape across the top of the slab. Where these slabs are required to be removed to positively identify the gas pipeline, an Approved Locator must always be used.

DBYD information may indicate the start and end points of the slabs. Slabs are generally 1.2m x 1.2m of concrete with lifting lugs to assist with removal, however other materials (and configurations) are becoming more commonly available. Gas pipes are generally 300mm below the bottom of the slab. Where required, excavate to allow removal of the slab ensuring that other assets are located and protected. Using an Approved Locator, remove the slab and store it in a safe location to prevent damage to the slab or from the slab falling into or causing collapse of the trench. Continue hand excavation under the slab until the pipeline is located in accordance with the requirements of sections 5.2.1 and 6.3. For any works around Critical Asset Gas Pipelines, the pipe itself must be visually sighted.

On completion of the works the protection slabs must be reinstated using an Approved Locator. A minimum of 300mm clean fill must surround the gas assets and the gap between slabs must be no greater than 200mm and no less than 25mm.

Caution: Concrete slabbing (or other appropriate material) is often used to protect the pipe in instances of reduced depth of cover or in areas of high consequence. Due caution should be exercised for works to proceed safely.

5.2.3 Locating Assets Bored within Rock

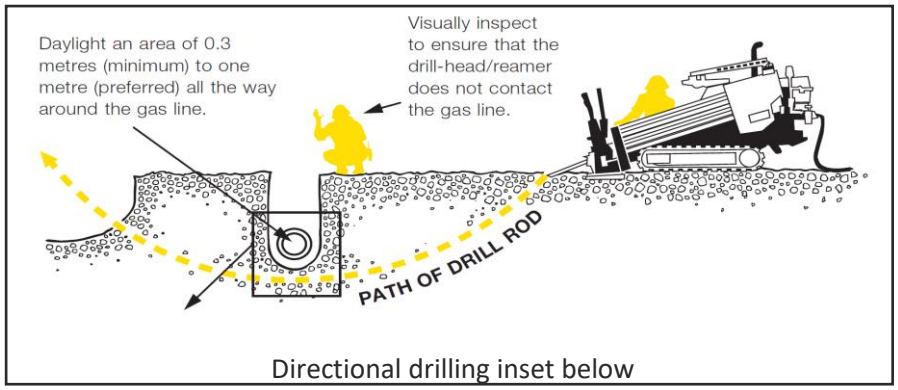
For location of bored sections of pipe within rock where the pipe cannot be visually checked, contact with Engineering Services is required to determine clearances and crossing requirements. In these situations, DBYD information may indicate the start and end points of the bores, but where drawings do not show this information contact Engineering Services. At the bore entry or exit point the pipeline should be located and exposed utilising the location requirements of this section. The pipe within a bore should either be steel or PE, and if PE should have tracer wire attached to the PE pipe. This tracer wire or the steel pipe can be used by an Approved Locator to attach a locating signal for positioning the pipe within the bore for depth and alignment. In some cases, additional bore information (bore logs) may be available.

5.3 Service Crossing under, or over, any Gas Pipeline

At the proposed crossing, you must locate the gas pipeline and verify its position and depth visually at the proposed crossing point. Any service crossing must be perpendicular to the gas pipeline, unless written approval from Engineering Services is obtained prior to the installation of the service.

You will need to visually sight the gas pipeline again, using a suitable non-mechanically excavated observation pit, to ensure that the drill / header / auger / jacking-pipe / crossing being used is able to be clearly seen by eye. This is to ensure that you are able to observe where the location of the gas pipeline is at all times and to prevent any possible damage to the gas pipeline from the installation of the crossing (refer Figure 1). Unseen jack / drilling / header advancing, or 'blind boring', pose high risks to the gas pipeline and should not be attempted under any circumstances.

Caution: No machinery is to be used within 1m of a Critical Asset and exposure shall be by **non-mechanical excavation only**.



Directional drilling inset below

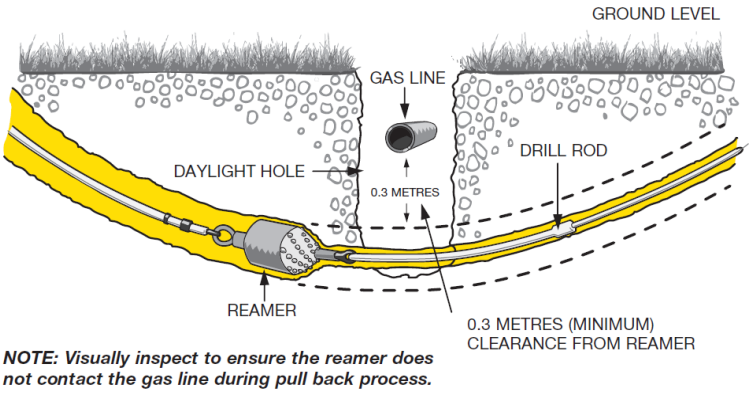


Figure 1: Observing and maintaining safe clearances when boring

A minimum clearance of 300mm is required between the gas pipelines and any third party pipe or service crossing. For concrete mains passing above gas pipelines a minimum clearance of 500mm is required.

Plunking is not an accepted hand excavation technique, when working in the vicinity of gas assets, and requires equivalent controls and supervision as mechanical excavation.

5.4 Service Paralleling a Gas Pipeline

To determine the position of the gas pipeline, you will need to locate the pipeline at 10m intervals by potholing along the parallel straight sections and physically locate all bends, junctions / laterals service offtakes and tappings / protrusions and at entry and exit locations. Some site conditions may require potholing intervals of 5m or less for accurate location of services.

For service installation parallel to a gas line, the service must not be installed such that the gas pipeline cannot be safely accessed without working in the collapsible soil zone of the service. (The collapsible area around the excavation results from the angle of repose or natural angle of the lay of the soil during the works).

For any service installation less than 1-metre from a gas pipeline, pothole spacing must be no greater than every 5 metres. Services running parallel to a gas line should have a 500mm minimum clear separation from any gas asset.

On completion of service locating requirements, the ground around the pipe should be reinstated to existing ground levels as described in section 5.2.1 and section 6.3 (as relevant to the specific circumstances).

Caution:	You are solely responsible for ensuring that all safety precautions and measures on site are met, and must endeavour to ensure that no damage occurs to the gas pipeline.

5.5 Hot Works

All hot works conducted within 15m of any gas infrastructure must be in compliance with applicable laws and Australian Standard 1674. Typical hot works include grinding, welding,

thermal cutting, concrete cutting (wet or dry) or heating, and other related heat-producing or spark-producing operations including non-mechanical cable jointing.

The presence of gas infrastructure must be specifically identified as a hazard, with the requirements of Section 3 Hazardous Areas within AS1674.1 applied accordingly. These requirements include a hot works permit authorised by a responsible officer, monitoring for flammable gases, and response procedures in the event of fire or flammable gas detection. Do not let heat sources or hot works impact on gas infrastructure and take into consideration that the ground or adjacent structures may also be capable of transmitting heat so as to circumvent protection afforded by a heat shield or barrier.

The following controls must be in place where the clearance for hot works **cannot** be maintained between Critical Asset pipelines and/or gas infrastructure of 600mm for below ground gas infrastructure and/or is within 5m of above ground gas infrastructure (e.g. valves, pits etc.),

- Hot works permit must be completed and kept on site for the duration of works.
- Calibrated Gas Detector must be on site and constantly monitoring for the duration of the hot works. (15m radius around the work area must be checked e.g. pits, manholes, drains, service covers)
- Fire extinguishers (in date)
- Fire Blanket (on site and to be used as a cover/shield)
- Fire Shield (19mm timber board)

If the above controls cannot be implemented, ATCO requires review by Engineering Services.

5.6 Changes to Ground Levels or Surface Conditions

Material must not be placed on or near the pipeline, nor can ground levels be altered without written permission from ATCO. Any proposed alterations to the finished surface level, width or surfacing of any street, road reserve or crossover must be submitted to Engineering Services for assessment in-line with this document.

If up to 100mm depth of cover is to be temporarily removed over a Critical Asset pipeline for the installation of a domestic driveway, the driveway has a width of less than 10m and a hand held compactor or bobcat of less than 1.7T is proposed, then works may proceed with a Critical Asset Notification. Driveway construction not in accordance with these parameters will require assessment by Engineering Services prior to commencement of site works, and may require a Pipeline Coating Survey to be undertaken as detailed in Section 5.9.1.

Routine road maintenance consisting of resurfacing existing road surfaces without excavation deeper than 100mm can proceed with a Critical Asset Notification. Changes to road levels, widths or maintenance with deeper excavation requirements will require assessment by Engineering Services prior to commencement of site works.

5.7 Operating over Gas Infrastructure with Vehicles, Cranes or Heavy Equipment

Vehicles crossing over the pipelines are limited to light vehicles (gross vehicle mass not greater than 4.5 tonnes) or heavy road legal vehicles on established sealed crossovers or roads. Any

crossings with reduced cover or exceeding the above limits must be assessed by Engineering Services.

Any crossings with reduced cover or exceeding the above limits must be assessed by ATCO Engineering Services with the following information/ data provided by the proponent:

- Locations where crossing gas Infrastructure
- Depth of Cover above gas Infrastructure at crossing point
- Surface Material
- Vehicle details including; Axle Weight, Axle Width, distance between Axles, Tyre width & pressure
- Potholing data

If lifting equipment, such as a crane, is proposed to be positioned in the vicinity of any gas Infrastructure, the following information/data will be required:

- Outrigger loads & bearing pressures
- Separation distance between edge of outriggers and gas infrastructure
- Outrigger specification i.e. thickness, area and material
- Potholing data
- Lifting plan- weight of load and whether it will be lifted over gas infrastructure

Cranes are generally **NOT** permitted to straddle over gas infrastructure. Typically Engineering review is not required where outrigger positions are not positioned within 5m of the gas infrastructure.

NOTE: For all Heavy Civil Machinery operating within the vicinity of ATCO assets, the proponent must demonstrate that the machine bearing pressure & vibrations will not impact the gas infrastructure

5.8 Vibration and Compaction Operations

5.8.1 Vibration

Gas infrastructure can be sensitive to vibration emitting activities. The proponent must clearly demonstrate that resultant vibration from construction activities will not impact any ATCO assets in the vicinity.

To avoid pipeline damage, vibrations from any site-works or activities must not exceed 5 mm/sec Peak Particle Velocity (PPV) as measured at the gas pipeline, by an ISO 9000 quality-accredited vibration monitoring company. If requested, you must provide ATCO with the results of the vibration readings by the next working day.

5.8.2 Compaction

Methods of compaction within the proximity of gas pipelines must be restricted to prevent damage to gas pipelines and their coatings. Compaction requirements are subject to site review, with Table 5 providing a guide to acceptable compaction methods around gas infrastructure,

including to pipelines with reduced depth of cover. Any compaction not in compliance with these guidelines must have written agreement from Engineering Services prior to conducting any works.

Table 5: Allowable compaction near gas pipelines

Horizontal distance to gas pipeline	Minimum undisturbed depth-of-cover provided		Size of Compacter / Roller	Vibration mode
0 – 5 metres	300mm		Small hand-held plate compacter only (<75Kg)	Any vibration setting
	500mm		Hand-held larger plate compacter (>75Kg)	Any vibration setting
			Maximum (total) 8-tonne tandem-drum	Static roller only (no vibration)
	900mm All Critical Assets	750mm PVC & PE	Maximum (total) 8-tonne tandem-drum	**low-amplitude** vibration setting only
			Maximum (total) 10-tonne vibratory roller	Static roller only (no vibration)
5 – 10 metres	N/A		Maximum (total) 8-tonne tandem-drum	Any vibration setting
			Maximum (total) 10-tonne vibratory roller	**low-amplitude** vibration setting only
10 – 15 metres	N/A		Maximum (total) 10-tonne vibratory roller	Any vibration setting
> 15 metres	N/A		No restrictions	

Any compaction in rocky areas must be submitted to Engineering Services for assessment prior to works commencing. Consideration should be given to using oscillating rollers rather than vibrating rollers.

5.8.3 Piling

No pile-driving, sheet-piling, vibro-piling, hammer-piling is permitted within 30m of a gas main, except with specific prior written consent from Engineering Services. It should be noted that contiguous piling is a preferred method of retaining, subject to assessment by Engineering Services and may require vibration monitoring and reporting.

5.8.4 Blasting / Seismic Survey / Explosives

No blasting, seismic survey or any use of explosives is permitted within 100m of a gas main, except with specific prior written consent from Engineering Services. Calculations demonstrating the predicted maximum particle velocity will be required for assessment by Engineering Services.

5.9 Additional Requirements near Metallic Pipelines

5.9.1 Pipeline Coating Surveys

Prior to any road works or ground surface treatments occurring, Pipeline Coating Surveys may be required in order to check the condition of the gas pipeline's protective coating. You will be responsible for the costs of any testing required.

Generally, if 10m or more of steel Critical Asset gas pipeline will subsequently be located within 500mm (measured horizontally) from the finished surface of the road / driveway or shoulder, or will be under the finished surface, you must first pre-organise with Engineering Services to perform a Direct Current Voltage Gradient (DCVG) Survey to determine the condition of the pipeline coating.

If the survey indicates that additional coating protection or coating repairs will be required, please ensure that you allow for additional time in your project in order to arrange these works. You should not call for tenders or commence site-works, before a DCVG Survey and/or pipeline coating repair is completed.

If any coatings are found to have been damaged by your works or activities, or by the lack of preventative actions, then you will be charged for the costs associated with the damage and repair of the coating, including any indirect damage that has occurred during your works such as coating damage from excessive vibration.

5.9.2 Electrical Equipment

Installation and alterations of sources of electrical current (such as earth rods, substations, transformers, impressed current systems of non- ATCO pipelines or above and below ground High Voltage electrical cables operating equal or greater than 1kV) must not interfere with the corrosion protection and electrical hazard mitigation equipment of existing ATCO assets. It should be noted that DYBD plans may not show all gas infrastructure nor may it distinguish from above or below ground assets. Further information can be requested to ATCO should plans be unclear.

Earthing rods, substations, transformers, earthing-stakes, high voltage cables impressed current systems (i.e. pipelines) and other electrical sources, may adversely affect the safety of the metallic gas distribution network, unless mitigation is employed in accordance with AS/NZS 4853:2012. During the design stage the proponent must verify the location of metallic pipelines subject to Low Frequency Induction from proposed parallel electrical infrastructure as well as any appurtenance or coating defect affected by the Earth Potential contour hazard.

ATCO Engineering Services must be pre-notified in all cases, with an Earth Potential Rise (EPR) and Low Frequency Induction (LFI) report completed by a qualified Electrical Engineer and provided to ATCO for review. ATCO requires any new electrical infrastructure near gas assets to comply with AS/NZS 4853:2012 “Electrical Hazards on Metallic Pipelines “as follows:

- AS4853:2012 Level 1 Conservative Compliance
    - If your proposed design complies with the requirements of a Level 1 assessment, a signed report must be provided to ATCO Engineering Services (eservices@atco.com). The report must demonstrate compliance to Level 1, with all parameters explicitly stated.
    - If the proposed installation does not pass the level 1 assessment, the proponent is required to inform ATCO Engineering Services via email and request pipeline specific data prior to completing a Level 2.
- AS4853:2012 Level 2 Voltage Limit Compliance
    - If a Level 2 report is provided to ATCO prior to requesting pipeline specific data, the report will not be accepted and the proponent will be required to resubmit an appropriate report that utilises actual pipeline data.

- The proponent is permitted to consider the pipeline as uncoated steel or with coating holidays present, in lieu of completing a new DCVG, provided they have used all other pipeline data as provided by ATCO.
- If a Level 2 assessment fails, ATCO will be required to conduct further investigation to determine whether mitigation of existing assets is required or not, at the proponent's cost. ATCO will not accept a Level 3 risk based assessment submitted by a proponent.

NOTE: Where an installation does not pass a Level 2 assessment, ATCO Engineering Services will assess, design and install the necessary electrical risk mitigation at the proponents cost. Adequate lead time for mitigation works to be installed must be considered during the planning phases of your project.

5.10 Exposure of Gas Assets

Where gas pipelines are required to be temporarily exposed, measures must be put in place to protect the pipelines from damage. Measures must be taken to protect the pipe from accidental (construction or vehicle impact) and deliberate damage (vandalism). Where any exposed gas pipe will be left unattended for any period of time, prior approval must be obtained from Engineering Services.

Damage by sagging must also be prevented, with safe working procedures developed for exposing any gas pipelines. For any unsupported span of pipe, Engineering Services can be contacted for advice on safe working procedures.

Table 6 can be used as a guide for maximum lengths of pipe that can be left unsupported for any period of time, subject to on-site review of the pipeline condition and safe working methods being utilised.

Table 6: Maximum unsupported length for gas pipelines

Pipe Size (Diameter, mm)	Pipe Material (Maximum Unsupported Length, m)		
	Steel (ST)	Polyethylene (PE)	Polyvinyl Chloride (PVC)
20	2.0	1.5	1.5
32 – 40	2.5	2.0	1.5
50 – 63	3.0	2.0	1.5
75 – 90	3.6	3.0	1.5
100 – 110	4.1	3.0	1.5
150 – 160	5.0	3.0	1.5
195 – 225	5.7	3.0	1.5
250 – 280	6.4	3.0	1.5
300 +	7.0	3.0	1.5

Prior to backfilling, a minimum of 150mm all around the pipe must be filled and packed with suitable backfilling material. The padding must be fine, loose material, equivalent to washed beach or river sand. The sand must be clean, free from all sharp objects, clay material, vegetable matter, building debris and disused road paving material.

The crown (top), of the asset must be covered with a minimum of 300mm of clean backfill material prior to mechanical compaction. The remainder of the excavation must be backfilled at 300mm increments and compacted to the density level in the surrounding sub-grade material and compaction requirements of the relevant road authority. All mechanical compaction must comply with Section 5.8.2.

6. CRITICAL ASSET INFRASTRUCTURE – MANDATORY REQUIREMENTS

6.1 Assets Subject to these Mandatory Requirements

Additional requirements are imposed on any activities occurring in close proximity to Critical Asset gas infrastructure. Critical Assets have been deemed integral to the gas distribution network and therefore carry increased risk to the security of gas supply. These requirements are in addition to the obligations set out in the planning and conducting work sections in this document. These mandatory requirements apply to all works within 15m of Critical Asset gas infrastructure, as shown in Table 7.

Table 7: Application of Mandatory Requirements to various types of the Network

Pressure	Acronym	Network Descriptor	Mandatory Requirements
20kPa	AMP	Albany Medium Pressure	No – LPG Network
7kPa	MLP	Medium - Low Pressure	No
70kPa	MP	Medium Pressure	No
350kPa	PEHP	Polyethylene High Pressure	No
	Critical PEHP	Critical Polyethylene High Pressure	Yes, selected Critical Asset pipelines only
	Critical CHP	City High Pressure	Yes
500kpa - 6900kpa	**Critical** HP	High Pressure	Yes

The mandatory conditions around this infrastructure apply to all works including service location and all above ground activities that could impact on the infrastructure. The mandatory requirements are shown schematically in Figure 2 and detailed in this section, summarised as follows:

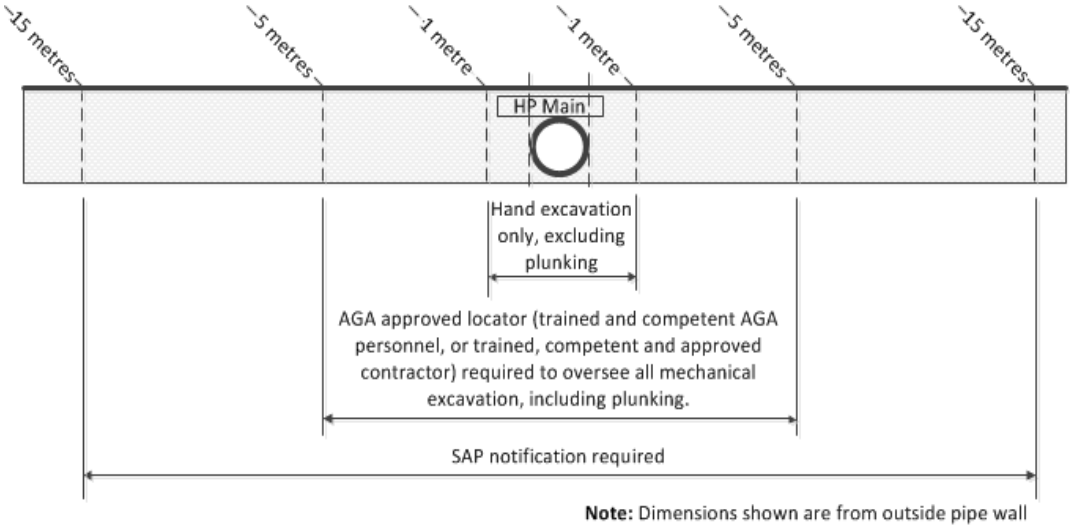
Works within 15m of Critical Asset Gas Infrastructure:

- All works must have a current ATCO Critical Asset Notification (Section 6.2.1).

Works within 5m of Critical Asset Gas Infrastructure:

- All works must have a current ATCO Critical Asset Notification (Section 6.2.1).
- Attendance is required by an Approved Locator for all activities / works (Section 6.3.1).
- The location of gas assets must be proven immediately prior to work (Section 6.3.2)

Figure 2 Mandatory Location Requirements



Note: Limitations on activities and use of mechanical equipment apply (Section 6.3.2).

6.2 Works within 15 Metres of Critical Asset Gas Infrastructure

Due to the risk associated with working around Critical Asset gas pipelines, all works that are proposed within 15m of Critical Asset gas infrastructure must be evaluated by ATCO. Once consent is provided by ATCO as the asset owner, a Critical Asset Notification will be provided that will list the permitted activities and any conditions that must be followed. A copy of the current Critical Asset Notification must always be available on site and presented to any authorised officer of ATCO upon request.

To apply for a Critical Asset Notification visit the ATCO website Self Service Portal (Link Here)

Relevant works are any action or activity or the omission of any act or activity that could affect the gas pipeline including, but not limited to:

- Weight loading onto the pipeline – heavy vehicle crossings, crane positioning, equipment storage, compaction, additional ground cover.
- Vibration loading – compaction, drilling, piling, vibratory rolling.
- Impact – digging, drilling, tie-back bars, pole installation, fencing, boring, new service installation, ground anchors, tree removal or stump grinding, etc.
- Alteration of ground conditions – road works, land developments, footpaths, crossovers, cycle paths, water courses (including swales or open drains), planting of vegetation, etc., including any activities that may limit access or cause the ground to shift or subside.
- Hot works – grinding, welding, thermal cutting or heating, and other related heat-producing or spark-producing operations per Section 5.5.

The location / position and crown level (i.e., 'top') of all gas pipelines should be proven using direct visual identification during the planning / design stage of the project. In some instances, proving of the obvert level of the gas pipeline is necessary to obtain a Critical Asset Notification for subsequent activities.

6.2.1 Critical Asset Notification

The Critical Asset Notification will be provided by the ATCO Critical Asset Officer once all requested information has been provided, and ATCO is satisfied that the works can proceed without damaging the Network. Where deemed necessary, the works may have to be reviewed by Engineering Services.

The ATCO Critical Asset Officer at their sole discretion will decide whether to issue a site specific Critical Asset Notification with accompanying conditions / requirements imposed and the proponent must comply with such conditions / requirements.

You must not conduct any works / activities on site, prior to obtaining the relevant Critical Asset Notification from the ATCO Critical Asset Officer.

Caution: The Critical Asset Notification must be kept on site with the works supervisor. All of the activities within 15m of Critical Asset Gas Infrastructure must be covered under the Critical Asset Notification.

ATCO regularly patrols its gas pipelines, and this Critical Asset Notification must be presented upon request by an officer of ATCO. Failure to provide the Critical Asset Notification or failure to demonstrate the works are in compliance with the approved activities may result in halting of the job until compliance with ATCO requirements is proven by the operator.

ATCO reserves the right to notify WorkSafe and EnergySafety in cases of non-compliance and initiate prosecution as necessary.

6.2.2 Required Lead Times

The minimum times that should be allowed for requesting and receiving a Critical Asset Notification to allow works within 15m of Critical Asset Gas Assets are as shown in Table 8.

Table 8: Minimum time frames for requesting a Critical Asset Notification

Type of Request	Time Frame
Critical Asset Notification without Engineering Assessment	3 business days
Critical Asset Notification with Engineering Assessment	20 business days

Where the proposed works are altered or added to, additional time should be allowed for re-assessment. Where works may require alterations to the Network, additional time will be required per Section 4.5.1.

6.2.3 What Information Will You Need to Provide the Critical Asset Officer

You must forward all relevant project details and drawings of any proposed works (including any temporary works / activities) and proposed machinery deployment, to the ATCO Critical Asset Officer. Refer to section 2.2.3 for the contact details.

6.3 Works within 5 Metres of Critical Asset Gas Infrastructure

6.3.1 Attendance by an Approved Locator

In addition to the Critical Asset Notification requirement (Section 6.2.1), an ATCO approved Critical Asset Gas Pipeline Location Officer (**Approved Locator**) must be on site to attend and assess all works and activities. Exceptions to this requirement may be granted in the case of works that involve hand digging only and this is at ATCO discretion.

> **Note:** Plunking is not an acceptable hand excavation technique when working in the vicinity of gas assets and requires equivalent controls and supervision as mechanical excavation.

To obtain a list of Approved Locators and to request a Critical Asset Notification, visit the ATCO online self service portal (refer section **Error! Reference source not found.**) of if you are unsure, call 1300 926 755 Monday to Friday, 7:30am to 3:30pm.

All on-site attendance by Approved Locators is at the requestor's booking and cost. You are responsible for any landscaping or road reinstatements that may be required by local regulations imposed by a local government authority or road-owner / landowner.

6.3.2 Work Requirements near Critical Asset Gas Infrastructure

The location of ATCO assets must be visually proved immediately prior to commencing any site works / construction. All digging must be by hand until the gas pipeline is visually located and confirmed. When working near or over Critical Asset gas pipelines, the location of the pipeline must be pegged or suitably visually indicated at all times.

Mechanical digging and vertical boring/augering may be conducted for further excavation under the direction of an Approved Locator once the pipeline has been located, **but no closer than 1 metre radially to the pipeline**. Accordingly, for any work within 1 metre of Critical Asset Gas Pipelines you must provide suitable labourers for hand-digging or vacuum extraction under the standing supervision of the Approved Locator on site.

All mechanical digging must be limited to the use of machinery up to an equivalent of a 20-tonne excavator with general purpose buckets only (no tiger tooth or similar without specific approval). Note that your site works may be delayed or stopped at time of construction if pre-proving by an Approved Locator has not been completed and Engineering Services has not otherwise agreed to the proposed design and clearances.

7. RELATED DOCUMENTS

7.1 Standards and Legislations

The current version of the following standards and legislation in Table 9 must be referred to when conducting works around gas infrastructure.

Table 9: Standards and legislation applicable to working around gas infrastructure

Standards and Legislation
• AS2885.0 Pipelines – Gas and Liquid Petroleum
• AS/NZS 4645.1 Gas Distribution Networks
• AS4799 Installation of Underground Utility Services and Pipelines within Railway Boundaries
• AS/NZS 4853 Electrical Hazards on Buried Metallic Pipelines
• AS4041 Pressure Piping
• AS/NZS 4130 Polyethylene (PE) Pipes for Pressure Applications
• AS/NZS 5601.1 Gas Installations
• ATCO Policies and Procedures (including Safe Work Instructions)
• Energy Coordination Act (WA)
• Environmental Protection Act (WA)
• Gas Standards Act (WA)
• Gas Standards [Gas Fitting and Consumer Gas Installations] Regulations (WA)
• Occupational Safety and Health Act (WA)
• Occupational Safety and Health Regulations (WA)
• Utility Providers Code of Practice for Western Australia
• Western Australia Excavation Code of Practice

7.2 High Pressure (Critical Asset) Notification Requests & General Notifications of Works Form

Available on the ATCO website via self-service Forms tab or via the below link:

ATCO Australia: Notification Requests

8. DISCLAIMER

Note:

1. To the maximum extent allowed by law, no warranty or representation is given or made concerning the information provided in this document (including as to quality, completeness, accuracy or fitness for any purpose or that it complies with any applicable laws, standards or codes).

2. You should conduct your own independent due diligence checks and verifications and obtain your own independent design and advice from relevant competent engineering experts and other professionals (including to ensure the stability, structural integrity, support, durability, performance, drainage, safety, quality, adequacy, fitness for any purpose and compliance with all relevant laws, standards and codes) for your own constructions, their location, footings, foundations, protections, materials and any equipment, fittings, wires, cabling, pipes, conduits or apparatus to be used, applied or installed in relation to those constructions; and for the maintenance, upkeep, repair, monitoring and checking on an ongoing basis of any such constructions.
3. Each site will have its own unique conditions / characteristics / difficulties / requirements and therefore it is your sole responsibility, as the project proponent to conduct independent investigations, research and engineering analysis and seek independent specialist advice regarding your specific projects / activities / works to ensure that any of your works / activities do not cause damage, or are likely to cause damage to, gas assets.
4. To the maximum extent permitted by law, ATCO, its related bodies corporate and officers, employees, agents or contractors are not liable in any way whatsoever (including for negligence, recklessness or breach of any statutory duty) for any loss, liability, cost or claim of any kind whatsoever (including any direct loss, indirect loss, consequential loss, economic loss, loss of profit, loss of opportunity, death, illness, injury or damage to reputation or goodwill) arising from or in relation to the use of or reliance on the information in this document.
5. ATCO reserves the right at any time (without giving any notice) to modify, supplement or withdraw this document, or any part of this document.
6. In this document, ‘including’ means ‘including, but not limited to’.
7. This important notice may not be altered, omitted, hidden or removed, except by ATCO.