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Gas Networks Ireland

Guidelines for Designers and Builders – Domestic Sites

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Gas Networks Ireland

1 General Information and Single Occupancy Dwellings

1.1 Introduction

This guide outlines the permitted locations, positions, safe depths and distances the installation of your natural gas meter and meter box when connecting to the natural gas network.

It is designed to give guidelines for designers and builders on development sites with domestic and commercial loads. The preferred location for Gas Networks Ireland (GNI) to locate the gas meter is externally. This is to allow for ease of meter reading, maintenance and operation assurance. However a meter can be located internally if it is not possible to locate it externally and if the gas is being supplied at a low pressure of 100mbar or less. For more information on locating meters internally please consult the Industrial and Commercial Sites Booklet of this Technical Manual.

Note: For bespoke architectural solutions or for projects requiring meters located internally please contact your local Gas Networks Ireland sales representative.

This document is to be used for guidance purposes and references the Irish installation standards for natural gas I.S 813 (Domestic) and I.S 820 (Non- Domestic) as well as I.S. 329 "Code of Practice for Gas Distribution Mains" and I.S. 265 "Installation of Gas Service Pipes". However it must not conflict with or be used as a substitute for the standards should any conflict arise, the Irish standards take precedence.

1.2 How a New Gas Meter is Installed

A GNI approved contractor will lay and test the gas connection pipe/ service pipe in the pre-excavated trench provided by the builder and a top tee connection is made to the main in the path or road as appropriate. The gas connection pipe shall have sand surround and be reinstated as soon as practicable in order to reduce the possibility of external damage on site. Normally 32mm (low pressure) size polyethylene connection pipe and 25mm (medium pressure) size polyethylene connection pipe is used.

A gas connection pipeline is laid by Gas Networks Ireland connecting a building to the natural gas network. The natural gas connection pipeline must be laid in a straight line to the meter location, using the shortest most direct route and where possible at right angles to the gas main. An illustration of this is shown in figure 1.

Marker tape should be placed over all gas mains, gas connections and ducting intended for gas distribution pipes.

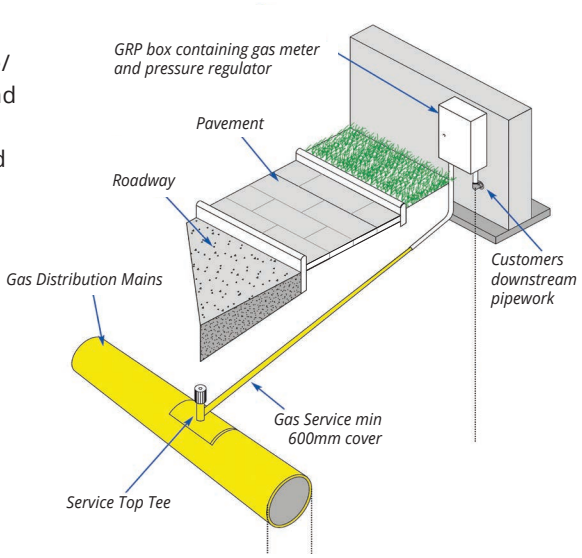


Figure 1: *Connection from Gas Main to Residential Meter Box*

General Rules

It must also be laid with a minimum of 600mm of ground cover. The proposed route of the connection pipe must be clear when the crew arrives to carry out the work, otherwise it cannot be installed.

If the meter box is to be attached to the property wall then it must be located above the damp proof course at a minimum of 300mm above finished ground level. A meter should not be placed within 150mm below or beside an electricity meter.

1.3 Self-Trenching Information

This sections illustrates how trenches should be prepared correctly before Gas Networks Ireland arrives on site. There are different excavation requirements depending on the type of pipe that is installed i.e. gas main or gas connection pipe / gas service.

Gas Mains

Trenches excavated for a gas main must allow for:

Sand Bed & Surround:
A 100mm bed of sand (150mm if in rock) shall be provided and installed by the customer and shall be in place before the GNI contractor crew is required on site.

Depth (on day of installation):

- A minimum cover of 750mm to the crown/top of the pipe in roadways.
- 600mm minimum cover is required beneath footpaths or landscape areas, but 750mm if trafficked.
- Gas mains must not be laid deeper than 1.2 metre unless specified and agreed in advance with Gas Networks Ireland.

Width:

- The total trench width must be 300mm in addition to the outside diameter of gas pipe.
- A minimum of 150mm of sand must surround the gas main.

Gas Connection pipe (Service Pipe)

The gas connection pipe will be laid in a straight line to the meter location, as perpendicular to the gas main as possible. Therefore the trench for this gas connection pipe must be excavated in a straight line. All trenches for gas connection pipes must be excavated to allow for:

Sand Bed & Surround:
A 100mm bed of sand (150mm if in rock) shall be provided and installed by the customer and shall be in place before the GNI contractor crew is required on site.

Depth:

- A minimum cover of 600mm for each gas connection pipe up to 1.5 metres from the meter box.
- Depth can reduce to a minimum of 375mm at the base of the GRP sleeve within the 1.5 metre distance at the meter location only.

Width:

- The gas connection trench width should be a minimum of 300mm in addition to the outside pipe.
- A minimum of 150mm of sand should surround the gas service.

N.B. Contractors/Builders must provide their own sand surround and reinstatement material. The main or connection//service pipe must be covered in surround before the Gas Networks Ireland contractor leaves the site. The trench must be reinstated as soon as possible after the pipe is laid to reduce the possibility of damage to the gas pipes.

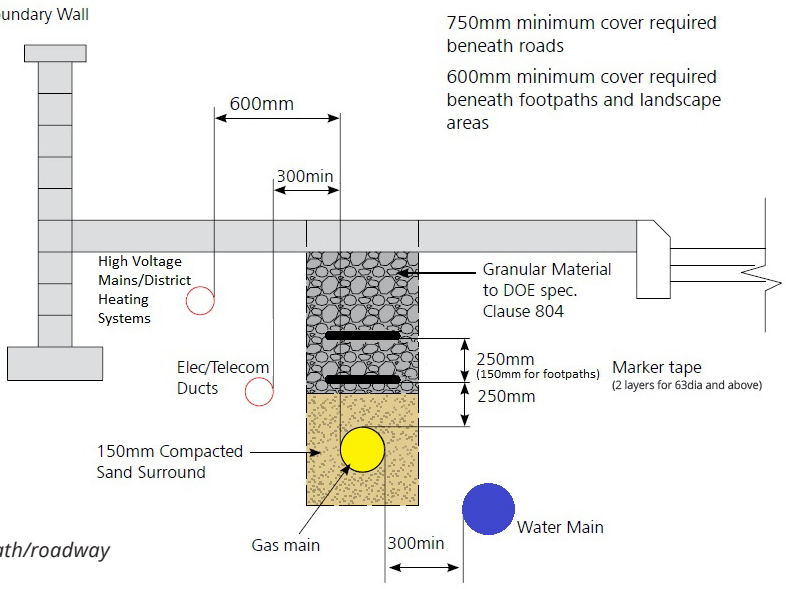


Figure 2: *Recommended gas main layout in a footpath/roadway*

1.4 Excavations Parallel to Walls

When excavating trenches parallel to a wall, the stability of the wall, must be checked. This is in case walls have not been adequately designed, altered, degraded over time or may now be used for an intention that they were not designed for.

Care must be taken with excavation work and a risk assessment carried out if the wall is leaning, cracked or showing any signs of instability or distress.

The stability of the wall should be checked whenever:

- the edge of a gas connection/service trench is within 0.5 m of the wall;
- the edge of a mains trench is within 1m of the wall, or
- the main is larger than 200 mm nominal diameter,
- or the main or service is to be laid at a depth greater than normal.

Note:
Please ensure the distance from the trench to the wall (S), is greater than the depth of the trench (H).

Please see the diagrams and further information relating to safely excavating parallel to walls in the Appendix section.

If there are any queries relating to excavating parallel to walls please contact customer service at **1800 200 694.**

1.5 On site Requirements

- The gas main should never be placed in an inspection chamber with other utilities, services, drainage/ sewage systems.
- A distance of 300mm must be provided when a gas main is placed adjacent to an inspection chamber (see figure 3)
- A minimum clearance of 300mm is required where necessary to cross or run in close proximity to any other utility service.
- A distance of 600mm must be provided from high voltage cables and district heating pipes.
- **No other services/utilities is to be placed over the gas main/service**
- **Gas Networks Ireland will not insert the service pipe in a sleeve or duct.**

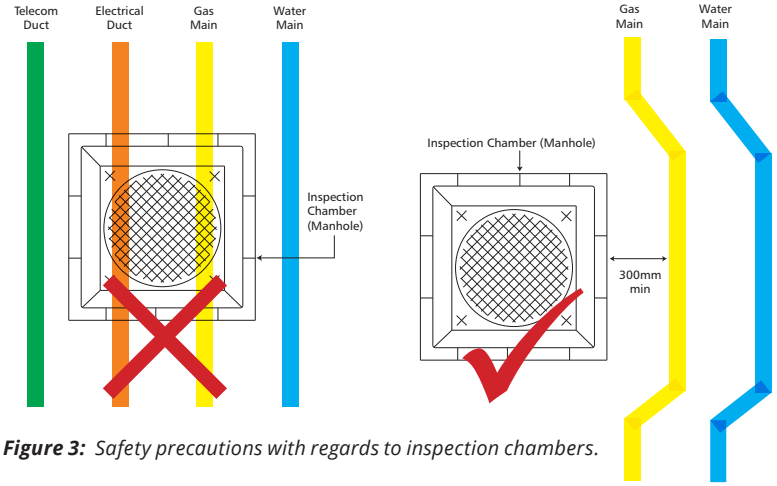


Figure 3: *Safety precautions with regards to inspection chambers.*

Note:

- *Polyethylene mains and services may not be positioned within the Building Line (as defined by I.S. 329 / I.S. 265).*
- *For more detailed information always refer to the Gas Networks Ireland Distribution drawings specific to the project.*

1.6 Gas Safety on Building Sites

After the initial project planning stage and when a site is in progress the following safety guidelines should be adhered to:

Do

- Ensure all excavations are carried out in accordance with the H.S.A Code of Practise: Avoiding Danger from Underground Services. i.e. use of maps/records, identification of pipe locations & safe digging practises.
- Maintain accurate on-going records of all gas mains and services laid on your site.
- Ensure all site personnel adhere to any exclusion zones while mains/services are under test on site.
- Make all operatives, including sub-contractors, aware of the presence and location of gas mains and services.
- Provide a safe and suitable location for the storage of gas pipes and materials
- Ensure that any necessary trial holes are dug carefully by hand.
- Ensure any personnel excavating in an area containing already existing gas mains have obtained Gas Networks Ireland maps.
- Report any damage, no matter how slight, to the Gas Networks Ireland 24 hr Emergency Line 1800 20 50 50.
- Ensure meter cabinet is securely fitted without compromising its structural integrity.
- If there is a natural gas transmission pipeline on your site you must contact Gas Networks Ireland for specific guidance.

Do not

- Interfere with stored gas pipe or materials.
- Attempt to cut or un-band coils of Polyethylene (PE) gas pipe, this can only be done by gas personnel. These coils contain a lot of stored energy and can cause serious injuries if interfered with.
- Use PE gas pipe for any other purpose, e.g. ducts, sleeves, drains.
- Use mechanical excavators within 1m of a gas main.
- Use hand held power tools, i.e. jack hammers within 0.5m of a gas main.
- Carry out piling work within 15m of a gas main without prior consultation with Gas Networks Ireland.
- Welding or hot works should not be carried out in the vicinity of an exposed gas main without prior consultation with Gas Networks Ireland.
- Attempt to repair any damage to a gas main or service.
- Do not interfere with the meter cabinet and its structural integrity.

1.7 Building Line

Explanation and Illustration

The building line is considered the outermost extent of the building structure (archway, balcony or basement) projected vertically on to ground level.

Gas mains, services and meters transporting gas at pressure greater than 100mbar are not permitted inside the building line of occupied premises.

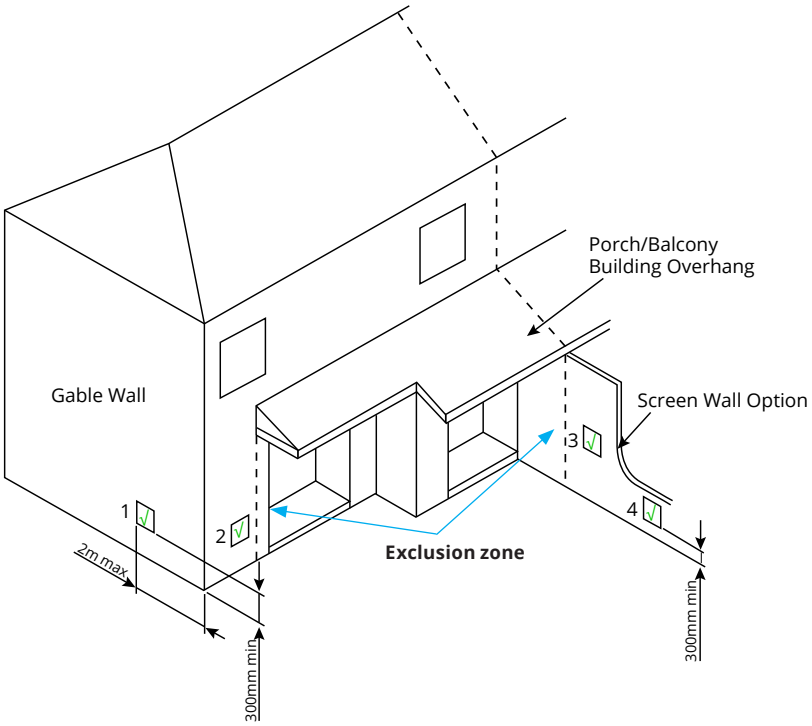
Under certain circumstances however Gas meters can be positioned inside the building line:

- The gas pipework must have a pressure of 100mbar or less.
- And there must be no available option of locating the meter externally.
- Polyethylene pipework may not be located within a building or in a space that may be potentially enclosed at a later stage e.g. an open porch.

In figure 4 below the exclusion zone is illustrated by a dotted line:

- This exclusion zone on the left ends in line with the porch at the gable wall.
- The exclusion zone shown on the right is further out as this porch/balcony/building overhang is said to be attached to the building.

For any queries relating to the building line/exclusion zone call 1800 200 694.



Note:
Meter not allowed in porch or inside the exclusion zone

Figure 4: *Exclusion zone drawing*

- Meter box is not permitted within the porch/building overhang.
- Meter box and service installations shall be in accordance with I.S. 265 and I.S. 813.
- The gas meter box shall be greater than 300mm away from a flue.
- Meter box shall not be placed more than 2 meters from the gable end of the property.

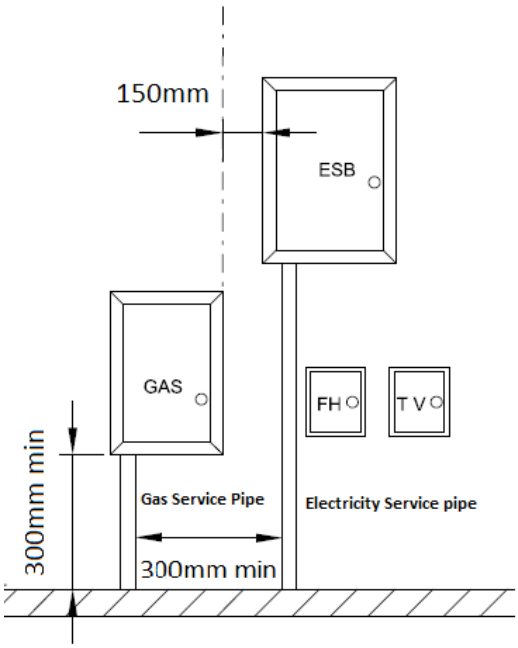


Figure 5 *Minimum separation between Gas and other meters*

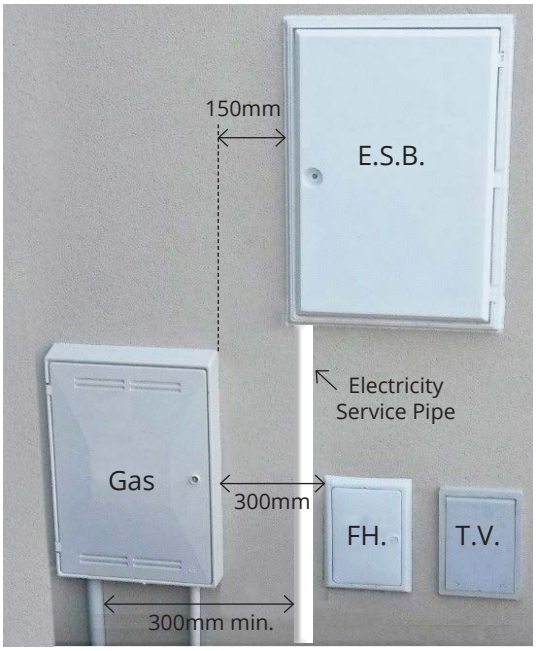


Figure 6 *Minimum separation from the Gas Meter box to the Electricity meter*

- A minimum separation of 300mm from the service pipe of the gas meter to the service pipe of the ESB meter
- A minimum separation of 150mm from the gas meter box to the ESB box, a minimum separation of 400mm from an electrical distribution board and 300mm from the gas service to any other services.

1.8 Meter Location

Where to locate your meter

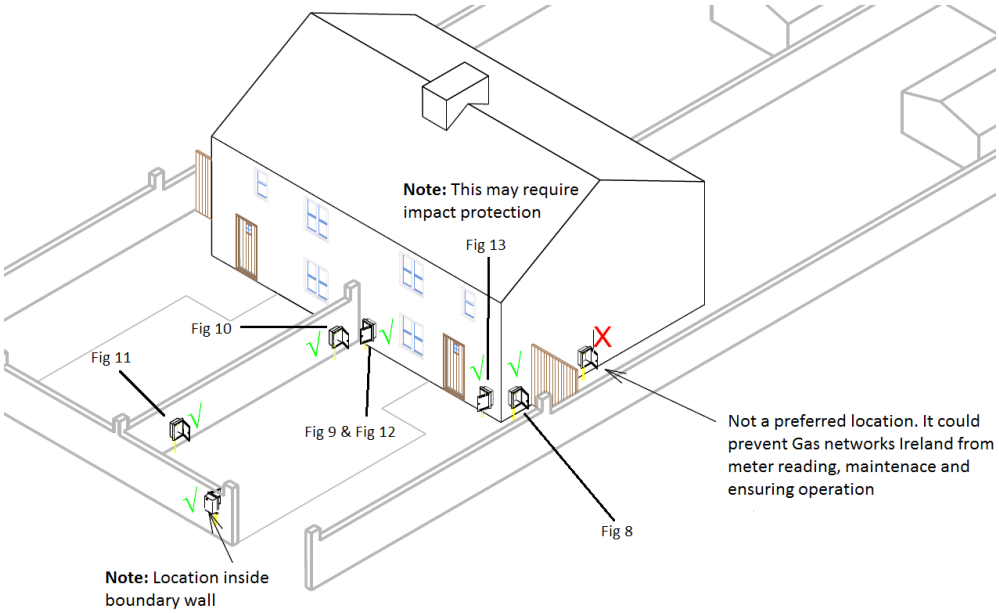


Figure 7 *Diagram of possible Meter Locations for a domestic property.*

The meter box should be accessible from the front of the house. The previous figure 7 gives examples of where the meter box can be placed:

At the front gable end wall, a maximum of 2 metres from the front corner of the building. Fig 8.

Figure 8 *Gable end of property*

At the front wall of the building – on either side of the front door, or on either side of a sealed window. Fig 9.

Note: *This can't be fitted directly below a window.*

Figure 9 *Meter box either side of the window*

On a nib wall. Fig 10.

Figure 10 *Meter box on nib wall*

On the wall that separates neighbours. Fig.11 i.e. boundary wall.

Figure 11 *Meter box between neighbours wall*

At the front wall of the building – on either side of the front door, or on either side of a sealed window.

Note: *This can't be fitted directly below a window.*

Figure 12 *Meter box either side of the window*

On either side of the door, Figure 13.

Note: *This may require impact protection.*

Figure 13 *Meter box on either side of the door*

Where not to locate your meter

The meter box must not be placed:

- At the back of the house or behind a gate.
- Directly above or below an electricity meter.
- Directly above drains, airbricks, manholes, or an electricity meter.
- Directly under appliance vents, windows that open or an electricity meter.
- In a porch or under an overhang which is enclosed or could be enclosed.
- Where it is liable to cause an obstruction or be subject to vehicular damage.
- Where access to the meter box may be restricted in an emergency e.g. narrow path.
- On a stone boundary wall or stone garden wall.
- Adjacent to an electricity meter, if there is a suitable practical location for it elsewhere.

For any queries relating to meter box location please call 1800 200 694.

1.9 Meter Box Types

There are two types of meter boxes – surface mounted and recessed.

A **surface mounted** meter box is installed on the property or boundary wall as shown in figure 14. This meter box is more suitable for installation on older buildings converting to natural gas. The meter box will be provided by Gas Networks Ireland and will be fitted at a minimum of 300mm above finished ground level. The meter box will project approximately 250mm outwards from the wall.

A **recessed** meter box is installed in the cavity wall of a building or in a pillar enclosure as shown in figure 15. This type of meter box is generally installed by a builder in a new one-off build or as part of a new extension. The box must be purchased from a building supplier and is not provided by Gas Networks Ireland. If this type of meter box is damaged, Gas Networks Ireland will be unable to install the meter for safety reasons. The meter box must be built into the wall, secured and unpunctured as per manufacturer's instructions. The meter box will project appoximately 100mm outwards from the wall.

Figure 14 *Surfaced Mounted Type Meter box*

Figure 15 *Recessed Type Meter Box*

1.10 Meter Box Dimensions

The following diagrams give dimensions for both types of meter boxes, surface mounted and recessed.

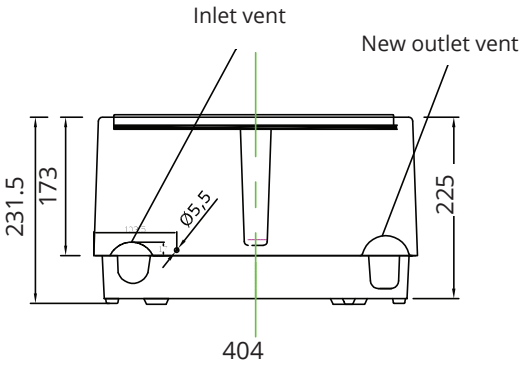
Surface Mounted Meter Box with ventilation

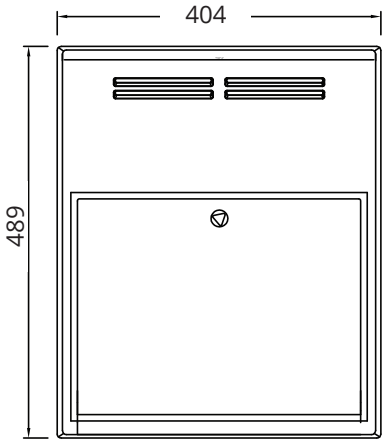
The new and improved surface mounted meter boxes are slimmer with additional vents that ensure it is not as obtrusive as previously.

The addition of the cut-out to the cover will allow the cover to be closed securely, if the outlet pipe is sitting proud of the groove in the base plate. This shall allow some additional flexibility in the location of the outlet pipe and for the meter box cover to be secured correctly with the retaining screw.

Figure 16: *New cut outs at outlet pipe and inlet pipe*

Accordingly, the outlet pipework should not interfere with the closure of the meter box cover, and the retaining screw and nut are to be secured after completion of any works.





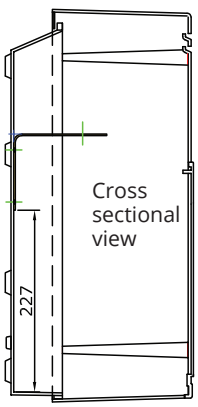


Figure 17: *Dimensions of surface mounted meter box with vents*

Recessed Meter Box with ventilation

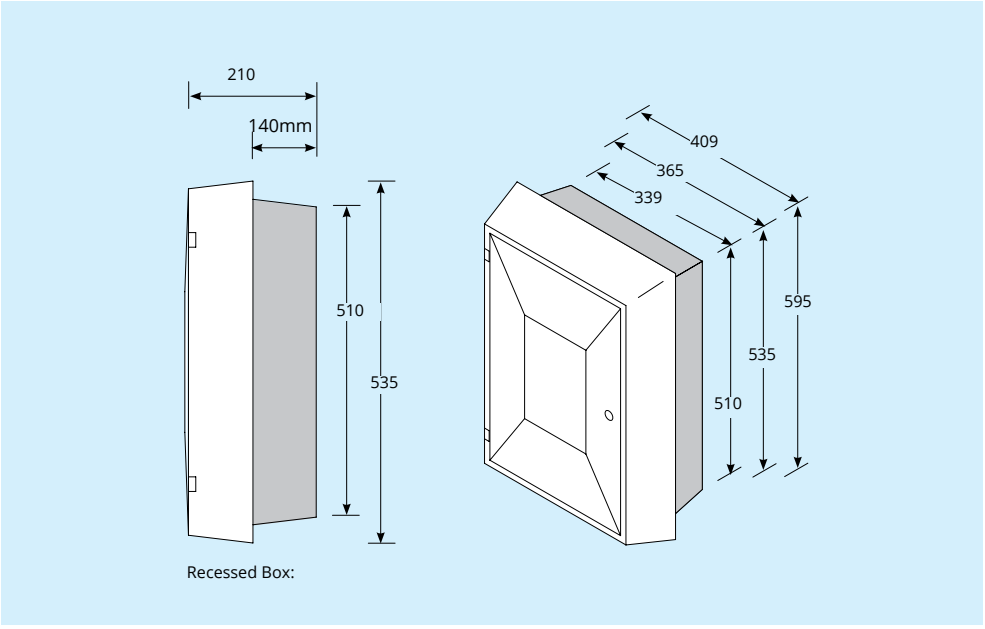


Figure 18: *Recessed type meter boxes with vents*

Note: The meter box must not be punctured when recessed into cavity walls or voids.

Recessed meter boxes and replacement doors may be sourced from your local builder provider. A list of suppliers can be provided by calling **1800 200 694.**

1.11 Recessed Meter Box in Pillar Enclosure

The following drawings illustrate how a meter box would be recessed in a pillar enclosure.

Note: The meter box **MUST NOT** be punctured when recessed into cavity walls or voids.

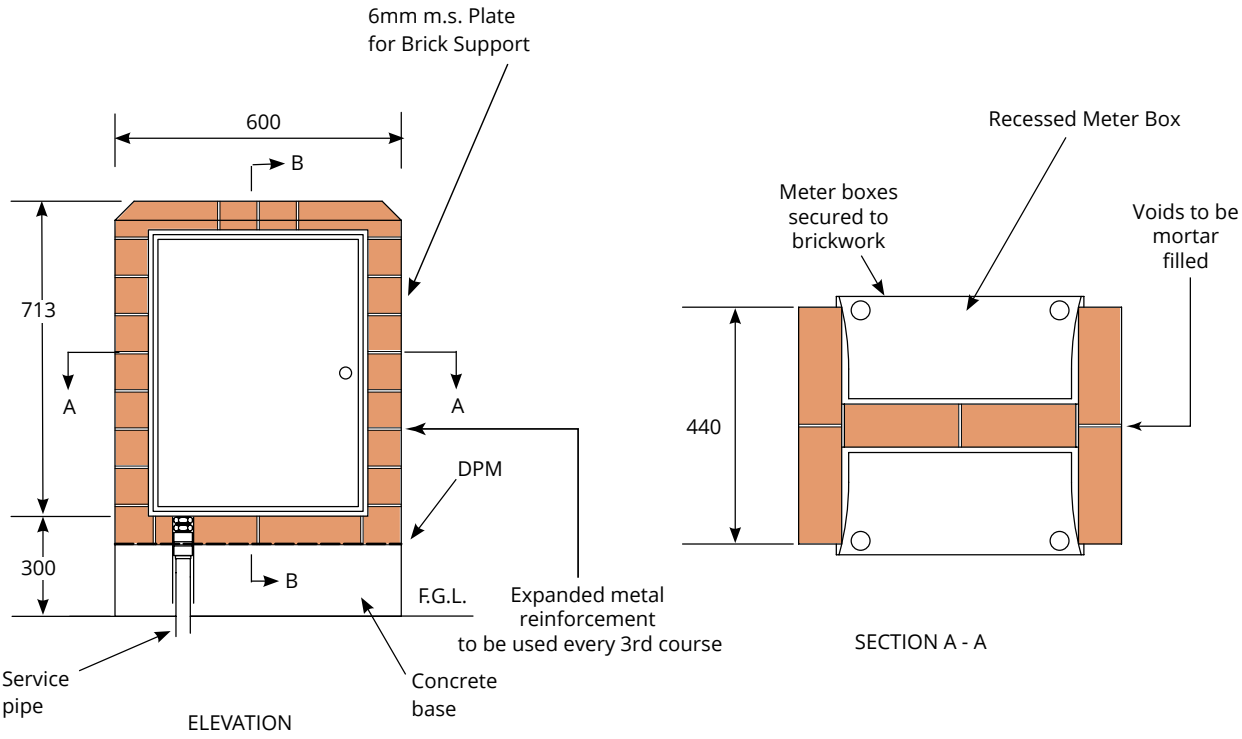


Figure 19: *Meter box in pillar enclosure*

Figure 20 *Meter box in pillar enclosure*

1.12 Foundation Requirements for Preformed Bend Below Ground

There are specific requirements for a preformed bend that is placed below ground. The below figures illustrate these requirements.

The minimum depth of cover is 600mm along the entire length of the connection pipe to within 1.5m of the building line, rising (within 1.5m of the building line or, if moling, in the exit pit) to 375mm at the preformed bend. Figures 21 and 22 show this 375 minimum depth of cover to the preformed bend.

Note: To accommodate the preformed bend the minimum depth of required cover to the top of the foundation is 450mm. Meter box shall not be placed more than 2 meters from the gable end of the property.

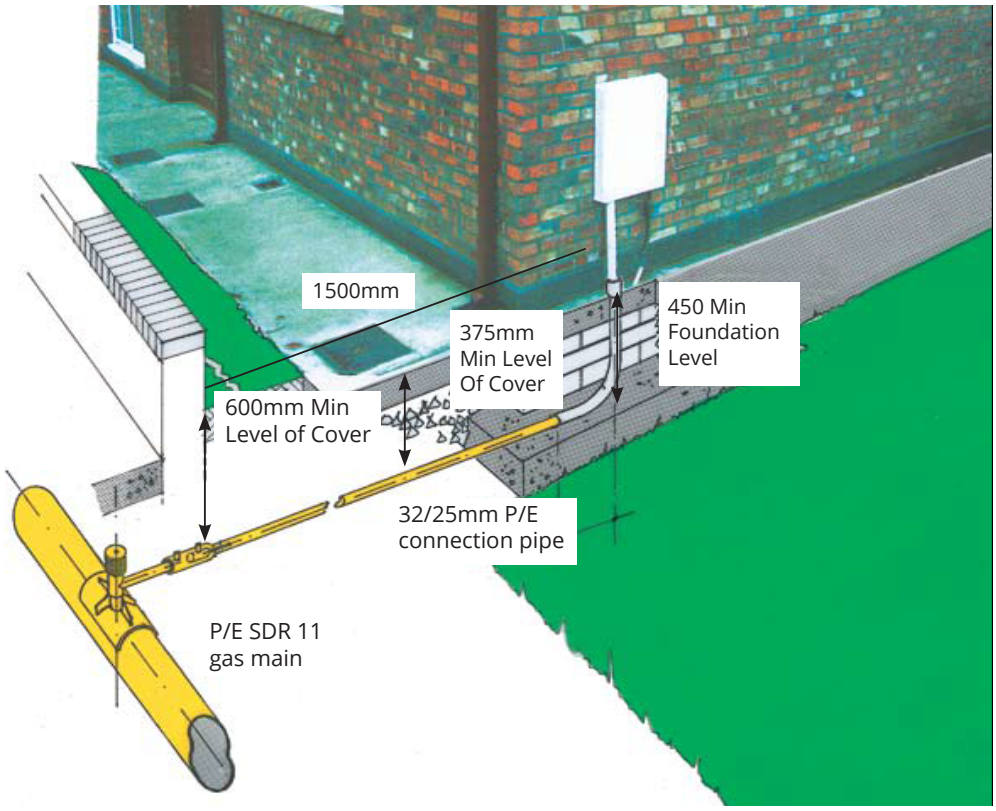


Figure 21: *Connection pipe with preformed bend attached to Mains showing minimum level of Cover and Foundations required.*

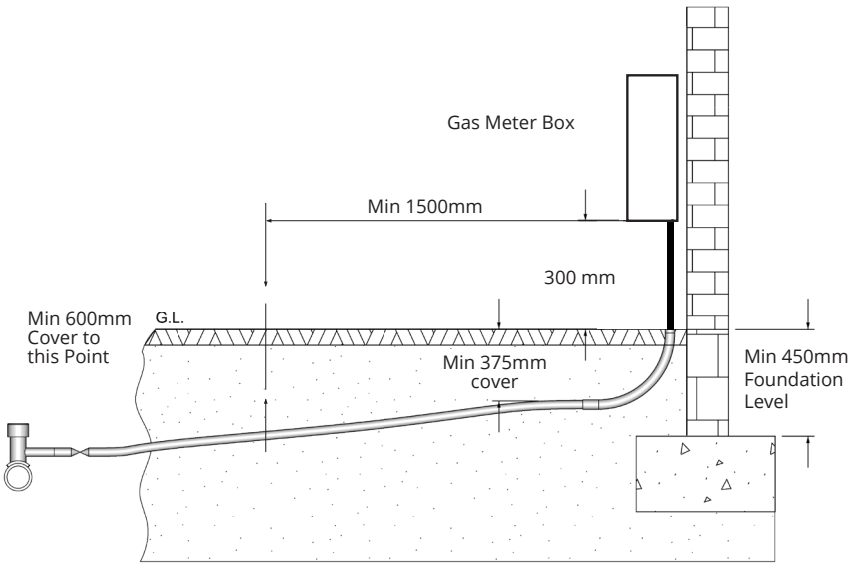


Figure 22: *A minimum cover of 375mm and minimum foundation of 450mm are necessary*

1.13 Meter Box Internals

Figure 23: *Recess Meter box*

Figure 24: *Recessed Meter Box Internals*

Once the connection is finalised, Gas Networks Ireland Distribution Operations will install a meter either surface mounted or recessed similar to figure 23 with a regulator and gas meter in the meter box as shown in figure 24.

1.14 To-do list Before a Meter can be Fitted

However before the meter can be fitted the following criteria must be satisfied.

- Customer must have opened an account with a preferred supplier.
- An appointment has been made with a Natural Gas Supplier to connect the meter.
- When the Gas Networks Ireland meter installer arrives to site, an accurately completed Declaration of Conformance must be available for collection (signed by a Registered Gas Installer).

Once all of the above is in place and a visual inspection is satisfied, meter is fitted and gas is made available.

Registered Gas Installer: A registered gas installer is an installer or service engineer, who has completed the required gas installation safety training and who has the necessary insurance to carry out gas installations to the legal standard.

1.15 Wayleave

Gas Networks Ireland has statutory powers to acquire a wayleave by CPO under Section 32 of the Gas Act, 1976. A wayleave once acquired, either by Deed or CPO, becomes a burden on the title of the land and affects all assigns/ successors. CPO's and completed Deeds of Easement are registered in the Property Registration Authority of Ireland or Registry of Deeds as appropriate. The Deeds provide safety protection on the land for GNI and also entitlements for future development.

When is a wayleave required?

- Pipelines or Services that traverse private lands to connect new customers.
- Private housing estates that are not taken in charge by the Local Authority.
- The requirement exists to supply gas to more than one customer.

Note: If a Wayleave is required, the project designer(s) and builder must assist in supplying all relevant information (i.e. land ownership) to GNI.

Gas Networks Ireland

2 Multi-occupancy Dwellings

2.1 Multi-Occupancy Dwellings - General

Multi-Occupancy Definition

Multi-Occupancy dwelling: A building containing more than two dwellings units. A multiple dwelling can be any of the following:

- A purpose built apartment building
- An existing single dwelling modified to accommodate a number of separate dwellings
- Dwelling units contained in a mixed use building e.g. shops / offices downstairs with dwelling units above

Note: A Multi-Occupancy dwelling can be serviced by an individual meter to a plant room that connects each dwelling or a separate meter to each single dwelling.

Multi-Meter Definition

Meter cabinets/manifolds which contain a number of meters are considered multi- meters and are used for multiple dwellings in a building which contains more than 2 dwelling units.

General Meter Requirements

Note: In all of the following cases in multi-occupancy dwellings, please contact Gas Networks Ireland at the earliest opportunity to provide the optimum design solution for your project.
The meters must be positioned for easy access to, reading or removal. The design or location must protect the meter and its connections against the possibility of corrosion. Meters must not be located where they may be exposed to extreme temperatures or ignition sources (e.g. switch gear). Ventilation of pipework will have a minimum of ½ air change per hour. Pipework and connections to meter must be located at least 0.5 metres away from any electrical equipment or effective ignition sources.

Installation up to the Meter

Gas Networks Ireland provide and lay all external underground gas mains, and gas connection pipework up to the point of the meter location.

The preferred location of meter cabinets or compartments is in an enclosure, external to the building outside the building line. Locating meters internally within the building line is only possible when:

- it is not feasible to locate meters externally
- and natural gas mains pressure is less than 100mbar.

Meters may only be located within the building when site design cannot facilitate them externally. A cabinet or compartment can only be placed inside a building if the gas is at a low pressure of 100mbar or less. The location should be chosen in order to allow for the shortest practicable length of gas connection pipework.

In the case of locations where multi meters are allowed there are two options available:

- **Option 1:** External Multi–Meter Location consists of locating multi-meter cabinets/manifolds around the development outside the building line. This is preferable as it is easier to service, ensure operation and get to in case of emergency. This is illustrated in figures 25-27.
- **Option 2:** Internal Multi–Meter Location consists of meters being located inside the building line. There are two variations of this option:
  Variation A: Meters located in Common Areas shown in figure 28.
  Variation B: Meters located in an Underground Car Park / Open Basement Area shown in figures 29-33, which consists of :
  - Type 1: Top-entry cabinets which are pre-fabricated off site.
  - Type 2: On-site fabricated meter manifold. The structural housing of externally located meters may be either.
- Prefabricated housing is illustrated in figures 34-35.
- Purpose-Built housing is illustrated in figures 36-41.

2.2 Option 1: External Multi-meter Location

The preferred location for meters supplying units in a multi-occupancy building is in an enclosure, external to the building.

Meters may only be located within the building when site design cannot facilitate them externally and the gas pressure is ≤100mbar. The structural housing of externally located meters may be either prefabricated or purpose-built (see further information below).

Figure 25: *Pre-fabricated meter cabinet*

Figure 26: *Purpose-built meter manifold*

Dimensions of each six meter cabinet:
1160mm high x 750mm wide x 300mm deep.

Isolation Valve

Should be positioned at a minimum distance depending on pressure value.

For **Medium Pressure (MP)** - 4m away.

For **Low Pressure (LP)** - 2m away.

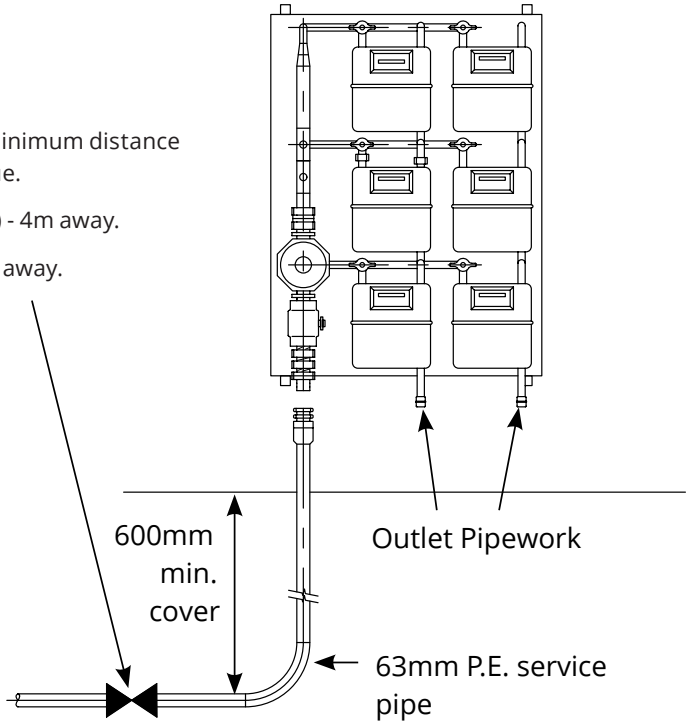


Figure 27: *Diagram of pipework and meter cabinet*

2.3 Option 2: Internal Multi-meter Location - Above Ground Level

Variation A: Meters in common areas

If the meters supplying the units in a multi-occupancy building cannot be located externally then they may be located within the building line subject to the following:

- Low pressure gas network must be available i.e. service pressure less than 100 mbar (Natural Gas).
- Meters should be positioned in an area of natural ventilation as close as possible to the external wall where the gas service pipe enters.
- Meters may not be located beneath a stairs, unless they are placed within a minimum two hour fire resistant and sealed compartment ventilated directly to the outside of the building. This compartment must not obstruct exits from the building.
- Provision should be made for a steel service to enter into the building through a suitable sleeve where traversing a cavity or void.
- Care must be taken when locating the external isolation valve where it is freely accessible, e.g. not in a parking area where vehicles may restrict access.
- Solid access doors to the cabinet / compartment must be self-closing and non-lockable.
- The enclosure, including access doors, must meet the structural and fire resistant requirements applicable to that part of the building.
- The ventilation to the outside atmosphere must be provided through suitably sized and constructed ducts, provided at high and low level. Ducts should be protected and constructed to prevent fire damage.
- If the compartment is above ground level, each vent should provide 5,000mm^2 minimum free area or at least 2.5% of internal floor area, unless it is only ventilated on one side, in which case it is 3.75% of internal floor area, depending on the number of vents, or notional equivalent, whichever is greater. Separation between the meters exits of each ventilating duct to atmosphere must be at least 450mm apart. If the compartment is to be positioned below ground level, Gas Networks Ireland must be consulted for ventilation requirements.
- The dimensions required for different meter arrangements is shown on page 25 of this booklet.

Note: Meters must always be positioned to avoid the possibility of impact with impact protection provided if necessary.

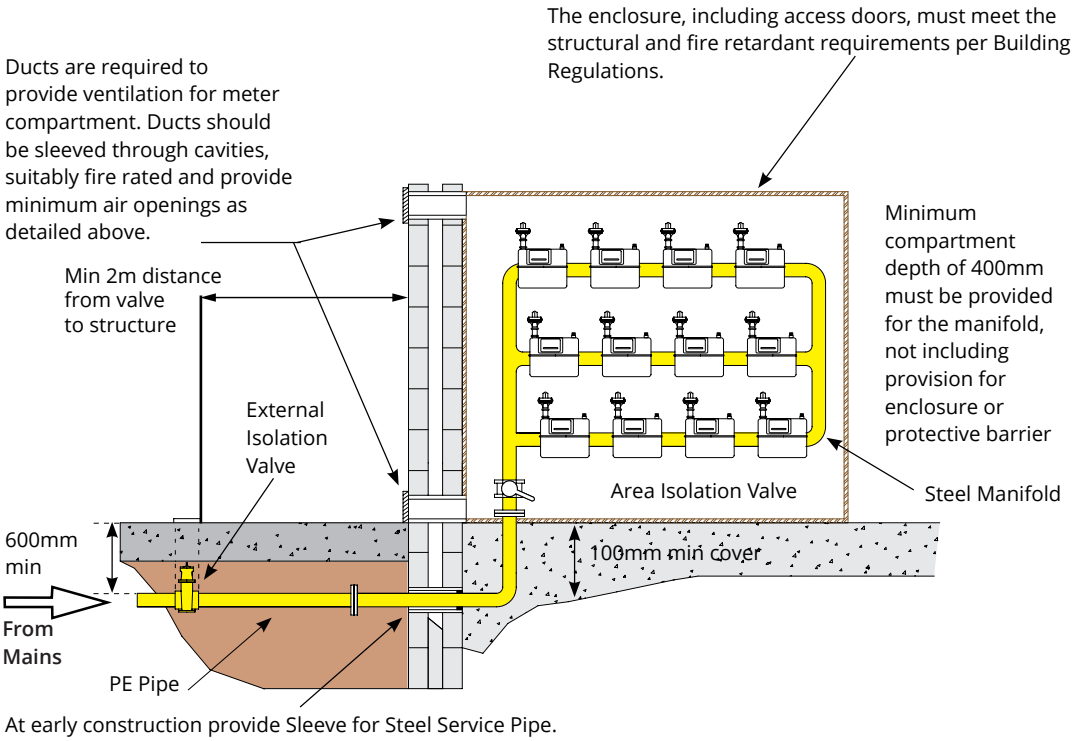


Figure 28: *Multiple meter within a building*

2.4 Option 2: Internal Multi-meter Location - Below Ground Level

Variation B: Underground car park or open basement

Meters located in an underground car park or open basement area must have direct access to natural ventilation. Mechanical ventilation may not be relied upon.

There are two types of meters that can be located in an underground car park or open basement area:

- Type 1: Top-entry cabinets which are pre-fabricated off site.
- Type 2: On-site fabricated meter manifold.

Figure 29: *Top entry cabinet pre-fabricated off site.*

Type 1: Top Entry Cabinets pre-fabricated off-site

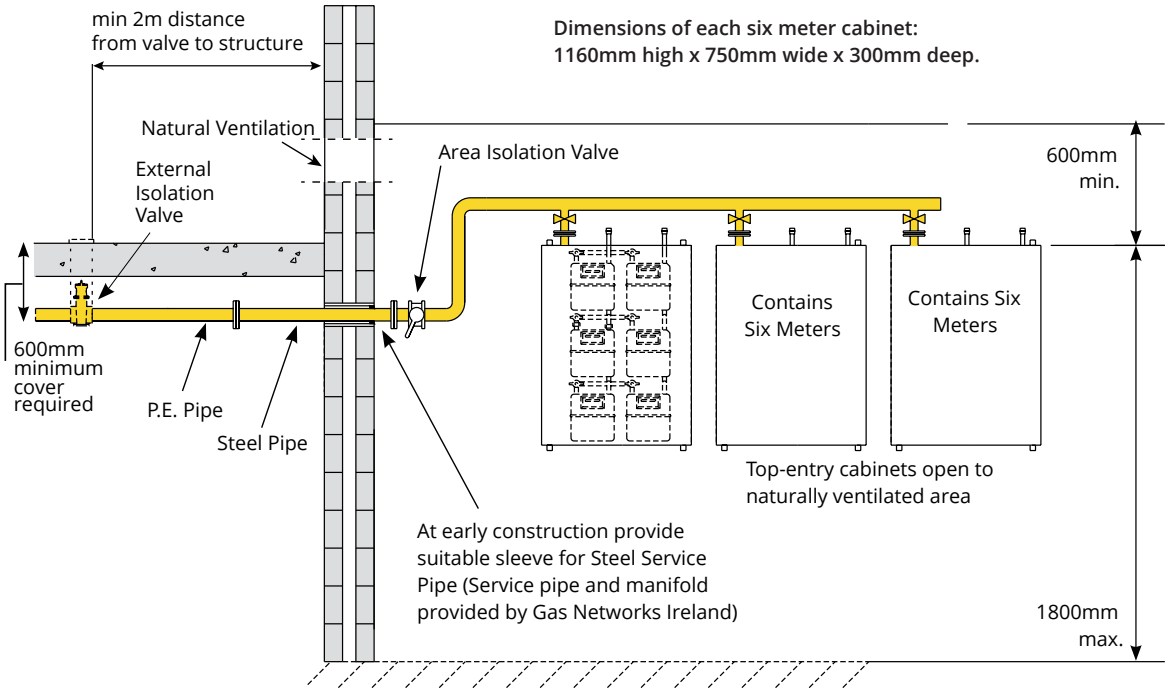


Figure 30: *Top-entry cabinets in underground car park open basement area*

Read in conjunction with page 22.

- Provision should be made for the steel service to enter into the building through an appropriate sleeve traversing a cavity or void.
- The gas service must pass through a ventilated area that is publicly accessible (i.e. providing access for Gas Networks Ireland maintenance at all times).
- Electrical current carrying equipment or cables must not be in contact with or suspended from gas equipment or plant.
- Meters must always be positioned so to avoid the possibility of impact with impact protection provided if necessary.
- If it is required that the meters or gas service be located in a dedicated room within the basement or in a basement lacking natural ventilation, Gas Networks Ireland must be consulted for specifications and ventilation requirements.
- Care should be taken when locating the external isolation valve so that it is freely accessible at all times, e.g. not in a parking area where vehicles may restrict access.

Type 2: On-site fabricated meter manifold

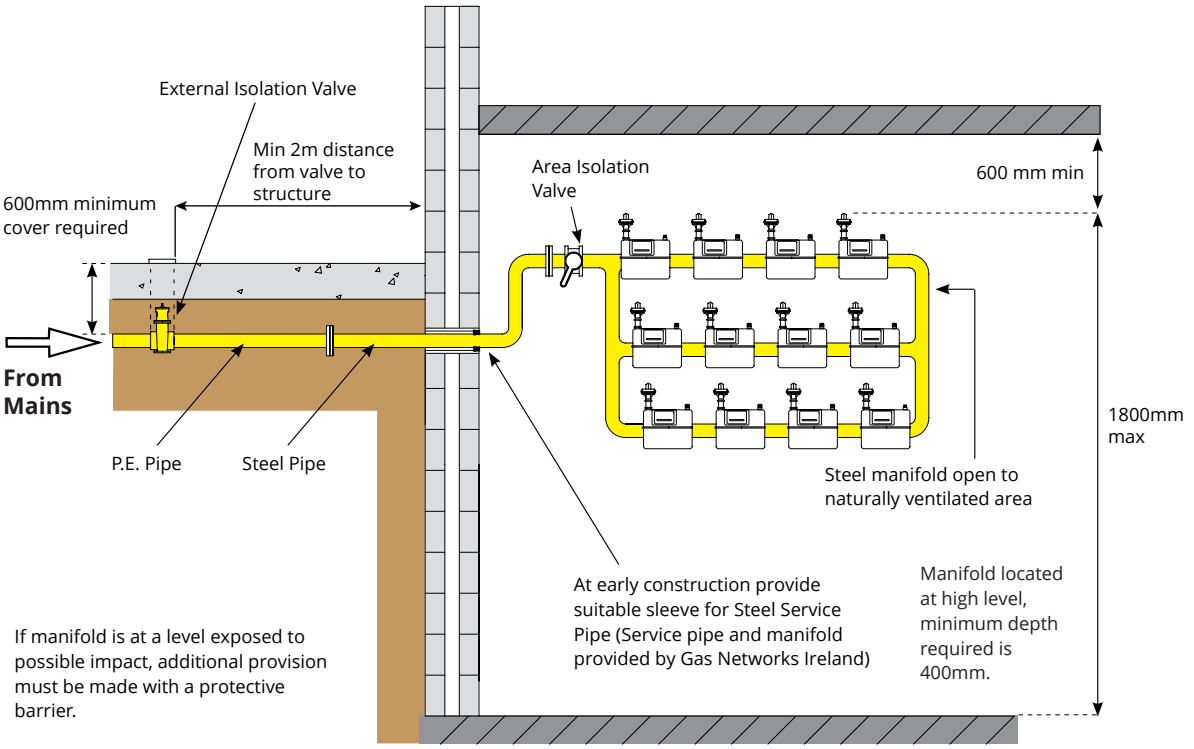


Figure 31: *Meters in underground car park / open basement area*

Figure 32: *On-site meter manifold*

Figure 33: *Supply pipework supported at ceiling level*

Read in conjunction with page 21.

However, if located internally, they must be installed at a minimum of 300 mm above finished ground level.

- The meter installation must not be directly located beneath a ventilation grille or in a position liable to cause ingress of water, unless weather protected.
- If required at low level a protective barrier must be placed around the meters. Sufficient impact resistance provided by the builder.
- In the case of the steel manifold, protection from tamper and impact may be provided by the provision of a suitable steel cage. The use of a steel mesh caging will allow for ease of meter reading. The area isolation valve must remain accessible at all times.

For the dimensions required for differing meter manifold arrangements see figure 42 page 25.

2.5 Multi-Meter Compartment Types

There are two types of meter cabinets or compartments that are used with multiple meters.

Pre-fabricated meters

A **prefabricated meter cabinet** is surfaced-mounted on a wall using the brackets and bolts supplied. The GRP cabinets are pre-drilled at the back to take the threads of the support bolts. The cabinets are to be installed a minimum of 300mm above Finished Ground Level (F.G.L) in order to allow connection by the Distribution Mains Crew on site using a service riser.

The multi-meter cabinet internals consist of an isolation valve, integral filter, regulator and pre-piped manifold supplying six domestic meter points. The heating installer connects directly to the fixed outlets outside the cabinet. It is not permitted to recess a multi-meter cabinet into the external wall of the building, unless all of the requirements outlined on pages 24 & 25 of this booklet are met.

Figure 34: *Pre-fabricated meter cabinet*

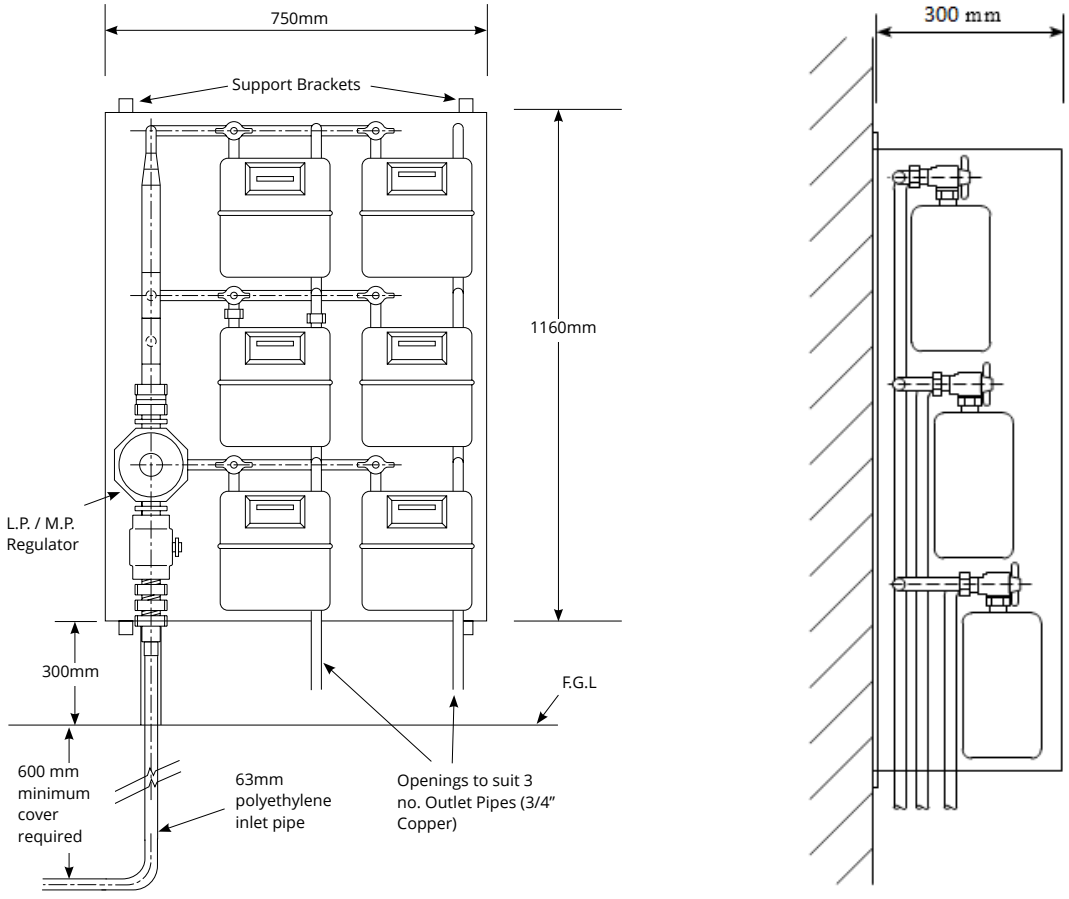


Figure 35: *Apartment Meter Details*

Purpose built meter compartment

A **purpose-built meter compartment** consists of a welded manifold with individual isolation valves, regulators and domestic valves. The regulators and domestic meter will be installed at a later date. This meter arrangement may be located away from the building or recessed into the outer leaf of the building structure.

Note: Purpose built compartments for gas meters are not to be used for any other purpose (e.g. storage of bins or any other equipment.)

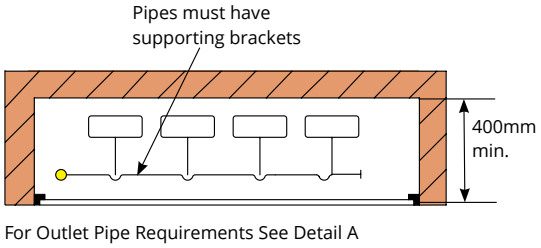


Figure 36: *Plan Detail*

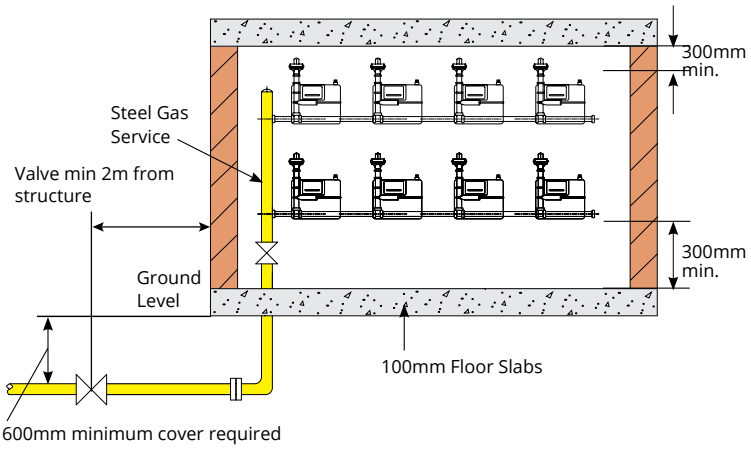


Figure 37: *Inside meter compartment detail*

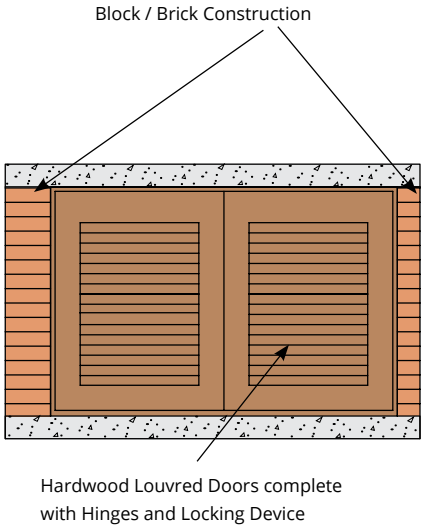


Figure 38: *Elevation*

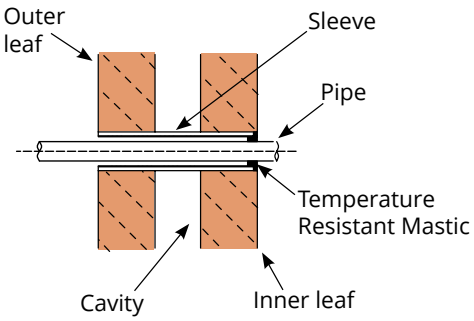


Figure 39: *Sleeving Detail A*

1. If recessed into the structure of the building or to be placed within the building line the meters must be in a completely sealed compartment with the exception of access and ventilation provided by louvered doors to the outside air. This arrangement is only permitted on a low pressure site i.e. gas pressure ≤ 100mbar.
2. The compartment must meet the structural and fire resistant requirements applicable to that part of the building. All voids within and around the compartment must be fully sealed and fire proofed to prevent the ingress of air or gas to the cavity wall or other voids.

3. If the enclosure opens to the outside but is set within the building structure then all pipe sleeves or entries into the building must be sealed with an approved fire sealing material. Access doors should not be lockable. Ventilation must be provided to atmosphere in the form of a fully louvered door or in the case of a solid door, vents must be located at the top and the bottom of the door. Each vent must provide a minimum of 5,000mm^2 free area, or at least 2.5% of internal floor area, unless it is only ventilated on one side, in which case it is 3.75% of internal floor area, depending on the number of vents, or notional equivalent, whichever is greater.
4. Meter compartments are to be located outside apartment walls in well-ventilated areas provided by the builder.

Figure 40: *Purpose-built meter manifold*

Figure 41: *Purpose built meter manifold in purpose built meter compartment block/brick construction*

5. The builder must open ground to allow for steel gas service into the meter compartment.

For internal dimensions for various meter configurations, please consult figure 42 below.

2.6 Internal Building Dimensions for various Meter Bank Configurations

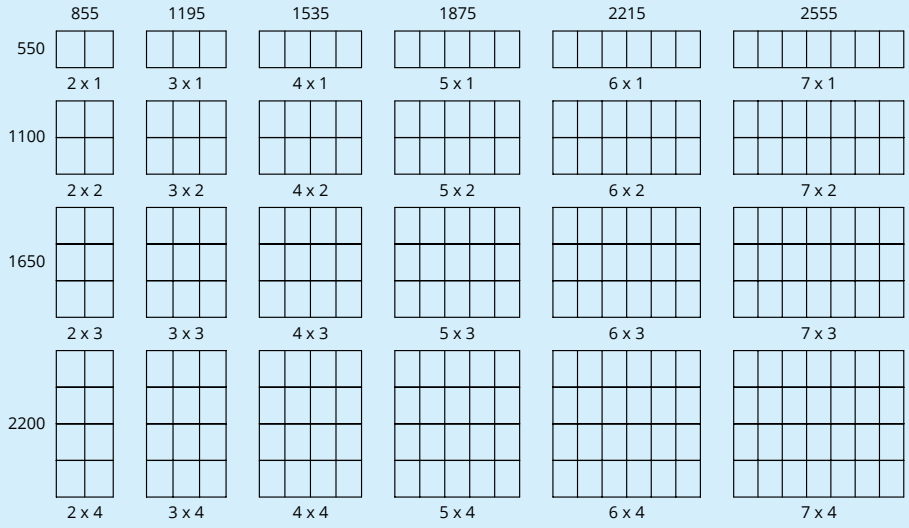


Figure 42: *Internal Building Dimensions for Various Meter Bank Configurations*

Note: If placing meters at low level, always allow for an extra 300mm beneath lowest meter point.

Readers Notes

Gas Networks Ireland

3 Conclusion & Appendices

3.1 Checklist of Essential Information required by Design

The following is the current essential information required for Gas Networks Design. It is mandatory that the developer/builder provides this check list of information to ensure that the project is not rejected by the Design Department of Gas Networks Ireland.

The list below is to outline what is required, the developer/builder must give this information to the Gas Networks Ireland Sales representative in order to process the project.

These items are to be checked by the Sales Rep - If NO or NA please give a reason in remarks.		Yes/No/NA
Meter Locations	Must be clearly marked on site layout maps or stated clearly in project remarks (this includes New Housing Sites).	
Site layout Plans	All New Build / Greenfield Sites require a Detailed Site Layout Plan that is compatible with Autocad *(including External References if required).*	
Elevation Drawings	These are required for all 4bar projects where the meter is to be located on, or within 3m of the building. *(PDF format will suffice)*	
Basement Plans	These are required for all builds where meters are to be located in a basement (including New Housing / Apartments site *(Autocad format required).*	
Ventilation	Basement works and internal meter locations require Client confirmation of adequate natural ventilation.	
Mains/Service Pipe Routing	If known.	
Builder/ Developer Specific Requirements	Please provide necessary details in the remarks / log. E.g. *Will the trench be provided on site? / What date is the gas required for if known?*	

Figure 43: *Checklist of information required by Gas Networks Ireland Sales Representative.*

Comments / Remarks/ Specific Requirements – Specify as much detail as possible to aid in the design process.

3.2 Irish Standards

This document is to be used for guidance purposes and makes reference to the relevant Irish Standards as shown below however it must not conflict with or be used as a substitute for the standards **should any conflict arise, the Irish standards take precedence.**

For gas and main services

Gas Networks Ireland will install all gas mains and services in accordance with the latest edition of the following Irish Standards:

I.S. 329 "Code of Practise for Gas Distribution Mains" and

I.S.265 "Installation of Gas Service Pipes".

E.T.C.I. National rules for electrical installations, Part 1, General requirements, Section 5.4.6.

RGII
Tel: 1800 454 454
www.rgii.ie

For downstream of the meter

Irish Standard I.S.813 "Domestic Gas Installations" and I.S.820 "Non-Domestic Gas Installations" Apply to the gas installation downstream of the point of delivery (normally the meter).

These Standards are the code of practice for natural gas installation requirements downstream of the point of delivery and includes the requirements for meters, appliances and associated pipework in single and multiple occupancy dwelling.

All of the above standards can be obtained from the NSAI (National Standards Authority of Ireland).
Telephone (01) 8073800

Appendix - Excavations Parallel to Walls

With reference to figure 4, dig a trial hole to determine the depth of the foundations or base of the wall, taking care to avoid undercutting the foundation/base. Excavation work must not proceed if the wall is leaning, cracked or showing any signs of instability or distress.

Note: Please ensure the distance from the trench to the bottom of the foundations **(W)**, is greater than the length from the bottom of the foundations to the pipe, **(X)**.

Otherwise please see conditions below:

- reduce the depth of the trench, or
- provide suitable support appropriate to the type of structure, soil characteristics and depth of trench.

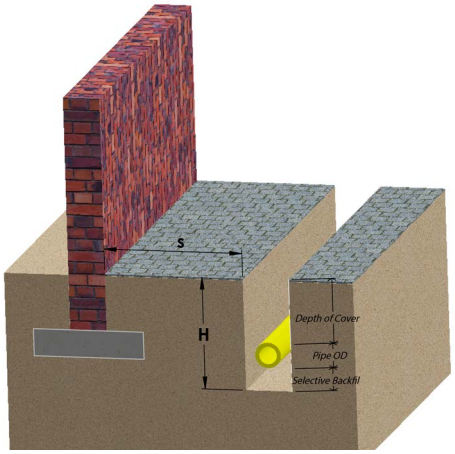


Figure 44: *Proximity of trench to walls*

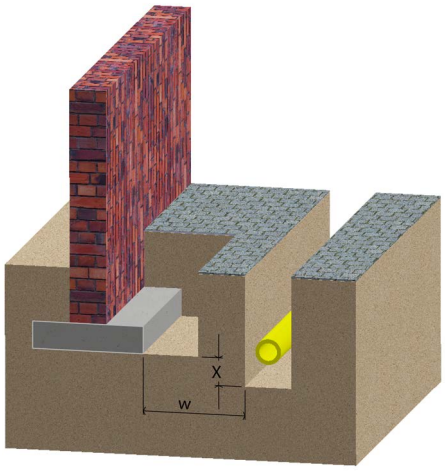


Figure 45: *Proximity of walls to foundation*

Otherwise please see conditions below:

- move the trench so that the distance from the trench to the wall is greater than the depth of the trench, or
- trial hole carried out.

Note: All personnel shall stay out of the area (S) during excavation work.

Readers Notes

Disclaimer

Gas Networks Ireland

The main contact details for
Gas Networks Ireland are:

General Enquiries

1800 200 694

24hr Emergency Service

1800 20 50 50

info@gasnetworks.ie

@GasNetIRL

gasnetworks.ie

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