
Site Selection – Industrial & Commercial Metering

Technical Standard

Document number:	TS 4349
Issue number:	6
Status:	Approved
Approver:	Elias Raffoul
Date of approval:	December 2016

TABLE OF CONTENTS

1 SCOPE AND PURPOSE.....3

2 REFERENCES.....3

3 DEFINITIONS3

4 SITE REQUIREMENTS.....4

 4.1 GENERAL.....4

 4.2 TRANSMISSION PRESSURE METER STATION.....4

 4.3 LOW, MEDIUM AND HIGH PRESSURE METER STATION.....4

5 PROTECTION.....5

 5.1 PROTECTION FROM PHYSICAL IMPACT5

 5.2 PROTECTION FROM TAMPERING5

6 SCHEDULE OF REVISIONS6

7 APPENDICES6

APPENDIX A - SITE SELECTION FACTORS AND COMMENTS7

Site Selection – Industrial and commercial Metering Stations

1 SCOPE AND PURPOSE

This standard gives requirements for selecting a site, and guidance on how to meet those requirements, for any industrial or commercial metering station installation. The installation includes natural gas and liquid petroleum gas.

This standard does not specify the location of a service line and service riser (see Standard Drawing S41-90-1 – Internal Services Typical Arrangements).

This standard does not cover site selection for pressure boosters. Requirements for these are given in AS 5601.

2 REFERENCES

AS/NZS 1940	The Storage and Handling of Flammable and Combustible Liquids
AS/NZS 2885.1	Pipelines - Gas and Liquid Petroleum, Design and Construction
AS 5601	Gas Installation Code
TS 1308	Technical Standard - Construction of Site Works for Industrial and Commercial Metering/Regulating Installations - LP/MP/HP Inlet Pressures.
TS 4004	Technical Standard – Policy on Valves for Systems Operating under 1050kPa
TS 4093	Technical Standard - Noise Control Transmission and Distribution Systems
TS 4356	Metering Rooms

3 DEFINITIONS

Egress path	means a designated path leading from a fire exit to an open space.
Secure area	means where access is restricted to authorised persons such as employees of an organisation.
Tamper-proof	means controls and settings cannot be changed without use of a key or special tool.
Locking	means access is provided for by use of an S43 key
Building	A structure having walls and a roof which has limited or restricted ventilation

Site Selection – Industrial and commercial Metering Stations

4 SITE REQUIREMENTS**4.1 GENERAL**

Select the most suitable site available with respect to the following, as applicable:

- (a) Safety of any person on or near the meter station site
- (b) Access for routine meter station reading and service
- (c) Foreign materials, protection of equipment susceptible to damage and tampering, and corrosion
- (d) Interference with the equipment accuracy from vibration,
- (e) Nuisance from noise that may be generated by the equipment,
- (f) Visual impact of the equipment
- (g) Cost effectiveness of way the installation meets these requirements
- (h) Consideration of ongoing responsibility for service line, and for any need for an additional service isolation valve (Refer TS 4004)
- (i) Protection from physical impact
- (j) Protection from flooding
- (k) Specific distances from: building openings, electrical substations, electrical wiring overhead, flammable storage area, the edge of power operated air intake, public road, any opening into a masonry sub-station

4.2 TRANSMISSION PRESSURE METER STATION

Select the site for a transmission pressure meter station not within any building, see table 5 in Appendix A with additional guidance from the Engineering and Service Delivery Manager AusNet Services or his designated representative.

4.3 LOW, MEDIUM AND HIGH PRESSURE METER STATION

Select the site for a low, medium or high pressure meter station taking into account the factors and comments given in Table 1, and as follows:

- (a) For an external location, i.e. not within any building see table 2 in Appendix A.
- (b) For a location within a building used only for the meter station see table 3 in Appendix A, as well as TS 4356.
- (c) For a location within a building shared for other operations see tables 3 and 4 in Appendix A.

Unit protection and security level shall be in accordance with requirements specified in Section 5.

Note: The location of the metering station should be chosen to be as close as possible from the point of entry of the service (i.e. as close as practicable to where the service enters the property).

Site Selection – Industrial and commercial Metering Stations

5 PROTECTION

Each site shall be provided protection and security as appropriate to the level of exposure and consequences of damage and tampering.

5.1 PROTECTION FROM PHYSICAL IMPACT

Protect the meter/regulator station from physical impact as follows:

- (a) Where there is a threat for falling objects, provide the following;
 - standard enclosure with roof, or if that is not sufficient,
 - special design barrier as necessary.
- (b) Where there is threat from vehicles, or other lateral impacts, provide the following;
 - 3m separation between the pipework/equipment and the roadway/path of the threat; or
 - Bollards or Armco to Standard Drawings S91-3-1 or S91-6-1; or
 - Special design barrier as necessary.

5.2 PROTECTION FROM TAMPERING

Protect the meter/regulator from tampering as follows.

- (a) Where the location provides a secure area no further protection from tampering is required.
- (b) Where the location does not provide a secure area and there are special circumstances, eg. hospital, critical supply, school grounds, a public reserve or place where vandalism is probable, provide the following;
 - equipment that is robust and tamper-proof; or
 - standard enclosure with roof in accordance with standard drawings.
- (c) Where the location does not provide a secured area and there are concerns about vandalising the equipment to the extent of being a nuisance to AusNet Services, a standard enclosure with roof or other approved enclosure shall be provided.
- (d) Where the location does not provide a secured area and there are no concerns about vandalising the equipment, no protection from tampering is required.

5.3 SPECIAL SIDE CONSIDERATION

- (a) For Alpine conditions and temperatures, consideration must be given to peak winter conditions when build up of snow can vary from season to season.
- (b) Identification of possible sources of ignition.
- (c) Due to the characteristics of LPG as a heavier than air gas, consideration for a well-ventilated installation is important.
- (d) Reticulated LPG being heavier than air, the tendency is for the vapourised gas to migrate and pool should an escape occur, is a critical consideration.
- (e) Consideration to snow drifts such as: snow falls off roofs, stairways, balconies, or as a result of clearing operations from elevated decks and door ways. Also snow accumulation as a result of mechanical clearing operations of local access roads by heavy snow ploughing equipment.
- (f) Accessibility all year round should also be a consideration and not be difficult due to sloping or unstable ground conditions. Preference needs to be given to necessitate meter-regulator installations are above normal snow levels.

Site Selection – Industrial and commercial Metering Stations

6 SCHEDULE OF REVISIONS

Issue	Date	Details of Change
4	February, 2010	Revised as an SP AusNet document with minor changes to the content.
5	November, 2010	Revised as SP AusNet document with a minor changes to the content
6	December 2016	Reviewed with update to AusNet Services document with minor changes to content.

NOTE: This standard is duplicated on AusNet Service's website. Please ensure it is updated whenever new revisions to this document are published.

7 APPENDICES

Appendix A - Site Selection Factors and Comments.

APPENDIX A - SITE SELECTION FACTORS AND COMMENTS

Table 1 - Factors applicable to all meter station sites

	Factors	Comments
1.1	Flooding	Avoid site with history or likelihood of flooding.
1.2	Environment	Avoid corrosive atmosphere, or where dust may affect equipment.
1.3	Flammable store, chemicals	Locate with boundary of meter station at least 5m from any storage of flammable materials, or any filling point for petrol, LPG, CNG, NGV or oil, and any chemical storage, except where equipment protected from spills and leakage and site is approved by AusNet Services. The requirements of AS/NZS 1940 apply.
1.4	Access	Access is required at all times for meter reading, emergency and routine maintenance activities. AusNet Services will specify any need for vehicle access.
1.5	Locate away from any egress path	Locate either; (a) With boundary of meter station at least 1.5m and more if possible, from any egress path (which must be at least 1m wide), or; (b) Provide fire resistant barrier level 1 hour min. Where fire resistant barrier provided, it must not restrict egress path to less than 1m. Any swinging gate must not restrict an egress path.
1.6	Power lines, electrical equipment	Comply with exclusion zone defined in AS/NZS 3000.
1.7	Vibration	Avoid site where vibration would affect accuracy of equipment, eg. Vibration within range 10Hz to 20Hz.
1.8	Noise	Avoid site where noise from equipment could be a problem, or specify acoustic barrier if noise problem is likely (see Technical Standard 4093).
1.9	Vehicles	Locate boundary of meter station at least 3m from any vehicle path, or protect meter station (see Section 5 of this standard).
1.10	Overhead	Avoid site where possibility of falling loads, eg. Under O/H crane, conveyors, larger trees, or protect (see Section 5 of this standard).
1.11	Remote from any air intake into a building	Locate equipment at least 3m from an inlet of any ventilation system that could carry leaking or vented gas into a building.
1.12	Ventilation (for equipment within building)	Comply with AS 5601 requirements for ventilation of gas equipment.
1.13	Vent lines	Vent lines not protected by an enclosure or building requires suitable support. Where within a building, comply with AS 5601 requirements for vent line.
1.14	Electrical supply	AusNet Services to advise if supply required. If installed, refer to Factor 1.6.
1.15	Protection, security	See Section 5 of this standard.

Site Selection – Industrial and commercial Metering Stations

Table 2 - Factors applicable to external meter station sites (not within any building)

	Factor	Comments
2.1	Relation to gas service entry	Meter station should be located as near as practicable to gas service entry into property (see Factor 2.2).
2.2	Visual	Not visible from street preferred. Locate behind screening if appropriate (overrides factor 2.1).
2.3	Location	Ideal meter station location as per Standard Drawing S13-21-1.

Table 3 - Factors applicable to meter station within any building used only for the meter station

Refer to the requirements in TS4356 – Metering Rooms

Table 4 - Factors applicable to site for meter station within building that includes other operations

	Factor	Comments
4.1	Shared sites	Not to share with messroom, sickroom, rest room, switch room, electrical meter room or similar.

Table 5 - Factors applicable to site for Transmission Pressure meter station

	Factor	Comments
5.1	Location	Be located outside buildings and be no closer than 3m to any building unless a firewall of minimum height of 2.2m is installed.
5.2	Openings	Not be located near openings, windows or inlet ducts to buildings or adjacent walls.
5.3	Soil Stability/ Compaction	Sub-grade shall be in accordance with Technical Standard TS 1308.
5.4	Isolating Service Valves	To be located in accordance with AS 2885.1

NOTE: Other factors are identified in Table 1.