Requirements for water meters in new developments

Guideline under the *Plumbing and Drainage Act 2018*

January 2020

Queensland Government

Table of Contents

Purpose

The purpose of this guideline is to provide details on the requirements for water meters in new developments and outline how to interpret Part B1.2 of the Queensland Plumbing and Wastewater Code (Version 1: 2019) (QPW Code).

This guideline will assist *water service providers*, local governments, plumbers, builders, developers and property owners to understand the technical and regulatory requirements for the installation of water meters (commonly referred to as sub-meters). Guidance on ownership and maintenance regimes is also provided.

This guideline updates and supersedes the "*Sub-meter guidelines, for councils, plumbers, builders, developers, water service providers and community title managers*" published as an informative guide in November 2013.

Authority

This guideline is made under section 154 of the *Plumbing and Drainage Act 2018* ('the Act'). Under section 154(1), the chief executive may make guidelines for matters within the scope of the Act to help compliance with the Act.

Under section 154(2)(a) of the Act, the chief executive may make a guideline about carrying out plumbing or drainage work ('work'), including ways of complying with the code requirements for the work.

The Act[1] requires a licensee who is carrying out work to have regard to the guidelines that are relevant to carrying out the work. If a licensee fails to have regard to a guideline that is relevant to the work the licensee carries out, disciplinary action may be taken against the licensee[2].

The requirement to have regard to guidelines made under the Act extends to investigators appointed by the Queensland Building and Construction Commission (QBCC), local governments and inspectors employed by local governments. Investigators and inspectors are required to have regard to a guideline that is relevant to performing their functions,[3] and a local government must have regard to guidelines that are relevant to its administration of the Act[4].

[1] Act, section 46(1)

[2] See the Act, section 49(1)(c).

[3] See the Act, section 133 and section 141.

[4] See the Act, section 138.

Background

On 1 January 2008, the superseded Queensland Plumbing and Wastewater Code (superseded QPW Code) was amended to introduce requirements for installing water meters in certain new developments.

These changes were introduced to secure Queensland's future water supply due to severe drought conditions.

'Part 4 – Water meters in new premises' in the superseded QPW Code provided acceptable solutions for the installation and maintenance of water meters. This included the installation of 'sub-meters' – the common term used to describe individual water meters and related equipment within multi-unit complexes employed to measure water use in individual premises. The term also differentiates from 'master meters' that measure the supply of water to a complex as a whole.

On 1 July 2019, the current QPW Code came into effect. 'Part 4 – Water meters for new premises' has been replaced by 'Part B1.2 Water meters for new premises'.

A copy of the current and superseded versions of the QPW Code are available on the Department of Housing and Public Works' website.

Important notes

This document is to be used as a guide to interpreting Part B1.2 of the QPW Code and should be read in conjunction with the code.

All terms referred to in this guide have the same meaning as defined in the Act, Plumbing and Drainage Regulation 2019 (PDR) or a relevant Australian/New Zealand Standard. If a definition given in a relevant standard is inconsistent with the Act, PDR or the QPW Code, the legislation prevails.

All relevant Australian and New Zealand Standards are applicable, unless otherwise outlined in the QPW Code. Where there is an inconsistency, or the QPW Code has additional requirements, the QPW Code prevails.

Queensland Plumbing and Wastewater Code

The current version of the QPW Code commenced on 1 July 2019.

The QPW Code sets out Queensland specific plumbing and drainage standards and has been designed to provide performance solutions to meet the statutory requirements of the Act. The standards set by the QPW Code allow for innovation in materials and methods.

Part B1.2 of the QPW Code provides the details on requirements for 'water meters for new premises'.

Definitions

The following are definitions used in the Act or QPW Code, however these are a guide only and the precise wording of a definition should always be consulted in the relevant legislation. Under the Act:

A ***responsible person***, for plumbing or drainage work, means a person who—

(a) carries out the plumbing or drainage work; or

(b) supervises the carrying out of, or directs another person to carry out, the work.

An ***authorised person*** means an *authorised person* of a *water service provider* under the *Water Supply (Safety and Reliability) Act 2008*.

The following are definitions used in the QPW Code:

Common property has the meaning provided in section 10 of the *Body Corporate and Community Management Act 1997*.

Complying valve means a device incorporated as part of the *water meter* which a *water service provider* can use to securely restrict the flow of water, either partially or fully, to the *meterable premises*, installed upstream of a water meter.

Meterable premises means:

(a) all *class 1* buildings;

(b) each lot within a community title scheme, including the *common property*, in a water service provider's area;

(c) the *sole-occupancy unit* of a *class 2, 4, 5, 6, 7* or *8* building in a *water service provider's* area;

(d) each *storey* of a *class 5* building in a *water service provider's* area where the building consists of more than one *storey* and *sole-occupancy units* are not identified at the time of the building's plumbing compliance assessment.

Public area means an area to which the public has lawful access, for example, a footpath.

Sole occupancy unit, in relation to a building, means:

(a) a room or other part of the building for occupation by one or a joint owner, lessee, tenant, or other occupier to the exclusion of any other owner, lessee, tenant, or other occupier, including:

  (i) a dwelling; or

  (ii) a room or suite of associated rooms in a building classified under the Building Code of Australia as a class 2, *4, 5, 6, 7 or 8* building; or

(b) any part of the building that is *common property*.

Storey means a space within a building which is situated between one floor level and the floor level next above, or if there is no floor next above, the ceiling or roof above, but not:

(a) a space that contains only:

  (i) a lift shaft, stairway or meter room; or

  (ii) a bathroom, shower room, laundry, water closet, or sanitary compartment; or

  (iii) accommodation intended for not more than three vehicles; or

  (iv) a combination of the above; or

(b) a mezzanine.

Water meter means a device, and related equipment, for measuring the volume of water supplied to premises.

Water service means**:**

(a) water harvesting or collection, including, for example, water storages, groundwater extraction or replenishment and river water extraction; or

(b) the transmission of water; or

(c) the reticulation of water; or

(d) drainage, other than stormwater drainage; or

(e) water treatment or recycling.

Water service provider for premises, means the person registered under the *Water Supply (Safety and Reliability) Act 2008*, chapter 2, part 3, as the *water service provider* for retail *water services* for the premises.

Water supply system means infrastructure used to supply water to premises, whether or not the infrastructure is also used to store or treat water, that consists of –

(a) a water main; and

(b) a pipe that connects the water main to the premises; and

(c) any of the following:

(i) valves;
(ii) engines;
(iii) pumps;
(iv) machinery;
(v) other works.

Alternative or new materials

The QPW Code has been designed to foster innovation and creativity. It should not be interpreted in a manner which prevents the use of materials or products not specifically referred to.

Associated legislation

Water meter requirements of the QPW Code should not be considered in isolation. Other Commonwealth, State, and local laws or referenced standards may be relevant. The following is a list that should be considered, but it is not a comprehensive list.

- *Body Corporate and Community Management Act 1997*
- *Building Act 1975*
  - Building Regulation 2006
- *Planning Act 2016*
  - Planning Regulation 2017
- *Plumbing and Drainage Act 2018*
  - Plumbing and Drainage Regulation 2019
- *Public Health Act 2005*
- *Water Act 2000*
  - *Water Regulation 2016*
- *Water Efficiency Labelling and Standards Act 2005*
- *Water Supply (Safety and Reliability) Act 2008*
  - Water Supply (Safety and Reliability) Regulation 2011
- *South-East Queensland Water (Distribution and Retail Restructuring) Act 2009*
  - South-East Queensland Water (Distribution and Retail Restructuring) Regulation 2010
- National Construction Code
- Australian and New Zealand design standards
- Australian technical specifications.

Standards

The following standard is referenced in the QPW Code in relation to water meters:

- AS3565.4:2007 Meters for water supply—In-service compliance testing.

What is sub-metering?

Sub-meters are individual water meters connected to units or lots in a multi-unit development used to measure water use in individual premises. The term also differentiates sub-meters from master meters, which measure the supply of water to a premises as a whole.

Sub-meters for new premises

General

Since 1 January 2008 it has been mandatory to install sub meters in all new residential multi-unit developments and some non-residential premises. From this date, all new premises within a reticulated water supply area require a sub-meter for each separate lot and *common property* in a community title scheme or for each *sole occupancy unit* in the building. This requirement does not apply to the retrofit of existing buildings.

This enables *water service providers* to directly charge the owners of separate lots in new buildings for their actual water consumption. For multi-unit buildings under single title, this also enables itemised billing based on sub-meter readings, so that the owner can pass the cost of water on to the individual user.

The *Water Supply (Safety and Reliability) Act 2008* contains requirements for *water service providers* to ensure consistent standards state-wide for billing content and billing cycles. The standardised billing content must include graphical information on water consumption, comparisons of average daily water consumption with previous billing periods and the local area average and messages about water savings and consumption targets.

Performance requirements

The performance requirements for sub-meters are specifically dealt with in Part B1.2 of the QPW Code ‘water meters for new premises’ (see Appendix 1).

The QPW Code now sets out all technical requirements in a single document and the format and terminology changed to align with the National Construction Code, Volume Three, PCA 2019.

Performance criteria P1 requires the water supply to a *meterable premises* to be fitted with a device (water meter) to measure the amount of water supplied to the premises.

Deemed-to-satisfy solution D1 provides a method of complying with this through the use of water meters. The water meter must be approved by the water service provider and must comply with any relevant requirements of the *water service provider* that may be imposed under the *Water Safety (Supply and Reliability) Act 2008.* An alternative solution can be formulated but it must be at least equivalent to the deemed-to-satisfy solution.

Meterable premises

Meterable premises only apply to certain new buildings located in a water service provider’s area, i.e. those supplied with reticulated water.

Lots in a community titles scheme must be individually metered, including usage for common areas. This is to ensure that the body corporate (which manages the *common property*) also receives water usage information and separate billing, e.g. for pools, watering gardens etc.

Sole occupancy units of certain classes of buildings (i.e. classes 2, 4, 5, 6, 7, and 8) which are exclusively occupied must be provided with sub-meters. For example, where a shop is split into multiple shops to become *sole occupancy units* then the individual units must be fitted with sub-meters.

At the time of construction, it may be difficult to identify the areas of a *class 5* multi-*storey* building which are going to be leased out, i.e. the *sole occupancy units*. In this case a sub-meter must be fitted on each *storey* of the building.

Where individual *sole occupancy units* have not been identified in a *class 5* building, the relevant *water service provider* will send a bill to the owner of the building, i.e. the person recorded in the *water service provider's* record as the owner of the land.

Individual *water service provider's* may have specific billing arrangements for these types of buildings. The bill will then be apportioned as it would under the respective lease or tenancy agreements. Parties may choose to agree separately on the water usage based on the water used per floor.

Each floor can then be supplied with information on water use which will assist tenants to gauge their water use and measure the effectiveness of water reduction methods and devices on a floor by floor basis.

Location

Performance criteria P2 of the QPW Code requires that the sub-meter be located so it is easy to read and maintain. Deemed-to-satisfy solution D2 further provides that it must be easy to read and maintain from the *common property* or *public area*. Furthermore, where the meter is located in a *public area* it must be less than three metres from the property boundary.

A *public area* means an area which the public have access too. This is an inclusive definition, i.e. it is not limited to the footpath and may include public car parks, walkways etc., provided the public ordinarily has access to them.

The location of the meter is important because it must be located in a place where the *water service provider* can easily access it to undertake readings.

Ownership of sub-meters

For properties constructed after 1 January 2008, all *water meters* located in community title schemes created and requiring compliance under the plumbing Act are owned by the *water service provider* supplying water to the scheme[5]. Prior to this, the *Body Corporate and Community Management Act 1997* provided that utility infrastructure (including sub-meters) was '*common property*' that was owned by the body corporate, unless it fell within an exclusion.

Tampering with water meters

Since 1 January 2008, it has been an offence to tamper with *water meters* or related equipment. Related equipment includes devices that assist in measuring or reading the volume of water supplied to the premises. Automatic meter reading equipment is considered to be equipment related to the meter.

Individuals found guilty of tampering with *water meters* or related equipment may face an on-the-spot fine of 20 penalty infringement notice points per offence ($2,669)[6] or if prosecuted, a maximum penalty of up to 250 penalty units ($33,362.50) under section 73 of the Act.

[5] *Water Supply (Safety and Reliability) Act 2008*, section 35.

[6] Under section 3 of the Penalties and Sentences Regulation 2015, *the prescribed value of a* penalty unit is $133.45. (As of 1 July 2019 – 30 June 2020). Under section 5(2A), the amount of the infringement notice is to be rounded down to the nearest whole dollar. For example: if an infringement notice prescribes a penalty of one penalty unit the monetary value of the penalty is $133 (rounded down from $133.45).

Role of the water service provider

General

Water service providers which provide retail *water services* will own the meters and be responsible for reading and charging customers accordingly.

For properties constructed after 1 January 2008, *water service providers* are responsible for the maintenance and replacement of sub-meters as necessary.

For properties constructed prior to 1 January 2008, it is the responsibility of the body corporate for the community title scheme to maintain or replace privately owned sub-meters. A sub-meter must be installed and maintained by a plumber with an appropriate QBCC licence.

The *water service provider* may want to make contact with the local government's plumbing inspector about a particular development. This may include advising the inspector of the approved sub-meter and the preferred location for the development.

Information supplied directly to the inspector will assist in the assessment of plans and compliance assessment for the work. As many *water service providers* are part of local government, this network should be set up between the business unit and department as early as possible.

Approval

Sub-meters must be approved by the *water service provider*. As *water service providers* will have different requirements in terms of choice of meter and reading equipment, there is no limitation or restriction on the type of sub-meter that can be used.

For example, some *water service providers* may wish to use automatic meter reading equipment which can be read in a wireless manner. This will require specific sub-meters to be installed in their service area.

Location

A floor plan of the building must be provided with the local government application showing the approximate location on the premises and specifications of each sub-meter for measuring the supply of water to any part of the premises.

This is critical to enable local government to assess the plans and the location of the sub-meters. The *water service provider* must be given an opportunity to nominate where the sub-meters are to be placed within the *common property* or *public area*. The *responsible person* and *water service provider* should contact each other early in the process.

Powers of entry

Under section 746 of the *Water Act 2000* an authorised officer may enter a property to read, check the accuracy of, or replace a *water meter*. The entry power does not allow entry to any part of a place used for residential purposes and entry may only be made at a reasonable time.

Installation

Only a plumber with an appropriate QBCC licence may install sub-meters.

In most cases, the *water service provider* will use plumbers contracted to or employed by the *water service provider*. However, the *water service provider* may choose to utilise the plumber who has installed the plumbing in the building.

Approval to connect to the *water service provider's* infrastructure will remain a separate approval under section 167 of the *Water Supply (Safety and Reliability) Act 2008* or section 99BRAS of the *South-East Queensland Water (Distribution and Retail Restructuring) Act 2009.*

Authorised person

An *authorised person* is not permitted to install sub-meters. Only an appropriately licensed plumber may perform the installation of sub-meters.

Under the Act, an *authorised person* may only carry out plumbing work that is removing, repairing or replacing a prescribed *water meter*[7], and any related work.

Role of the plumber

General

The role of the *responsible person* for the job, i.e. the plumber, is to maintain a dialogue between the *water service provider* and the local government.

Plans

It is important that the plumber contacts the *water service provider* as soon as possible to ascertain the *water service provider's* requirements so the location of the meters can be placed on the plans to be submitted to local government.

Installation

Only a licensed plumber may install sub-meters.

Each *water service provider* will have different requirements for the type of sub-meter, which will impact how the plumber leaves the plumbing open and ready for installation. By opening the dialogue with local government, the plumber will be aware of who to notify when the time comes for installation.

Installation work must not proceed until a connection approval has been received from the *water service provider* and a plumbing permit has been issued by the relevant Local Government.

A copy of the connection approval should be attached to the permit application (*Form 1—Permit work application for plumbing, drainage and on-site sewerage work*).

Under section 100(2) of the PDR, the *responsible person* for the work must, at least 2 business days before the plumbing work is covered, give notice that the *water meter* has been installed to the *water service provider* for the building. Individuals found guilty of breaching section 100(2) of the PDR may face an on-the-spot fine of 2 penalty infringement notice points per offence ($266) or if prosecuted, a maximum penalty of up to 20 penalty units ($2,669).

The *responsible person* must give the local government a notice, in the approved form (*Form 7—Notification of responsible person* (Form 7)), stating the *responsible person's* name and contact details in advance of asking the local government to inspect the work, (section 63(5) of the PDR).

Individuals found guilty of breaching section 63(5) of the PDR may face an on-the-spot fine of 2 penalty infringement notice points per offence ($266) or if prosecuted, a maximum penalty of up to 20 penalty units ($2,669).

[7] The Act, section 58(3).

Offences

Water Supply (Safety and Reliability) Act 2008

Under section 191 of this Act, a person must not, without the written consent of a *water service provider*, connect to, or disconnect from, the *water service provider's* infrastructure. Breaches of this offence may result in an on-the-spot fine of:

- 4 penalty infringement notice points per offence for individuals ($533);
- 20 penalty infringement notice points per offence for corporations ($2,669); or
- if prosecuted, a maximum penalty of up to 1000 penalty units ($133,450).

Plumbing and Drainage Act 2018

Under sections 56(1), 57(1), 57(2) and 57(3) of the Act, sliding-scale penalties exist for people who perform, direct or supervise unlicensed work. This may include prison terms for repeat offenders or if the plumbing or drainage work is grossly defective. On-the-spot fines for individuals under these sections are 20 penalty infringement notice points per offence ($2,669). If prosecuted, the following maximum penalties (of up to) may apply:

- first offence: 250 maximum penalty unit (MPU) ($33,362.50);
- second offence: 300 MPU ($40,035);
- repeat offenders: 350 MPU ($46,707.50) or 1 year's imprisonment.

Under section 66(1) of this Act, it is an offence to commence permit work without first obtaining a permit. Breaches of this offence may result in an on-the-spot fine of:

- 20 penalty infringement notice points per offence for individuals ($2,669);
- 80 penalty infringement notice points per offence for corporations ($10,676); or
- if prosecuted, a maximum penalty of up to 250 penalty units ($33,362.50).

Role of the local government

General

Installation and assessment of sub-meters will be managed through the permit process by local governments under the Act.

Plans

When an application is made for a permit (approval of plans for plumbing work required before work can commence) it must be accompanied by advice from the *water service provider* about the sub-meters for that particular building.

Local governments must assess what type of premises the water is being supplied to and the requirements for the installation of sub-meters. This will mean assessing the plan against the definition of '*meterable premises*' in the QPW Code to determine the requirements for the development. Local government will also need to determine if all *common property* usage has been metered.

If the information required to be supplied by the *water service provider* has not been received or additional information is needed to assess the application, then local government must issue an information request seeking this information. Assessment of the application should stop until the information is received.

Local government may impose conditions on the permit requiring that installation of sub-meters comply with the advice from the *water service provider*, where this complies with the QPW Code requirements.

The plumbing inspector may wish to contact the *water service provider* to establish a network for the flow of information. As many *water service providers* are part of local government this network should be set up between the business unit and department as early as possible.

Assessment and compliance

As part of the inspection process, the local government should check the approved sub-meter has been installed and the location conforms to the requirements of the *water service provider*, where consistent with the QPW Code. As with other assessments of plans, local government may amend the approved plan themselves in the case of minor inconsistency between the plan and the work performed to show the final location of the sub-meters.

In addition, the local government may request additional forms from the plumber who installed the *water meter*, where that person did so as a contractor or employee of the *water service provider*.

For example, local government may require the *responsible person* under 79(3)(b) of the PDR to provide within a stated period or at a stated stage of the work, an as-constructed drawing that correctly represents the relevant work.

Local government should not issue the final approval of plumbing work (*Form 19—Final inspection certificate*) until the installation of sub-meters has taken place to the specifications of the *water service provider* and complies with the code requirements.

More information

More information is available from the Department of Housing and Public Works' website, www.hpw.qld.gov.au/construction/BuildingPlumbing/Pages/default.aspx

Appendix 1 - Part B1.2 of the Queensland Plumbing and Wastewater Code

B1.2 Water meters for new premises

Performance requirements

P1 The *water supply* to a *meterable premises* must be fitted with a device (*water meter*) to measure the amount of water supplied to the premises.

P2 A *water meter* must be located so it is easy to read and maintain.

P3 A *water meter* must be properly maintained.

P4 The installation of a *water meter* includes a device which allows for the restriction of the flow of water from the *water service* to the *water meter*.

Deemed-to-satisfy solutions

D1 Each *water supply* to a *meterable premises* is to be fitted with a *water meter* which:

(a) measures only the water supplied by that water supply to that *meterable premises*; and
(b) is approved by the *water service provider*; and
(c) complies with relevant requirements of the *water service provider* that may be imposed under the *Water Supply (Safety and Reliability) Act 2008*.

D2 The *water meter* is:

(a) located so that it can be easily maintained and read from *common property* or *public area*; and
(b) installed:
    i. in *common property*; or
    ii. less than 3 metres from a property boundary within a *public area.*

D3 A *water meter* is to be maintained in accordance with AS 3565.4

D4 The *water meter* has a *complying valve.*

Appendix 2 – Classification summary of buildings and structures

This list provides the definitions of Building Classes as set out in the Building Code of Australia

Classes of Building		
Class 1	Class 1a	A single dwelling being a detached house, or one or more attached dwellings, each being a building, separated by a fire-resisting wall, including a row house, terrace house, town house or villa unit.
	Class 1b	A boarding house, guest house, hostel or the like with a total area of all floors not exceeding 300m2, and where not more than 12 reside, and is not located above or below another dwelling or another Class of building other than a private garage.
Class 2	A building containing 2 or more sole-occupancy units each being a separate dwelling.	
Class 3	A residential building, other than a Class 1 or 2 building, which is a common place of long term or transient living for a number of unrelated persons. Example: boarding-house, hostel, backpackers accommodation or residential part of a hotel, motel, school or detention centre.	
Class 4	A dwelling in a building that is Class 5, 6, 7, 8 or 9 if it is the only dwelling in the building.	
Class 5	An office building used for professional or commercial purposes, excluding buildings of Class 6, 7, 8 or 9.	
Class 6	A shop or other building for the sale of goods by retail or the supply of services direct to the public. Example: café, restaurant, kiosk, hairdressers, showroom or service station.	
Class 7	Class 7a	A building which is a car park.
	Class 7b	A building which is for storage or display of goods or produce for sale by wholesale.
Class 8	A laboratory, or a building in which a handicraft or process for the production, assembling, altering, repairing, packing, finishing or cleaning of goods or produce is carried on for trade, sale or gain.	
Class 9	A building of a public nature.	
	Class 9a	A health care building, including those parts of the building set aside as a laboratory.
	Class 9b	An assembly building, including a trade workshop, laboratory or the like, in a primary or secondary school, but excluding any other parts of the building that are of another class.
	Class 9c	An aged care building.
Class 10	A non-habitable building or structure.	
	Class 10a	A private garage, carport, shed or the like.
	Class 10b	A structure being a fence, mast, antenna, retaining or free standing wall, swimming pool or the like.
	Class 10c	A private bushfire shelter.