Energy Networks Australia

ABANDONMENT OF DOMESTIC AND SMALL COMMERCIAL GAS SERVICES AND ASSOCIATED METERING INSTALLATION

ENA DOC 055-2025

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Key Information

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Acknowledgements

This is a Reference Group project of Energy Networks Australia Gas Technical Reference Group (GTRG).

The Energy Networks Australia Gas Technical Reference Group has broad national representation from a number of industry representatives and has access to a large database of industry guidelines, policies, reference standards and design manuals.

Energy Networks Australia has Members across Australia's electricity distribution and transmission and gas distribution companies. For the development of this guideline the following industry organisations were represented on the Reference Group:

- AGIG, APA, ATCO, AusNet, Jemena, Multinet Gas

The Reference Group would like to acknowledge the assistance of all these parties and specifically:

- Andrew Bambridge of Pascal Asset Services

Documents of Energy Networks Australia

History of Energy Networks Australia

Energy Networks Australia is the peak national body representing Australia's gas distribution and electricity transmission and distribution companies. Established in its current form in 2004 it has a long history of industry representation, operating under different names over the years to reflect the sector transformation.

With more than 16 million customer connections across the nation, Australia's energy networks provide the final step in the safe, reliable delivery of gas and electricity to virtually every home, business and industry in the country.

Documents

Part of Energy Networks Australia's role is the development and management of support material such as codes, specifications, guidelines and handbooks to support the energy industry and members of the public in the interpretation and application of legislation and standards. All documents are written in collaboration with the industry through reference groups and general consultation with Energy Networks Australia's members.

This guideline is just one document in a framework of information designed to support the energy sector. Network Operators and Service Providers should refer to all current Energy Networks Australia Guidelines. A full list of documents can be obtained from Energy Networks Australia at http://www.energynetworks.com.au/industry-guidelines.

1 Purpose and Scope of these Guidelines

The Energy Networks Association (ENA) is the peak body representing eight or more licenced gas distribution businesses across Australia in all States and Territories. Its gas members are owners and operators of gas networks supplying gas to domestic, commercial, and industrial users.

The purpose of these guidelines is to provide member organisations and personnel across the gas distribution assets information as to the nature of the various types of abandonment of small customer connections.

The types of gas connections that fall under this guideline are those that:

- Operate with natural gas, renewable gas, or a blend of these gases
- Gas connections supplying domestic and small commercial premises
- Gas connections with a gas meter size of 25scmh or less capacity; and
- Gas connections with a normal operating pressure of ≤515kPa.

Reticulated LPG gas services are not included within the scope of the guideline, however many aspects would apply, and all differences need to be risk assessed separately.

All involved in the development and use of the guidelines are encouraged to contribute to ongoing development of the document.

This guideline excludes any commercial / cost related analysis of permanent abandonment or abolishment of a gas service.

2 The Role of the Gas Distribution Network Business

Each gas Distribution Business (DB) under their State legislative environment distribute gas in a manner that meets their own business level of risk. Although each State has a different regime, this requirement is met through the policies, plans, systems and processes that define the planning, design, construction, testing, operation, maintenance and decommissioning of those gas distribution systems. Each DB will typically have a Gas Safety Case which outlines at a high level the policies, plans, systems and processes that demonstrate a 'Case for Safety' for the lifetime of the gas asset from design, construction, testing, commissioning to operations and finally abandonment or abolishment.

The DB should develop and keep updated relevant operating procedures detailing the abolishment options available in accordance with these guidelines which are supported by Section 8 of Australian Standard AS4645 Part 1:2018 (Network Management) which requires that:

"……the processes required to carry out this action shall ensure *that the disconnected elements cannot become unsafe at the time of the disconnection or any time afterwards."*

The DB's Formal Safety Assessment(s) take into account the associated risks of decommissioning their assets including the abandonment of the gas service pipe on a public or private property.

3 Purpose of the Guidelines

This guideline provides general guidance, and additional advice and support for each of the DB's and Operators of gas networks to further develop their own policies, standards, or procedures.

It will also assist the reader by explaining the requirements and a number of options to be considered in accordance with good industry practice. and provide a uniform approach across the gas industry in Australia.

4 Abbreviations

Table 1 Abbreviations

ALARP	As Low As Reasonably Practicable
AS	Australian Standard
ESIV	Emergency Service Isolation Valve
FSA	Formal Safety Assessment
GSC	Gas Safety Case
JHA	Job Hazard Analysis
MCV	Meter Control Valve (maintap)
PCBU	Persons Conducting a Business or Undertaking
PPE	Personal Protective Equipment
SMS	Safety Management System
SWMS	Safe Work Method Statement

5 Request for a gas service abolishment

A request for a gas supply to be permanently discontinued is normally made by a consumer to their gas Retailer, In some jurisdictions, it may be possible for a property owner to request a permanent gas supply disconnection directly through the DB where no Retailer is attached to the supply point.

The Retailer will typically consider the details of the request by the consumer and if appropriate the request for the permanent abolishment of the gas supply will be sent to the gas distribution business operating the network.

The Retailer will normally take into consideration the following:

- Current status of the gas supply (Consuming, disconnected, etc)
- The person making the request whether they are the customer or not, and whether they are a tenant of the property or other third party. Most Retailers will require the property owner (or landlord/body corporate) to apply for and consent for a disconnection or abolishment of the supply
- Whether the property is being renovated or demolished, and the gas supply is no longer required, or only a short-term temporary disconnection is required
- Whether the property is for sale or has been sold. This may determine that a temporary disconnection only is needed ready for the new owners to then apply for a gas supply

The DB will receive the request and process the application through their work management systems and allocate the works to be undertaken as appropriate.

As well as a Retailer a request may also be made from other sources such as the Technical Regulator or WorkSafe for an unsafe supply. Urgent requests may also be made following a serious event such as a house fire where urgent demolition is to take place. As seen later this may determine the type of abolishment or temporary disconnection to take place, and where the service pipe is capped and what assets are removed.

Where the DB identifies a prolonged period of discontinued gas usage at a supply point, and there is no Retailer attached to that supply point, it should assess the associated risks related to the continued presence of a live service. If the DB determines that the risk level is intolerable, abolishment of the service connection may be considered an appropriate risk management measure. The abolishment should be carried out in compliance with applicable local codes and legislative requirements.

6 Formal Safety Assessments

The DB's Formal Safety Assessment(s) take into account the associated risks of decommissioning their assets including the abandonment of the gas service pipe on a public or private property. With respect to the abolishment of a gas service, the following provides a list of considerations for the FSA:

For each option the following table should be considered as a guide in the decision making and risk assessment.

Table 2 Formal Safety Assessments

Maximise the length of gas service pipe abolished	Where possible minimise the length of small diameter gas service pipe that is left live and pressurised with gas to minimise the risk of leakage and damage resulting in an uncontrolled gas escape.
Material and pressure of gas main	Consideration on the supply main material, operating pressure and its location and the complexity of the abandonment work.
Material and diameter of gas service	The diameter and material of the gas service pipe should also be considered. Non-standard diameters and materials may be a consideration and the availability of plugs and caps to suit.
Location of gas main: verge, footpath or carriageway	Complexity surrounding the physical location of the service connection to the main and ease of access for excavation and public safety, including the depth of cover, traffic management, etc.
Record keeping	Consider the need to record and maintain "as built' details of the remaining 'live' capped service stub for asset record purposes and any future asset protection works.
BYDA responses	What information is recorded in a GIS system and provided to third parties through the BYDA system to avoid damage to the main and service tails.
Potential physical controls to be considered	Whether physical markers or discs are installed indicating the end of a service stub

Likelihood of renovations, building works or landscaping/fencing at the property	Consider the likelihood of any live assets remaining on the private property being damaged or built over in the future. This may be due to the elapse of time and property owners changing or not realising the live gas pipe is present.
Theft of gas	If any live assets are to remain on the private property, consider the risks and likelihood of the asset being interfered with and the potential for a dangerous situation to develop including the potential theft of gas.
Theft or damage to disused meter, regulator, riser pipe etc	If any live above ground assets are to remain, consider the controls to minimise damage or theft.
Damage to buried gas pipe in public and private property.	If any live gas service pipe is to remain consider the controls to reduce the likelihood of interference damage.
Access to any remaining gas equipment / meter	If the meter or other equipment is to remain on site what will the future access to the equipment be like. Consider restrictions due to gates, fences, domestic pets, shrubs and other obstructions.
Leakage survey coverage	Consider whether gas services form part of the leakage survey programme
Ability to locate the pipe using a locator tool	Whether the gas service pipe is of metallic construction or tracer wire is installed to allow the pipe to be traced underground by an appropriate pipe and cable locator. This may be by the asset owner or a third party.
Proximity of cap or redundant equipment to buildings	The physical distance of the cap on the service to a building and the potential for a leak to enter the building. Consider the surface type whether sealed or unmade, the distance of broken ground and whether there are any cellars of voids that gas could enter.

7 Simple Single Gas Service Abandonment

The service isolation and capping locations for a normal single supply gas service that may be considered are shown in ***Appendix A – Gas service 'capping point' options "A"***

Where the parent gas main is located in a particularly difficult location such as under a busy highway or arterial road that would involve complex traffic management, excavation machinery and/or reinstatement then the risks shall be assessed further regarding the preferred location and method of isolation/ capping. If an alternative location is determined acceptable through risk assessment, such as the back of kerb without digging the carriageway, then this position should be marked and recorded in the records system for future reference.

8 Alternative Means of Service Abandonment

Where the supply to be abolished is part of a dual, multiple gas service or a meter manifold arrangement the site layout and conditions will determine the most appropriate location for the

isolation and capping to occur. Refer to the schematic showing position **'A'** in ***Appendix B – Gas service 'capping point' Unit Complex***. This may be determined as part of the planning process, or on site as required during the site planning and investigation works.

On dual or multiple services serving more than the affected consumer supply to be abolished then the most practical location as close to the 'Tee' on the service pipe shall be chosen to cap the unused supply. Refer to the schematic showing position **'A'** in ***Appendix B – Gas service 'capping point' Unit Complex***

Subject to the DB's risk assessment and assessing the individual site conditions, capping the service pipe in a verge, garden bed or unsurfaced driveway etc avoiding the need to disturb sealed or concrete private driveways, etc may be considered. This position where practical shall be marked and recorded in the records system for future reference.

For metered supplies on a manifold pipework arrangement then only the affected consumer supply shall be disconnected. The meter control valve (MCV) shall be turned off, the handle removed, and the outlet permanently capped. The affected meter regulator and meter shall be removed. Refer to the schematic showing position **'A'** in ***Appendix C – Gas service 'capping point' Meter Manifold***

The location and details of the abolished service should be captured in the DB's GIS system.

9 Timing of abolishments

Each DB should develop and operate to a documented policy for the permanent abolishment of gas services including the timing of abolishments.

Where an urgent disconnection or abolishment is received for safety reasons, e.g. urgent building demolition following a fire, then these works shall be completed as a priority. The isolation shall be completed at a safe distance from the boundary and the location of the disconnection identified and recorded.

10 Method of isolation of the gas supply

The majority of gas supplies to domestic and small commercial consumers are a single pipe from the main in the street to the meter of between 10mm and 63mm in diameter and made up of predominantly polyethylene, PVC/nylon, galvanised steel, copper or coated/wrapped steel.

Alternatively, there may be dual or multiple gas services or meter manifold service connections where there is one tapping to the gas main in the street and then multiple branches and gas connections/meters connected along the route of the service pipe. This type of installation is commonly found in unit complex's, dense housing blocks or meter rooms for apartment blocks, etc.

Any service abolishment should be in accordance with the individual DB's procedures and work instructions and generally follow the guidelines below.

For the majority of single gas services this gas service should be capped close to the parent main (ideally within 150mm of the tapping saddle), to maximise the length of service pipe abandoned. See Figure 1 below of an example capped service pipe.

The abandoned end of the pipe going to the premises should be plugged, sealed or capped is avoid a future duct or leak path in the future, and all DB owned above ground equipment that

has been abandoned should be physically removed. Where practical the gas riser pipe above ground should be physically removed and the end of the pipe sealed. Where the riser is in a sealed or concrete surface the pipe may be cut off level with the ground and sealed.

Figure 1 Example -Service tapping saddle with cutter wound down, and service pipe capped.

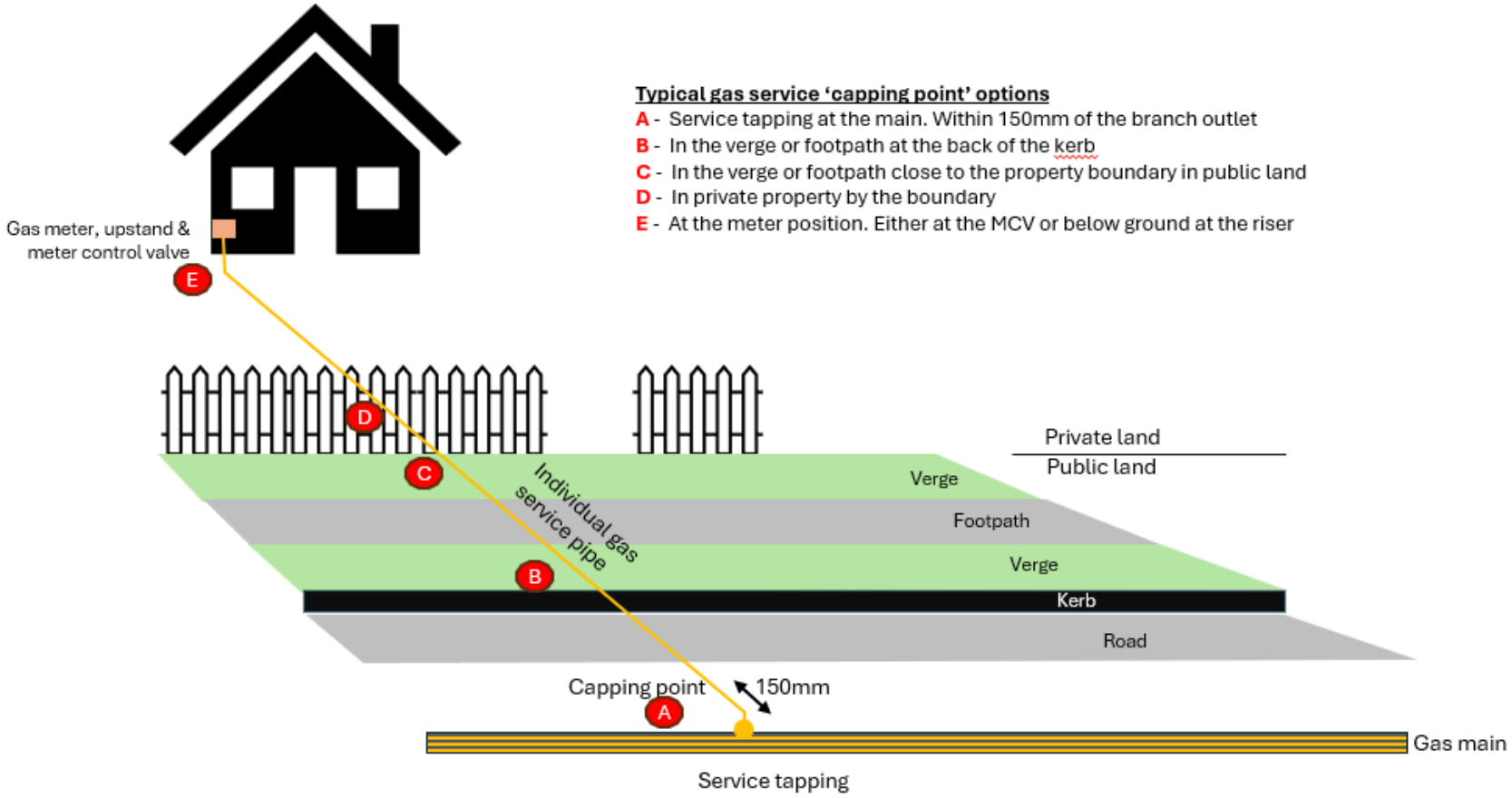
For steel or cast-iron mains connections the service tee should be unscrewed and plugged where appropriate, or the PE service pipe capped as shown above in accordance with the DB's standard operating procedure for live gas operations.

Following any capping or plugging of the main or service pipe the new and any visible joints shall be tested with a leak detection solution (snoop).

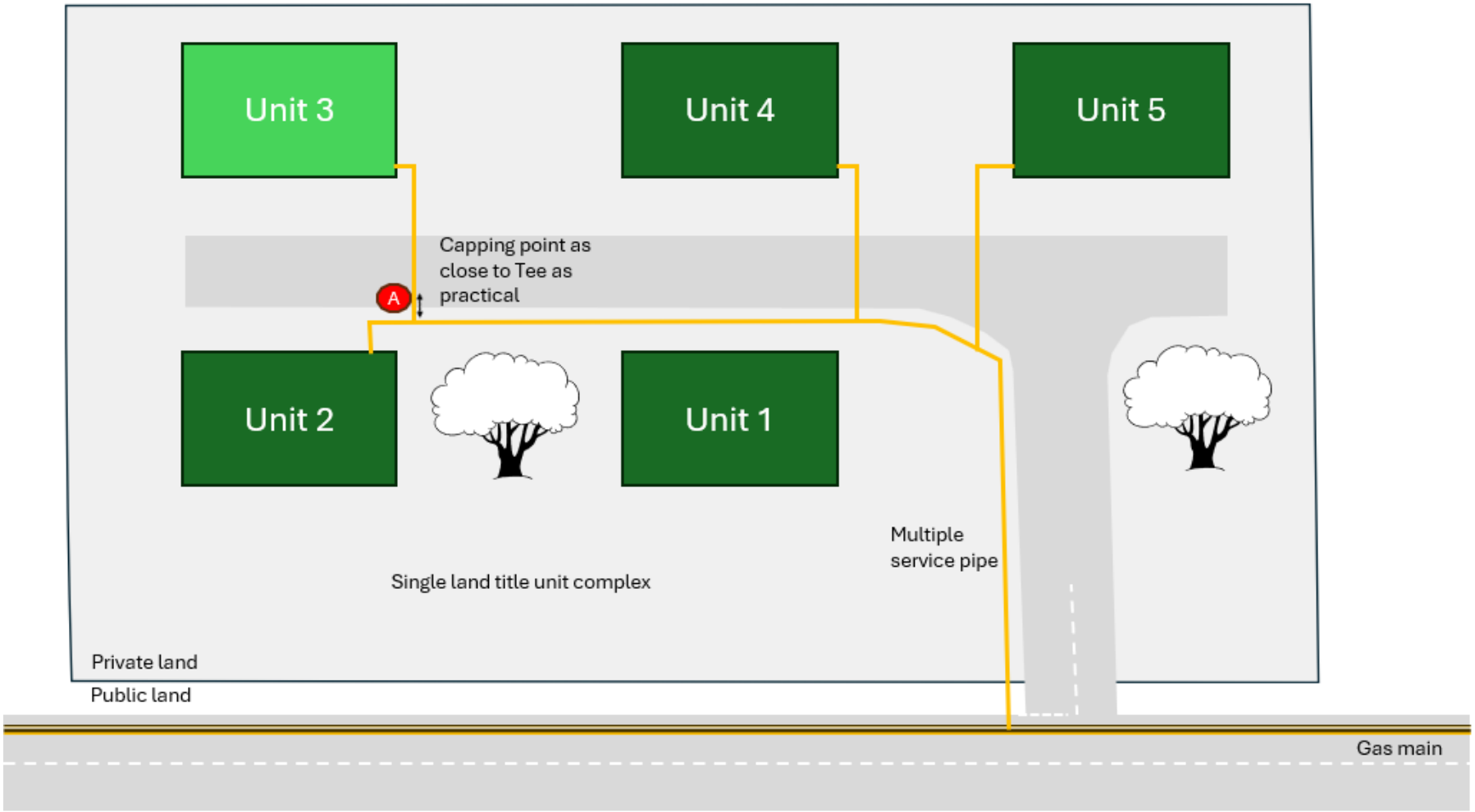
Any surplus valve lids, in ground regulator pits (black boxes) shall also be abandoned and removed along with any signage.

The risks associated with the abandoned pipe close to the main should be considered which may include fitting of a plug or sealed with a cap, or other form of mastic sealant (e.g Denso mastic or similar). This should be assessed as part of the risk assessment process.

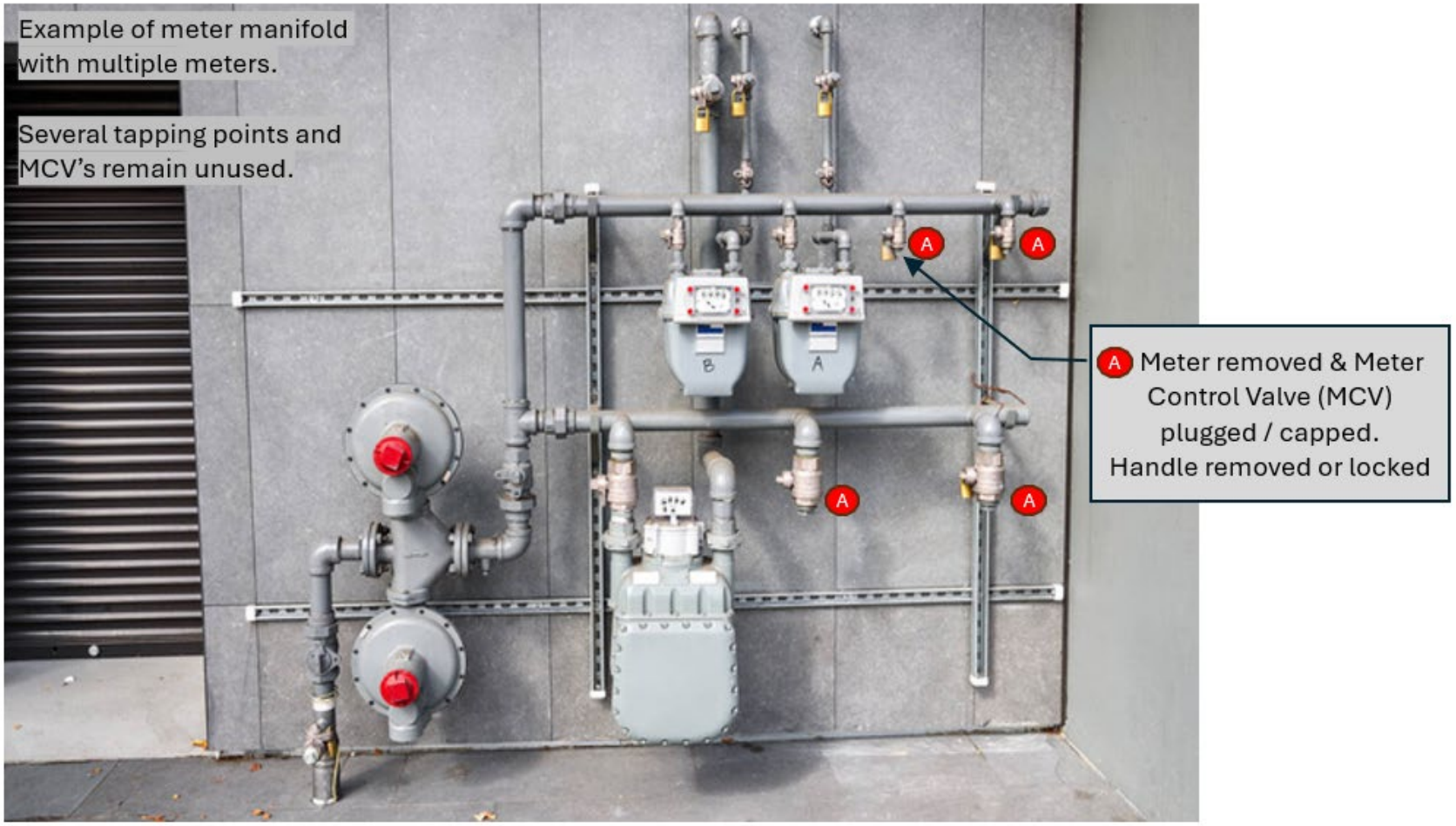
11 Appendix A – Gas service ‘capping point’ options ‘A’



12 Appendix B – Gas service ‘capping point’ Unit Complex



13 Appendix C – Gas service ‘capping point’ Meter Manifold



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