

SA New Homes Domestic Gas Meter Location Guidelines



GENERAL GAS METER LOCATIONS REQUIREMENT

It is the customer's responsibility to ensure that meter locations, selected in consultation with the distributor's representative, remain compliant with safety distance and accessibility guidelines.

General Site Considerations

All gas meter installations shall consider, wherever possible, the following when selecting a site:

- Located where the meter won't become a trip hazard;
- Located externally to a building and freely ventilated;
- Located away from areas where escaping gas may become trapped, e.g. below closed canopies where gas cannot disperse into the atmosphere
- Installed so that the base of the meter is above finished ground level.
- Located where the APA Networks personnel are able to safely access the meter at any time to enable installation, isolation, readings and maintenance;
- The area in front of the gas meter or gas meter enclosure shall be kept clear and free from obstructions at all times;
External gas meter or gas meter enclosure shall be located entirely on the consumer's property.
- Located away from areas where the meter may be subject to interference, vandalism or from vehicle damage
- A minimum 600 mm clearance shall be maintained in front of the gas meter box at all times to open the meter box and access the meter
- Final ground levels shall be prepared prior to the gas inlet service installation, to ensure minimum depth of gas pipes are maintained and garden meter heights are suitable. APA Group will not be responsible for shallow gas pipes if retaining walls or removal of excess soil has occurred after the installation
- It is the owner or builder's responsibility to provide gas inlet service installation crews a safe working environment. The site is to be free of building debris, waste bins and construction toilets as they will not be moved by gas installation crews.
- Combined enclosures that have different compartments for electrical and communication equipment are not permitted by APA Group to be used for gas meter installations.

DOMESTIC GAS METER ASSEMBLY

Domestic Installations are those gas meter assemblies that supply residential consumers who use the property for residential use only. It is the consumer's responsibility to ensure that gas is not used for non-domestic purposes other than for domestic / residential purposes.



This section gives requirements for the location of gas meters, with a capacity not exceeding **30 m³/h**, on residential premises.

Gas Meter Assembly Configurations

Gas meter assemblies may be installed in any of the following configurations:

1. Building Wall installation (Meters located on individual dwellings at Building);
2. Garden installation (Single or Group of Meters - 4 or less meter assemblies);
3. Free Standing Wall installation - on Masonry Wall, Block Wall, Rendered Mailboxes or Steel Structure (Single or Group of Meters - 4 or less meter assemblies);
4. Manifold arrangement - on Masonry Wall or Steel Structure (Group of Meters – more than 4 meter assemblies)
5. Enclosures or meter rooms (see your SA New Homes representative for details)

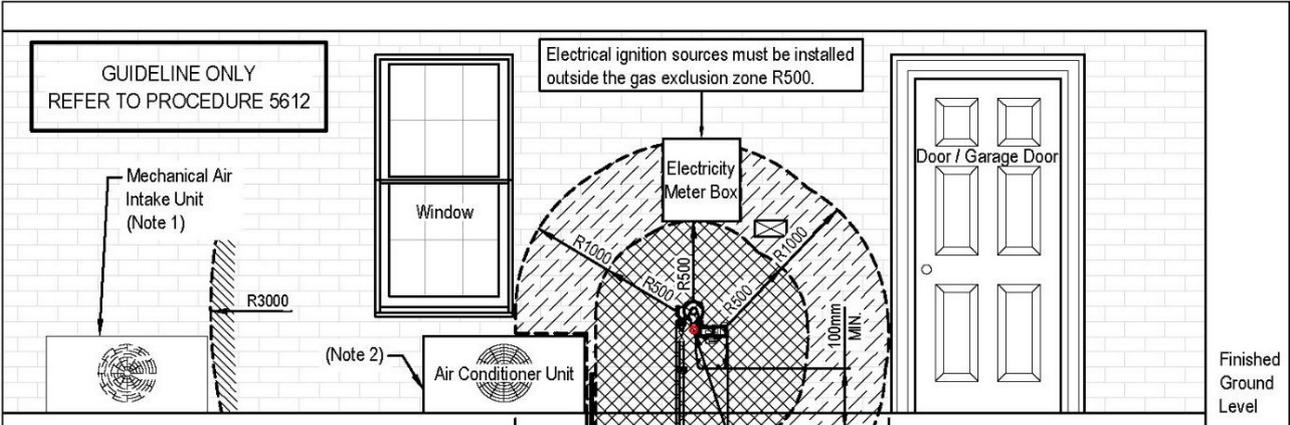
Approved Meter Box

Only single gas meter boxes that are accepted by APA Group are permitted to be used for domestic installation.



NOTE: Combined enclosures that have different compartments for electrical and communication equipment are not permitted by APA Group to be used for gas meter installations.

APPENDIX B DOMESTIC GAS METER INSTALLATION REQUIREMENT FOR NATURAL GAS



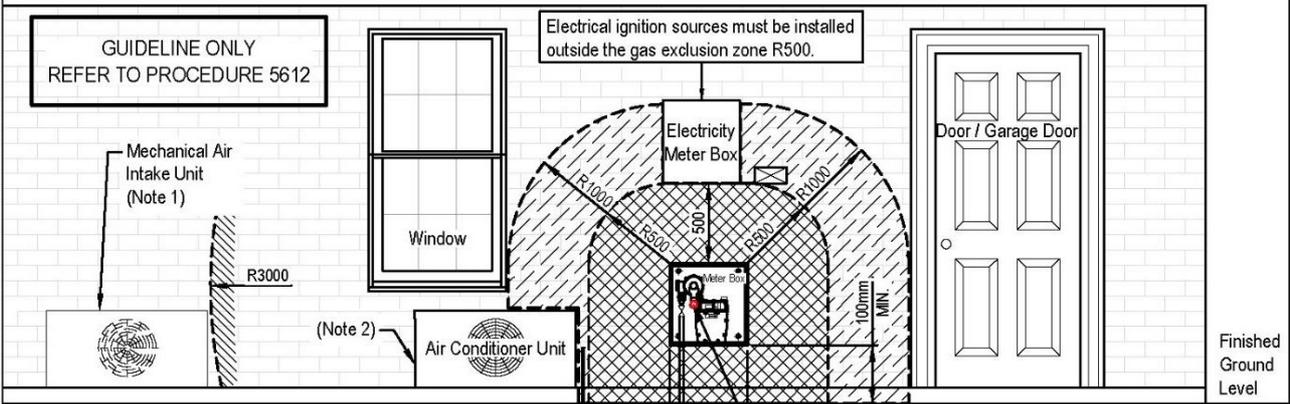
1000mm MIN - Opening of the Window (Note 3) / Gas Appliances and Flue Terminals

500mm Note 6

Relief Discharge Point (Note 4)

1000mm MIN - Opening of the Door (Note 3) / Gas Appliances and Flue Terminals

Gas Meter Exclusion Zone without Meter Box



1000mm MIN - Opening of the Window (Note 3) / Gas Appliances and Flue Terminals

500mm Note 6

Relief Discharge Point (Note 4)

1000mm MIN - Opening of the Door (Note 3) / Gas Appliances and Flue Terminals

Gas Meter Exclusion Zone with Meter Box

NOTE:

1. For mechanical air inlet units, 3.0m minimum from relief discharge point clearance required.
2. Electrical ignition sources are and not limited to power points, photo voltaic (PV) inverters and isolation switch gear, electric motors for water pumps, air compressors, automatic gates etc, split cycle air conditioners and electrical water heaters - Zone R500.
3. Openings includes doors, windows, vents weepholes except sub flooring openings - Zone R1000.
4. The relief / vent position & orientation must be considered prior to installation, refer to procedure 5612 for clearance requirements.
5. 1.0m clearance from driveways unless authorised by an APA representative.
6. Electrical earthing electrode shall be a minimum 500mm away from inlet riser and service lines.

LEGEND

- Zone R500 - Electrical Ignition Source (Note 2)
- Zone R1000 - Openings, gas appliances and flue terminals (Note 3)
- Zone R3000 - Mechanical Air Intake (Note 1)
- NBN/Foxtel/Telstra

REVISION: PROCEDURE 5612 (ISSUE 6) AMENDED / SUPERSEDES SK-0079 Rev E

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APA NETWORKS NATIONAL STANDARD DOMESTIC GAS METER NATURAL GAS INSTALLATION REQUIREMENTS

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Scale: N.T.S

Cad File Name: 400-100-DWG-A-0001

Sheets 1 of 1
 Rev. 1
 A4

DOMESTIC GAS METER LOCATION

For all new connections the customer shall submit proposed gas meter location. Gas meter location shall be assessed prior to installing the inlet, taking into account operational considerations and Economic Feasibility.

APA Group reserves the right to request open trenches to be supplied by the owner or builder on the alignment of the gas service if machinery access to dig the trench is not available, e.g. where the land is very steep, or the presence of significant flora.

Final ground levels shall be prepared prior to the gas inlet service installation, to ensure minimum depth of gas pipes are maintained and garden meter heights are suitable.

APA Group will not be responsible for shallow gas pipes if retaining walls or removal of excess soil has occurred after the installation.

It is the owner or builder's responsibility to provide gas inlet service installation crews a safe working environment. The site is to be free of building debris, waste bins and construction toilets as they will not be moved by gas installation crews.

Figure 3 shows a typical detached dwelling indicating the front boundary, building frontage and acceptable / unacceptable gas meter assembly locations.

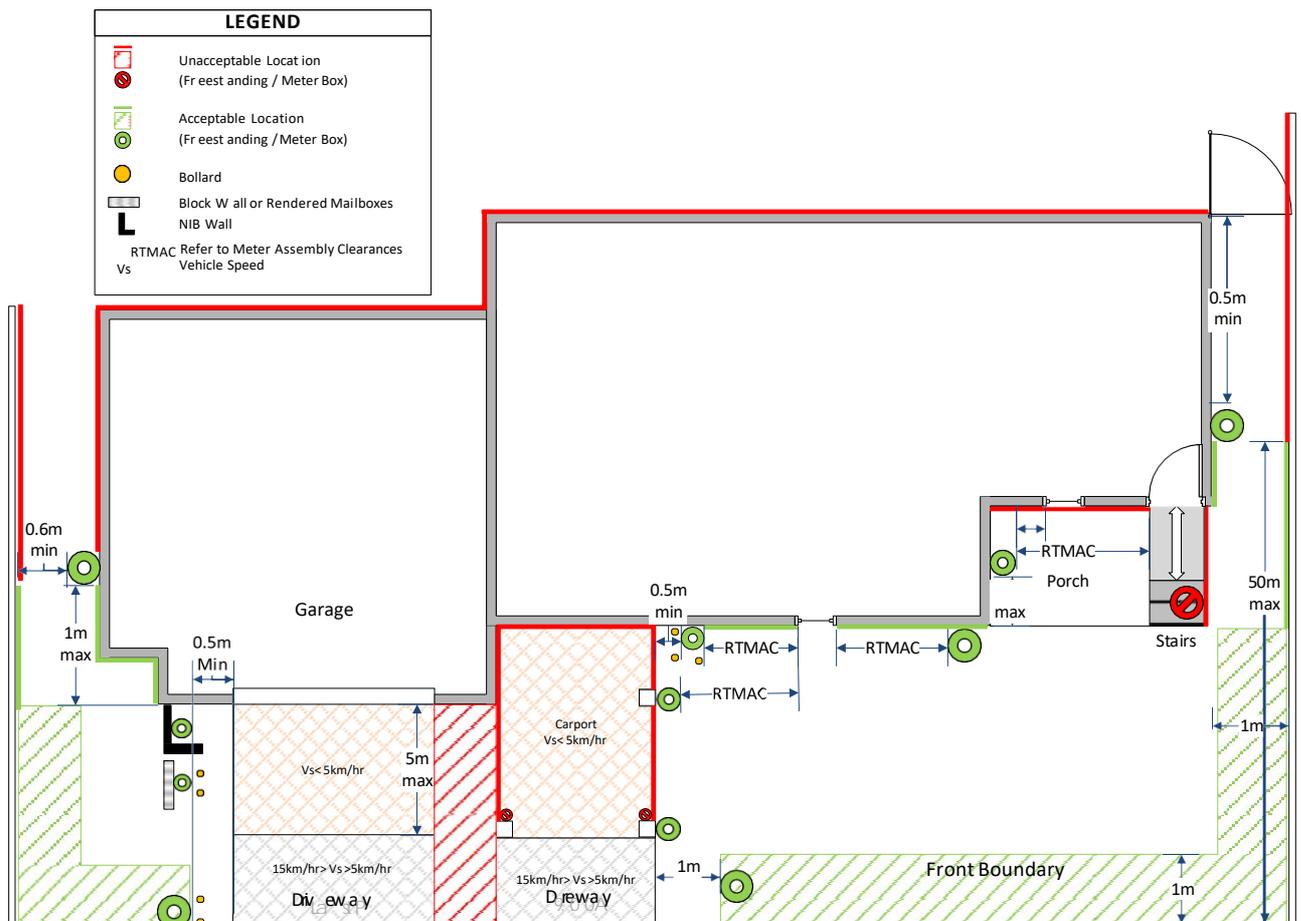


Figure 3: Acceptable / Unacceptable Domestic Meter Locations

CLASSIFICATION OF RESIDENTIAL DEVELOPMENT

Gas meter locations will be determined by the dwelling type and also in consideration of the associated risk of a gas leak and maintenance of the pipework within the development. Determining the classification of residential developments is crucial to the process of the gas meter location. A definition of each category for residential dwelling types is provided below:

| | |
|--|---|
| | <p>Detached Dwellings</p> <p>A detached building comprising one dwelling on a site that is held exclusively with that dwelling and has a frontage to a public road - meters to be positioned as per Fig.3 page 4</p> |
| | <p>Semi-Detached Dwellings</p> <p>A dwelling occupying a site that is exclusively with that dwelling, has frontage to a public road and comprises 2 dwellings built side by side, forming a single dwelling - meters to be positioned as per Fig.3 page 4</p> |
| | <p>Row Dwellings</p> <p>A dwelling occupying a site that is exclusively with that dwelling, has a frontage to a public road and comprises one of 2 dwellings built side by side, joined together and forming a single dwelling - meters to be positioned as per Fig.3 page 4</p> |
| | <p>Group Dwellings</p> <p>One of a group of 2 or more detached buildings each of which is used as a dwelling and one or more of which has no frontage to a public road - meters to be positioned as per Fig.3 page 4 (trenches supplied by builder)</p> |
| | <p>Residential Flat Buildings</p> <p>A single building or multiple attached dwellings. Meters to be located by consultation with APA representative</p> |
| | <p>Apartment and High Rise Residential Buildings</p> <p>Meters located within a meter room with consultation by APA representatives</p> |

Figure 2 Dwelling Types



Meter positions on all multi dwelling sites must be approved by APA New Homes Representatives prior to connection request being made

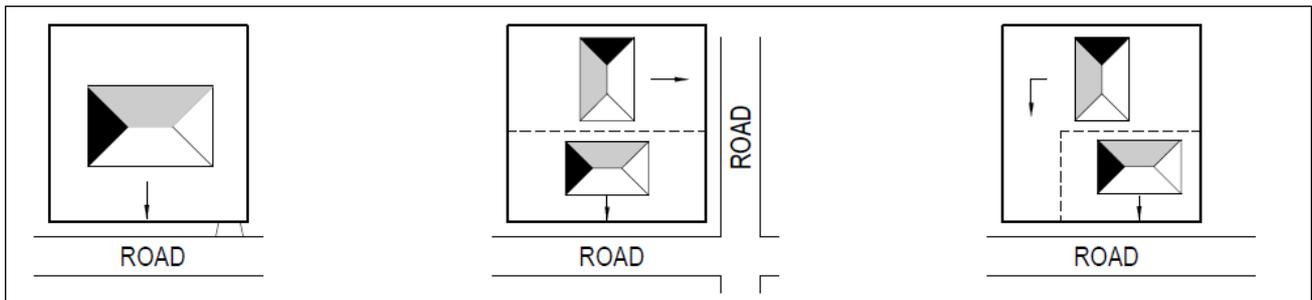
Classification of Residential Development (continued)

This section describes a conforming location of a gas meter assembly at various dwelling types.

Detached Dwellings



A detached building comprising one dwelling on a site that is held exclusively with that dwelling and has a frontage to a public road. For detached and Semi Detached Dwellings, individual meter placement shall comply with the acceptable locations in Figure 3, Page 4



Hammerhead Block

A dwelling on a hammerhead block is considered a detached dwelling; Figure 7 shows a typical hammerhead development:

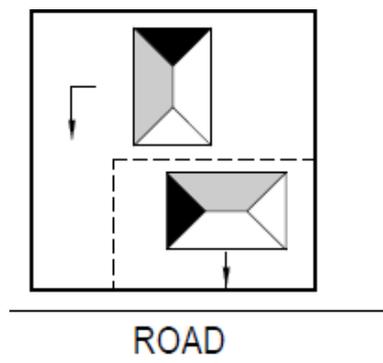


Figure 7: Hammerhead Block – Detached Dwelling

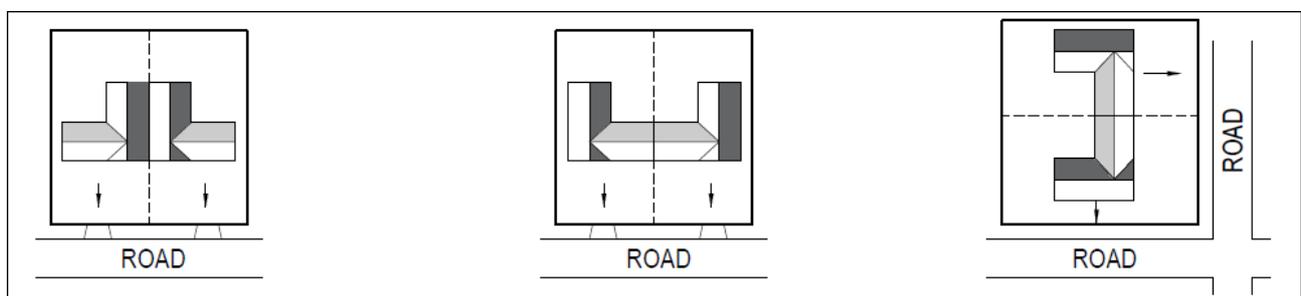
The preferred meter location for the dwelling/s on a hammerhead block is within the acceptable locations of the property's front boundary.



Gas meters may be located on the rear dwelling if trenching or conduits (as per APA Group installation requirements) is provided by the builder to each meter location.

Semi-Detached Dwellings

A dwelling occupying a site that is exclusively with that dwelling, has frontage to a public road and comprises 2 dwellings built side by side, forming a single dwelling)



Row Dwellings

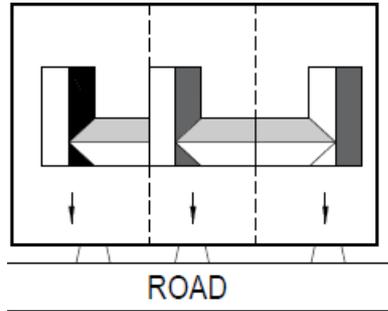
A dwelling occupying a site that is exclusively with that dwelling, has a frontage to a public road and comprises one of 2 dwellings built side by side, joined together and forming a single dwelling.



For Row Dwellings (e.g. townhouses), individual meter placement for each premises should comply with the acceptable locations.



Where a suitable meter location is not available at a building, freestanding wall installation utilising a block wall or rendered mailboxes in the garden bed and are a practical alternative to meet meter position requirements.



Garden Installations – Row Dwellings

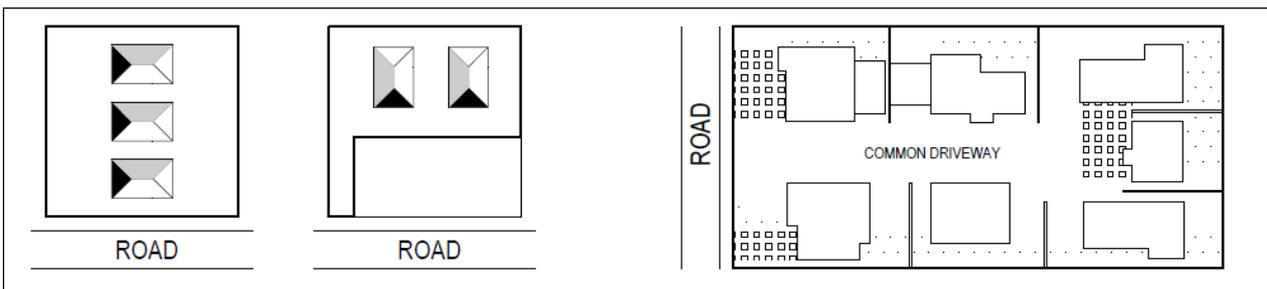
Group Dwellings

One of a group of 2 or more detached buildings each of which is used as a dwelling and one or more of which has no frontage to a public road *



For Group Dwellings (e.g. retirement villages), the preferred installation is to install the meters at the property boundary of the development or a shared area in any of the below configuration and in compliance with APA guidelines.

- Garden installation (Group of Meters - 4 or less);
- Free Standing Wall installation - on Block Wall or Rendered Mailboxes (Group of Meters - 4 or less);
- Manifold arrangement (Group of Meters – more than 4);
- Enclosure or meter room



NOTE: Site plans with proposed gas meter locations shall be submitted to APA Group for approval.

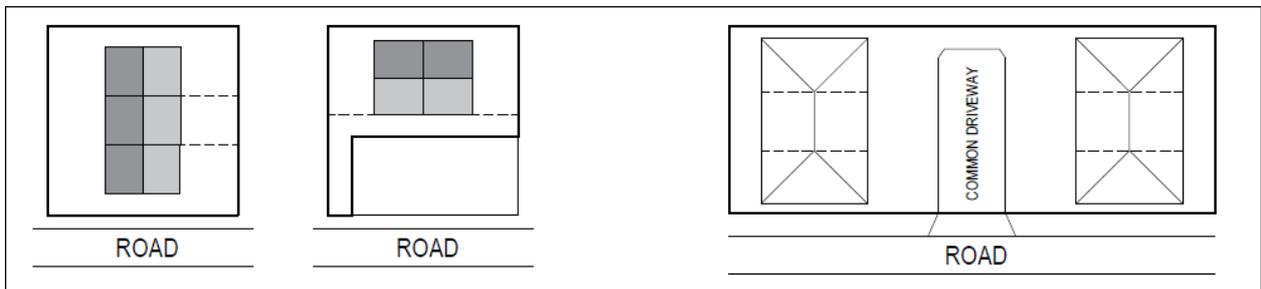
Gas meters with capacities not exceeding 10m³/hr may be located on each premises if trenching or conduits (as per APA Group installation requirements) is provided by the builder to each meter location. The meter placement shall comply with the acceptable locations of Figure 3, Page 4

Residential Flat Buildings

A single building in which there are 2 or more dwellings but does not include a semi-detached dwelling a row dwelling or a group dwelling.

For Residential Flat Buildings, the meters shall be placed at the front boundary of the development or shared area in any of the below configuration and in compliance with APA guidelines on manifolds.

- Garden installation (Group of Meters - 4 or less);
- Free Standing Wall installation - on Block Wall or Rendered Mailboxes (Group of Meters - 4 or less);
- Manifold arrangement (Group of Meters – more than 4);
- Enclosure or meter room



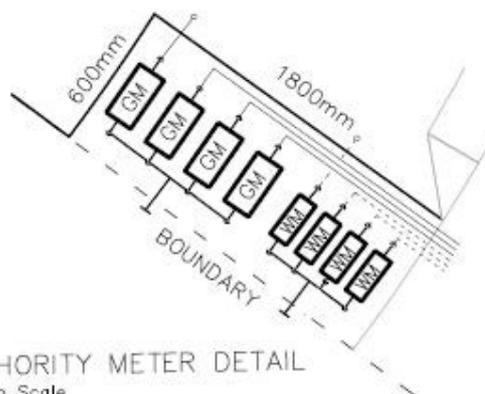
NOTE: Accurate site plans with proposed gas meter locations (including measurements) shall be submitted to APA Group for approval of any manifold setups, prior to any connection requests into APA's system.

Apartments and High Rise Residential Buildings

For high-rise residential buildings (apartments) it is APA Group's preference to have a meter room or enclosure with a number of meters catering for the requirements of the building.



NOTE: Accurate site plans with proposed gas meter locations (including measurements) shall be submitted to APA Group for approval of any manifold setups, prior to any connection requests into APA's system - example



AUTHORITY METER DETAIL
Not To Scale

1. Building Wall installation



2. Garden installation (Single or Group of Meters)



3. Free Standing Wall installation (Single or Group of Meters of 4 or less)



4. Manifold arrangement

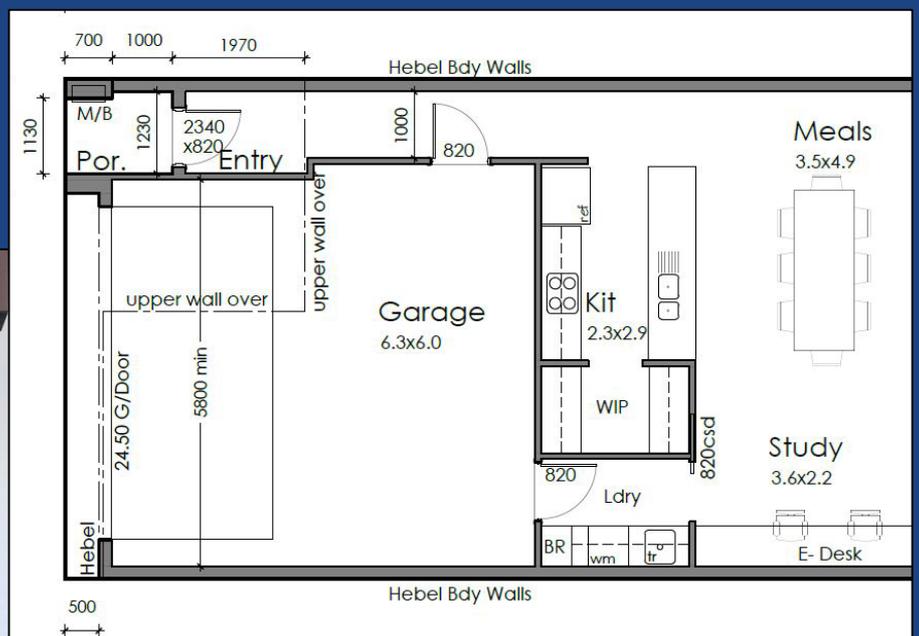


5. Enclosure or meter room



Egress in porch settings

- Maximum 500mm inside building line
- Minimum 1m from the door opening



- Egress from the dwelling must not be impeded by the meter setup
- Meter to be set up on the same side as the door hinge nib

METER PROTECTION

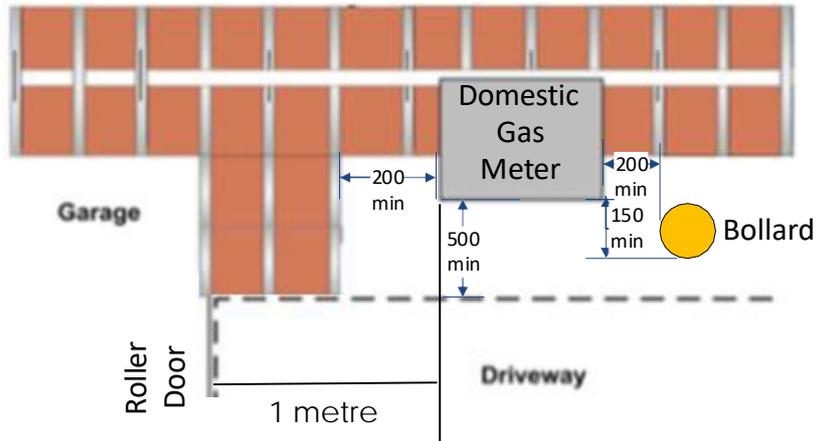


Figure 4 Plan View of Domestic Meter Installation near a Driveway



NOTE: An appropriate form of protection for gas meter installations will be determined by APA Group in all instances.

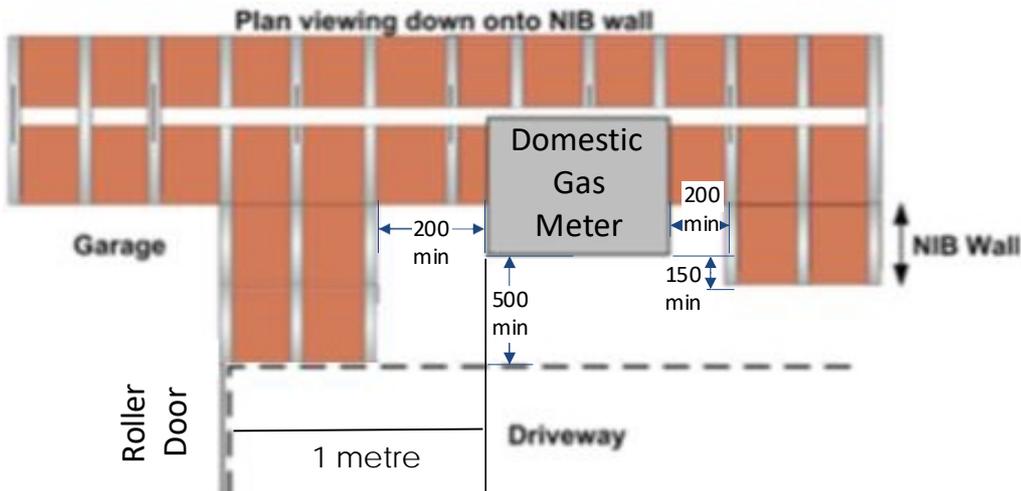


Figure 5: Plan View of NIB Wall - Domestic Meter Installation



Figure 6: Gas Meter Protection (Examples)

NIB Walls

A NIB wall is a term used in the construction industry for a short section of wall that extends out from a buildings framework. As one type of protection, NIB walls in accordance to Figures 4 and 5 are accepted by APA Group for the protection of gas meter installations where required separation with no protection (as per Figure 3) is not available between the face of the meter and the driveway.



NOTE: Only gas meters, with a capacity not exceeding 10 m³/h are allowed to be installed within a NIB Wall.

METER PROTECTION

The safety of gas meters is one of the primary considerations when choosing a location for the gas meter. Locating a gas meter assembly away from traffic areas (e.g. roadways, vehicle parking areas or driveway) is preferred and enforced prior to taking into consideration any gas meter protection.

Gas meter assemblies shall be protected against vehicular and mechanical damage by installing bollards filled with concrete or Armco Railing or an approved equivalent. Protection requirements shall be determined using Table 11 based on the speed of the vehicle, type of vehicle and clearance from traffic. APA Group shall determine the amount of protection required. Property boundary fences do not constitute a substantial physical barrier.

Table 11 Protection Requirement

| Proximity to Vehicle < 1 m ¹ | |
|---|-----------------|
| Speed of Vehicle | Car/Forklift |
| 0 to 5 km /hr | 75 mm bollards |
| 5 to 15 km/hr | 100 mm bollards |
| 1m < Proximity to Vehicle < 3 m | |
| 0 to 5 km /hr | No Protection |
| 5 to 15 km/hr | No Protection |

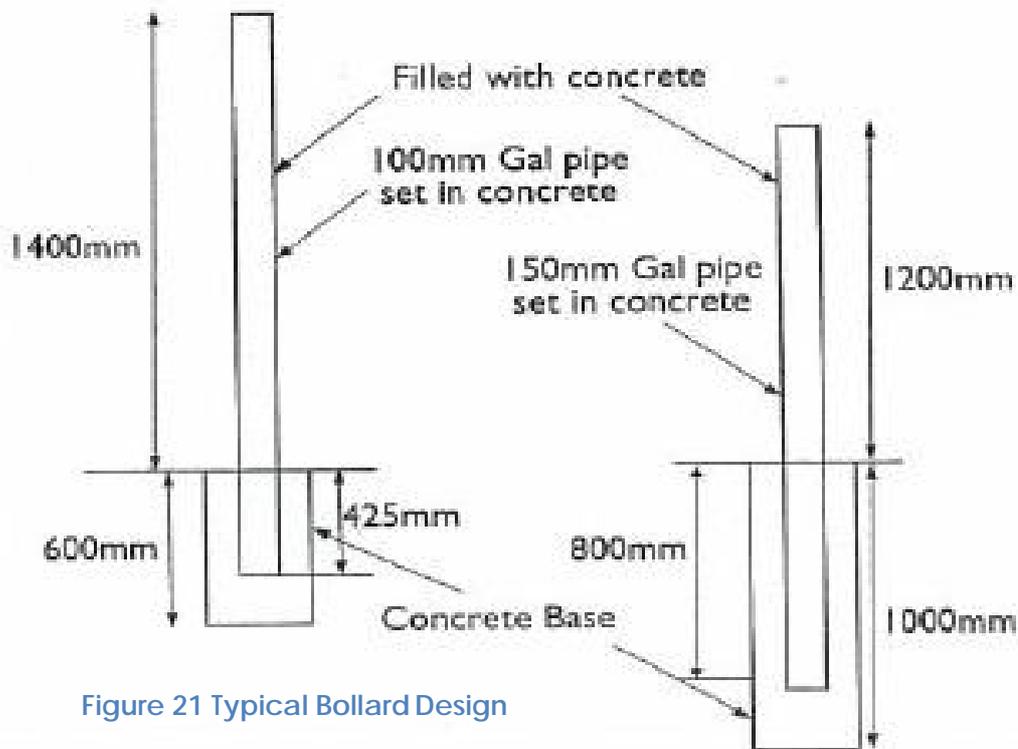


Figure 21 Typical Bollard Design



OVERHANGS / VERANDAHS

Gas meter assemblies should not be located under building overhangs where the overhang is likely to direct vented gas into a building opening or where gas can accumulate under the building overhang.

LPG DOMESTIC METER LOCATION

The main additional requirements for the location of LPG consumer meter assemblies are as follows:

1. The area surrounding an LPG Gas consumer meter assembly shall be free of pits, drains or openings for at least 1.5 m radius at ground level measured from the service riser centre-line and below any other potential leak points.
2. There shall be no openings below any potential leak points of the LPG meter assemblies.

Figure 10 shows a typical detached building frontage with an acceptable/unacceptable LPG meter assembly locations.

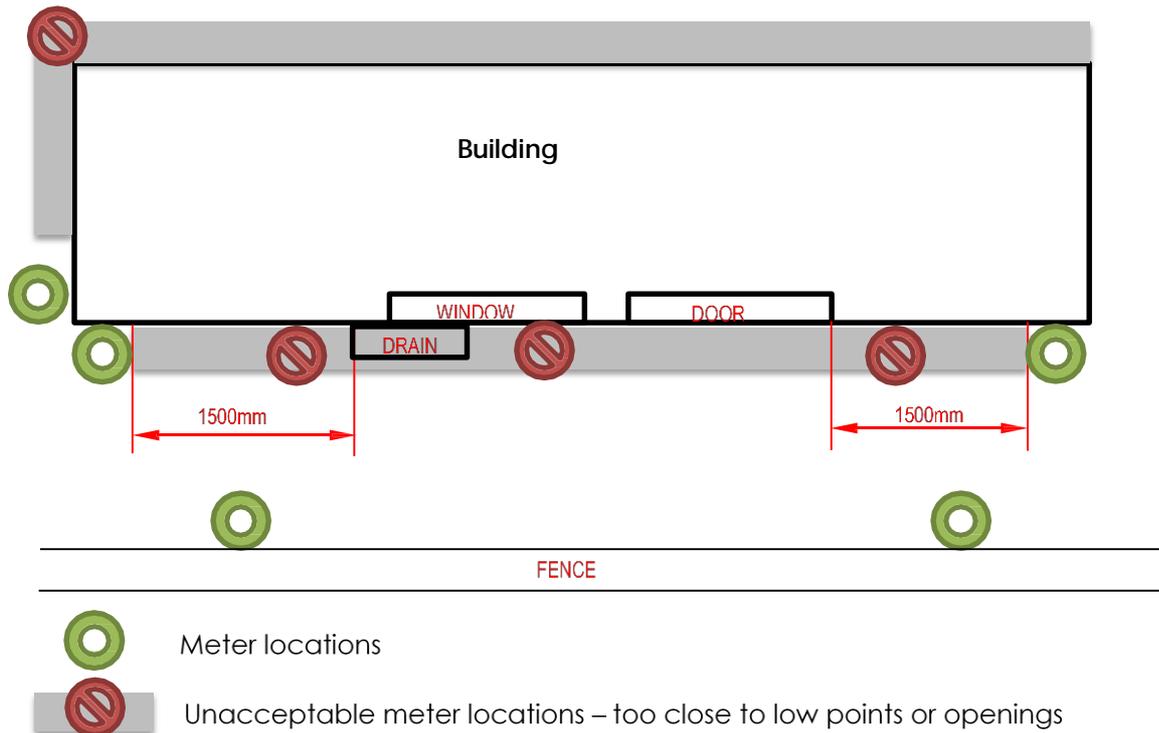


Figure 10 Acceptable LPG Domestic Meter Location

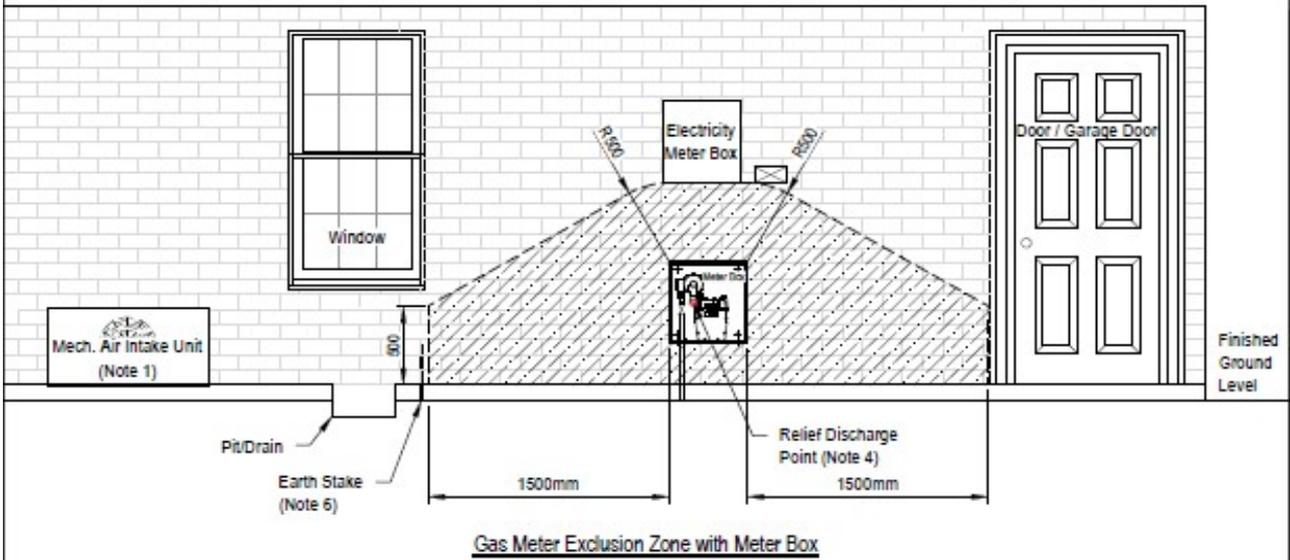
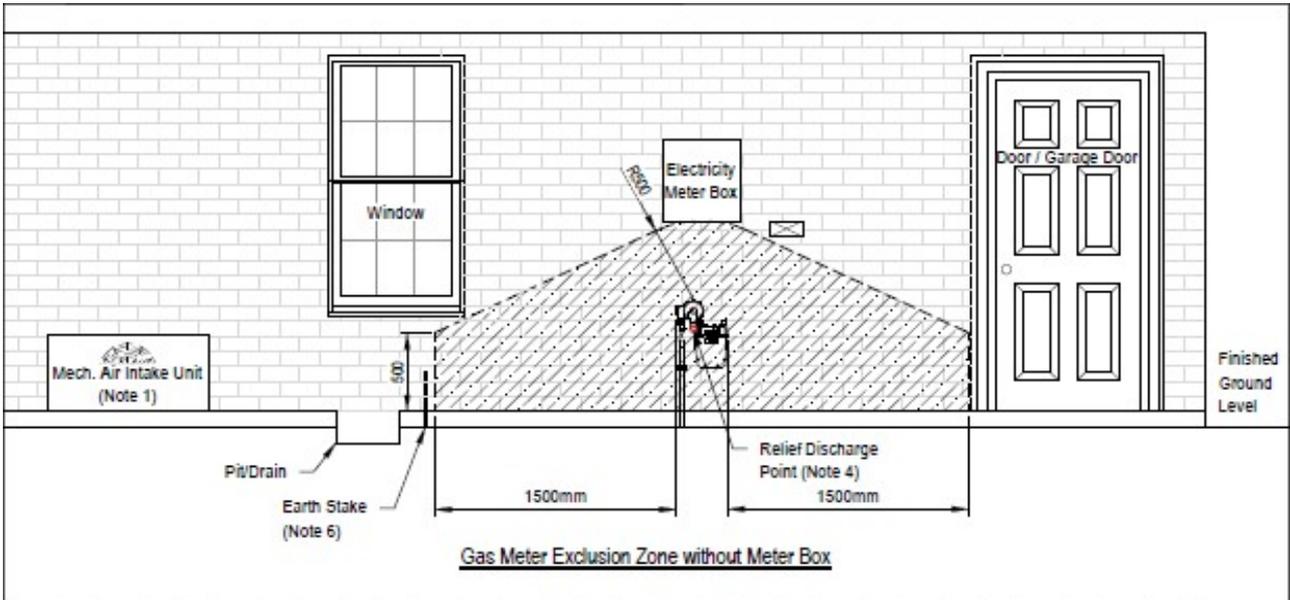
LPG Domestic Meter Clearances

The required clearances for an LPG domestic meter assembly are provided in Table 4.

Table 4 LPG Domestic Gas Meter and Regulator Clearances

| Clearance Requirements From | Openings into buildings / any ignition source |
|--|---|
| Pressure relief device discharge point | cylinder of 1m diameter having its axis on the line of discharge and extending from 1 m behind the point of discharge to 1.5 m in front of the point of discharge |
| Piping, meters, regulators and valves | 0.5 m in all directions from the point of discharge extending to a distance of 1.5 m laterally at ground level below the point of discharge and extending to include stagnant areas |
| Above ground enclosure | 0.5 m in all directions from any opening in the enclosure and extending to a distance of 1.5 m laterally at ground level below any opening. |

APPENDIX C DOMESTIC GAS METER INSTALLATION REQUIREMENT FOR LPG



NOTE:

1. For mechanical air inlet units, 3.0m minimum from relief discharge point clearance required.
2. Exclusion zones apply to pits or drains, ignition sources and opening into buildings. Electrical ignition sources are and not limited to power points, photo voltaic (PV) inverters and isolation switch gear, electric motors for water pumps, air compressors, automatic gates etc, split cycle air conditioners and electrical water heaters.
3. The zones only apply to meters with regulator relief valve opening 50mm and under.
4. The relief / vent position & orientation must be considered prior to installation.
5. 1.0m clearance from driveways unless authorised by an APA representative.
6. Electrical earthing electrode shall be a minimum 1500mm away from inlet riser and service lines.

LEGEND

-  Exclusion Zone
-  NBN/Foxtel/Telstra

REVISION: ISSUED FOR USE

PROJECT No. : FILE REF. :



APA NETWORKS NATIONAL STANDARD DOMESTIC LPG GAS METER INSTALLATION REQUIREMENTS

| | | | |
|--------------------------------|--------------------|-----------------------------------|--------|
| Date: 05/09/17 | 400-100-DWG-A-0002 | 1 of 1 | Rev. 1 |
| Designed: S.GREENWAY | | | |
| Drawn: J.BAQUERO | | | A4 |
| Approved: M.O'BRIEN RPEQ 16512 | Scale: N.T.S | Cad File Name: 400-100-DWG-A-0002 | |

APPENDIX A

LOCATIONS — CONSUMER METER ASSEMBLIES AND INTERNAL SERVICES

| Locations | | Consumer meter assembly | Internal service |
|--|---|-------------------------|------------------|
| P: Prohibited | | | |
| R: Restricted – requires assessment prior to placement of consumer meters or internal services | | | |
| AS/NZS 4645.1:2018 Appendix M | | | |
| 1. | A lift shaft/ lift lobby/ lift motor room | P | P |
| 2. | In a fire control, sprinkler or hydrant pump room, fire hydrant duct/ cabinet or fire hose reel cabinet | P | P |
| 3. | In/on/under a fire-isolated stairway, passageway or ramp, fire exit-way, emergency exit or other location that may prevent or obstruct egress from the building in the event of an emergency | P | P |
| 4. | In a clothes chute or rubbish chute | P | P |
| 5. | In a room designed for electrical metering or switchgear | P | R |
| 6. | In a bedroom or sickroom or rooms designed for purpose of sleeping | P | |
| 7. | In basements or the foundation area under a building; unless contained in a dedicated enclosure/room designed to contain any potential explosions and direct their force via pressure rated ducting to a safe above ground location such that the building support structure is not compromised | P | |
| 8. | In a cavity wall, unless installed in an adequately ventilated non-combustible enclosure sealed from any adjoining recess or cavity | P | |
| 9. | Directly in contact with ground, floor or any other surface or material which may lead to corrosion of the meter or service | R | R |
| 10. | In the floodway or low laying areas where water may pond in contact with the meter or service | R | |
| 11. | In an area of excessive vibration | R | R |
| 12. | In a room specifically designed to store corrosive materials | P | P |
| 13. | In an area where corrosive materials may be present | R | R |
| 14. | In a room specifically designed to store inflammable liquids or explosives materials | P | P |
| 15. | Closer than 1.5 m laterally to public or private roads without vehicular protection | R | |
| 16. | In a recess or meter box not completely sealed from any adjoining recess or cavity for pressures greater than 7 kPa | P | |
| 17. | In a recess or meter box not of adequate size to permit ease of replacement and maintenance | R | |
| 18. | Near a source of ignition | P | |
| 19. | In any unventilated position; unless relief and breather ports are vented away or breather port is small enough to be in accordance with minimum safe vent requirements | P | |
| 20. | Beneath a canopy that has the potential to accumulate gas | R | |

| Locations | | Consumer meter assembly | Internal service |
|---|--|-------------------------|------------------|
| P: Prohibited R: Restricted – requires assessment prior to placement of consumer meters or internal services | | | |
| 21. | In any position subject to wide temperature variations | R | |
| APA Group Requirements | | | |
| 22. | Closer than 1.0 m to combustible surfaces e.g. brush fence | P | |
| 23. | In a position that can be used as an access step | P | |
| 24. | In an easement other than a gas easement | P | |
| 25. | Under trees | P | |
| 26. | In a position that protrudes outside the property boundary line | P | |
| 27. | In position higher than 1.5m or lower than 100 mm to the base of the meter | P | |
| 28. | The vertical supply pipe installed within a cavity or covered by cladding (It shall be exposed) | P | |
| 29. | Where a gas service upstand is <u>500 mm</u> separated from an earth electrode or earth stake | P | |
| 30. | In a non-approved recess, meter box, enclosure and meter room | P | |
| 31. | In a position where any part of the gas service to supply the meter box has to pass inside the building fabric, including across or within roof/ceiling cavities | P | |
| 32. | Below retaining walls that are greater than 1.5m high | P | |
| 33. | In a position that excavation alongside an unsupported wall or structure will compromise that wall or structure | P | |
| 34. | In areas with Steep slopes | P | |
| 35. | In a position that access will be restricted due to landscaping | P | |
| 36. | Living quarters, toilets, bathrooms or first aid rooms | P | |
| 37. | Floor spaces under buildings, unless in a gas meter room or cupboard which is fully accessible from the outside the building. Utilising floor space under an external decking requires additional evidence that the area will not be frequented by Smokers as per Section 8.2.11 prior to being considered | P | |
| 38. | In a position to be deemed 'a confined space'. Confined spaces are fully or partially enclosed areas, which aren't designed to be normal places of work, and where entry and exit are restricted. They include places like storage tanks, pits, pipes, shafts or ducts | P | |
| 39. | In a location subject to organic dust. E.g. flour mills sawmills, etc. | P | |
| 40. | In an area subject to Toxic fumes | P | |
| 41. | A Property, other than the customers supply address unless it is common property | P | |
| 42. | In a recess or meter box not ventilated directly to outside atmosphere | P | |

SA New Homes Procedure - Meter Positioning Checklist -

When positioning your meter box, the following points should be considered:

1. Is there 1m separation from the meter box to any openings - doors, windows / garage openings. See overleaf for details
2. Is there 500mm separation from the meter box to the electrical meter box and any comms?
3. Is there 1m from the meter box to the driveway (500mm with protection)
4. Is the meter box positioned to allow adequate egress from the building?
5. Is the meter box APA approved?

For enquiries call your APA New Home Representatives:



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SA New Homes Procedure - Natural Gas Inlet Checklist -

Keep your MIRN letter, contact the contractor when the following checks have been completed:

1. Is the meter location compliant? (see specifications overleaf)
2. Does the meter location need to be approved? Community titled properties with multiple dwellings will require approval
3. If the meter is located in a garden bed, request a meter bar from the APA contractor then install the outlet service to the correct location and height
4. Has the power been installed? Power conduits are deeper than gas pipes so should be installed prior to gas
5. Is the final ground level prepared? APA contractors are not responsible for shallow gas pipes if the soil is removed after installation
6. Have storm water pipes been installed? Gas pipes are installed deeper than storm water. PVC pipes, are difficult to excavate around and are easily damaged
7. Is there clear access for machinery? Ensure bins, toilets and building debris is not within 3m corridor to the meter location
8. Is the site safe for APA contractors to complete the installation?

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SA New Homes Procedure - Meter Fix Checklist (SA) -

Keep your MIRN letter, contact the chosen retailer when the following checks have been completed:

1. Has the gas service been installed?
2. Is the outlet service complete?
3. Have the appliances been installed? If they have, then you will need to order a full meter fix. If not then you need to order a 'hang and wad' meter fix
4. If ordering a 'hang and wad', is your gas fitter APA approved to perform hang and wad installations?
5. If ordering a full meter fix ensure that someone will be at the property for the duration of the meter fix window (either 8am to noon or noon to 4pm)
6. Have you given the customer the correct total mj rating for the property?

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