

# Water Sub-Metering for Multi-Unit Properties Guidelines

Revision	Revision Date	Details	Authorised
1.0	14/12/2023	Draft	Lisa Champion
1.1	15/12/2023	Reviewed	Andrew Parker
1.2	18/12/2023	Reviewed	Skye Hughes
1.3	04/01/2024	Approved	Graham O'Byrne

## 1. Introduction

### 1.1. Background

The Water Meter Policy – Sub Meters for Multi-Unit Properties refers to the Water Sub-Metering for Multi-Unit Properties Guidelines.

The Guideline has been prepared to help apply our Water Supply Standards.

The Guideline provides technical information about individual sub-metering of multi-unit properties (MUP'S).

Sub-meters must meet our requirements as a water service provider to fulfil the Plumbing Application condition in the *Water Act and Other Legislation Amendment 2007*.

Before the introduction of the *Queensland Plumbing and Wastewater Code (QPW Code)* on 1 January 2008, it was not mandatory to install water meters to individual premises with multiple dwellings, multi-unit residential and commercial developments. This meant that individual unit owners or occupiers had no knowledge of their water use and may have been discouraged to reduce water consumption.

The QPW Code makes it mandatory to install sub-meters to all new multiple dwellings, multi-unit developments and some commercial premises.

This allows water service providers to directly charge owners of separate lots in new buildings for their actual water consumption. For multi-unit buildings and secondary dwellings under single title, this will also allow for itemised billing based on sub-meter readings. This will allow owners to pass the cost of water onto the individual user.

The purpose of the guidelines is to help make sure that any Council requirements for sub-meters are consistent and in line with the intent of our Water Sub-Metering for Multi-Unit Properties Policy (the Policy).

The Policy, Guidelines and their technical specifications may be amended from time to time. Decisions and approvals made in connection with a particular development application will take precedence over the Policy and the Guidelines.

The Policy and the Guidelines do not supersede any requirements of our Water Supply Standards.

### 1.2. Scope

The Guidelines provide details about:

- where sub-meters are required
- sub-meter selection information and associated infrastructure
- sub-meter installation requirements
- Council's Smart Metering and Automatic Meter Reading (AMR) position.

### 1.3. Definitions

The dictionary in **Appendix A** defines particular words used in this Guideline.

## 2. Metering Requirements

All new multiple dwelling (duplex and secondary dwellings) and multi-unit developments, defined as meterable premises, that draw water from our water supply infrastructure will be metered in line with the Policy, the Guidelines and the relevant legislation. A development application may need to be lodged with council depending on the proposed installation location and type of water meter.

Existing developments are not required to retrofit sub-meters.

It is the developer or landowners responsibility to make sure water meters and sub-meters conform.

The QPW Code requirements for the metering of fire services including acceptable solutions remain unchanged by these Guidelines.

### 2.1. Plumbing and Drainage Act 2018 and the Queensland Plumbing and Wastewater Code.

The *Queensland Plumbing and Wastewater Code* (QPW Code) is the primary regulation for the introduction of sub-meters.

Part B1.2 of the QPW Code specifically deals with water meters for new premises. Other reference documents are listed in **Appendix B**.

Table 1 below is an extract from Part B1.2 of the QPW Code that details the performance criteria for water meters in new developments.

	<b>Performance Criteria</b>		<b>Deemed-to-satisfy Solutions</b>
<b>P1</b>	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.	<b>D1</b>	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.
<b>P2</b>	A water meter must be located so that it is easy to read and maintain.	<b>D2</b>	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 3m from a property boundary within a public area.
<b>P3</b>	A water meter must be properly maintained.	<b>D3</b>	A water meter is to be maintained in accordance with AS 3565.4
<b>P4</b>	The installation of a water meter includes a device that allows for the restriction of the flow of water from the water service to the water meter.	<b>D4</b>	The water meter has a complying valve.

### 2.2. Master Meter

A master meter is to be installed on the front property boundary, at the property owner's expense. This meter will measure the water supply entering the property consistent with our Water Supply Standards and specifications.

The master meter will be considered a Body Corporate meter for billing purposes. The volume of water used by the Body Corporate will be determined by subtracting the total usage registered on the sub-meters from the master meter.

The Body Corporate, or the developer on behalf of the Body Corporate, may install extra meters to monitor their onsite water consumption at their discretion (e.g. swimming pools, town top-ups of rainwater tanks, gyms etc.). These meters are not used for billing purposes and are the property of the Body Corporate.

Council will own the master meter and be responsible for its maintenance, verification and replacement.

### 2.2.1. Dual Occupancy (Duplex) or Multi-Unit Properties

Where a duplex or multi-unit properties are approved, regardless if on a single title lot or not then a master meter must be installed and sub meters also installed for each meterable premise in line with the QPW Code, the Guidelines and Council approval regardless if Common Title exists or not.

A duplex built before the introduction of the *Queensland Plumbing and Wastewater Code (QPW Code)* on 1 January 2008 is not required to retro fit separate meters.

The master meter must be located and installed in line with the QPW Code, the Guidelines and Council approvals.

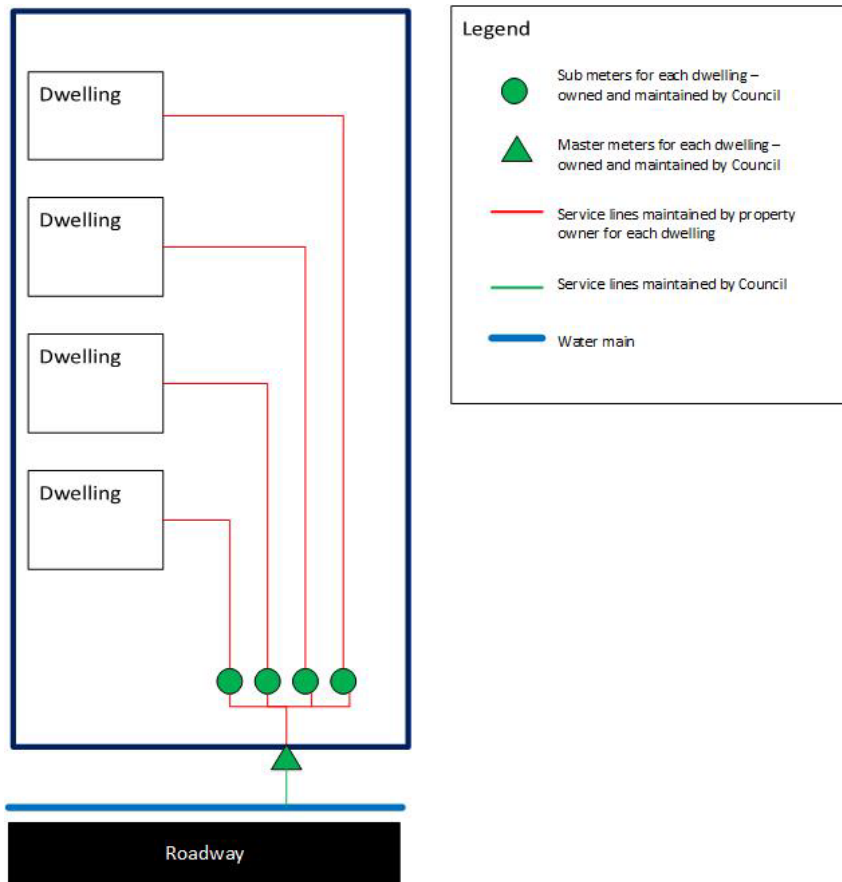
A water meter and its location must be maintained to allow at all times access for reading and maintenance purposes. If it is not maintained it may result in the meter not being read, the issue of a compliance notice, or cause workplace health and safety issues.

Depending on when the initial building work was done and the relevant legislation at the time there are circumstances where a single water meter may service both or multiple meterable premises, for example before January 2008 a duplex only needed one meter to service both properties.

A customer may apply to have additional sub meters installed so that each meterable premises on a single title lot have their own water meter and are billed for individual water usage. The existing plumbing may need some changes to allow for additional water meter installations. As this may incur costs, we recommend that owners consider this before installing additional water meters. Changes to internal plumbing are the owner's responsibility and may need a Plumbing and Drainage approval.

Figure 1 and 2 below show examples of common multi-unit and duplex designs.

Figure 1



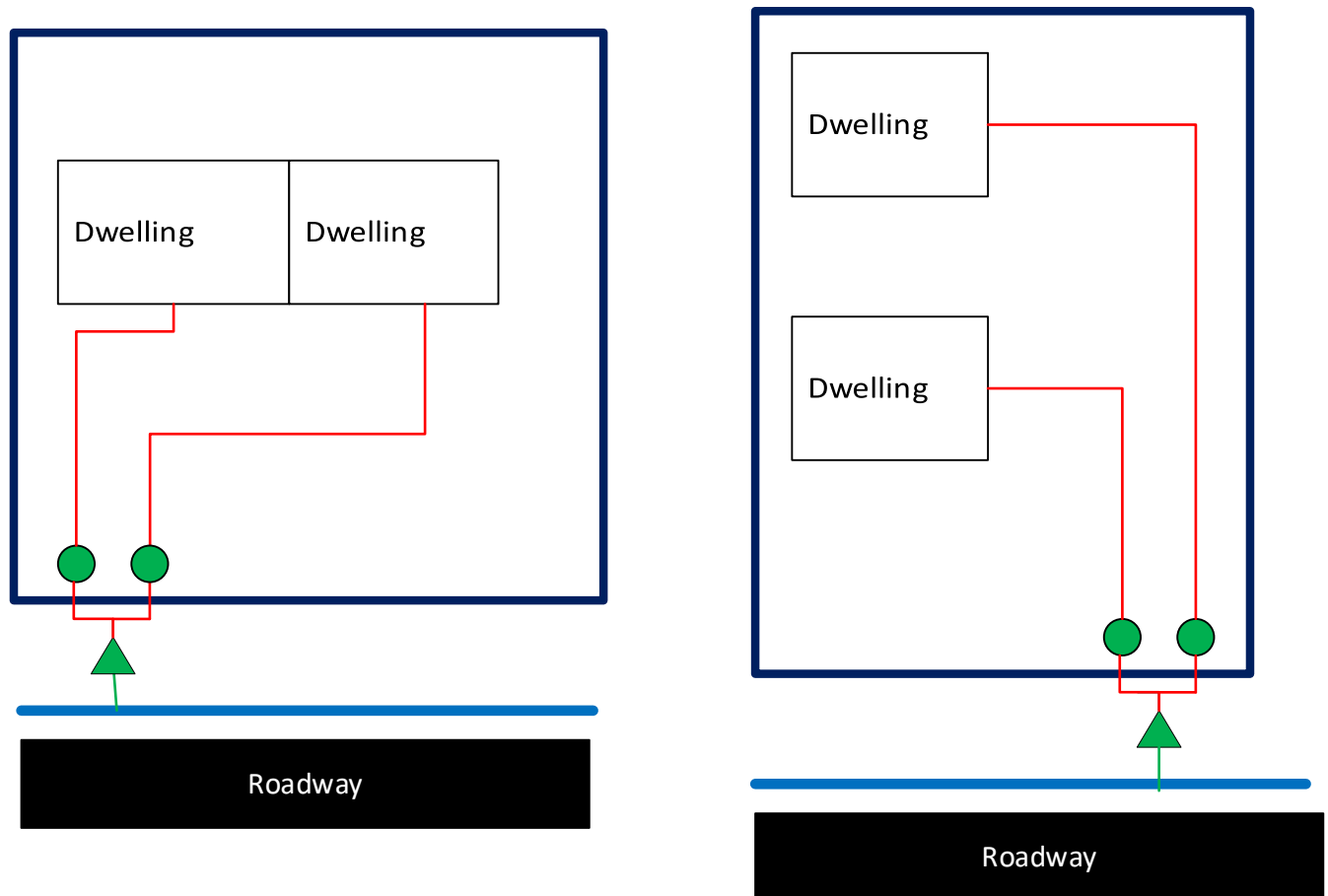


Figure 2

### 2.3. Sub-Meter General Provisions

A single sub-meter capturing all cold water entering the meterable premises must service each multiple dwelling (secondary dwellings and duplexes), and each lot in the MUP. These sub-meters capture only the water entering the assigned dwelling or lot.

The location and type of all meters and sub-meters need to be in accordance with Council approval. Each sub-meter must be numbered clearly to define which premises it serves.

Licensed plumbing contractors are responsible for installing sub-meters. Our Plumbing and Drainage section will conduct inspections to make sure installation of sub-meters is in line with the Guidelines, *Plumbing and Wastewater Code, Plumbing and Drainage Act 2018, AS/NZS 3500.1*, and approved hydraulic plans.

#### a) Dual Check Valves

Australian Standard AS/NZS3500 outlines provisions about backflow protection. Where necessary, a hazard assessment may be completed for the development and individual lots. The default situation is that each sub-meter installation must be fitted with dual check valves at the points where sub-meters are installed. In 20mm diameter sub-meters, these check valves are incorporated in the sub-meter

so that the overall length of the sub-meter assembly is not affected.

b) Sub-meter Dimensions

All sub-meters must comply with the dimensions described in Appendix D of Australian Standard AS3565.1. Sub-meter assemblies of 20mm size must have end connections of 14 threads per inch. Other sizes must conform to the Australian Standards if available, otherwise with normal Council practice (we can provide details on request).

### 2.3.1 Secondary Dwellings

Secondary dwelling means a dwelling, whether attached or detached, that is used in conjunction with, and subordinate to, a dwelling house on the same lot. To be considered self-contained, the secondary dwelling must include the following:

- food preparation facilities
- a bath or shower
- a toilet and wash basin
- clothes washing facilities.

If the secondary dwelling is self-contained as defined above, then it must have its own meter. If the dwelling is not self-contained, then both the main dwelling and the dwelling addition will be metered through one meter.

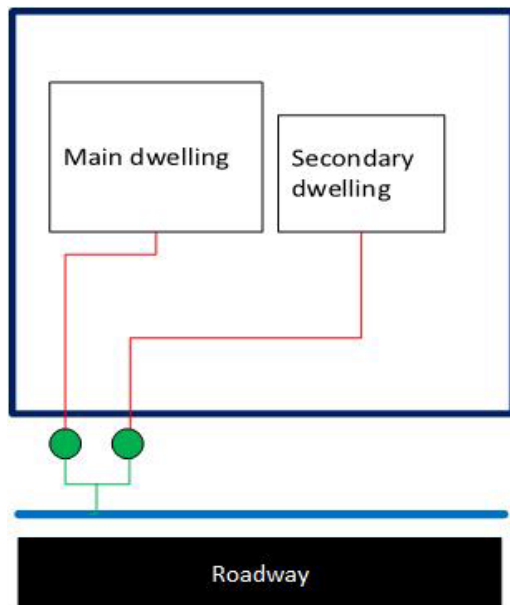


Figure 4 Self-contained second dwelling

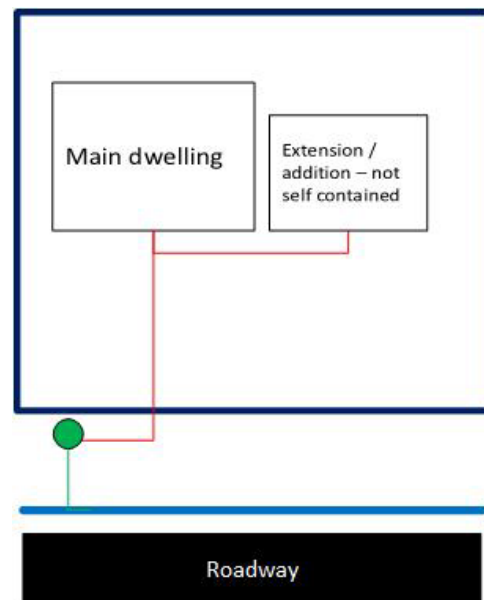


Figure 3 Secondary dwelling not self-contained

### 2.3.2. Multiple Land Uses and Complexes

Mixed use complexes (that is, mixed residential and non-residential) will have a master meter servicing each separate volumetric lot, e.g. a master meter to the residential section and a master meter to the non-residential section. Sub-meters must be grouped together and installed in an accessible, common area to allow direct reading.



If the residential and non-residential uses are within a single body corporate, then only one master meter is required. If there is more than one volumetric lot, each volumetric lot needs to have their own master meter.

The location of the water sub-meter enclosures should be in a common or public area to allow access for maintenance or replacement. Mixed use complexes will need a water sub-meter enclosure to house sub-meters. In most cases more than one water sub-meter enclosure will be needed.

Common property areas must also be sub-metered (that is, designated common areas like recreation areas and common public toilets).

If the development contains more than one land use, each land use must follow the relevant sub-meter requirements. For example, a high rise building with shops on the ground floor, offices on intermediate storeys with residential apartments above and a hotel on top may need:

- each shop to be individually metered
- each floor of the office space to be metered
- each residential apartment to be separately metered
- a single meter for the hotel usage
- the entire water supply to each Body Corporate must be metered if applicable.

### 2.3.3. Sub Metering Figures

The diagrams below show several common ways for different land uses showing where sub-meters are required. Section 2.4 below has the specific requirements for sub-meter locations.

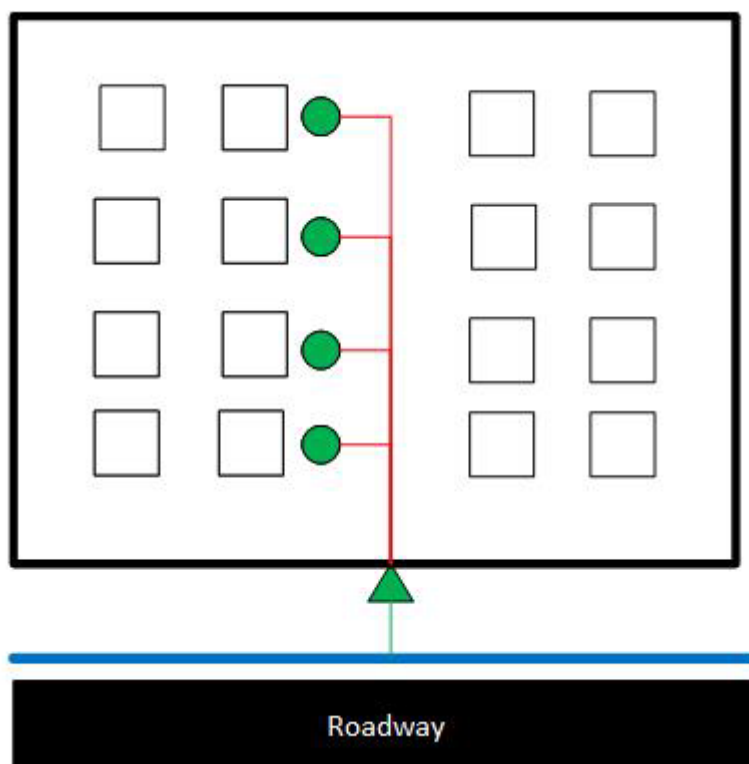


Figure 5 Apartment building

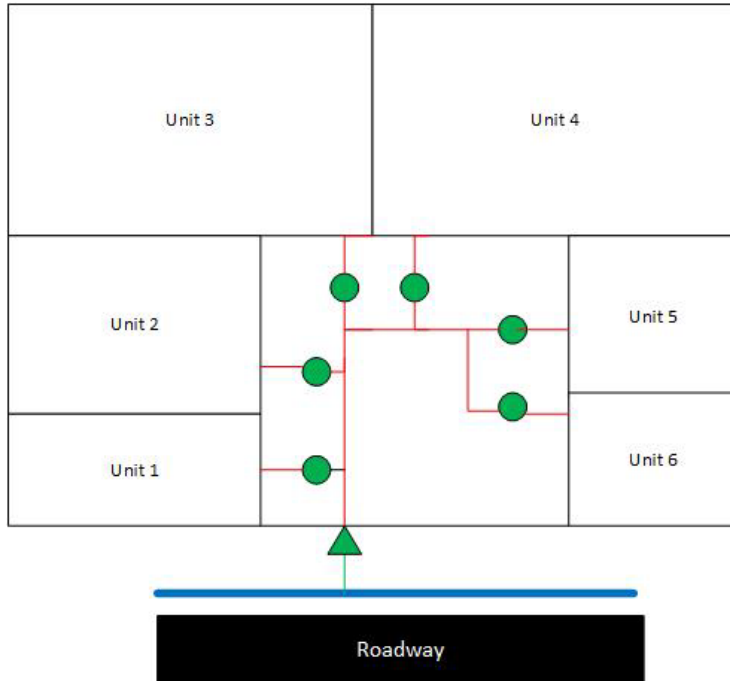


Figure 7 Gated community

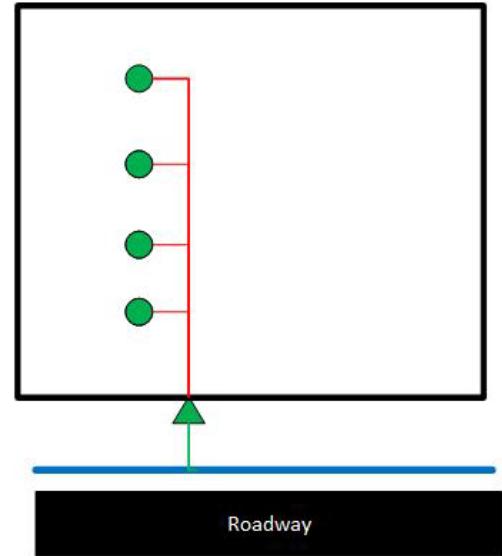


Figure 6 Office building

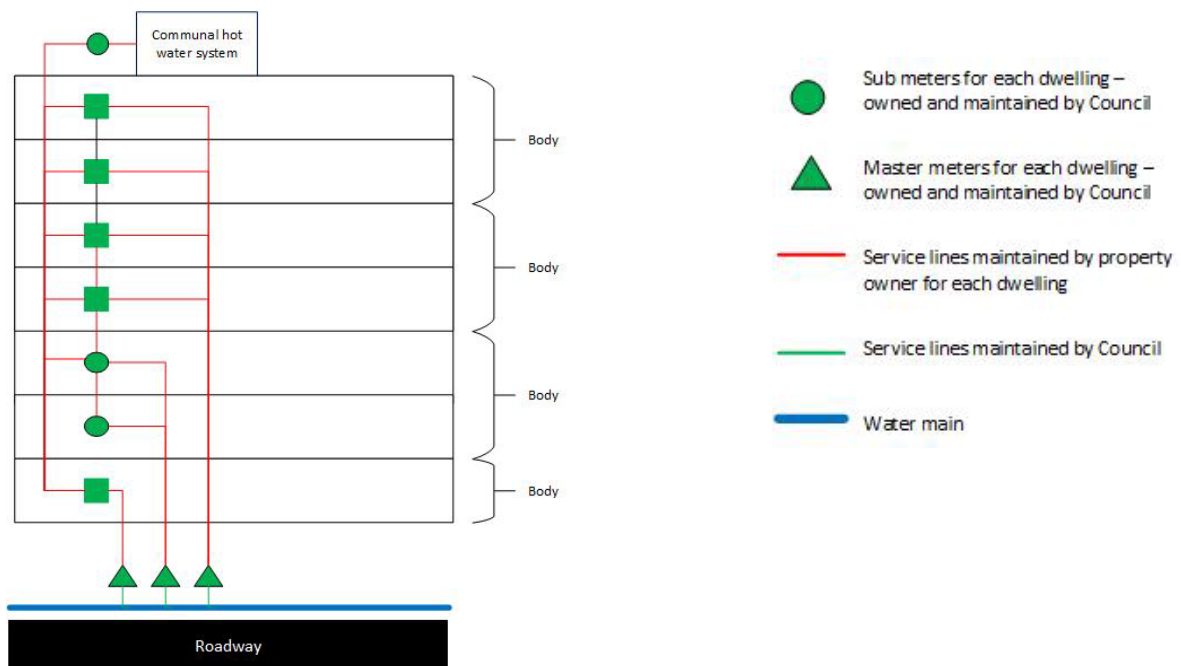


Figure 8 Mixed use building with multiple Body Corporates and communal hot water

## 2.4. Cold Water Sub-Meters

### 2.4.1. Cold Water Sub-Meter - Installation Option 1

Standard installation of sub-meters are to be in a meter box below the ground, ensuring the meter box is of sufficient size and is accessible.

In buildings up to and including three storeys where the hydraulic analysis of the plumbing shows an acceptable level of pressure loss, sub-meters will be installed in a weather resistant sub-meter cabinet. This cabinet will be located at an accessible side of the building or in a cabinet in a common area (stairwell landing, beside the elevator shaft, etc.) on the ground floor.

Sub-meters of 20 millimetres, or in some applications, larger sizes if the hydraulic design states, will be installed within developments to measure individual units and common property water supply.

See the following sections on Buried Sub-meter Boxes (s2.4.3) and Sub-meter Cupboards (s.2.4.4) for more information.

#### **Contact Person**

It is the responsibility of the building owner to make sure there is a contact person available to provide access for Council staff to the sub-meters for maintenance purposes. Council will not be held responsible if failure to provide access in a timely manner results in damages to persons or property.

### 2.4.2. Cold Water Sub-Meter - Installation Option 2

This option is for cases where sub-meters at ground level are impractical (e.g. high rise buildings), or where access to any of the sub-meters is restricted in any way (e.g. gated communities).

In the case of high-rise buildings, the sub-meters must be:

- Located in a single latched cupboard in a common area on each floor. If it is not practical to install all sub-meters in a single cupboard, extra cupboards may be used, but kept to a minimum.

In the case of gated communities and horizontal developments:

- Buried sub-meter boxes are to be located on the common property, less than 3m outside the front boundary of the lot for which the sub-meter is required.

Or, for either type of development:

- The sub-meter can be located in a utility room that is accessible through the common property. These requirements are the same as for those in submeter cupboards.

See the following sections on Buried Sub-Meter Boxes (s2.4.3) and Sub-Meter Cupboards (s.2.4.4) for more information.

If a development is a mixture of both a gated community and high-rise buildings, then the sub-meter installations may be a mixture of those described above.

#### **Contact Person**

It is the responsibility of the building owner to make sure there is a contact person available to provide access for Council staff to the sub-meters for maintenance purposes. Council will not be held responsible if failure to provide access in a timely manner results in damages to persons or property.

### 2.4.3. Buried Sub-Meter Boxes

Sub-meters installed in buried sub-meter boxes will be designed so that:

- The meter box complies with existing Council specifications, with the exception that the sub-meters do not need to be located in the footway against the property boundary, instead by following the Installation Options listed above.
- Lids have a non-slip pattern.

#### 2.4.4. Sub-meter Cupboards

Sub-meter cupboards are designed so that:

- There is at least a 100mm gap, perpendicular to the direction of the pipes, between sub-meters.
- There is at least a 100mm gap between the outermost valves and the edges of the cupboard.
- If the cupboard also houses fire hose reels, the fire rating required must not be compromised.
- The sub-meters are easily accessible and readable from floor level of the common property, unassisted by a ladder or other equipment. Maximum height for the higher of either the centreline of sub-meters or the top of the sub-meter assembly is 1.6m.
- There is no need for a person performing normal maintenance duties to enter the cupboard (i.e. the cupboard must not be classifiable as a confined space for entry purposes). Sub-meters located in a utility room must have adequate ventilation.
- At least 2 square metres is available in front of the cupboard as free working space.
- Adequate lighting is available during daylight hours.
- There is enough room for the cupboard door(s) to swing open completely and provision for them to be held open.
- The cupboard will have at least 100mm bund at the opening if it is located inside a building.
- The cupboard is sufficiently waterproof and drained to prevent seepage into the surrounding building structure in the event of a leak.
- The cupboard does not need to be locked but must have a latch where a double padlock can be fitted if needed.
- The requirements must be complied with at all times and maintained in working order.
- Sub-meters installed in buried boxes and / or a cupboard will be conventional (also known as inline) meters.

#### 2.4.5. Other Installation Requirements

Where the installation options above are not possible or impractical, installation on walls may be permitted subject to Council approvals.

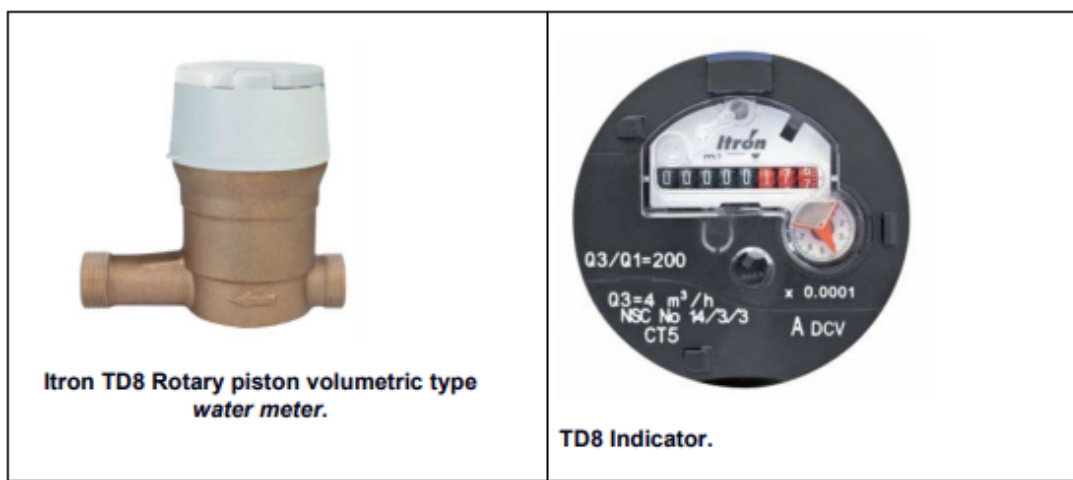
All sub-meter boxes, whether housing single or multiple sub-meters, must be identified on the outside with the words "Water Sub-Meter" or "Water Sub-Meters" in readable and permanent print.

### 2.5. Approved Sub-Meters and Associated Infrastructure

#### 2.5.1. Conventional Meter Assemblies

Where conventional meters are installed, each sub-meter must have ball valves on both sides for shutting of the water supply, and an adjustable meter coupling on one side of the meter and a standard meter coupling on the other side for the safe removal of the sub-meter. The ball valve on the upstream side of the sub-meter must be able to be fixed in variable positions with a stainless-steel tie.

- 20mm - Itron TD8 with Dual Check Valve
- 25mm – Itron TD8 with Dual Check Valve



### 3. Smart Meters and Automatic Meter Reading (AMR)

Between 2009 and 2017, Council upgraded its manual water meter fleets to automated water meters with the ability to read wirelessly and store historic data. Council continues to use the TD8 water meters that are supplied and manufactured by Itron. The software that Council utilises has been configured to read the water meters is also provided by Itron.

Investing in smart water metering solutions will allow us and our customers the ability to understand the value of real-time access to water usage data and information. Potentially, smart water meters, a customer portal and app will give us and our customers the ability to understand water usage patterns, water supply network performance and early water leak detection.

Where an AMR system is installed, all meters must be readable through the AMR system. This includes the master meter at the boundary and any other master meters for other Body Corporates (see Section 2.3.3).

## Appendix A. Dictionary

ITEM	DEFINITION
AMR	The term AMR means Automatic Meter Reading and also includes Digital Electronic Readouts (DER) like a display panel that can be scrolled through to read the respective sub-meter consumption.
Accessible	The term accessible for water meter reading, maintenance and / or replacement purposes, means accessible within reasonable time (between 8 am-5 pm), with the sub-meters being located in a non-locked enclosure requiring a non-key access (PIN code), and not being obstructed by vehicles or other plant or equipment or vegetation.
Body corporate	An entity created under section 30 of the Body Corporate and Community Management Act 1997. The members of the body corporate for a Community Title Scheme are the owners of all lots included in the scheme.
Boundary	Boundary means the area between the property external walls and pathways, streets or fence.
Building classes 1 to 10	Building classifications as defined by the Building Code of Australia – Classification of Buildings. Some common classes being: Class 1a – detached dwelling or an attached dwelling separated by a fire-resisting wall. Class 2 – a building containing more than 2 or more sole-occupancy units each being a separate dwelling. Class 5 – an office building used for commercial purposes. Class 6 – a shop or other building for the sale of goods by retail or the supply of services direct to the public. Class 9 – a building of a public nature. Class 10 – a non-habitable building or structure.
Common area	The term common area means an area of common property defined in the Body Corporate and Community Management Act 1997.
Common property	Common property has the meaning provided in Section 10 of the Body Corporate and Community Management Act 1997 and for a Community Title Scheme is freehold land forming part of the scheme land, but not forming part of a lot included in the scheme.
Common property water consumption	The term common property water consumption refers to water used in common properties within a complex for irrigation, cleaning, recreation fixtures, etc. The common property water consumption for each meter read cycle will be decided by deducting the sum of consumption registered by all sub-meters from the consumption registered by the master meter. Water consumption through a communal hot water system is part of common property water consumption under this policy.

Community management statement	The <i>Body Corporate and Community Title Management Act 1997</i> , Chapter 1 Part 4 Section 12, describes a community management statement as a document that: (a) identifies land; and (b) otherwise complies with the requirements of the Act. One such requirement is to include a contribution schedule.
Community title scheme	A scheme registered in line with section 10 of the <i>Body Corporate and Community Management Act 1997</i> in relation to certain freehold land. A Community Title Scheme is established by: a) the registration, under the Land Title Act 1994, of a plan of subdivision for identifying the scheme land for the scheme b) the recording by the registrar of the first community management statement for the scheme.
Complex	A complex includes Community Titles Schemes (CTSs) and multi sole occupancy units of a class 2, 4, 5, 6, 7 or 8 building and each storey of a class 5 building.
Council	Gympie Regional Council.
Dual occupancy	Dual occupancy— a) means a residential use of premises for 2 households involving i) 2 dwellings (whether attached or detached) on a single lot or 2 dwellings (whether attached or detached) on separate lots that share a common property; and ii) any domestic outbuilding associated with the dwellings; but does not include a residential use of premises that involves a secondary dwelling.
Fixed water access charge	Council defines fixed water access charge as the charge for having your property provided with access to the reticulated or 'town' water network in your area. It covers water supply infrastructure including water mains and pipes, pumping stations, reservoirs, hydrants and any other associated infrastructure.
Management	The term management refers to the management of complex which can be a body corporate of a community title scheme or a representative body of a multi sole occupancy unit.
Master meter	The meter at the point of connection for the Community Titles Scheme property to the Council's water main and is upstream of all sub-meters and is used to register total water consumption.
Meterable premises	The term meterable premises means: <ul style="list-style-type: none"> <li>• all class 1 buildings; and</li> <li>• each lot within a community title scheme, including the common property, in a water service provider's area; and</li> <li>• the sole occupancy unit of a class 2,4,5,6,7,or 8 building in a water service provider's area; and</li> <li>• 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.</li> </ul>
MUP	Multi-unit property

Occupant/ owner	The occupant / owner is an occupant or owner of a house, unit, flat or an apartment within a complex.
Policy	Gympie Regional Council "Water Sub-metering for Multi-Unit Properties Policy"
QPW Code	The term QPW Code refers to the Queensland Plumbing and Wastewater Code. This code is required to be complied with under section 8B of the Standard Plumbing and Drainage Regulation 2003.
Scheme land	The land identified in the plan of subdivision registered under the <i>Land Title Act 1994</i> in relation to a Community Titles Scheme.
Secondary dwelling	Secondary dwelling means a dwelling, whether attached or detached, that is used in conjunction with, and subordinate to, a dwelling house on the same lot.
Sole occupancy unit	The term 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, for example – 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 a common area or common property.
Storey	The term 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 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) mezzanine.
Sub-meter	The term sub-meter is used to describe individual water meters within multi-unit complexes. The term also differentiates from master meter that measures the supply of water to a multi-unit complex as a whole.
Unit	A unit is a house, flat, lot of land or an apartment within a complex.
Water meter	A water meter means a device including equipment related to the device, for measuring the volume of water supplied to premises and installed on infrastructure that supplies a water service at the premises. An example of equipment related to the device is an automatic meter reading device and associated technology or similar devices.
Water service	Water service has the meaning given in the <i>Water Supply (Safety and Reliability) Act 2008</i> .



Water service provider	The term water service provider, for premises, means the persons registered under the <i>Water Supply (Safety and Reliability) Act 2008</i> , chapter 2, part 3, as the water service provider for retail water services for the premises.
Water supply	The term water supply means the plumbing supplying water to meterable premises from a water service.
Water supply standards	The water supply standards as specified in the: <ul style="list-style-type: none"> <li>• <i>Water Supply (Safety and Reliability) Act 2008</i></li> <li>• <i>Plumbing and Drainage Act 2002</i></li> <li>• South East Queensland Water Supply and Sewerage Design and Construction Code 2013</li> </ul>

## Appendix B. Related Legislation and Policies

DOCUMENT TYPE	DOCUMENT NAME AND LOCATION
Legislation	Plumbing and Drainage Act 2018 NB: For details of the provisions of this legislation in operations see the State Governments In Force Legislation web page at: <a href="http://legislation.qld.gov.au">Plumbing and Drainage Act 2018 (legislation.qld.gov.au)</a>
State Government Regulation	Plumbing and Drainage Regulation 2019 <a href="http://legislation.qld.gov.au">Plumbing and Drainage Regulation 2019 (legislation.qld.gov.au)</a>
State Government Code	Queensland Plumbing and Wastewater Code. <a href="http://hpw.qld.gov.au">Queensland Plumbing and Wastewater Code (hpw.qld.gov.au)</a>
Legislation	Queensland Water Commission Customer Water and Waste Water Code – South East Queensland <a href="http://resources.qld.gov.au">South East Queensland Customer Water and Wastewater Code (resources.qld.gov.au)</a>
Legislation	Water Supply (Safety and Reliability) Act 2008 <a href="http://legislation.qld.gov.au">Water Supply (Safety and Reliability) Act 2008 - Queensland Legislation - Queensland Government</a>
Legislation	Body Corporate and Community Management Act 1997 <a href="http://legislation.qld.gov.au">Body Corporate and Community Management Act 1997 (legislation.qld.gov.au)</a>
Council Policy	Water Sub-metering for Multi-Unit Properties Policy
Council	South East Queensland Water Supply and Sewerage Design and Construction <a href="#">About SEQ Code Standards — SEQ CODE • Water Supply • Sewerage • Design • Construction</a>
Legislation	Water Act 2007 <a href="http://legislation.qld.gov.au">Water Act 2007 (legislation.gov.au)</a>