Metering & Servicing Guidelines
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1. Introduction

These water metering guidelines have been introduced to provide a consistent approach to other Water businesses.

The guidelines will benefit the plumbing, building and developer industries, including, property owners, plumbing specialists and Western Water staff and contractors.

2. Purpose

These guidelines document the necessary water metering conditions required by Western Water for new developments, alterations to existing developments and existing water metering arrangements. These guidelines are for illustrative purposes only. For more detailed technical information refer to AS/NZS 3500. Plumbing and Drainage and Water Services Association of Australia (WSAA). Where ever possible, conditions have been standardised to assist the industry/customer.

The water metering guidelines refer to standard development projects and apply to the majority of development proposals. Where these guidelines are inappropriate for a particular development, Western Water will determine the necessary requirements on a case-by-case basis.

These guidelines and appendices are to be read in conjunction with any Western Water’s Application for Connection, ‘Conditions of Connection’.

Water supplies that are a part of this guideline may include but are not limited to: potable, all classes of recycled water and alternative water.

3. Water Service Metering

Western Water require the installation of an approved water meter known as the main water meter to measure the volume of water supplied through each property service pipe to a parcel of land.

In addition to this, additional water meters known as individual meters are required to measure the volume of water supplied to certain types of buildings and or occupancies located within that parcel of land as well as possibly measuring water for certain purposes within a property i.e. water used for irrigation.

Water meters, at a cost, will be provided by Western Water and the meter technology will be appropriate to the type of development, intended purpose and required flow rates. Western Water will endeavour to provide the most cost effective water meter, however some water services (like fire services) will require a different water meter arrangement which will not impede water flow or introduce pressure losses. These water metering arrangements may be at a higher cost.

Note:

All water meters must be a type approved by Western Water for the purpose of billing and be fit for purpose. Only water meters approved for horizontal installation shall be installed horizontally and must have a register at or near vertical to the horizontal axis of the water meter.
4. Definitions & Abbreviations

4.1 DEFINITIONS

Self-Contained Occupancy Commercial/Industrial
Has the same meaning as used by Council Valuers for producing valuations to determine municipal rates. The definition of the term has been developed by both Common law and legislation, in accordance with the Valuation of Land Act 1960 and Local Government Act 1989. For the purpose of determining the appropriateness of water metering/provisioning for metering, a self-contained occupancy shall contain a tea sink, toilet basin as a minimum. The occupants are not required to utilise common facilities outside the individual occupancy. All parent property general water connections are required to be metered in accordance with the requirements documented in these guidelines.

Main Water Meter
A main water meter is Western Water’s approved water meter, connected directly from the water main located as close as possible to the properties’ title boundary.

Dwelling (Residential)
A dwelling is a self-contained building erected on the land of the property owner and is used or intended to be used as a separate residence. A dwelling must contain a minimum of kitchen, bathroom and sanitary facilities to be considered self-contained. Source: Based on the definition of ‘dwelling’ in the section 46H of the Planning and Environment Act (Vic) 1987.

Backflow
Backflow is the reverse flow of a liquid within a piped plumbing system. It may be caused from back syphonage, back-pressure or a combination of both. It can result in contaminants being drawn back into the Western Water supply system through a cross connection. All general water connections to the water supply system must provide for an appropriate containment backflow prevention device at the outlet of the main water meter, in accordance with the relevant Australian Standard.

Dry Tapping
A dry tapping is generally 20mm in diameter (nominal Ø) and installed by the developer at the time the water mains are laid within residential estates. A dry tapping includes a connection and service pipe which terminates within each parcel of land (lot) within the estate. Western Water or their representative installs the water meter after the plumber has installed the meter assembly on request and payment of the applicable fee.

Wet Tapping
A wet tapping is a type of connection which is made into the reticulated water supply main under pressure. A wet tapping may be for any size from 20mm Ø and greater. Please note: The service pipe work and water meter assembly must be in place prior to the connection being made.

Remote Reading Water Meter
A remote water meter may consist of a conventional water meter with a remote reading device attached or an integrated unit. A remote reading device electronically records the volume of water flowing through the water meter and transmits the reading by radio or similar technology when activated by the water meter reader. The benefits of remote water meters are that Western Water reads the water meter outside of the property thereby ensuring security and privacy for the customer. (Only installed with Western Water approval.

Tapper
A Western Water representative authorised to carry out water tapping activities.

Tapping
Is the activity carried out to connect a new service to the water main.

Tee Insertion
Is similar to a wet tapping; however a tee insertion applies to a connection greater than 50mm Ø diameter where a tapping cannot be achieved under pressure. The plumber is responsible to excavate and expose the water main. The main may be required to be shut off and therefore existing customers connected to the main must be notified prior to the work taking place. A Western Water representative will cut a section of main out and insert the tee piece or in some cases plug and seal the service. Tee removals done in conjunction with new wet tapping’s are to be carried out on the same day.

Potable Water
The highest quality water otherwise referred to as drinking water.
Recycled Water (Class A)

Class A recycled water is the highest quality of recycled water and is achieved after a tertiary treatment process combined with pathogen removal. DoH www.health.vic.gov.au has classified Class A recycled water as safe for use on irrigation for food crops – including those eaten raw. DoH requires an extensive verification process to ensure Class A water can be guaranteed. Environment Protection Authority Victoria (EPA Victoria) (www.epa.vic.gov.au) also supports its use.

Class A recycled water has the widest range of uses including:

› Residential garden watering
› Close system toilet flushing
› Clothes washing
› Process/cooling water for industry
› Fire protection reticulation systems (external to the property)
› Irrigation for municipal parks and sports grounds
› Water for contained wetlands or ornamental ponds
› Food crops that are consumed raw or sold to consumers uncooked or processed
› All of the uses listed for classes B - D

Plug Off/Plugging

Is when an existing tapping up to 50mm Ø is required to be removed? The plumber is responsible to excavate and expose the tapping and a Western Water representative will inspect the plugged service. Plug offs done in conjunction with new wet tapping’s are to be carried out on the same day.

When an existing connection greater than 50mm Ø is required to be sealed. The plumber is required to excavate and expose the tee/tapping band. The main may be required to be shut off and therefore existing customers connected to the main must be notified prior to the work taking place. A Western Water representative will inspect the plugged service.

Individual Water Meter

An approved water meter connected after a main water meter may be used to register water used by multi-dwelling/occupancy developments on a parcel of land. An individual meter must be supplied directly from a main water meter for Western Water billing information on usage only.

Property Service Pipe

A water pipe that supplies water from the reticulation main to the customer. The portion of the service pipe under the control of Western Water generally terminates at the outlet of the water meter. Location on mains described as ‘short-side’, meaning water mains on the same side of a road reserve as the parcel of land to be serviced, or ‘long-side’ where the property service pipe is required to cross under a road way to reach the property.

Western Water

Refers to Western Region Water Corporation licensed to provide drinking water, sewerage services and recycled water to properties in their supply district.

Temporary Private Water Service

A temporary private water service is permitted in cases where Western Water determines that a property is too remote from the existing reticulated water infrastructure, and is assessed having regard to potential future development. The water service is installed by the owner’s/applicant’s contractor external to the individual properties it services and is maintained and owned by the responsible legal entity. If/when reticulated water supply becomes available (water mains fronting the property) it is the responsibility of the individual property owner to transfer supply to the reticulated water main at the owner’s expense. Where these services are not adequately maintained Western Water may terminate supply having given property owners (legal entity) the appropriate notice.

Conditions of Connection

A list of conditions that Western Water issues as part of its consent to carry out plumbing work for water and sewerage works. Provided for under section 145 of the Water Act 1989.

Reticulated water/sewer supply system

A network of water/sewer mains, pump stations etc. owned and operated by Western Water to provide for the community’s water and sewerage needs.
4.2 RELEVANT DOCUMENTS

- Plumbing Code of Australia
- Customer Charter
- AS/NZS 3500.1 Plumbing and Drainage – Water Services
- AS 3565 Meters for Water Supply
- National Measurements Act 1960
- National Measurements Regulations 1999
- Victorian Building Authority Recycled Water Plumbing Guidelines
- Residential/Home Fire Sprinkler Services designed under the AS2118.4 or AS2118.5
- Fire System Design Standards – AS 2419, 2441, 2118.1-6
- Backflow Prevention Standards AS/NZS 284
- Water (Estimation, Supply and Sewerage) Regulations 2014
- Backflow Prevention Containment Guidelines
5. Water Meter Positioning

5.1 POSITIONING OF MAIN GENERAL WATER/FIRE SERVICE METERS

› The water meter assembly in most cases must be within two metres of the title boundary that abuts the water main.

› The water meter assembly must be fitted at right angles to the water main, in line with the tapping.

› The water meter assembly must be fully supported with minimum ground clearance of 100mm, and should not be greater than 300mm from the finished ground level to the base of the water meter assembly (where the Backflow prevention device is a Reduced Pressure Zone type, a minimum 300mm to the device vent is required). On a case by case basis consideration will be given to varying the height of the water meter up to a maximum of 1.5m subject to specific approval from Western Water.

› The water meter assembly must not be encased in concrete.

› Water meters must be readily accessible for reading, maintenance and replacement.

› Water meters can be installed in utility rooms or meter cabinets located within a common access area and are readily accessible, subject to Western Water’s approval.

› Water meters must not be located within garages, roof cavities, ceiling spaces or inside pits. (For pit installations refer section 5.4)

› Water meters must not be installed within dwellings.

› Recycled water meters are to be positioned to the left of the drinking water meter assembly, maintaining 300mm separation from the drinking water meter.
FIGURE 1.2: 20MM CLASS A RECYCLED WATER & DRINKING WATER. WATER METER ASSEMBLIES INSTALLED BY WATER RETAILER

FIGURE 1.3: DRINKING WATER & CLASS A RECYCLED WATER
5.2 POSITIONING OF INDIVIDUAL METERS

Prior to any individual meters being installed, the licensed plumber will ensure the following:

› The water service individual meter assembly servicing each unit or building must be fitted with a permanent tag.
› The tag must be located adjacent to the position of the meter.
› The tag must be made of water proof material (i.e. plastic brass, stainless steel or similar).
› The tag must be made of water proof material (i.e. plastic brass, stainless steel or similar).
› The tag as a minimum must provide the following information in a legible permanent print.
› Floor level (if applicable) and unit or building number.
› If the individual meter is for a common area the tag must have the common area purpose (i.e garden irrigation, lap pool etc.)

Individual meters for unit/factory developments may be fitted at each unit or building after the main meter.

Remote water meters can be installed inside secured areas of main buildings provided that the following conditions are met:

› Water meters are installed in utility rooms or meter cabinets located within common access areas on each level.
› Water meters are readily accessible for maintenance and replacement.

Water meters must not be located:

› Inside the units/apartments.
› Within the ceiling cavities of common access areas or pits.

Provision for the water meters must be:

› No less than 100mm above the finished floor level.
› No greater than 1.5m above the finished floor level (unless otherwise approved by Western Water in writing).
› With a minimum clearance above the centre of each pipe of 250mm.
› With a minimum clearance of 150mm between the centre of each pipe and any wall or door.
› The licensed plumber is to provide a water meter assembly including a temporary non-metallic water meter spacer for each water meter, prior to the water meter installation.

Separate isolating valves adjacent to each water meter installation in accordance with AS/NZS3500 must be provided.

Note:

An additional isolating valve is required on the outlet side of water meters where removal of the water meter may result in water damage to the building or excessive water wastage.

Where water meter assemblies ONLY are to be installed, the water meter spacer pipe is to be of an approved material type in accordance with the Plumbing Regulations incorporating the Plumbing Code of Australia. All other water metering requirements are to be complied with.
5.3 OFFSETTING OF EXISTING MAIN WATER METERS

The water meter can be relocated up to 1.5 metres parallel to the water main from the existing service.

The change in direction must be made with an isolation valve and Fitzroy box located at ground level.

The repositioned meter should be fitted sideways across the block in order to indicate that the tapping point at the main is not directly adjacent to the meter.

Water services and tapping’s must not be located under driveways or driveway crossings.

Western Water’s responsibility is to the isolation valve at the change of direction. For any relocation greater than 1.5 metres the service will require moving and the old tapping plugged (refer section 6.5 for details).

Note:
Where the relocation of any Class A recycled water meter assembly is required, both assemblies (drinking water and Class A) will be relocated at the owners expense. The assemblies shall remain 300mm apart with the drinking water meter assembly located on the right hand side.

These guidelines apply equally for tapping’s located on the same side (short) of the road reserve and those located on the opposite side (long) of the road reserve.

FIGURE 1.6: OFFSETTING OF EXISTING WATER METERS (LONG SIDE)
5.4 WATER METER PITS

Where conditions in Section 5 “Water Meters Positioning” cannot be met, main and individual meters may be permitted to be installed in a pit, however it must be demonstrated that all listed options to install the water meter above ground have been adequately explored to the satisfaction of Western Water. In such cases, the pit must conform to the following requirements:

Be constructed in an impervious material and be of a standard adequate to the location it is to be installed.

Have a lid which can be safely and easily removed by one person.

In trafficable areas must provide for a cover adequate to the loads experienced as well as access for reading (i.e. trap door).

Provide adequate space around the water meter (within the pit) for maintenance and replacement.

Where a testable (double check valve) backflow prevention device is installed, the pit must provide for ease of maintenance of the device and assembly components.

Be drained to prevent the pit retaining water (i.e. connected to the storm water system).

The owner of the pit is responsible to maintain the pit in good order, conforming to the above requirements at all time and is responsible for any costs applicable.

A pit located outside the title boundary and/or on council property requires the property owner to gain appropriate approval prior to the installation of the pit.

Note:

Aesthetics is not considered a valid reason to locate a water meter in a pit.
Reduce Pressure Zone devices must not be installed in pits.

5.5 PROTECTION OF WATER METERS

In order to provide protection for water meters, Western Water may require the installation of a water meter cage to be installed.

In such cases the cages must conform to the following requirements:

Must have a gate which can be safely and easily opened by one person. If lockable, a standard Western Water key must be able to open the lock.

Provide adequate space around the water meter (within the cage) for maintenance and or substitution of the water meter.

The property owner is the owner of the cage and is responsible for the maintenance and safekeeping of the cage.

Cages located on council property require the property owner to gain appropriate council approval prior to the installation of the cage/s.

Safety bollards may be applicable in some cases.

5.6 LOSS OR DAMAGE OF WATER METERS

An occupier of land must notify Western Water of the loss of, or damage to, a water meter installed on the land within 2 business days after first becoming aware of the loss or damage.

5.7 CUSTODY OF WATER METERS

A plumber to whom a water meter is supplied by Western Water must take reasonable steps to ensure that the water meter:

(a) is not damaged or destroyed during installation or while in the custody of the plumber; and

(b) is not lost or stolen while in the custody of the plumber; and

(c) is installed on the land for which the water meter was supplied.

A water meter is taken to be in the custody of the plumber from the time the water meter is supplied to the plumber by Western Water until it is properly installed on the land for which it was supplied.
6. Water Main Connections (Tappings)

Some properties do not have a dry tapping and will require a wet tapping.

6.1 WET TAPPING’S

A Western Water representative performs the wet tapping after excavations are completed by a licensed plumber (refer Section 6.4). Plumbers are not permitted to carry out the wet tapping. Not all water mains are capable of having a property service connection. The selection of water main used for this purpose is at the discretion of Western Water.

› A fully completed plumbing application must be submitted to Western Water with applicable fees paid and consent given prior to any works being carried out.

› A ‘New Customer Contribution’ will apply for all meter sizes greater than 20mm for all water supplies.

› For 20mm and 25mm connections, the water meter will be installed by Western Water.

› 32mm and larger water meters are provided to the licensed plumber by Western Water by arrangement. The water meter may be delivered to the property site or to a predetermined location providing it is located within Western Water’s licensed boundary.

› The water meter assembly including the containment backflow prevention device must be installed in accordance with these guidelines prior to the connection to the water main being carried out. (Refer Meter Configuration Drawings, Appendix 1)

› Some large water meters may take longer to be supplied and therefore customers may need to allow a lead time when arranging for the water meters.

Water meter location – Positioned at right angles to the water main, above ground and within two metres of the title boundary that abuts to the water main.

6.2 TAPPING’S CLASS B AND C RECYCLED WATER

A fully completed plumbing application must be submitted to Western Water with applicable fees paid and consent given prior to any works being carried out.

A Western Water representative performs the wet tapping. The water meter assembly including the containment backflow prevention device must be installed in accordance with these guidelines prior to the connection to the water main being carried out. Refer Meter Configuration Drawings, Appendix 1.

› Some large water meters may take longer to be supplied and therefore customers may need to allow a lead time when arranging for the water meters.

› All meter assemblies are to include a dirt box before the meter

Water meter location – Positioned at right angles to the water main, above ground and within two metres of the title boundary that abuts to the water main.

6.3 DRY TAPPING’S FOR DRINKING WATER AND CLASS A RECYCLED WATER (RESIDENTIAL ONLY)

› A fully completed plumbing application must be submitted to Western Water with applicable fees paid and consent given prior to any works being carried out.

› A dry tapping connection point is provided to each Lot where applicable for the licensed plumber to construct the water meter assembly and connect the internal water service pipe.

› Any leaks on pipework between the dry tapping valve and the water meter assembly constructed by a plumber will not be repaired by Western Water if it is under 36 months’ old.

› A Western Water representative will fit the water meters up to and including 25mm.

› The location of the dry tapping can be obtained from Western Water.

› In the event that the location of the water meter assembly requires moving by more than 1.50m in either direction, the existing tapping is to be plugged at the water main and a new dry tapping provided. This tapping and plugging is to be carried out by Western Water (fees apply).

› Water Meter Location – Positioned at right angles to the water main, above ground and within two metres of the title boundary that abuts to the water main.

Water meter location Class A recycled water – Always located 300mm to the left of the drinking water meter assembly, positioned at right angles to the recycled water main, above ground and within two metres of the title boundary that abuts to water main.
6.4 TAPPING EXCAVATIONS

Unless previously advised the licensed plumber should confirm the tapping date by telephoning Western Water or its nominated agents on the working day prior to the tapping.

› Prior to the commencement of any works, the contractor/licensed plumber is required to obtain the location of all services from Dial Before You Dig by telephoning 1100.

› The contractor/licensed plumber is required to have the water main exposed with adequate clearance and free of all ground water when the tapper arrives. The minimum hole size required for the tapper to do the work is specified. (See Figure 2.3 below)

› The water service pipe, water meter assembly, including isolating valve and appropriate backflow prevention device, must be installed prior to the tapping taking place.

› Connection to the water main must be at right angles to the intended position of the water meter.

› The contractor/licensed plumber must take all precautions necessary for the safety of the excavation including traffic management and the protection of pedestrians. No excavation should be left unattended unless it is surrounded by temporary fencing or completely covered.

› Any water services installed as part of an under road bore must be installed in a poly or PVC conduit.

Note:

Failure to satisfactorily meet all of the above requirements will result in cancellation of the tapping for that day, making it necessary for the plumber to re-book and pay a re-booking fee.

Loose polyethylene sleeving (Greensleeve) is used to protect ductile iron water mains against corrosion. The sleeving is essential to prolong the life of the reticulation system and care should be taken when exposing the main to protect this sleeving from damage.

6.5 PIPE BEDDING

› Water pipe bedding to be as per the WSAA Guidelines 2014.

› Scoria is not permitted, as scoria retains salts and bacteria that may be aggressive to some metallic pipework and fittings.

6.6 EXCAVATION REQUIREMENTS

› The contractor is to carry out all excavation requirements and ensure that all Occupational Health and Safety, Trenching, Road Signage, Traffic Management & Road original permits requirements are applied for.

› Obtain location of all other services. Dial Before You Dig by calling 1100.

› Maximum length from the main to the end of the shut off valve is 450mm.

› The contractor/licensed plumber is required to have the water main exposed with adequate clearance and free of all ground water when the tapper arrives. The minimum hole size required for the tapper to do the work is specified. (See Figure 2.3 below)

› The water service pipe, water meter assembly, including isolating valve and appropriate backflow prevention device, must be installed prior to the tapping taking place.

› Connection to the water main must be at right angles to the intended position of the water meter.

› The contractor/licensed plumber must take all precautions necessary for the safety of the excavation including traffic management and the protection of pedestrians. No excavation should be left unattended unless it is surrounded by temporary fencing or completely covered.

› Any water services installed as part of an under road bore must be installed in a poly or PVC conduit.

Note:

› Excavations (below) also apply when flushing a main and renewing a tapping ferrule.

› Proper ground support must be provided for all excavations over 1500mm deep.

› The tapping hole must be free of all ground water.

› Loose polyethylene sleeving (Greensleeve) is used to protect ductile iron water mains against corrosion. The sleeving is essential to prolong the life of the reticulation system and care should be taken when exposing the main to protect this sleeving from damage.

Note:

Figure 2.3
TRENCH SPECIFICATIONS FOR TAPPINGS & PLUGGINGS
6.7 PLUG AND RE-TAP AT THE WATER MAIN

For offsetting greater than 1.50m, New Developments and Redevelopments.

› If the re-tapping involves only the water meter assembly, the owner is to engage, at their cost a licensed plumber to do the necessary work, with the exception of an actual tapping or plugging.
› A new application (with applicable fee) must be lodged if an existing tapping is to be plugged.
› All excavation works are to be carried out by the owner’s licensed plumber.
› Any plug off required is to be carried out at the time of the new tapping being installed.
› Where offsetting has occurred, any reinstatement of paved surfaces is the responsibility of the property owner.
› Both (drinking water and Class A recycled water) assemblies will be relocated at the owner’s cost. The assemblies shall remain 300mm apart with the drinking water meter assembly located on the right hand side of the recycled water meter assembly.

6.8 RE-USE OF EXISTING TAPPING’S

Existing water tapping and existing property service pipe may be retained where:

› The existing water service is of approved material and is in sound condition (not galvanised wrought iron pipe).
› The new water meter is provided at owner’s expense.
› The tapping is sized appropriately for the new development in accordance with table 3.2 of AS/NZS3500.1.

However, if it can be demonstrated that the developments water supply demand does not impact on the performance of the water meter, the following applies:

› Where existing pressures and flows are found to be adequate to service the proposed development (to be substantiated in writing by a hydraulic consultant), the existing property service pipe and water meter may be retained to service the new development.

6.9 UPSIZING AND DOWNSIZING OF EXISTING SERVICES

› An existing tapping may be retained where the upsizing/downsizing of the property service pipe is no more than one pipe size.
› The upsizing/downsizing is to occur directly at the first isolation valve located off the water main.
› Full replacement of the property service pipe is to be carried out by the owner’s plumber at the owner’s expense.
› Only approved polyethylene or copper pipe is to be used for general services up to and including 50mm.
› Services larger than 50mm to be of an approved material in accordance with the AS/NZS 3500 incorporating the Plumbing Code of Australia.
› The owner or applicant is responsible to ensure pressures and flows will be adequate and substantiated in writing by a licensed plumber or hydraulic consultant.
› The request for the retention of the existing service must be submitted in writing for approval by Western Water.

Where the above criteria for retention of the existing tapping cannot be satisfied, the existing tapping is to be plugged and an appropriately sized tapping is required in accordance with Clause 6.8.

If the service is 80mm or greater the existing tee or tapping band is to be removed by Western Water at the owner’s expense.

6.10 SIZING OF WATER METERS AND PROPERTY SERVICE PIPES

All water meter sizes are to comply with relevant standards. For non-residential developments, the size of the property service pipe to the property is to be determined by the property owner or their authorised agent.

For Class B and C recycled water schemes the meter and service pipe size is based on flow rates for Peak and Off-Peak use allocations.

6.11 SELECTION OF WATER METERS

The selection of the size and type of water meter will be dependent on the required flow rates nominated by the applicant for the intended development and in the case of Class B and C recycled water connections by Western Water as this relates to Peak and Off-Peak use allocations. All water meters used by Western Water for billing purposes are to be of an approved type supplied by Western Water.
7. Other Related Guidelines

7.1 BACKFLOW PREVENTION

All property owners when notified by Western Water must comply with the requirements of AS/NZS 3500.1: (and as amended) and the Water Act 1989 (and as amended). All property owners with reticulated water supply connection must arrange for a suitably qualified person to assess the potential hazard and install an appropriate backflow prevention device at the property boundary/main water meter for containment purposes.

› For single residential properties generally a low hazard Dual Check Valve is required to be installed at the outlet of the water meter.

› Where the installation of an appropriate zone or individual hazard backflow prevention device is necessary in accordance with the provisions of AS/NZS 3500.1:2010, Western Water will require, as a minimum, the same level of protection installed as a containment backflow prevention device at the outlet of the property main water meter.

› Where above ground rainwater tanks are installed to provide toilet flushing, and it is intended to interconnect the reticulated drinking water supply system from Western Water, an appropriate containment backflow prevention device will be required at the outlet of the main water meter. In such cases, as a minimum, the device is to be a WaterMark approved, dual check valve.

Non-compliance

As the aim of this Backflow Prevention Containment Guideline is to protect the system and public health, it is vital that all parties cooperate with the relevant Acts, regulations, standards and plumbing codes.

In the event of a property owner refusing to rectify a potential backflow or cross connection hazard, Western Water has the authority to disconnect the Reticulated Water Supply System to the relevant property in order to protect the system and public health as per Section 151 of the Water Act 1989 (and as amended).

Examples where the System may be disconnected include:

› Failure to install a backflow prevention containment device following request from Western Water.

› Failure to carry out tests or maintain a backflow prevention containment device in accordance with AS/NZS 3500 (and as amended) and AS/NZS 2845 (and as amended).

› Failure to replace or repair a backflow prevention containment device.

7.2 REMOTE WATER METERS

Remote water meters are to be installed, at the owner’s expense. Where the pre-arranged access would be necessary in order for Western Water to read the water meter, it is now no longer acceptable for the customer to supply keys and codes to access any new development. For existing properties it is at Western Water’s discretion to obtain/retain keys and access codes.

› Remote water meters may be required to be installed in new developments of three levels or greater or where directed by Western Water.

› Additional equipment at the owner’s cost may be required where the development is greater than four levels.

› When applicable, water meters must have a minimum 150mm distance between the centre of the pipe and any wall and a minimum 250mm distance between the centres of the pipes of each water meter assembly.

› Remote water meters must not be located inside the units/apartments, or within the ceiling, wall or floor cavities of common access areas.

› Remote meters will need to be installed when Western Water deems it necessary.

7.3 MATERIAL FOR MAIN TO WATER METER PROPERTY SERVICE PIPES 20MM TO 50MM

Polyethylene pipe (PE100 PN12.5) or copper pipe is required as a minimum and must be WaterMarked.

Note:

PE pipe is not to form a part of the water meter assembly.

7.4 MATERIAL FOR MAIN TO WATER METER SERVICE PIPES 80MM AND LARGER

Services greater than 50mm Ø may be installed in any approved material.

7.5 WATER METER OWNERSHIP

Water meters are supplied by Western Water upon payments of the fee. Once fitted the water meter remains the property of Western Water and is maintained and replaced periodically at no cost to the owner, unless the owner has altered the water meter surrounds and accessibility to the water meter.
7.6 DAMAGED, MISSING AND STOLEN WATER METERS

If the water meter is damaged, stolen or missing, it will be replaced by Western Water at the owners/applicants expense unless a police report is provided.

A regulated fee for the supply and installation of the water meter and any other associated works may be charged.

Where the water meter assembly is found to be missing or damaged, Western Water will provide the owner/applicant 14 days' notice to rectify the assembly. Should the owner/applicant not have re-instated the water meter assembly within 14 days, Western Water will carry out the necessary works and the associated costs will be at the owners or applicants cost.

The owner/applicant maybe required to fit a protective cage or barrier around the meter to prevent any further damage, refer section 5.5

The occupier of the land must notify Western Water of the loss of, or damage to a water meter installed on the land within 2 business days after first becoming aware of the loss or damage.

Any deliberate or negligent damage to a water meter or property service pipe maintained by Western Water is addressed under Western Water's Water Misuse or Theft Procedure.

7.7 REMOVAL OF WATER METERS

No person shall remove a water meter or alter its position unless that person has first obtained permission from Western Water to do so. Water meters removed are not to be reused as per the National Measurement Regulations.

If a building is being demolished and an application has not been lodged for a redevelopment of the property, it is a requirement that the service is plugged and the water meter returned to Western Water.

7.8 RETURN OF WATER METERS

For redevelopments where the service is to be plugged the water meter is to be returned to the tapper at the time of the plugging, for final reading.

7.9 USE OF A DATA LOGGER

Data loggers are not permitted to be fitted to Western Water meters without prior written consent, which may include conditions which must be met. For details please contact Western Water.

7.10 SERVICE PIORGES

Where a redevelopment is proposed and the existing property service pipe is of galvanised wrought iron material the property service pipe is to be replaced.

› Only approved polyethylene pipe is to be used up to and including 50mm.
› Any approved material can be used on property service pipes greater than 50mm.

7.11 PRESSURE LIMITING VALVE

When the water pressure exceeds 500Kpa at the outlet of potable or recycled water meter, a pressure limiting valve is required to be installed at the owners cost in accordance with Plumbing Regulations incorporating the Plumbing Code of Australia.

7.12 HOT WATER METERS

Water meters used to measure heated water are not the responsibility of Western Water.

7.13 INLINE PUMPING AND BOOSTING

Western Water does not usually allow inline pumping and boosting. However, for special circumstances Western Water will review applications on a case by case basis.

Inline pumping and boosting or boosting of pressure may be considered subject to Western Water’s approval. A written request for approval of variable speed inline pumps must be lodged with Western Water. Details of the pump should be submitted with the application.

Note:
*The maximum pump flow should not result in the capacity of the fitted meter or street main being exceeded under peak demand conditions. This must be checked and approved by Western Water.*
8. Responsibilities

8.1 SERVICE PIPES

Western Water is responsible for maintaining the potable and/or the recycled water service pipe up to and including the meter and meter couplings, or the property boundary if the main meter is more than two metres inside the property boundary except for a fire service (refer to Western Water’s individual Customer Charter).

Western Water is not responsible for:

› A backflow prevention device installed at the outlet of the meter.
› A pressure reduction valve installed at the outlet of the meter
› Fire services past the first isolation valve on the water main.

8.2 CLASS B AND C RECYCLED WATER SCHEMES ALL SERVICE PIPES

Western Water is responsible for maintaining all service pipes up to and including the water meter

8.3 – INTERNAL PIPE WORK

The property owner is responsible for maintaining all pipe work from the outlet side of the main water meter, including any individual meter assemblies. Any individual meter purchased from Western Water remains the property and responsibility of Western Water. This does not include private water meters not purchased or accepted by Western Water.

Western Water requires the installation of a purple non-standard inlet thread hose bib tap with removable handle directly after the meter assembly, refer figure 2.2.

8.4 – REMOTE WATER METERS

Western Water is responsible for maintaining and for the replacement of remote water meters, with the exception of stolen or damaged water meters.

8.5 – ALL OTHER SERVICES

Western Water maintains the tee/tapping band including the flange. The owner of the property maintains all other parts of the service. Refer to figure 3.1. (overleaf)
9. General Water And Fire Service Valving Arrangements

To be read in conjunction with Meter Configuration Drawings, refer Appendix 1

9.1 GROUPED WATER METERS

Where grouped water meters are to be located at the front of multi-unit developments within 2 metres of the property boundary, instead of a main meter and individual meters, the owner/owner’s corporation is responsible to ensure that each meter is always tagged with the corresponding unit number.

9.2 – NON-COMPLIANT INSTALLATIONS

Where an installation is found to be non-compliant it is the owners/applicants responsibility to rectify the installation in accordance with these guidelines and applicable standards within a nominated timeframe given by Western Water. Failure to do so may result in the disconnection of the main supply or rectification works will be carried out by Western Water at owners/applicants expense.

Note:
Bolts on the inlet & outlet sides of the sluice valve are the responsibility of Western Water.

9.3 – FIRE SERVICES

All fire services must be metered. The type of meter used is dependent on the type of fire service being installed and the Australian Standard design applicable to each installation.

Note:
Typically all water meter assemblies shall comply with the Meter Configuration Drawings, refer Appendix 1

The metering of hydrant fire services with inline water meters requires prior approval from the relevant Fire Authority.

Redevelopments/Major Augmentation of Fire Services

In cases of redevelopments and/or a major augmentation of a fire service is required, the fire service metering and containment backflow are to be upgraded to meet current industry requirements.

FIGURE 3.1: TYPICAL TAPPING UNDER PRESSURE GREATER THAN 50MM Ø

![Diagram of typical tapping under pressure greater than 50mm Ø](image-url)
Recycled Water for Fire Services

Western Water may grant approval for Class A recycled water to be used for firefighting purposes subject to recycled water quality and availability of supply. Where Class A recycled water or approved alternative supply of water is intended to be utilised for firefighting purposes the appropriate hazard level of containment backflow prevention is to be based on the degree of risk of containment to Western Water’s water supply system.

Where the fire service is greater than 50mm the general service is to be connected off the fire service prior to the fire service water meter and must be separately metered

Hose Reel Services

The meter shall be installed to measure all water usage prior to separate fire service and general service piping, however the hose reel service may be taken directly from the metered general water supply service where the design specifies a combined system.

Hydrant Services

These services as a minimum must be fitted with a WaterMark approved Testable Single Detector Check Valve (supplied by the property owner) and a 25mm by-pass water meter supplied by Western Water.

Each isolating valve located within the by-pass meter assembly is to be locked in the open position by the commissioning / device testing contractor. The lock is to be a Fire Authority keyed padlock.

Each Testable Single Detector Check Valve must be commissioned by an approved contractor to commission BPD with a Test Certificate forwarded to Western Water and be commissioned. Retesting of the valve is required on an annual basis and retest reports forwarded to Western Water.

For backflow Protection, as a minimum, a Testable Single Check Valve is required on all fire services 80mm diameter or greater.

Automatic Fire Sprinkler Services

Where the fire system is designed and installed to AS2118.6 a Magnetic Flow Meter must be installed to register all fire service water used (See fire service metering Matrix for details) Note: Magnetic Flow meters will generally require 240V electrical connection. Therefore, as specified electrical connection must occur at the time of installation of the meter. Such connection is to be direct wired (plug type connections will not be permitted).

Where a hydrant and fire sprinkler service is required, the water meter will register all fire service water used.

Fire Service Water Saving Requirements

The fire sprinkler system design shall incorporate all necessary features called in for AS1851:2005 (Maintenance of Fire Protection Systems and Equipment) and/or subsequent versions of AS1851 or equivalent to allow for the monthly testing of the Fire Sprinkler System.

Where fire system booster pumps (diesel & electric set) are required, the system shall incorporate recirculating equipment such as storage tanks or other options/methods to reduce or eliminate the wastage of test water.

Demonstrated water saving options may include either:

1. Tank capture system.
   a) a break tank or full capacity storage tank with recirculation of all water discharge that is capable of discharging into the tank and will include (pressure relief valve, pump churn relief valve, cooling water, flow test water, installation relief lines) or
   b) a recirculation tank, the recirculation tank is to be used during testing only and needs to be included in the maintenance routines.

Or

2. Written advice from a Fire Engineer or Design Consultant detailing that the Fire pump system will, upon installation, have the pressure relief and control valves adjusted to minimise water loss with an acceptable pressure gauge schedule (in accordance with AS2118.1 Automatic Fire Sprinkler Systems Section 8.6). This work must be undertaken by an experienced fire service engineer/designer.

It is recommended that the owner test and maintain the fire service valve external to their property on a yearly basis.
## 9.4 – FIRE SERVICE METERING GUIDE

<table>
<thead>
<tr>
<th>Type of Fire System</th>
<th>Australian Standard</th>
<th>Designed under a Single Standard or in Combination with another Standard</th>
<th>Inline booster pumps (not Jacking Pumps)</th>
<th>Metering Requirement</th>
<th>Water Saving Measures Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Hydrant 80mm diameter or larger</td>
<td>AS2419.1</td>
<td>Single</td>
<td>No</td>
<td>TSDC</td>
<td>No</td>
</tr>
<tr>
<td>Fire Hydrant 80mm diameter or larger</td>
<td>AS2419.1</td>
<td>Single</td>
<td>Yes</td>
<td>Mag Meter</td>
<td>No</td>
</tr>
<tr>
<td>Fire Hydrant 80mm diameter or larger &amp; general service combined</td>
<td>AS2118.1</td>
<td>Single</td>
<td>No</td>
<td>Turbine meter (see note)</td>
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<td>Automatic Fire Sprinkler greater than 50mm diameter</td>
<td>AS2118.1</td>
<td>Single</td>
<td>No</td>
<td>Mag Meter</td>
<td>No</td>
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<tr>
<td>Automatic Fire Sprinkler greater than 50mm diameter</td>
<td>AS2118.1</td>
<td>Single</td>
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<td>Mag Meter</td>
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<td>Design for monthly testing</td>
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<td>Combined</td>
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<td>Mag Meter</td>
<td>Yes</td>
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<tr>
<td>Automatic Fire Sprinkler Designed under Commercial and Residential Standards i.e. car park under one standard / units under another</td>
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<td>Combined</td>
<td>No</td>
<td>TSDC</td>
<td>No</td>
</tr>
<tr>
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<td>AS2118.1 / AS2118.4</td>
<td>Combined</td>
<td>Yes</td>
<td>Mag Meter</td>
<td>Yes</td>
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<td>No</td>
<td>Turbine Meter</td>
<td>No</td>
</tr>
<tr>
<td>Automatic Fire Sprinkler greater than 50mm diameter</td>
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<td>TSDC</td>
<td>No</td>
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<td>Automatic Fire Sprinkler, Drenchers greater than 80mm diameter</td>
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<td>Single</td>
<td>No</td>
<td>TSDC</td>
<td>No</td>
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<td>Automatic Fire Sprinkler, Deluge up to 50mm diameter</td>
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<td>No</td>
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<td>Single</td>
<td>Yes</td>
<td>Turbine Meter</td>
<td>No</td>
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<tr>
<td>Automatic Fire Sprinkler, Deluge 80mm diameter or larger</td>
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<td>Single</td>
<td>No</td>
<td>TSDC</td>
<td>No</td>
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<tr>
<td>Automatic Fire Sprinkler, Deluge 80mm diameter or larger</td>
<td>AS2118.3</td>
<td>Single</td>
<td>Yes</td>
<td>Mag Meter</td>
<td>Design for monthly testing</td>
</tr>
</tbody>
</table>
DEFINITIONS

Booster Connections: Refers to providing a connection for Fire Brigade pumper trucks. (No direct inline pumping).

Combined: A fire system designed under two separate Australian Standards i.e. car park under one standard and the remainder of the development under another.

Combined Fire and General System: Where the fire service also supplies general water fixtures. In such cases prior relevant Fire Authority consent is required to meter the fire service via a water meter other than a bypass meter. Backflow prevention requirements must be in accordance with the hazard level identified for the development.

Drenchers, Deluge Systems: Provide a wash of water over windows or act as a barrier between areas within a building by creating a wall of water.

Inline Booster Pumps: Are used to pump water directly from the water main. Normally a diesel and an electric pump are utilised.

Jacking Pumps: Are used to maintain pressure in the fire system and have no bearing on whether recirculating is required.

Mag Meter: Magnetic Flow meters have no moving parts and are permitted by Fire Authorities on request.

(TSDC): Testable Single Detector Check Valve with 25mm bypass meter

(TSCV): Testable Single Check Valve.

Turbine Meter: Normal water meter used on general and fire services up to 50mm (services greater than 50mm require a mag meter or (TSDC) Testable Single Detector Check Valve to be used.

Water Saving Measures: Recirculating tank or other means employed to save the test water i.e. adjustment of relief valve.

Note: Where the fire system is required to be designed to accommodate monthly testing or provide a minimum of 80% savings of the system test water, a statement is required from the Fire System Engineer confirming these requirements.

9.5 – FIRE SERVICE PUMPING

Inline pumping may be approved subject to the written approval of Western Water. A written request for the approval of inline boosting must be lodged with Western Water, as part of the application for conditions of connection, and should include details of pumps curves and pumps to be used.

Note: The maximum pump flow should not result in the capacity of the street main being exceeded under peak demand conditions. This must be checked and approved by Western Water.

Variable speed pumps in accordance with AS 2941 are preferred, however consideration may also have to be given to installing a break pressure tank to provide added protection to Western Water’s water supply infrastructure assets.

FIGURE 3.2: TYPICAL BOOSTERED FIRE SERVICE WITH SINGLE CHECK DETECTOR VALVE (TESTABLE)
10. Residential Water Metering And Servicing

Water metering and servicing requirements for residential developments are detailed in this section to assist in determining the applicable servicing guidelines related to the proposed development.

10.1 SINGLE DWELLING RESIDENTIAL DEVELOPMENT

<table>
<thead>
<tr>
<th>Definition</th>
</tr>
</thead>
</table>
| ‣ House 
| ‣ Terrace House 
| ‣ Strata unit where there is no common land and all units are to be serviced via a separate tapping. |

<table>
<thead>
<tr>
<th>Water Metering</th>
</tr>
</thead>
</table>
| ‣ A main water meter is mandatory on all available water supplies 
| ‣ Water meters must be readily accessible for reading, maintenance and replacement. Where the water meter is deemed to be inaccessible for reading, remote water meters will be required to be fitted (see section 7.2 – Remote Water Meters) |

<table>
<thead>
<tr>
<th>Servicing</th>
</tr>
</thead>
</table>
| ‣ 20mm Ø tapping is required. 
| ‣ For dry tapping’s the water meter assembly is to be installed by the licensed plumber, and the water meter by Western Water. For wet tapping’s, the plumber is to install the water meter assembly and property service pipe prior to the tapping time. Western Water taps the water main. |

10.2 NEW DUAL DWELLING RESIDENTIAL DEVELOPMENT

Where both dwellings have water main frontage:

<table>
<thead>
<tr>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two dwellings on a residential parcel/s of land</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Water Metering</th>
</tr>
</thead>
<tbody>
<tr>
<td>For each dwelling a new main water meter is mandatory on the drinking water supply and also on the recycled water supply where available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Servicing</th>
</tr>
</thead>
</table>
| ‣ Separate 20mm Ø tapping is required to service each dwelling. 
| ‣ An existing 20mm Ø tapping may be retained for one dwelling if approved by Western Water. 
| ‣ For wet tapping’s, the plumber is to install the water meter assembly and property service pipe prior to the tapping time. Western Water taps the water main. Upsizing of the property service pipe may be approved following an assessment based on the required flow rate. Additional fees apply. |
FIGURE 4.1: TYPICAL DUAL OCCUPANCY RESIDENTIAL DEVELOPMENT

- COMMON LAND
- DRIVEWAY
- MAIN WATER METER
- DRINKING WATER MAIN
- FOOTPATH
- ROAD
Where only one dwelling has water main frontage (either for new dwellings or a proposed second dwelling):

<table>
<thead>
<tr>
<th>Definition</th>
<th>Two dwellings on a residential parcel/s of land</th>
</tr>
</thead>
</table>
| Water Metering | - A main water meter is required (generally 25mm) on the drinking water supply and also on the recycled water supply when available to service both dwellings.  
- For each dwelling a meter is also required on the drinking water supply and also on the recycled water supply when available (See Section 7.2 – Remote Water Meters). |
| Servicing | - To be serviced by 25mm tapping and main water meter with meters on each unit. Any existing 20mm tapping is to be plugged.  
- When upsizing a service, where possible, one size up from the ferrule/ball valve is acceptable (refer to clause 6.8).  
- Plumber to fit sleeve and cover at ground level over ferrule.  
- For wet tapping’s, the plumber is to install the water meter assembly and property service pipe prior to the tapping time. Western Water taps the water main. Upsizing of the property service pipe may be approved following an assessment based on the required flow rate. Additional fees apply. |

FIGURE 4.2: TYPICAL DUAL OCCUPANCY WHERE ONLY ONE DWELLING HAS WATER MAIN FRONTAGE
10.3 MULTI-DWELLING RESIDENTIAL DEVELOPMENT
(Greater than two units and less than 20 units’ ground floor/ground and first floor)

<table>
<thead>
<tr>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple dwellings on a single title or Owners Corporation:</td>
</tr>
<tr>
<td>› Flats</td>
</tr>
<tr>
<td>› Apartments</td>
</tr>
<tr>
<td>› Units</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Water Metering</th>
</tr>
</thead>
<tbody>
<tr>
<td>› A main water meter is required on the drinking water supply and also on the recycled water supply where available to service all dwellings.</td>
</tr>
<tr>
<td>› For each dwelling a water meter is also required on the drinking water supply and also on the recycled water supply where available or for Group Meters see section 9.1.</td>
</tr>
<tr>
<td>› Water meters must be readily accessible for reading, maintenance and replacement. Where the water meter is deemed to be inaccessible for reading, remote water meters will be required to be fitted (see section 7.2 – Remote Water Meters).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Servicing</th>
</tr>
</thead>
<tbody>
<tr>
<td>› A single tapping is to be provided to service the total development.</td>
</tr>
<tr>
<td>› Upon application a second tapping will be considered where a dual supply arrangement is proposed and the services are to be interconnected.</td>
</tr>
<tr>
<td>› Existing services are to be plugged with all dwellings to be serviced from the same main water meter</td>
</tr>
<tr>
<td>› Dual supply from water mains in different pressure supply zones will not be permitted.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fire Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refer to section 9.3</td>
</tr>
</tbody>
</table>

FIGURE 4.3: TYPICAL MULTI-DWELLING RESIDENTIAL DEVELOPMENT
### 10.4 MULTI-DWELLING RESIDENTIAL DEVELOPMENT

(Greater than 19 units’ ground floor/ground and first floor)

| Definition | Retirement Villages (separate units, not high rise, separately titled).  
|            | Ground floor units. |
| Servicing  | As per these Guidelines |

### 10.5 MULTI-DWELLING RESIDENTIAL DEVELOPMENT

(High Rise multi dwelling, greater than two floors)

| Definition | Multiple dwellings on a single title or Owners Corporation:  
|           | › Flats  
|           | › Apartments  
|           | › Units |
| Water Metering | A main water meter is required on the drinking water supply and also on the recycled water supply where available to service all dwellings/units.  
|          | For each dwelling/unit a remotely read meter is required on the drinking water supply and also on the recycled water supply where available or for Group Meters see section 9.1.  
|          | Additional water meter reading equipment may be required for developments over four levels.  
|          | Refer to Section 5 – Water Meter Positioning |
| Servicing | › A single tapping is to be provided to service the total development.  
|          | › On application, a second tapping will be considered where a dual supply arrangement is proposed and the services are to be interconnected.  
|          | › Existing services are to be plugged with all dwellings to be serviced from the same water meter.  
|          | › Dual supply from water mains in different pressure supply zones will not be permitted. |
| Fire Services | See Section 9.3. |
10.6  DEPENDANT LIVING RESIDENTIAL UNITS (‘GRANNY FLAT’)

| Definition | A self-contained building erected on the land of the property owner, and is used or intended to be used as a separate residence from the main residence. The dwelling must contain kitchen, bathroom and sanitary facilities, the requirements of which are outlined below. The occupier of the dwelling has the right to exclusive use, but does not need to have paid or contributed to the purchase price of the dwelling.

Evidence is required that the person/s residing or intending to reside in the dwelling is/are in fact a dependent relative for it to be so classified.

Source: Based on the definition of ‘dwelling’ in s 46H of the Planning and Environment Act (Vic) 1987.

| New Customer Contributions (NCC’s) | Where the proposed development satisfies the definition of ‘dwelling’ under the provisions of the Planning and Environment Act 1987, or the applicant requests separate water meters, NCC’s will apply. The fee will be charged in line with Essential Services Commission Determination requirements.

| Property Declaration | In cases where the development does not meet the definition of a ‘dwelling’ under the provisions of the Planning and Environment Act 1987 No. 46H, and the customer does not require separate water meters for the proposed building, the owner will be required seek permission from Western Water. Western Water will require payment of new customer contributions only when the property is subdivided in the future or provided with separate water meters at the request of the property owner.

| Water Metering | Individual metering of the dwelling is optional. Water meters must be readily accessible for reading, maintenance and replacement. Where the water meter is deemed to be inaccessible for reading, remote read water meters will be required to be fitted (see section 7.2 – Remote Water Meters).

| Servicing | These developments may be serviced in several ways:

› Separate tapping’s for each dwelling.

› Upsize existing 20mm Ø property service pipe to 25mm. A 25mm main valve with meters to each dwelling.

However, if it can be demonstrated that the development’s increased demand for water supply does not impact on the performance of the water meter, the following applies:

› Where existing pressures and flows are found to be adequate (to be substantiated in writing via a licensed plumber or hydraulic consultant), the existing property service pipe may be retained to service both dwellings.

Note: Where the development does not meet the definition of a ‘dwelling’ under the provisions of the Planning and Environment Act 1987 No. 46H, metering arrangements will not be required, and the existing service may be utilised.

10.7 – MOVEABLE RESIDENTIAL UNITS (DOH ‘GRANNY FLATS’)

| Definition | Provided by the DoH and deemed by Section 15 of the Housing Act 1983 as owned by the DoH, in the occupation of hirer, and is not a permanent fixture on the property. DoH to provide Western Water with an approved plan for endorsement.

| Water Metering | Not to be individually metered.
10.8 – RESIDENTIAL CARAVAN PARKS

**Definition**

Section 156 (3A of the Local Government Act 1989 provides: ‘For the purposes of this Part and Part II of the Valuation of Land Act 1960, a caravan park is a single rateable property of which the caravan park owner is taken to be the occupier’.

**Water Metering**

Not to be individually metered.

**FIGURE 4.4: DEPENDENT PERSONS RESIDENTIAL UNITS**

New Customer Contributions Payable

Option 1:
- Separate meters may be supplied via separate tappings.

Option 2:
- Plumber/consultant report required. Plug existing 20mm water service tapping and install new 25mm tapping and property service pipe where insufficient flows exist.

New Customer Contributions Deferrable – Dependant Persons Unit Declaration From Applicable

Option 3:
- No subdivision
- No request for separate meters
- Plumber/consultant report required
- Plug existing 20mm water service tapping and install new 25mm tapping and property service pipe where insufficient flow exist.
11. Non-Residential Water Metering and Servicing

Water metering and servicing requirements for non-residential occupancies are detailed in this section to assist in determining the applicable servicing guidelines related to the proposed development. All properties not classified as either residential or mixed developments are non-residential.

11.1 – SINGLE OCCUPANCY NON-RESIDENTIAL DEVELOPMENT

| Definition | Parcels of land or developments where all of the 'occupancies' located on the parcel of land are for non-residential purposes:
|           | › Factories   › Offices   › Sporting Facilities   › Council Building
|           | › Warehouses  › Schools   › Childcare Centres  › Irrigations Systems
|           | › Shops       › Hospitals  › Nursing Homes        |

Note: Developments that have a mixture of 'occupancies' used for non-residential purposes and of 'occupancies' used for residential purposes are dealt with in section 10 (mixed developments).

| Water Metering | A main water meter is required on the drinking water supply and also on the recycled water supply where available.
|               | Meters must be readily accessible for reading, maintenance and replacement. Where the water meter is deemed to be inaccessible for reading, remote water meters will be required to be fitted (see section 7.2 – Remote Water Meters).

| Servicing | A single tapping is to be provided to service the total development.
|          | Upon application, a second tapping is will be considered where a dual supply arrangement is proposed and the services are to be interconnected.
|          | Dual supply from water mains in different pressure supply zones will not be permitted.
|          | All tappings 25mm and over plumber to fit sleeve and cover at ground level over ferrule.

| Fire Services | Refer Section 9.3

FIGURE 5.1: SINGLE OCCUPANCY NON-RESIDENTIAL DEVELOPMENT
## 11.2 – MULTI-OCCUPANCY NON-RESIDENTIAL DEVELOPMENT

| Definition | Parcels of land or developments where all of the 'occupancies' located on the parcel of land are for non-residential purposes:  
› Factoryettes  
› Strip shops (all shops have a separate frontage to street).  
› Multiple Sporting Facility Complexes |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Metering</td>
<td></td>
</tr>
</tbody>
</table>
› A main water meter is required on the drinking water supply and also on the recycled water supply where available.  
› For each occupancy a water meter is required on the drinking water supply and also on the recycled water supply where available or for Group Meters see section 9.1.  
| Exceptions |  
› Large shopping centres require a main water meter at all connections to the water main.  
› All individually services shops require a water meter assembly, however the installation of water meters will not be required unless the shop is a trade waste premises (refer Section 12.5).  
› Office blocks.  
› Serviced apartments. Where a lease arrangement is in place that the development will be operated as a motel, the meter assemblies will be required; however the installation of water meters will not be required.  
› Student accommodation. Where a lease arrangement is in place that the development will be operated as a single entity, the meter assemblies will be required; however the installation of water meters will not be required.  
› Motels. Where a lease arrangement is in place that the development will be operated as a motel, the meter assemblies will be required however the installation of water meters will not be required. |
| Servicing |  
› A single tapping is to be provided to service the total development.  
› Upon application, a second tapping will be considered where a dual supply arrangement is proposed and the services are to be interconnected.  
› Dual supply from water mains in different pressure supply zones will not be permitted. |
| Fire Services | Refer to Section 9.3 |

See Figure 5.2 following page
12. Water Metering in Special Cases

12.1 – MIXED DEVELOPMENTS

<table>
<thead>
<tr>
<th>Definition</th>
<th>Parcels of land or developments that have within their title boundary 'dwellings'/'occupancies' used for both residential and for non-residential purposes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Metering</td>
<td>› Using the definitions in section 4, all 'dwellings'/'occupancies' that are deemed to be self-contained must have their supply individually metered.</td>
</tr>
<tr>
<td></td>
<td>› For multi-level developments of three floors or more, remote water meters are required.</td>
</tr>
<tr>
<td></td>
<td>› Additional water meter reading equipment may be required for developments over four floors, not including a basement (see section 7.2 – Remote Water Meters).</td>
</tr>
<tr>
<td>Servicing</td>
<td>› A single tapping is to be provided to service the total development.</td>
</tr>
<tr>
<td></td>
<td>› On application a second tapping will be considered where a dual supply arrangement is proposed and the services are to be interconnected.</td>
</tr>
<tr>
<td></td>
<td>› Dual supply from water mains in different pressure supply zones will not be permitted.</td>
</tr>
<tr>
<td>Fire Services</td>
<td>Refer to section 9.3</td>
</tr>
</tbody>
</table>

FIGURE 6.1: TYPICAL MIXED DEVELOPMENT
12.2 – ADDITIONAL UNITS OR FACTORYETTES TO EXISTING DEVELOPMENTS

<table>
<thead>
<tr>
<th>Definition</th>
<th>Where the additional units or factoryettes are added to existing developments that are not individually metered; these types of developments will be treated on a case by case basis.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Metering</td>
<td>If it is not possible that an agreement can be reached to meter the existing units, then a separate tapping may be required to service the new units or factoryettes with separate meters (See section 7.2 – Remote Water Meters).</td>
</tr>
</tbody>
</table>

12.3 – EXISTING MULTI-OCCUPANCY RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENTS WITH NO EXISTING INDIVIDUAL METERS.

<table>
<thead>
<tr>
<th>Definition</th>
<th>In many older developments, only a main water meter was provided with the water usage being divided among the occupants of the individual occupancies. In such cases some customers wish to install individual water meters to allow them to monitor their water usage.</th>
</tr>
</thead>
</table>
| Water Metering | Existing dwellings/occupancies are permitted to be individually metered, however in the case where one occupancy owner requires a separate water meter but cannot reach agreement with the other owners to install water meters to all dwellings/occupancies, the following applies:  
› A letter from the Owners Corporation authorising the installation of the water meter/s. The letter must also state that they are aware that any common water usage will be spilt over the dwellings/occupancies that remain unmetered.  
or  
› The signatures of all the dwelling/occupancy owners consenting to the partial water metering of the development. A letter must state that they are aware that any common water usage will be spilt over the dwellings/occupancies that remain unmetered.  
or  
See Servicing below. |
| Servicing | A separate tapping with a main water meter may be permitted to service each of the dwellings/occupancies however it must be demonstrated that common water usage is not provided as part of the plumbing installation. |

12.4 – PROPERTIES SERVICED BY TEMPORARY PRIVATE WATER SERVICE

| Definition | A Private Water Service is installed by the owner’s plumber at the owner’s cost where a reticulated water main is not required to be extended to service:  
› Houses  
› Farms  
› Factories  
Private water services may require a “Water by Agreement” to be completed prior to tapping approval.  
Private water services are temporary and may be disconnected by Western Water at its discretion. Private water services must be removed from service where a reticulated water supply main is installed in the future. All costs are to be borne by the property owners. |
### Water Metering

- All new private water services must be metered by a private water service main water meter at a point as close as practicable to the connection at the reticulated water main.
- The water meter must be located in a position that prevents damage and provides ease of reading and maintenance within a lockable cage fitted over the water meter assembly to prevent tampering.
- Each individual tapping point off the private service must be metered.
- For each property connected, a water meter is required on the drinking water supply, at the property boundary.

### Servicing

- Private water services will only be permitted in cases where Western Water determines that a property is too remote from existing reticulated water infrastructure. This will be assessed having regard to potential future development and the distance from existing infrastructure.
- Where multiple properties are to utilise the private water main, Western Water will require a letter nominating either the owner of the private main or a property owner responsible to manage payment of the water consumption through the main water meter.
- A design plan of the proposed private water service is required to be submitted to Western Water for approval prior to commencement of works.
- Details are to be provided to Western Water regarding Council/other authorities approval in relation to the following:
  - Location and depth of the proposed service
  - Relevant environmental/cultural assessment has been carried out.
  - Pipe material must be approved (such as Polyethylene, MPVC, OPVC) and PN12.5 as a minimum, and must be WaterMark approved.
  - All plumbing to be in accordance with AS/NZS 3500 2003
  - Isolation valves are to be installed at 300m maximum intervals along the length of the private water service. All valves are to be fitted with risers, valve covers and concrete surrounds at surface level.
  - The owner is required to contact Western Water to arrange for the work to be verified prior to final backfilling of trenches. A 1000 kPa minimum pressure test is to be carried out on the pipeline in the presence of a Western Water representative. This may have to be increased depending on the maximum working pressure of the private service.
  - The alignment of the as-constructed private water service is to be surveyed on completion and forwarded to Western Water.
  - The owner must agree to indemnify Western Water from and against all claims for loss, damage, injury or whatsoever which may arise out of the installation, operation or use of the private water service.
  - All owner obligations shall transfer to Successors in title as per the Water Act 1989.
  - All property water meters on the nominated private water service will be totalled when the water meters are read and checked against Western Water billing water meter at the tapping connection. Any significant variation between the total of the property water meters and the billing water meter will be divided equally between the property owners of the private water main.
- The service is provided with no guarantee of quality, pressure, flow and continuity of supply.
- Private water services are not intended to be provided for firefighting purposes.
FIGURE 6.2: PRIVATE WATER MAIN REMOTE FROM RETICULATION SUPPLY
12.5 – TRADE WASTE

<table>
<thead>
<tr>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade waste is the discharge from premises as a result of trade, industrial, medical, dental and commercial premises. These premises require discharging trade waste to comply with the terms and conditions set out in the Trade Waste Agreement.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Water Metering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow metering of trade waste effluent is required if requested by Western Water. Water metering is required to monitor water usage associated with trade waste discharge, in accordance with these requirements.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade waste flow meters are owned, maintained and installed by the owner at the request of Western Water. It is the responsibility of the owner to ensure that the flow meter:</td>
</tr>
<tr>
<td>› Is installed, operated and maintained in good working order.</td>
</tr>
<tr>
<td>› Continually records the rate of the flow of trade waste.</td>
</tr>
<tr>
<td>› Incorporates a totaliser, calibrated to record in kilolitres, which cannot be reset to zero.</td>
</tr>
<tr>
<td>› Is capable of activating an automatic sampler if requested by Western Water.</td>
</tr>
<tr>
<td>› Is calibrated annually by an accredited company.</td>
</tr>
<tr>
<td>The owner must also:</td>
</tr>
<tr>
<td>› Give Western Water a copy of each calibration certificate, within two weeks of receipt.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Additional References</th>
</tr>
</thead>
<tbody>
<tr>
<td>See Western Water individual trade waste agreements.</td>
</tr>
</tbody>
</table>

12.6 – NON-RESIDENTIAL IRRIGATION SYSTEMS/COUNCIL OPEN SPACE

<table>
<thead>
<tr>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irrigation Systems typically found in Council reserves, nature strips, median strips and school reserves.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Water Metering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water metering is required of all potable and recycled water irrigation systems. Water meters are to be:</td>
</tr>
<tr>
<td>› Installed above ground in accordance with these Guidelines.</td>
</tr>
<tr>
<td>› Protected from damage and have regard to all Occupational Health &amp; Safety requirements for public areas.</td>
</tr>
<tr>
<td>› For nature strips, as close as practicable and adjacent to the water main connection.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Servicing</th>
</tr>
</thead>
<tbody>
<tr>
<td>› A single tapping is to be provided to service irrigation systems.</td>
</tr>
<tr>
<td>› Upon application a second tapping will be considered where a dual supply arrangement is proposed and the services are to be interconnected.</td>
</tr>
<tr>
<td>› Dual supply from water mains in different pressure supply zones will not be permitted.</td>
</tr>
<tr>
<td>› The maximum size of the metered service is generally limited to 40mm diameter (2.10 Litres/sec)</td>
</tr>
<tr>
<td>› Irrigation main line piping that traverses roadways shall be either copper or polyethylene pipe and fittings, minimum Class PN12.5.</td>
</tr>
<tr>
<td>› Street reserve mainline piping must be laid providing a horizontal clearance of between 300-600mm from drinking water or 600mm from a sewer asset.</td>
</tr>
<tr>
<td>› Any new recycled water system piping, pipe sleeves, identification tapes outlets and sprinkler heads shall be coloured purple in accordance with AS2700 and provided with signage ‘warning recycled water do not drink’ in accordance with AS1345.</td>
</tr>
</tbody>
</table>
### Servicing

- Irrigation systems must be fitted with an approved master solenoid valve to ensure that main lines up to individual sprinkler station solenoid valves are not under constant pressure. The master solenoid should be located close to the water meter assembly to reduce the length of pressurised irrigation piping.
- Irrigation systems must incorporate moisture sensors to ensure watering is controlled during or following periods of rain.
- Drinking water systems time of operation must comply with permanent water restriction requirements.

### General Conditions

- Plumbing work must be installed by a licensed plumber in accordance with AS/NZS 3500 2003. The design and sizing of the metered service will be the responsibility of the applicant.
- All work must be maintained in accordance with Western Water’s Customer Charter.
- The drinking water service and recycled water service installations shall comply with Australian Standard AS/NZS 3500.1:2003 Water Services.

Note: The workmanship, valves, fittings and all materials on the upstream side of, and including the last pressurised valve on the line, shall meet this Standard. Recycled water property service pipes and water meter assembly requirements must comply with relevant sections of this guide.

### Recycled Water (where available)

### Environmental Requirements

- Customers will need to prepare a CSMP in accordance with the requirements of the current EPA Guidelines for Environmental Management – Use of Reclaimed Water (2003).
- The guidelines set out management requirements to ensure long-term sustainable use of recycled water without risk to the environment and also human and animal health. Western Water will provide an CSMP Template and assist the customer in preparing the CSMP for their site. The CSMP must be prepared and submitted prior to commencing construction of the irrigation system. If the customer fails to prepare or comply with an CSMP, Western Water will not permit the flow of recycled water or may suspend the supply of recycled water.
- For single residential properties generally a low hazard rated Dual Check Valve is required to be installed at the outlet of the water meter.

Some of the key CSMP requirements are given below:

#### Irrigation Practice

- Many different application methods can be used for irrigation with recycled water (sub-surface drip irrigation above ground drippers, above ground spray systems). The system needs to be stated in the CSMP.
- Watering scheduling should occur as per the CSMP.
- Run-off from the site is to be prevented due to the nutrients in the recycled water.
- Recycled water run-off is not permitted to flow into the stormwater system. This must be considered during the design of the system.

#### Nutrient and Salinity Budget

- The addition of nutrients to the soil through recycled water must be considered when undertaking fertiliser application. Additionally, the salt content of the recycled water may need to be considered when choosing plants.
- The customer will be required to undertake soil sampling prior to using recycled water and have the location identified on the areas CSMP, monitoring to be carried out approximately every two-three years.

#### Managing Occupational Health and Safety (OH&S)

- Staff/Contractor must be consulted to clearly identify OH&S roles and responsibilities.
- Staff/Contractor inductions and refresher training shall also be provided, addressing the necessary knowledge and hazards about working with recycled water.
### Recycled Water (where available) Environmental Requirements
- **Contingency Plans**
  - Contingency plans will need to be developed to manage any unlikely recycled water incidents such as pipeline bursts or run-off.

- **Auditing**
  - Western Water may audit the site to check that recycled water is being used in accordance with the CSMP.

### Additional References
Refer to individual Class A, B or C CSMP’s and or Contracts and Agreements

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### 12.7 – WATER CONNECTIONS FOR PROPERTIES HAVING DRINKING WATER AND CLASS A RECYCLED WATER (OTHER THAN SINGLE RESIDENTIAL DRY TAPPED PROPERTIES)

<table>
<thead>
<tr>
<th>Definition</th>
</tr>
</thead>
</table>
| › House  
› Irrigation Systems  
› Terrace House  
› Non Residential Properties  
› Strata Unit |

<table>
<thead>
<tr>
<th>Water Metering</th>
</tr>
</thead>
</table>
| › A Western Water meter is required on the drinking water supply and also on the recycled water supply where available.  
› Both the Class A recycled water and drinking water property service pipes are to be installed at the same time with both tapping’s to be carried out concurrently.  
› Water meters must be readily accessible for reading, maintenance and replacement. Where the water meter is deemed to be inaccessible for reading, remote water meters will be required to be fitted (see Section 7.2 – Remote Water Meters). |

<table>
<thead>
<tr>
<th>Drinking/Recycled Water Requirements</th>
</tr>
</thead>
</table>
| **Drinking Water Wet Tapping Residential Properties:**  
**Drinking Water & Class A Recycled Water:**  
› The owner/applicant will arrange to install the property service and connect it to Western Waters supply system/s. the owner/applicant must pay the relevant connection fee approved by the Essential Services Commission.  
› Both the drinking water and Class A recycled water meter assemblies will be positioned 300mm apart when viewed from the front of the property with the recycled water meter located on the left (refer figure 1.3).  
› The recycled water meter inlet ball valve will be closed and fitted with a lock by Western Water at the time of meter fitting.  
› The lock is only to be removed by a Western Water representative or the purpose of conducting the commissioning inspection of internal recycled water plumbing.  
› A fee may be imposed for any unauthorised removal of this lock.  
**Recycled Water Wet Tapping**  
› The owner/applicant must arrange to install both the property service and the connecting works at the property owner/s/applicant’s cost. The property service pipe is to be solid jacketed purple polyethylene pipe (PN80 or 100 PE 12.5 minimum) and must be WaterMarked. PE pipe must not form any part of the water meter assembly.  
› **In the case of short side installations** the service pipe is to be laid on the left of any drinking water property service pipe when viewed from the front of the property and maintain 300mm separation.  
› **In the case of long side installations** a separate conduit for the recycled water and any drinking water property service must be installed a minimum of 300mm separation is to be maintained between service pipes. |
### Drinking/Recycled Water Requirements

- The owner/applicant must pay the relevant tapping fee approved by the Essential Services Commission.
- The recycled water meter inlet ball valve may be closed and fitted with a locking device by Western Water at the time of the meter fitting.
- The lock is only to be removed by a Western Water representative for the purpose of conducting the commissioning inspection of internal recycled water plumbing.

*Note: If at the time of connection the above works that the plumber is responsible for have not been completed, the tapping will be cancelled and a re-booking fee, as approved by the Essential Services Commission, will apply.*

The owner/applicant must ensure that the installation of the connecting works for recycled water is in accordance with the Victorian Building Authorities Recycled Water Plumbing guide for dual pipe plumbing systems, AS/NZS 3500 and Western Water requirements. 100% mandatory inspections of property service pipe and water meter assembly, up to last pressurised valve, is required. Contact Western Water for advice.

#### Special conditions for installing recycled water

- A purple recycled water 5/8” inlet thread tap having a removable handle and sign reading ‘Recycled Water. Do not drink’ must be installed to all external hose taps.
- The recycled water meter inlet ball valve may be closed and fitted with a lock by Western Water at the time of the meter fitting.
- The lock is only to be removed by a Western Water representative for the purpose of conducting the commissioning inspection of internal recycled water plumbing.
- The water meter assembly pipe work and fittings must be of an approved type; WaterMark approved and must be of an approved colour (purple).
- All pipes and fittings must never be painted any other colour.

#### Inspection of Work (Residential)

The owner/applicant must ensure that the installation of the connecting works for recycled water is inspected by Western Water in accordance with Western Water or the Victorian Building Authority requirements and any “Conditions of Connection” at the owners/applicants expense, at each of the following stages.

- Stage 1  Water meter to building prior to backfilling
- Stage 2 Rough in (pipework within the building)
- Stage 3 Commissioning prior to the building being occupied.

#### Use of Class A recycled water

- Garden irrigation including fruit and vegetables
- Toilet flushing
- Clothes washing
- Vehicle washing
- Washing down outdoor furniture and the exterior of buildings
- Fire fighting

#### Don’t use recycled water for

- Drinking, cooking and dishwashing
- Bathing and showering
- Swimming pools and spas
- Evaporative coolers
Drinking/Recycled Water Requirements

For onsite fire services excluding Fire Sprinkler Systems the use of Class A recycled water for firefighting purposes will be assessed on a case by case basis. Use of Class B and C recycled water refer to individual CSMP’s.

Drinking Water & Class A Recycled Water Non Residential Properties:

- The licensed plumber must arrange to install both the property service and the connecting works, at the owner’s expense.
- The licensed plumber must expose the water main in accordance with Western Water’s requirements contained within this document. The owner/applicant must pay the relevant fee approved by the Essential Services Commission.
- Both the property service and the connecting works must be installed at the property owner’s expense.
- The property service pipe must be solid jacketed polyethylene pipe (PE100 PN 12.5 as a minimum) and must be water marked. PE pipe must not form any part of the water meter assembly.
- In the case of short side installations the service pipe is to be laid on the left of the drinking water property service pipe when viewed from the front of the property and maintain on both upstream and downstream ends of the conduit.
- In the case of long side installations a separate conduit for the recycled water and any drinking water property service must be installed a minimum of 300mm separation is to be maintained between service pipes.
- The water meter/s will be provided by Western Water.
- Refer to Appendix 1 for the installation of water service assemblies.
- If the work referred to above is not been completed at the time, the owner/applicant will have to make a further booking. The owner/applicant must also pay any re-booking fee approved by the Essential Services Commission.
- If any existing drinking or recycled water service to the owners/applicants property is to be disconnected, the owner/applicant must expose the existing property service connection at the drinking or recycled water main (as the case requires) at the owners/applicants cost, to allow us to disconnect the relevant water meter and return it to Western Water or its contractor.

Note: The owner/applicant is required to obtain a Road Opening Permit from the relevant authority before commencing any excavation work within a road reserve. The owner/applicant must also comply with every traffic management requirement contained in that permit.

Special conditions for installing recycled water supplies

- Irrigation systems must comply with Western Water’s guide to the installation of irrigation systems. Refer Western Water website.
- A purple recycled water 5/8 inlet thread tap having a removable handle must be installed to all external hose taps.
- A recycled water prohibition sign with the words ‘Recycled water. Do not drink’ and complying with AS1319 is to be installed above each recycled water tap outlet.
- The recycled water meter inlet ball valve may be closed and fitted with a lock or locking device by Western Water at the time of the meter fitting.
- The locking device is only to be removed by a Western Water representative for the purpose of conducting the commissioning inspection of internal recycled water plumbing.
- In the case where approval is given for the connection of a fire service to the Class A recycled water supply, the isolating valve at or near the property boundary will also be locked closed.
<table>
<thead>
<tr>
<th>Drinking/Recycled Water Requirements</th>
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<tbody>
<tr>
<td>› Any pipe, tap or other fitting used or intended to be used to supply recycled water on the owners/applicants side of the recycled water meter must be of an approved type and colour in accordance with the ‘VBA’s Recycled Water Guide’.</td>
</tr>
<tr>
<td>› The water meter assembly pipework and fittings must be of an approved type; WaterMark approved and must be of an approved colour (purple).</td>
</tr>
<tr>
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</tr>
</tbody>
</table>

**Educational & public buildings/areas – schools, kindergartens, health care centres**

All external recycled water hose bib taps must conform with the requirements as previously detailed and in addition must either:

› Be fitted with a ‘Hose Bib Tap Lock’.

Or

› Be installed in a secured location.

Other development types where hose bib taps require secured locations or tap locks to be determined on a case by case basis.

**Inspection of Conditions of Connection for non-residential properties**

Western Water will carry out an inspection of the recycled water plumbing work to verify its ‘Conditions of Connection’ have been complied with.

The installation of the connecting works for recycled water must be inspected in accordance with Western Water’s ‘Conditions of Connection’, at the owners expense, at each of the following stages:

› Stage 1 Water meter to building prior to back filling
› Stage 2 Rough-In (pipework within the building)
› Stage 43 Commissioning prior to the building being occupied.

**Use of Class A Recycled Water**

The owner/applicant may only use Class A recycled water for the following approved purposes:

**Use of Class A recycled water**

› Garden irrigation including fruit and vegetables
› Toilet flushing
› Clothes washing
› Vehicle washing
› Washing down outdoor furniture and the exterior of buildings.
› Fire fighting

**Don’t use recycled water for**

› Drinking, cooking and dishwashing
› Bathing and showering
› Swimming pools and spas
› Evaporative coolers

Onsite Fire Services excluding Fire Sprinkler Systems (the use of Class A recycled water for firefighting purposes will be assessed on a case by case basis).
**Drinking/Recycled Water Requirements**

Where rainwater is to be used for flushing of toilets via a rainwater tank, backup supply is only to be provided via an automatic change over device connected to the Class A recycled water supply.

**Drinking Water/ Recycled Water Backflow Prevention Requirements**

From the information provided, an initial assessment of the application will be made to determine the hazard level for both the drinking water and recycled water.

In line with current regulations, Western Water requires the owner/applicant to employ a suitably qualified person to check the business process on site to verify the anticipated level of hazard and install an appropriate containment device (WaterMark approved) located at the water meter, at or near the property boundary for the prevention of backflow.

When a testable backflow prevention device is installed, please send a backflow inspection and maintenance report to Western Water so we may make record of it.

In the interest of health and safety it is the responsibility of the property owner to ensure that containment, zone and individual backflow prevention is provided.

**Verification Of Class A Recycled Water Internal Plumbing Systems**

- The owner/applicant must ensure that the installation is verified in accordance with these requirements at the owners/applicants expense, at each of the following stages:
  - Main to water meter prior to back filling.
  - Water meter to master solenoid valve prior to back filling.
  - To arrange verification of the plumbing installation, please contact Western Water.

**Customer Site Management Plan (CSMP)**

Prior to the supply of Class A recycled water being made available to the property, an approved CSMP is required to be submitted and approved by Western Water.