



ENVIRONMENTAL LAND SERVICES (AUSTRALIA) PTY LTD

GAS METER INSTALLATION GUIDE

A Guide to Builders & Installers

13/02/2025



Guidelines for ELS Domestic Meter Installations

ELS(Australia) P/I has a Distribution License to reticulate LPG vapour underground within new housing estates at Mt Barker SA.

This Guide document provides information and ELS' requirements to be followed for installing gas meter boxes and services for safe, reliable and efficient connection to ELS' LPG gas network.

The Australian Standard (Code) that covers the installation of domestic gas Services and Customer Meter Sets is AS/NZS 4651.1 and domestic meter installations that comply with ELS' requirements as outlined in this Guide will generally meet or exceed the requirements of that Code.

Gas Service Installations and Gas Meter Box Locations

This section sets out ELS' standard requirements for the laying of gas services and the location of gas meter boxes.

The route of the underground service between the gas meter box and the gas connection point is to be evaluated, to ensure :

- the route is free from hazards / obstructions,
- is as close as practicable to the street frontage,
- is straight and
- there is a minimum separation of 250 mm from all other underground services

Gas meter boxes must be installed in a location not greater than 1,000mm behind the Building Frontage of a dwelling.

Note: The Building Frontage is defined as the elevation of the building that faces the relevant gas main or service which connects to the property.

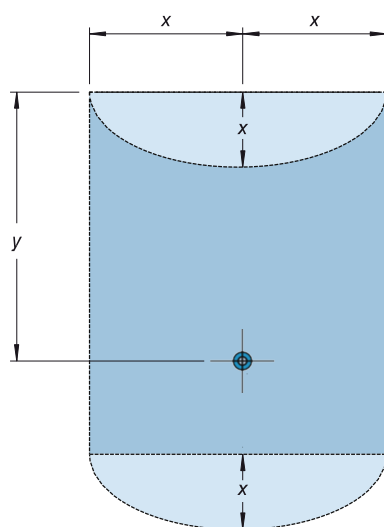
Ease of the installation of the gas service and possible later access to the gas service and the meter box must be taken into consideration when planning its route including adequate separation from the boundary fences and walls.

The meter assembly (in a wall mounted enclosure or in a garden box) must be located in a position that provides ready access for meter reading and authorized maintenance activities to take place.

The location of the meter assembly should be chosen to prevent accumulation of water (ie via rain water or watering systems), weeds and accumulated other debris.

There should not be any pits or drains where escaping LP gas could accumulate within a 1.5 metre radius measured from the gas inlet service riser centre line.

For gas safety reasons, points of ignition (as per the following section “Location Restrictions”) shall be followed to the requirements of Appendix I of AS/NZS 4645.1:- including the Figure 11 Exclusion Zone Diagram.



External meter to maximum badge capacity of 25 m ³ /hr	Venting regulators		OPSO or non-venting regulators	
	Source of ignition (mm)	Opening (mm)	Source of ignition (mm)	Opening (mm)
x	500	800	400	400
y	500	1000	400	400

Note : ELS uses non-venting regulators (ie with OPSO provisions) and LP gas vapour is heavier than air – therefore the minimum separation between the top of the gas regulator, within a wall mounted meter box, and the bottom edge of a SAPN Meter Box is 400 mm.

Gas Meter Box Location Restrictions (per AS/NZS 4645)

The gas meter shall **not** be installed in any of the following locations/situations – as adapted from the clauses in AS/NZS 4645.1:2008 (Appendix K) relevant to typical ELS installations:

- Closer than 1000mm from a source of ignition including electrical devices such as the external unit of a split system air conditioner, pool pumps, external power points, etc.
- Where egress from a building would be obstructed.



- In a cavity wall, unless installed in an ELS approved ventilated enclosure which is sealed from the cavity.
- Where access for meter reading or maintenance is restricted.
- In an unventilated position.
- Where subject to physical damage unless the gas meter is adequately protected.

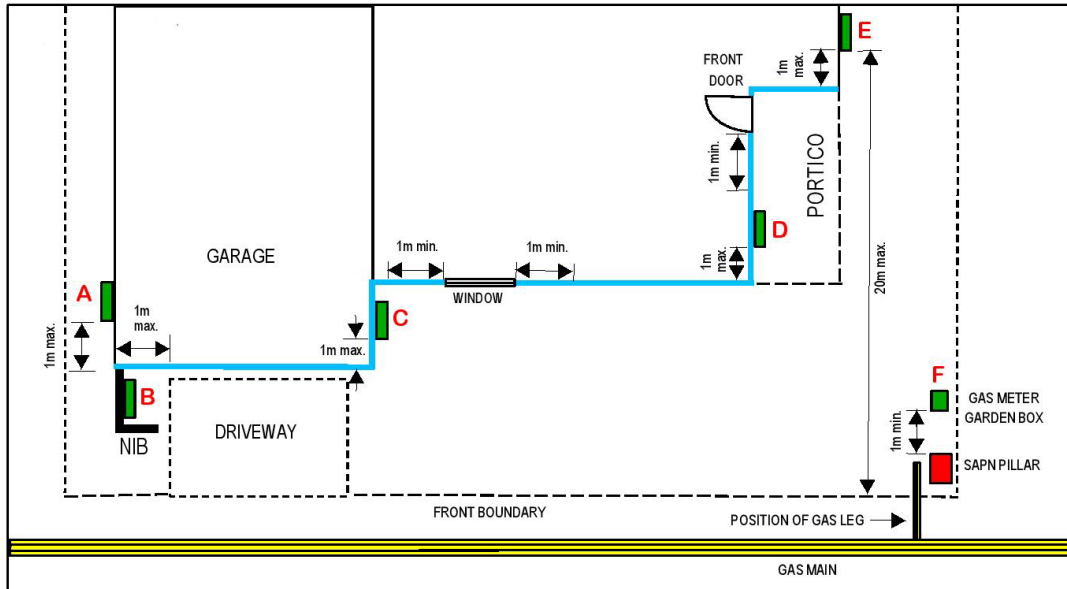
The definition of adequate protection shall be determined by ELS in all instances.

- On a fence, unless the fence is constructed of masonry.
- In a carport or any other location where it may be struck by vehicular traffic.

If the gas meter or box is not situated in a protective recess and there is likelihood of vehicular damage (e.g., adjacent to a driveway), then the gas meter box must be protected by bollards or ELS approved alternative methods.

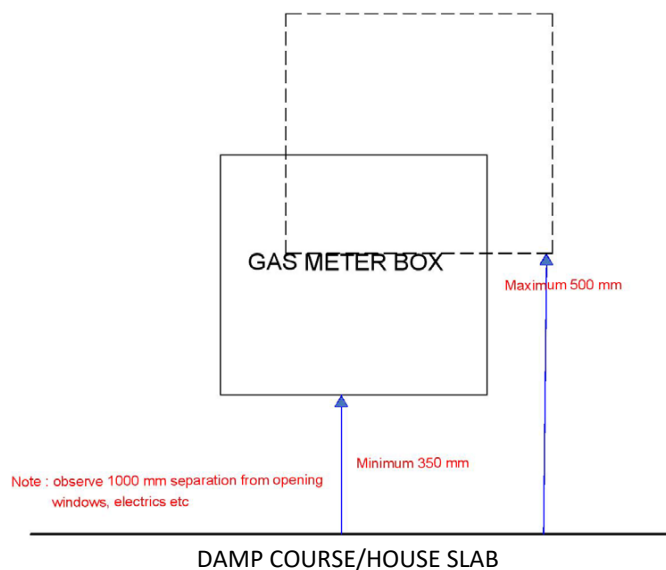
- Where there is an obstruction to installing the gas service, maintaining or reading the gas meter or accessing the gas meter box in an emergency.
- In a position where any part of the gas service to supply the gas meter box has to pass under any part of a building (i.e., carport, garage, etc.).
- Behind fencing or a locked gate, unless the gas meter remains readily accessible at all times.
- In a position that contravenes the requirements of other utility service providers.

EXCLUSION ZONES FOR GAS METER WALL & GARDEN BOXES



- A** YES
- B** YES - recommended position (nib wall).
- C** YES
- D** YES - access conduit must be installed in strip footing @ 450mm deep & 250mm from other services.
- E** YES - must be approved by ELS.
- F** YES - garden box - must be approved by ELS.

GAS METER BOX MOUNTING





Meter Box Installation Locations/ Separations & Dimensional Requirements

Only ELS approved gas meter boxes shall be used and ELS approved mounting and location requirements must be met.

The diagrams at the end of this guide are provided for clarity.

A gas meter box must satisfy the location requirements set out below:

Bottom of Meter Box to Damp course/House slab – no less than 350 mm and no greater than 500 mm

Front Edge of Meter Box to Building Frontage – meter boxes must be installed in a location not greater than 1,000 mm behind the Building Frontage of a dwelling.

Gas meter boxes must have a minimum clearance of 1000 mm from any door, opening window, mechanical air inlet (including air conditioners) or any other opening into a building.

Note: An air brick / vent and ventilation gaps in brickwork are considered an opening to a building, if lower than the meter box and within the 1000 mm radius exclusion zone and any such openings must be sealed.

Separation distances measured will include around corners.

Windows within the 1000 mm exclusion zone must be permanently fixed so they cannot open. Permissible compliance methods are as follows:

- Reversing the openable portion of the window
- Permanently securing the window in the closed position with a minimum of two (2) rivets or non-retractable screws in three (3) sides of the openable window portion. There must be a minimum quantity of six (6) permanent fixtures.

Note: Approval must be granted by ELS before proceeding with any gas meter positions within 1000 mm of altered building windows or openings. Approval of acceptable window fixing is at the discretion of ELS.

A 1000 mm exclusion zone applies between the SAPN electrical power dome and any part of the gas service including the service riser and the gas meter box.

A 1000 mm exclusion zone applies between any source of ignition (eg external power point, air conditioner) and any part of the gas service including the service riser and the gas meter box.

A 100 mm exclusion zone applies between an electrical earth stake and any part of the gas service including the service riser and the gas meter box.

Customer Side Gas Meter Connections

The Builder's Gas Fitter must check and confirm that the galvanized steel standpipe on the Customer's internal gas service terminates between a minimum of 240 mm and a maximum of 300 mm as measured from the bottom internal surface of the wall mounted meter box.



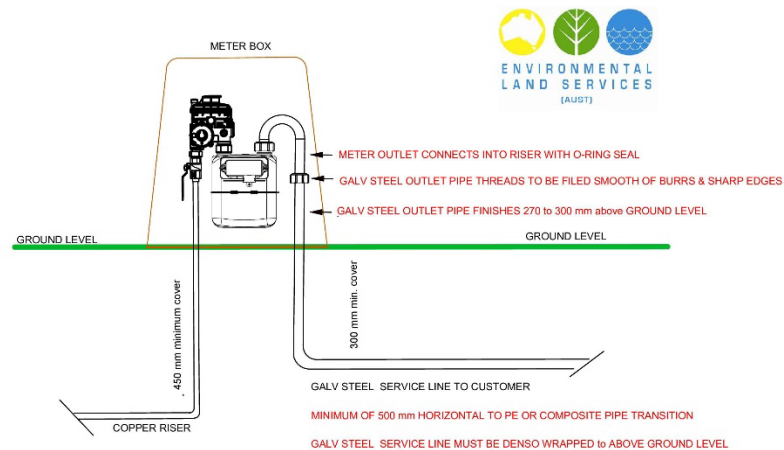
GARDEN BOXES : In the case of the gas meter being fitted in a garden box, that height of termination (240 to 300 mm) should be taken from the effective ground level under the garden box housing. For garden box installations the L- shaped galvanized steel riser must also have a depth of cover of at least 300 mm and extend a minimum of 500 mm towards the dwelling before transitioning to another pipe material (if applicable). The whole Customer side service pipe run shall have a minimum of 300 mm of cover.

All underground steel shall be wrapped with Denso tape or other ELS approved material to minimise corrosion and that wrapping shall extend to 100 mm above ground height and cover any transition joint to other underground pipe materials used. The same corrosion protection shall be used for the L-shaped riser at the Customer end of the underground gas service line to protect the galvanized steel riser where it enters the dwelling.

If there is a section of alternate material underground pipe used from the garden box to the dwelling, it would be helpful if a small piece of that material is left affixed to the galvanized steel pipe section under the garden box housing – to indicate what was used underground.

After pressure testing the Customer gas service lines in accordance with AS/NZS 5601, the final threaded end of the riser that connects to the gas meter must be sealed with a cap or tape - to prevent entry of water, insects or other debris.

ELS STANDARD GARDEN METER BOX DETAILS



GEOFF NASH & ASSOCIATES JULY 2022

