



Coliban  
WATER

# *Land Development Manual*

August 2021

*Information contained within this manual is for guidance and is subject to change. Current as at August 2021.*

# Contents

1.	Introduction.....	6
1.1	Intended audience.....	6
2.	General.....	6
2.1	Responsibility for service provision.....	7
2.2	New Customer Contributions.....	7
2.3	New Customer Contributions exemptions.....	8
2.4	Reimbursable works (Shared Assets).....	9
2.5	Temporary works.....	9
2.6	Unnecessary works.....	9
3.	Existing Services.....	9
3.1	Existing service-realignment.....	9
3.2	Existing service abandonment.....	10
3.3	Existing combined sewerage drains.....	10
3.4	Existing private water services.....	10
3.5.	Coliban Water Managed Land & Rural Channels.....	10
3.5.1.	Rural Channels.....	10
3.5.2.	Coliban Water Land.....	10
3.5.3.	Vegetation Impacts.....	11
3.5.4.	Bushfire Management Overlay & Public Open Space.....	11
3.5.5.	Planting Over Coliban Water Assets.....	11
4.	Residential development or subdivision.....	11
4.1	Sewerage requirements.....	11
4.2	Potable Water Requirements.....	12
4.3	Recycled water requirements.....	12
4.4	Super lots.....	12
4.5	Separate Occupancy - Same Lot.....	12
5.	Industrial/Commercial.....	12
5.1	Sewerage requirements.....	12
5.2	Potable water requirements.....	12
5.3	Recycled water.....	13
5.4	Trade waste.....	13
5.5	Water tapplings.....	13
5.6	Backflow prevention.....	13
6	Multi-Unit Developments.....	13



6.1	Standards.....	13
6.2	Dual occupancy without an Owners Corporation .....	14
6.3	Existing multi-unit developments .....	14
6.4	Water tapplings .....	14
7.	High rise .....	15
7.1	Pressure and flow .....	15
7.2	Inline booster pump .....	15
7.3	Metering.....	16
7.4	Private plumbing works .....	16
7.5	Existing high rise developments.....	16
7.6	Water tapplings .....	17
8.	Boundary sewers and water mains that service two developments.....	17
9.	Easements and Reserves .....	17
10.	Connections .....	17
10.1	Connection requirements .....	17
10.2	Applications and fees.....	17
10.2.1	Water .....	17
10.2.2	Sewer, Fire Services, Alterations, Renovations, Unserviced structures.	18
10.3	Conditions of Connection .....	18
10.4	Standards.....	18
10.5	Sewer connections.....	19
10.5.1	Plumber Responsibilities .....	19
10.6	Water and recycled water connections .....	19
10.7	Responsibilities.....	20
10.8	Connection standards.....	20
10.8.1	Recycled Water Connection.....	21
11.	Land Development - Developer Installed Works .....	21
11.1	What are Developer Installed Works?.....	21
11.2	Phases .....	21
11.3	Who pays for the works?.....	22
11.4	Registered consultants.....	22
12.	Overview .....	23
12.1	Reference documents .....	24
12.2	General .....	24
12.2.1	Letter of Conditions .....	24
12.2.2	Standards .....	24
12.2.3	Materials.....	24



12.3	Design solution .....	24
12.3.1	Sewerage works .....	25
12.3.2	Sewer lot control .....	25
12.3.3	Sewer property connection points .....	25
12.3.4	Water .....	25
12.3.5	Recycled Water .....	25
12.3.6	Temporary cross connections .....	26
12.4	Design coordination .....	26
12.5	Design drawings .....	26
12.6	Lodging the design .....	26
12.7	Auditing the design .....	27
13	Pre-construction .....	27
13.1	Overview .....	27
13.2	Lodging construction notification .....	27
13.3	Auditing .....	27
14	Construction .....	27
14.1	Overview .....	27
14.2	General .....	28
14.3	Construction hold points .....	28
14.4	Alteration to existing Coliban Water assets. ....	28
14.5	Disinfection and water quality testing of mains .....	28
14.5.1	Responsibilities .....	28
14.6	Connection with a shutdown of the main .....	29
14.7	Water shut off period .....	29
14.8	Work on live assets - sewerage connections .....	29
14.9	Hydrant use and cross contamination .....	30
14.10	Trench backfill requirements .....	30
14.11	Working with pipes with asbestos .....	30
14.12	Acceptance testing .....	30
14.12.1	Water supply/recycled water .....	30
14.12.2	Sewer .....	30
14.13	Construction completion .....	31
14.14	Acceptance of Works .....	31
14.14.1	Coliban Water Audits .....	31
15.	Defects liability .....	32
15.1	Auditing .....	32
15.2	End of defects liability period inspection .....	32



15.3	Final completion .....	32
16.	Responding to faults .....	32
17.	Shared assets.....	32
17.1	Coliban Water responsibilities.....	32
17.2	Shared cost assets.....	33
17.3	Non- reimbursable .....	33
17.4	Payment.....	33
17.5	Scope of works .....	33
17.6	Reports required .....	34
17.7	Procurement .....	34
17.7.1	Quotations .....	34
17.7.2	Shared Trenching.....	34
17.8	Consultant fees .....	35
17.9	Specialist Consultant fees .....	35
17.10	Variations .....	35
17.11	General .....	36
17.12	Audit strategy.....	36
18.	Definitions.....	36



# 1. Introduction

Generally, any urban development of land, redevelopment of land or subdivision of land will require the provision of water and sewerage services. In some areas where recycled water is available recycled water may also be a requirement.

In built up areas these services may already be available to the property being developed. However, it is important that a developer contemplating a development project checks that services are available to the site and, if available, they are adequate and have sufficient capacity to provide a service to the developer's proposal.

Developers are required to access the services of a [consultant registered](#) with Coliban Water to undertake design and supervision as required for the particular development.

Developers and consultants can access Coliban Water's GIS Asset Map to determine what services are available. Not all services are suitable for connection due to size or depth and therefore proper investigation will be required.

To determine if the capacity is adequate, developers will need to seek professional advice from a consultant accredited and registered with Coliban Water.

If it is determined that services are not readily available to the site or they need upgrading then arrangements need to be made for the provision of new "developer installed works" to provide the necessary service. The Land Development Manual sets out the process for the provision of new "developer installed works" and conditions for connection to services as well as associated policy.

If it is determined that no new works are required then this is classified as a "non-works" development.

The Land Development Manual details the servicing requirements, design, construction, quality assurance and audit policy for Land Development activities.

The business rules in this manual refer to standard subdivisional developments. Where these provisions are inappropriate for a development, then the requirements for the development will be determined on a case by case basis and specified in the Letter of Conditions issued by Coliban Water.

The Land Development Manual should be read in conjunction with the Letter of Conditions, issued by Coliban Water with each land development project and the Coliban Water current [Schedule of Fees & Charges](#)

This Land Development Manual is subject to review and change. Developers and Consultants are required to ensure they are accessing the current available version.

## 1.1 Intended audience

The Land Development Manual has been written for all engineering consultants, contractors, surveyors, developers, land owners, councils and Coliban Water personnel involved in land development within Coliban Water's coverage area.

# 2. General

Development, for the purposes of this manual, refers to all aspects of any land or building development related to provision of water supply, recycled water supply (where mandated) and sewerage services (including trade waste).

Development in this context may range from large scale residential, commercial or industrial developments (including subdivisions) to individual customers seeking a single water or

sewerage connection. The specific requirements and extent of the process detailed in this manual may vary based upon the size and complexity of a particular development.

If a development requires new works to extend or upgrade water and sewer networks to provide these services to a development, the developer is required to arrange and pay for the construction.

The design and survey of the works are to be undertaken in accordance with Coliban Water's technical requirements, specifications and as set out in a letter of conditions. We use the following criteria to determine the requirements for sewerage, water and recycled water works.

The requirements for servicing a development are described in sections of this manual including:

- Boundary Sewers and Water Mains servicing two developments
- Connections
- Developer Installed Works
- Easements and Reserves
- Existing services
- High rise developments
- Industrial lots
- Multiple unit developments
- Residential lots
- Temporary works

## 2.1 Responsibility for service provision

### Coliban Water

Coliban Water is responsible for providing shared infrastructure assets (such as headworks, treatment plants, and trunk water and sewer mains) with sufficient capacity in accordance with a predetermined servicing plan.

### Developers

Developers are responsible for:

- Providing reticulation assets and the cost of connecting those assets to Coliban Water's infrastructure.
- Paying the costs associated with bringing forward the provision of shared infrastructure assets, if they are required ahead of Coliban Water's asset development sequence.

## 2.2 New Customer Contributions

The Essential Services Commission (ESC) is Victoria's water industry regulator. The ESC approves standard rates for New Customer Contributions (NCC, also known as developer charges).

NCCs are a one-off, upfront charge applied under section 269 of the *Water Act 1989* to all new allotments connected (or to be connected) to Coliban Water's water, sewer or recycled water networks. Payment of NCCs can be initiated by a new development, subdivision or application to connect.

NCCs require the owner to contribute to the costs of Coliban Water providing existing and incremental infrastructure and services for the supply of water, sewer or recycled water

networks (as applicable) to account for the increase in use of these services resulting from additional lots or further development of existing lots.

NCCs are usually paid by the developer during the subdivision process as a condition of obtaining Coliban Water's consent to the subdivision. However, there are many existing vacant blocks where NCC fees have not been charged. In those cases, NCCs are applied when property owners commence building or further development (including subdivision) or an application for connection is made.

Because NCCs are applied to cover the increase in services that result from new developments, Coliban Water can specify separate connections and apply NCCs accordingly to a separate occupancy erected on an existing property with existing water or sewer connections.

**Non-standard water NCCs** are applied to specialised non subdivisinal or higher water usage developments and are charged based on an equivalent lot calculation. This is a measure of the demand that a connection will place on Coliban Water infrastructure in terms of water consumption and discharge compared to an average residential dwelling. A single equivalent residential lot will utilise a 20mm water tapping & meter. NCC charges are calculated on meter size. Please refer to our [Schedule of Fees & Charges](#)

These include but are not limited to:

- Caravan parks
- Commercial or industrial developments
- Hospitals or private hospitals
- Nursing homes
- Reserves or public open space
- Schools or other non-rateable properties
- Sporting grounds/complexes

**Non-standard sewer NCCs** are calculated where the application of a standard NCC for a single lot, occupancy or dwelling doesn't apply due to the nature and/or locality of the development. Like standard NCCs, non-standard NCCs are applied to account for the additional load on Coliban Water's infrastructure and services resulting from a new development. Coliban Water calculates the non-standard sewer NCC using the fixture unit rating method which exists within AS/NZS3500 plumbing standards. It is a numerical calculation of the fixtures within a building to determine their loading on Coliban Water systems. An equivalent residential connection rating is 30 points for the purpose of calculating the non-standard NCC.

[Coliban Water NCC Negotiating Framework](#) applies where the standardised NCC Charge is **not** applicable. Non-traditional sewer servicing strategies where Pressure Sewer servicing may initiate a negotiated NCC. The negotiated NCC will be required to include provision of pressure sewer system supply and installation to all new lots created.

Please contact Coliban Water with details of your proposed development for confirmation of the New Customer Contribution (NCC) that may apply to your commercial or non-subdivisinal development.

The Essential Services Commission website has [information on the pricing determination for New Customer Contributions](#).

## 2.3 New Customer Contributions exemptions

New Customer Contributions are not payable for:

- Lots defined on the plan of subdivision as staged or super lots until that area is further developed, or



- Land set aside for reserves, retarding basins and main road widening that does not need a water supply, recycled water supply or sewerage service at the time of subdivision.

If a water supply, recycled water supply or sewer connection point is requested at a later date due to development, the NCCs are charged and paid at the prevailing rate.

## 2.4 Reimbursable works (Shared Assets)

Coliban Water funds some assets in accordance with the Essential Services Commission (ESC) guidelines. Where a developer/owner has to provide a pipeline greater than the reticulation size, Coliban Water will reimburse the increased sizing of these shared distribution assets.

Coliban Water must make sure that reimbursable (shared asset) works are designed and constructed in accordance with the relevant standards, and as efficiently as possible. To achieve these objectives, the developer must:

- Enter into an agreement for the provision of required works.
- Construct the works in accordance with the asset requirements specified by Coliban Water.
- Make sure the consultant follows Coliban Water's design process.
- Involve Coliban Water actively in the design and construction procurement phases of the development works.

## 2.5 Temporary works

Coliban Water will not normally support the installation of temporary works however may consider applications or justifications on a case by case basis.

Where temporary works are requested, and approved by Coliban Water, they are to be paid in full by the owners/developers. Coliban Water will not be involved in any cost sharing arrangements.

Before any temporary works are installed, the owners/developers must:

- Determine the development intentions of adjoining land owners so that temporary works are sized appropriately.
- Determine any cost sharing arrangements to be made between the owners.
- Provide land for temporary works.
- Agree to the specific conditions provided by Coliban Water that may also include the reimbursement to Coliban Water of any additional operational costs.

## 2.6 Unnecessary works

Owners need to pay the full cost of any works that Coliban Water considers to be in excess of those required to provide an efficient system. Reimbursements do not apply to these works.

Unnecessary increases to infrastructure sizing without Coliban Water's approval is not permitted.

# 3. Existing Services

## 3.1 Existing service-realignment

Where an existing service is to be realigned due to redevelopment or changes to the subdivision of land, the property owner is liable for all associated costs of decommissioning, removal and construction of realigned assets in accordance with Coliban Water's requirements.

## 3.2 Existing service abandonment

If a service needs to be abandoned due to redevelopment or changes to the subdivision of land, the property owner:

- Must pay all associated costs including for removal and decommissioning.
- May have to pay the undepreciated value of the service being abandoned and removed.

## 3.3 Existing combined sewerage drains

Where a development's parent lot is currently serviced by a combined drain with another existing lot, the combined drain cannot be used to connect additional lots. The developer must provide separate connection points to each of the new lots. This may require sewer main extension which will be at the developer's expense.

## 3.4 Existing private water services

Development of lot(s) currently connected to a private water service may only proceed once the private service has been disconnected at the water main. Provision of reticulated water to the development shall be in accordance with Coliban Water's requirements. Coliban Water does not maintain private services and does not guarantee the service of properties connected by a private service as this can only be guaranteed at the point of connection to a Coliban Water asset.

Where the development contains existing private or combined water connections to properties outside the proposed development, reticulated water services will be provided to serve these properties at the developer's expense.

## 3.5. Coliban Water Managed Land & Rural Channels

### 3.5.1. Rural Channels

The developer may be required to enter into an agreement with Coliban Water for the underground piping of a section of Coliban Water rural water channel located adjacent to the development site. This includes piping design, construction methodology, fencing and rehabilitation of the site. Alternative agreement may be for the provision of a buffer zone within the development site to cater for drainage to protect the development from flooding from the rural channel or to divert flow from the development site entering Coliban Water managed land or the rural channel.

### 3.5.2. Coliban Water Land

Where a development has the potential to impact on, or be impacted by adjacent Coliban Water land, the developer is required to discuss and reach agreement with Coliban Water on avoiding and mitigating impacts. The impacts may be on stormwater drainage, vegetation, channels and other infrastructure.

- Discussing the impacts as early as possible in the planning phase of a development will allow for the developer to obtain the required permits, approvals and referrals in a timely manner. These may include, but not be limited to:
- Planning permits and offsets for vegetation removal
- Permits to remove protected species under the *Flora and Fauna Guarantee Amendment Act 2019*
- For crown land, consent from the responsible land manager
- For crown land, consents and approvals under the Land Use Activity Agreement being part of the Recognition and Settlement Agreement with the

Dja Dja Wurrung Clans Aboriginal Corporation, and the Taungurung Clans Aboriginal Corporation under the Traditional Owner Settlement Act 2010.

- Cultural Heritage Assessments

### 3.5.3. Vegetation Impacts

Where developments impact on vegetation on Coliban Water owned or managed land all necessary permits, approvals and referrals must be obtained prior to works commencing.

Where development on the owner's land impacts on the root zones of trees on adjacent Coliban Water land, a planning permit and arborist's report may be required. For example, a site cutting may remove a substantial volume of tree roots, undermining stability and stressing or killing the tree.

Impacts to native vegetation on Coliban Water land are to be assessed by a DELWP registered vegetation assessor under the current native vegetation regulations. An arborist report may also be required if tree health and safety are compromised.

Where native vegetation has been removed or impacted on Coliban Water land without the appropriate permits or approvals they must be obtained retrospectively and proof of allocation of offsets must be provided to Coliban Water. If trees on Coliban Water land are destabilised due to development works the developer will be liable for any works to mitigate safety risks.

### 3.5.4. Bushfire Management Overlay & Public Open Space

Applications must not include Coliban Water owned or managed land as defendable space under the Bushfire Management Overlay. They may also not use this land to meet public open space, or subdivision amenity requirements as use and access may change over time.

### 3.5.5. Planting Over Coliban Water Assets

The developer is required to reach agreement with Coliban Water on any vegetation planted over Coliban Water assets. Vegetation planted over Coliban Water assets can be removed in the event of an emergency and for maintenance without compensation to the owner?

## 4. Residential development or subdivision

Any landowner wishing to subdivide their land will require a planning permit from Council. As a referral authority, Coliban Water will respond to the responsible authority detailing requirements for the provision of water, sewer and recycled water (where mandated or otherwise incorporated) services to each lot being created. Areas being developed adjacent to the Coliban Water rural channel system or where it passes through the subject property may also include conditions requiring the underground piping of affected sections.

### 4.1 Sewerage requirements

The condition requiring sewer services to all lots may be withdrawn where a local council or the Environment Protection Authority (as the case requires) advises us in writing that it is satisfied that all domestic sewerage can be treated adequately and retained within the boundaries of each lot without danger to public health or the environment and the use is economically sustainable over the lifetime of the septic systems.

Whilst management of septic systems is the responsibility of the landowner, there is a community cost borne by council to monitor systems through their Domestic Wastewater Management Plan and a longer term benefit may be to provide connection to sewerage services at the time of subdivision.

The relevant clauses in the State Environmental Protection Policy (SEPP) for Victorian waters must be considered along with relevant ministerial guidelines and planning policy. The Victorian Planning Policy applied through municipal planning schemes may also require connection to services regardless of ability to treat wastewater onsite.

## 4.2 Potable Water Requirements

Potable water is required to be provided by the developer to service any new lots created within a subdivision or previously unserviced lot being further developed according to The Victorian Planning Scheme section 32 and 56.07.

Please refer to section 11 for details about connections to Coliban Water's sewer, water or recycled water services and section 12 for details about Coliban Water's Developer Installed Works process and requirements.

## 4.3 Recycled water requirements

Recycled water is required to be provided by the developer to service any new lots created within a subdivision or previously unserviced lot being further developed. This requirement applies to areas mandated for connection to recycled water services.

Please refer to section 11 for details about connections to Coliban Water's sewer, water or recycled water services and section 12 for details about Coliban Water's Developer Installed Works process and requirements.

## 4.4 Super lots

For super lots that are unlikely to be subdivided further, or may not be developed for a significant period of time, we may require the sewer, water and recycled water networks to be extended the full length of the super lot. This will be considered on a case by case basis and confirmed within the Letter of Conditions provided by Coliban Water.

## 4.5 Separate Occupancy - Same Lot

A separate occupancy on an existing serviced lot including non-government authority supplied dependent person's units will be required to make application to connect separately to Coliban Water Sewer and Water services. Refer to section 2.2 New Customer Contributions (NCC's), section 10 Connections and Definitions.

# 5. Industrial/Commercial

Any landowner wishing to subdivide their land will require a planning permit from Council. As a referral authority, Coliban Water will respond to the responsible authority detailing requirements for the provision of water, sewer and recycled water (where mandated) services to each lot being created.

Areas being developed adjacent to the Coliban Water rural channel system or where it passes through the subject property may also include conditions requiring the underground piping of affected sections.

Changes to usage altering demands on our services to existing industrial/commercial developments will also require application to Coliban Water.

## 5.1 Sewerage requirements

Refer to residential section 4.1.

## 5.2 Potable water requirements

Refer to residential section 4.2.

### 5.3 Recycled water

Refer to residential section 4.3.

### 5.4 Trade waste

Coliban Water sewers can accept only limited amounts of trade waste into its sewers in addition to normal domestic waste. The developer must not assume that, by entering into a development, Coliban Water has agreed to accept trade waste discharge into its sewers.

The developer must notify Coliban Water if any prospective purchasers intend to discharge trade waste from the development.

Trade waste discharges must comply with Coliban Water's quality and quantity standards. Business owners operating in the development must apply to Coliban Water for approval to discharge trade waste. Coliban Water will supply details of its quality and quantity standards for trade waste at this time.

A copy of our Trade Waste Policy and Guidelines and Trade Waste application forms can be downloaded [from our website](#).

### 5.5 Water tapplings

For any tapplings greater than 20mm an application must be lodged prior to construction of the tapping. If these services are to be provided at the time that the reticulation mains are constructed, then Coliban Water approval must be obtained prior to construction. Increased annual water access charges will apply for services with a meter greater than 20mm.

Access a copy of our current [Urban Customer Charter](#) and [Schedule of Fees & Charges](#).

Please refer to Section 11 for details about connections to Coliban Water's sewer, water or recycled water services.

#### **NOTE:**

*Water Act 1989*, Section 165 (5) Subsection (4) (a) does not require an Authority to make sure that water pressure is adequate for firefighting.

### 5.6 Backflow prevention

A Backflow Prevention Device (BPD) for containment protection must be provided on the water supply connection to all residential, industrial/commercial properties regardless of the proposed water service size. The selection of the backflow prevention device and the installation shall be in accordance with the Plumbing Standards Regulations AS/NZS3500 (Victoria).

Coliban Water must receive specific details of the Backflow Prevention Device (BPD) installed industrial/commercial properties for monitoring of ongoing compliance.

## 6 Multi-Unit Developments

### 6.1 Standards

For both residential and industrial/commercial multiple unit (multi-unit) developments, developers will be advised through early consultation or via Coliban Water's Letter of Conditions to construct works specific to their development proposal either or both:

- To Water Services Association of Australia (WSAA) and Coliban Water standards with Coliban Water owning, operating and maintaining the assets, or
- To AS/NZS 3500 Acceptable Solutions, or AS/NZS 3500 Performance Requirements, with the Owners Corporation owning, operating and maintaining the works.

The developer must apply the confirmed standard to services infrastructure, agreed by Coliban Water and specified within our Letter of Conditions.

**NOTE:**

It should be noted that potential or future subdivision of such developments will require all water and sewer infrastructure to comply with **WSAA** standards and addendums or supplements to Coliban Water requirements.

Where the developer construct works, which the Owners Corporation or property owner will own, operate and maintain, Coliban Water will not be responsible for the level of service or quality of assets inside the parent property boundary.

The developer is responsible for engaging appropriately qualified professionals to design and install the appropriate private works for water, recycled water and sewer. For this type of servicing arrangement, water quality, pressure and flow will be guaranteed only at the parent property boundary.

The developer must install meters as defined in our Letter of Conditions of Connection. In all cases, on completion of the works, the developer must supply Coliban Water a record of each meter location.

**NOTE:**

Fire hydrants and services are to be designed and installed to meet requirements and remain the responsibility of the property owner or Owners Corporation.

*Water Act 1989*, Section 165 (5) Subsection (4) (a) does not require an Authority to make sure that water pressure is adequate for fire-fighting.

## 6.2 Dual occupancy without an Owners Corporation

For dual occupancy subdivisions without an Owners Corporation, it is mandatory for the water and the recycled water supplies to have a separate tapping and 20mm water services to each individual lot or unit. The two water meters should be located within two metres of the parent property boundary.

## 6.3 Existing multi-unit developments

All high rise developments must have Coliban Water sewerage, water and recycled water services (where available) to the property boundary.

The maintenance, operation and replacement of the internal plumbing is the responsibility of the Owners Corporation or the owners in common.

## 6.4 Water tapplings

For any tapplings greater than 20mm an application must be lodged prior to construction of the tapping. If these services are to be provided at the time that the reticulation mains are constructed, then Coliban Water's approval must be obtained prior to construction. Increased annual water access charges will apply for services with a meter greater than 20mm. Pressure and flow to support a larger tapping is not assured.

Coliban Water will confirm in our letter of Conditions of Connection what additional requirements may be necessary to be funded and installed by the developer.

See our current [Schedule of Fees & Charges](#).

## 7. High rise

Works required to service each unit within a high rise development will be constructed to a standard that the Owners Corporation, or property owners, will own, operate and maintain. The work done to provide a service to each unit must:

- Meet the plumbing regulations,
- Be to the satisfaction of the Plumbing Industry Commission, and
- For water supply, be to the satisfaction of the relevant fire authority.

Coliban Water will not be responsible for the level of service or quality of assets inside the parent property boundary. The property owner has a responsibility to engage the appropriate professionals to design and install the private works for water, recycled water and sewer.

### 7.1 Pressure and flow

Coliban Water guarantees water quality, pressure and flow only to the meter which is typically at ground floor level of each development. It may not be possible to deliver the same level of service to the upper floors; as such an alternative solution is required. Also, fire service requirements as defined by the CFA for the development may demand a greater volume or pressure of water than is available in the water supply network.

Applications for a pressure and flow information request are available via our [Pressure & Flow Test Page](#) on our website.

Options available are:

- Hydrant flow and pressure field test
- Hydraulic model simulation
- Both hydrant flow pressure test and hydraulic model simulation

Typically, developers have three options to deliver acceptable pressures and flows to their developments. They can:

- Install tank storage on the roof of the building which is supplied from a pump on a lower floor level,
- Install tank storage on the ground floor level which feeds a pump also located on the ground floor level, or
- Install an inline booster pump that is connected directly to the water supply network. Coliban Water must be consulted for any application that may require a booster pump. This approach may not be acceptable to Coliban Water or may include some site specific conditions.

#### **NOTE:**

*Water Act 1989*, Section 165 (5) Subsection (4) (a) does not require an Authority to make sure that water pressure is adequate for fire-fighting.

### 7.2 Inline booster pump

Please refer to item 7.1. Analysis of inline booster pumps has found that many are oversized and/or incorrectly installed. This can lead to an increased risk of asset failure, supply deficiencies for surrounding customers, and ongoing maintenance problems.

A developer must have Coliban Water's written approval before installing an inline booster pump or an assembly allowing Fire Service pump units to connect. Coliban Water's approval of the application is subject to each of the following conditions:

- Additional demands the development will place on the water supply network must not compromise the service levels of surrounding customers.
- The pumps' operation must not have a detrimental impact on Coliban Water's assets (e.g. pressure spikes from pump starts and stops).
- The inline booster pump must comply with Coliban Water's requirements upon assessment.
- Pumped fire services connected to the water supply network are designed in accordance with the Fire Code and pressure and flow advice provided by Coliban Water.
- The developer agrees that an Inline Booster Pump Agreement encumbrance will be placed on the property.
- Flow limiting devices may form part of the design and installation acceptance by Coliban Water.

### 7.3 Metering

The developer is responsible for engaging appropriately qualified professionals to design and install the appropriate private works for water, recycled water and sewer. For this type of servicing arrangement, water quality, pressure and flow will be guaranteed only at the parent property boundary.

The developer must install meters as defined in our Letter of Conditions of Connection. In all cases, on completion of the works, the developer must supply Coliban Water a record of each meter location.

Fire service design should consider the fire authority (CFA) requirements for hydrant or other service locations. The developer will be required to reach agreement with Coliban Water regarding the conditions of connection.

#### **NOTE:**

To service other nearby developments, part of the infrastructure may have to be installed so that it can be vested in Coliban Water. In these cases, the property owner must install the water main, recycled water main or sewer to WSAA and Coliban Water standards.

### 7.4 Private plumbing works

Where the Owners Corporation is to own, operate and maintain the water, recycled water or sewer service and the development is fronted by a water main, recycled water main and/or serviced by a sewer main, the supply is usually provided by a single tapping or one sewer connection point (requests for individual tapplings or connection points are assessed on a case-by-case basis).

The Owner's Corporation is responsible for the maintenance, operation and replacement of any private water services.

### 7.5 Existing high rise developments

High rise developments that already have water, recycled water and/or sewerage services do not require the provision of Coliban Water owned water mains, recycled water mains or sewerage services for a planning permit for the subdivision of the developments to be issued. Further development of the subject property will be assessed by Coliban Water and conditions specified for any additional requirements.

The Owner's Corporation or the owners in common, are responsible for the maintenance, operation and replacement of internal services. These internal services are commonly known as private plumbing works.



## 7.6 Water tapplings

For any tapplings greater than 20mm an application must be lodged prior to construction of the tapping. If these services are to be provided at the time that the reticulation mains are constructed, Coliban Water approval must be obtained prior to construction. For services greater than 20mm it is likely increased annual water access charges will apply. Pressure and flow to support a larger tapping is not assured. Coliban Water will confirm in our letter of Conditions of Connection what additional requirements may be necessary to be funded and installed by the developer.

See our current [Schedule of Fees & Charges](#).

## 8. Boundary sewers and water mains that service two developments

If the development works include water/recycled water mains or sewers that are not considered shared assets but will supply or service other land, the owner is responsible for arranging any cost sharing agreement with the adjacent property owners.

Coliban Water will not be involved in any cost-sharing arrangements.

## 9. Easements and Reserves

Easements must be established on the Plan of Subdivision to cover any sewerage services, rural water channels or other Coliban Water assets that are located on or proposed to cross private land. All easements need to comply with Section 12 of the *Subdivision Act 1988*.

The minimum easement width for a sewer main is 2.5 metres and if the easement is shared with another service, then the minimum width is 3.0 metres. The easement boundary is to be at least one metre from the nearest edge of the sewer pipe.

- Purpose – Pipelines or Ancillary Purposes
- Origin – This Plan Section 136 of the *Water Act 1989*
- Land Benefitted/In Favour Of – Coliban Region Water Corporation

Coliban Water does not allow water or recycled water services to cross or be located on private land.

Reserves may need to be established where the proposed sewer, water or recycled water service crosses land owned by another Government authority.

## 10. Connections

### 10.1 Connection requirements

Developers who want to connect to our water services or discharge into Coliban Water sewerage systems must have Coliban Water's approval before starting any work.

Developers who want to alter or remove fixtures on Property Service Drains must have Coliban Water's approval.

### 10.2 Applications and fees

#### 10.2.1 Water

Connections to our water supply system is completed by Coliban Water's approved contractor. This includes tapping of the water main, installation of the property service connection and

supply and installation of the water meter and digital device used for remote meter reading. Application can be made by completing the online form located on the Coliban Water website:

### [Connect to drinking water](#)

An application fee will be included on the first water account after lodging the application.

Water access charges will be applied from the date that connection is completed by Coliban Water's contractor. Please see our [Schedule of Fees & Charges for information about current billing charges](#).

## 10.2.2 Sewer, Fire Services, Alterations, Renovations, Unserviced structures

Applications to amend your property sewer service which may be relocation of the existing sideline connection or additional connection point required for renovation or other works can be made directly with Coliban Water.

Applications are also required for unserviced structures such as a shed or carport.

These applications can be made either by you, your builder or plumbers performing the work for you. Our [Connect a property](#) online form can also be accessed via our website. Sewer connection can also be selected within the 'Connect to drinking water' form.

Any application fee will be described within the online form depending on the type of application being made.

Sewer access charges will begin to apply 90 days after the date of application approval for new connections. Please see our current [Schedule of Fees & Charges](#).

## 10.3 Conditions of Connection

Where services are available currently and they have sufficient capacity to enable the new development to connect, Coliban Water issues Conditions of Connection. Generally, these conditions set out the required water meter arrangements and define how a connection is to be made to the existing water main or sewer pipes.

The developer must agree to these conditions, and pay all charges and fees, before the connection can be made. If New Customer Contribution charges (NCCs) applicable to the property have not been paid previously (for example as a condition of subdivision), NCCs must be paid before consent to connection will be given. Refer to Section 2.2 for more information on NCCs.

Only licensed plumbers may complete this work.

Coliban Water's General Conditions of Connection and Specific Conditions of Connection contain all the conditions the property owner must comply with when connecting to Coliban Water's sewer and water infrastructure.

## 10.4 Standards

Connection standards and regulations:

- Plumbing Regulations – AS/NZS3500, National Plumbing & Drainage Code
- Sewerage Code of Australia WSA02-2002-2.3 – Melbourne Retail Water Agencies Edition
- Coliban Water's Supplement to Sewerage Code WSA 02-2014-3.1 MRWA edition
- WSA 07-2007-1.1 Pressure Sewerage Code of Australia
- Water Supply Code of Australia WSA 03-2011-3.1 - Melbourne Retail Water Agencies Edition – Version 2.

- Coliban Water Supplement to Water Supply Code WSA 03-2011-3.1 MRWA

## 10.5 Sewer connections

Generally, only one property branch per property is permitted.

100mm is the minimum size for property branches, with the required size based on AS/NZS3500, National Plumbing and Drainage Code.

The maximum size of any sewer pipe a property connection can connect directly to is 225mm diameter as per item 6.2 of Coliban Water's Supplement to the Sewer Code.

All property branches and connection points must be clear of buildings. See [Buildover Consent Guidelines](#) for further information.

Property connection branches are to extend a minimum 600mm past the property boundary they service and require 1.0m horizontal clearance from side boundaries.

An existing connection point may be relocated at the property owner's cost by a Licensed Plumber subject to Coliban Water approval.

Where a gravity connection is not possible Coliban Water may permit a pumped connection subject to specific conditions. We require consulting engineers on behalf of developers to demonstrate they have considered all possible options prior to seeking permission for alternative servicing solutions.

A Negotiated NCC will apply to all pressure sewer connections approved from 1 April 2021. This requires developers to fund the onsite sewer assets required to facilitate connection to the reticulated pressure sewer network constructed by the developer. This includes provision for onsite tank and control system. Connection of the property drain to the pressure sewer tank remains the responsibility of the property owner. Refer to Section 2.2 for more information on NCCs.

Our [Pressure Sewer System Planning & Development Guidelines](#) can be accessed via our website.

### 10.5.1 Plumber Responsibilities

Plumbers must not connect to the sewer without obtaining a Plumbing Industry Commission (PIC) number from Coliban Water.

Coliban Water will not consent to connect prior to practical completion of any mains extension to service a new development.

Within seven days of completing any major drainage plumbing work, plumbers must provide Coliban Water a revised Property Sewerage Plan (PSP). This is a legal obligation.

## 10.6 Water and recycled water connections

Connection to an existing Coliban Water main is known as a tapping.

A dry tapping is used in new subdivisions where the service pipe to the property is installed at the time that the water and recycled water mains are being constructed. These pre-laid property connections are generally not acceptable to Coliban Water. Written permission is required from Coliban Water if it can be demonstrated that specific circumstances may apply to a proposed development.

A wet tapping is a new connection to a main that contains potable, recycled or in few instances raw water and is the generally accepted approach within the Coliban Water service area.

Plumbers or specialised contractors complete these new for developer.

## NOTE:

Some water mains are identified as non-tapping mains that Coliban Water will not consent to a connection.

## 10.7 Responsibilities

The owner is responsible for maintenance of connections over 50mm and all fire services including domestic services connected to the property fire service.

Coliban Water is responsible for all water meters and most connections up to 50mm.

New fire sprinkler services can be connected separately subject to there being no change to the existing connection and all Plumbing Regulations in accordance with AS/NZS3500 are met.

## 10.8 Connection standards

All connections must be:

- Positioned at 90 degrees to the tapping on the water main,
- In a straight line from the stop valve at the main to the stop valve at the meter, and
- Clear of driveways and crossovers.
- Coliban Water's default meter position is centre front of the lot within 2.0 metres of the property boundary.

An approved water meter must be fitted to all connections.

A Backflow Prevention Device protects water in Coliban Water's mains from contamination. A Backflow Prevention Device (BPD) for containment protection must be provided on the water supply connection to; all residential, industrial/commercial properties regardless of the proposed water service size; all residential properties serviced by a 32mm or larger supply; any premises that requires contaminant protection.

Backflow Prevention Devices shall be installed and comply with requirements detailed within AS/NZS3500 National Plumbing and Drainage Code.

If water supply pressure at the outlet of the water meter is more than 500Kpa a pressure limiting valve may be required and specified within our Letter of Conditions of Connection.

Individual occupancies on a lot must be separately metered.

Below is a guide to determining connection requirements, together with the information needed to process applications.

Coliban Water requires individual connections for sewer, water, and recycled water (where available). Separate water metres are therefore required for each separate occupancy on an individual lot or multi-unit development.

Coliban Water requires all dwellings on a lot to be individually metered. Coliban Water may consent to a larger tapping to the main with a stop valve and individual manifold mounted meters to service each of the dwellings. Specific requirements will be confirmed in Coliban Water's letter of consent to connect for each applicant.

The following table can be used as a guide to tapping and meter sizing requirements. These must be confirmed by your plumbing contractor prior to commencement of works.

Property Type	Tapping Size	Meter Size Each Occupancy	Information Required with Application
Dual Occupancy	2 x 20mm	20mm	Application form, fee & building plans
3 Multi Units	3 x 20mm or 1 x 25mm	20mm	Application form, fee & building plans
4-5 Multi Units	32mm	20mm	Application form, fee & building plans
6-9 Multi Units	40mm	20mm	Application form, fee & building plans
10 + Multi Units	Applicant to advise requested type & size, subject to Coliban Water approval		Application form, fee & building plans, hydraulic plans & computations

If more than 10 units are proposed then the developer will be required to reach agreement with Coliban Water regarding the conditions of connection.

Multi-unit developments will generally be serviced by one connection to either the water and recycled (where available) water main, which will provide for separate fire and/or general services within the development. Additional connections may be approved for fire sprinkler services, and other special circumstances.

Applications for property service pipes over 50mm need to be assessed by Coliban Water for engineering and planning purposes. Applications must specify required minimum, maximum and nominal flow rates.

### 10.8.1 Recycled Water Connection

Properties within a mandated recycled water area must connect to Coliban Water's recycled water network. Recycled water connections must be completed in accordance with Water Supply Code of Australia WSA 03 2011-3.1, MWRA Water Metering & Servicing Guidelines and [Conditions of connection for dual pipe areas](#).

## 11. Land Development - Developer Installed Works

### 11.1 What are Developer Installed Works?

Coliban Water may require a developer to construct sewer, water or recycled water mains (assets) to provide water and sewerage services to the new properties created by the development.

If a developer plans to subdivide or build, they must apply to Coliban Water to confirm if Developer Installed Works (DIW) are required. If DIW are required we prepare a Letter of Conditions that states what works are required to develop the land.

#### NOTE:

It must not be assumed that Coliban Water is committing to accepting any future trade waste discharge into sewers.

### 11.2 Phases

There are six Developer Installed Work phases:

1. Engage registered consulting engineer
2. Preliminary design

3. Verified design
4. Construction
5. Practical completion
6. Defects liability

### 11.3 Who pays for the works?

In most cases the developer pays for all works including temporary works. We will reimburse the developer for works they have built according to our shared asset procedure if:

- Coliban Water has requested that the developer build a main that is larger than what is needed for just the developer's development, or
- Coliban Water has requested the developer to install other assets on their behalf during construction works. This is typically infrastructure required to service future growth in Greenfield development areas.

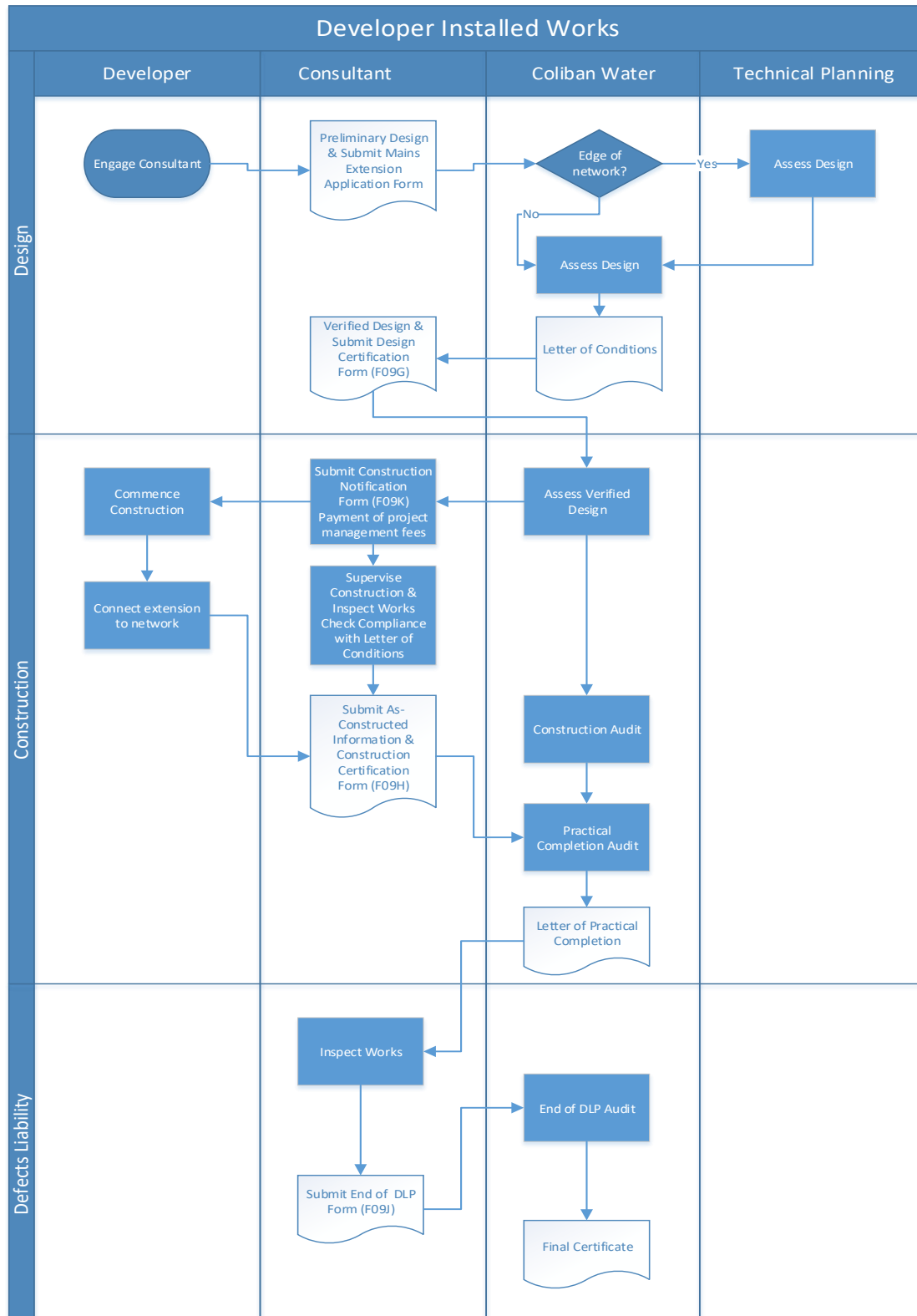
We will state in the Letter of Conditions, what additional works may be required and will initiate discussions with developers through their consultants to agree the best approach.

### 11.4 Registered consultants

The developer needs to engage a Coliban Water [Registered Consultant](#) to design and audit installation of any works. Registered Consultants have the knowledge and experience to design, audit and organise the construction of the assets to Coliban Water standards.



## 12. Overview



The consultant prepares a preliminary design of the services required to provide water, sewer or recycled water mains to service the proposed development for submission to Coliban Water. They should seek asset plans or concept plans from Coliban Water prior to commencing this preliminary design to establish the most appropriate existing assets to connect to.

The consultant should provide a full development plan and individual designs for each proposed development stage. The following links our online Asset Plans and contact details to obtain printed copies. [Locating Assets](#)

The consultant designs the water, recycled water and sewer mains required to service the proposed development in accordance with the relevant standards and Coliban Water's supplements and addendums.

## 12.1 Reference documents

Registered consultants are required to have access to the appropriate Water Services Association of Australia (WSAA) Codes applicable for servicing within Coliban Water's region. Links to these, Coliban Water Addendum's, Supplements and Guidelines are available via the [Builders & Developers Page](#) of our website.

On completion of the preliminary design, the consultant submits the design to Coliban Water.

## 12.2 General

### 12.2.1 Letter of Conditions

Coliban Water prepares a Letter of Conditions which sets out the responsibilities of the developer, consultant, contractors and Coliban Water for the design of the developer installed works. Developers must use a consultant registered with Coliban Water to design the works.

A Coliban Water Letter of Conditions remains valid for a period of nine months. If construction has not commenced within 9 months of the date of these conditions then the application is considered void and a new preliminary design will need to be submitted.

After reviewing the design to ensure it complies with the relevant codes, standards and specific requirements noted in the Letter of Conditions, the consultant lodges the verified design with the Design Verification form (F09G).

### 12.2.2 Standards

Developer works designed in accordance with the relevant MRWA Editions of the WSAA Codes and Coliban Water supplementary standards and specifications are acceptable.

### 12.2.3 Materials

Unless otherwise specified in the Letter of Conditions or subsequently approved by Coliban Water, all materials used in the development works must be approved for use by Coliban Water. The list can be accessed via the [MRWA Products Portal](#) and selecting Coliban Water for your search.

## 12.3 Design solution

Coliban Water actively encourages developers and consultants to work with us to offer creative and innovative solutions relating to the concept, design and construction of water, recycled water supply (if applicable) and sewerage infrastructure assets.

The design solution must:

- Be based on sound engineering principles,
- Provide effective and economic alternatives over the life of the asset,
- Provide the best value "whole of life" option that provides surety of ongoing effective and efficient performance of the system, and
- Include any special design parameters for particular works that Coliban Water has included in the Letter of Conditions.



### 12.3.1 Sewerage works

Unless otherwise specified in the Letter of Conditions, the sewerage works design must also provide:

- Sufficient capacity for the catchment upstream of the development, and
- Gravity control of the catchment upstream of the development.
- Gravity control of each lot created within any proposed subdivision.

### 12.3.2 Sewer lot control

Sewer works by gravity. Usually a sewer connection point (branch or sideline) is provided to the lowest point of a lot ensuring that any part of the lot can contain plumbing fixtures. It is important to determine if the existing sewer branch will be able to control the proposed development. If it cannot then a new sewer branch or sewer mains extension may be required.

The developer must obtain Coliban Water's approval if the design proposes to provide any lot with only limited gravity control. Lots approved for limited gravity control must have the area of control identified on the design drawings. Advice detailing the building envelope should also be included on the property title to ensure future purchasers are fully aware of its impact on their proposed building or development.

### 12.3.3 Sewer property connection points

- Property Connection Sidelines are to be a maximum of 3m in length unless authorised by Coliban Water
- Property connections are to terminate a minimum of 600mm within the Lot it is servicing
- Where property connection sewers are to be constructed adjacent to storm water drains, the property connection shall be extended a minimum of 300mm beyond the storm water drain or to the edge of the easement, to eliminate the future need to construct the private property drain beneath the storm water drain
- Property connections are to maintain a minimum of 1.0m clearance to the side boundary
- Buildings or works over a property connection sewer is not permitted
- The property connection riser is to be extended to the surface and capped with a light concrete cover
- Works adjacent require a minimum 1.0m horizontal clearance from the centre of the property branch or be located outside the easement (whichever is greater)

### 12.3.4 Water

Successive shutoff blocks on a single source of supply are not allowed. The developer must provide either:

- A valving arrangement for two directional supply, or
- An alternate supply to the development.

At the completion of all stages of the development, the number of properties not supplied by an alternate water supply when a shut off block is isolated must not exceed 25.

### 12.3.5 Recycled Water

Coliban Water has a number of areas mandated for recycled water; however, the recycled water network has not yet been expanded to all the areas.

### 12.3.6 Temporary cross connections

Developers must not install any temporary cross connections between our water and recycled water networks (TCCs) without Coliban Water's permission. The Letter of Conditions will specify if a TCC is to be designed and constructed, and its location. Unless it is specified in a later Letter of Conditions, the developer must not install any other temporary cross connections for that estate.

When designing and constructing the TCC the developer must:

- Comply with Coliban Water's standard drawing for TCCs,
- Include a RPZD backflow prevention device, and
- Notify the Coliban Water Operations Team at least one week before installation.

When the developed estate is in a position to access the live recycled water network, the developer must:

- Contact the Coliban Water Operations at least six weeks before removal of the TCC is required to arrange the removal by Coliban Water or its contractors,
- Include a "missing link" in the network before the TCC is removed, and
- Make sure only Coliban Water removes any temporary cross connection.

### 12.4 Design coordination

The consultant is responsible for coordinating the design of the works with any works, operations and services involving Coliban Water.

This responsibility extends to coordination with councils, VicRoads, utilities and other authorities or individuals who may have a direct or indirect interest in the construction and location of the proposed water or recycled water supply or sewerage works.

Any requirements that affect the construction methods must be included on the design drawings.

### 12.5 Design drawings

The verified design drawings must:

- Specify the standards or engineering concept used to design the works.
- Include any requirements that affect the construction methods.

### 12.6 Lodging the design

At least five (5) days before starting construction of the development works, the consultant must lodge a Design Verification Form (F09G) along with the verified design.

The form must include:

- The full set of design documents,
- The design plans (in PDF format),
- A copy of any dispensation requests and Coliban Water's approval, and
- The registered consultant's nominated representative signature.

This form and/or the Letter of Conditions set out any additional documentation that is to be lodged at this time. If the design of the development works changes, the consultant must make sure that they provide Coliban Water with the most recent version of the design documents at least five days before construction begins.

## 12.7 Auditing the design

Coliban Water may audit the submitted design. We will inform the consultant of any observations and/or non-conformances that need to be addressed.

Coliban Water reserves the right to conduct design audits at any time during the life of the development works project.

# 13 Pre-construction

## 13.1 Overview

During the pre-construction phase the consultant notifies Coliban Water of their intention to start construction of the assets.

## 13.2 Lodging construction notification

The consultant must lodge a Construction Notification Form (F09K) signed by the consultant's nominated representative. The form must include:

- Consultant company name
- Coliban Water reference (ME) number
- All supporting documentation
- Contractor details
- Contact details
- Construction commencement date and planned duration
- OH&S section identifying potential confined spaces, SWM's or asbestos pipe works. Refer to section 14.11 for further detail about working with asbestos pipes

## 13.3 Auditing

Coliban Water may choose to audit the construction of the development works. The developer and/or consultant or contractor will be informed of any observations and/or non-conformances that need to be addressed.

# 14 Construction

## 14.1 Overview

The consultant project manages the construction of the assets and keeps Coliban Water fully informed of the progress of construction by providing the appropriate notifications.

Any special conditions in relation to construction of the development works will be set out in the Letter of Conditions.

The developer can appoint only accredited consultants to carry out the audit activities and supervise construction of the development works.

As many contractors specialise in a particular type of construction, the consultant may arrange for separate water and sewer main contractors to do the work. Consultants and contractors must make sure that their work complies with the applicable Occupational Health and Safety Act, Regulations and Codes of Practice and Commonwealth Environmental Legislation, Victorian Environmental Legislation and Local Government requirements.

## 14.2 General

Any special conditions in relation to construction of the development works will be set out in the Letter of Conditions.

Developer installed works must be constructed in accordance with the relevant MRWA Editions of the WSAA Codes and Coliban Water supplementary standards and specifications. The Letter of Conditions may also specify other requirements to be considered in the design and construction stage.

As-constructed information must be provided in the format as specified in the Coliban Water supplement.

Coliban Water may audit the works construction to make sure it occurs in a safe manner, and in accordance with the design and Coliban Water's requirements.

## 14.3 Construction hold points

During construction, there may be a number of hold points where the consultant must inform Coliban Water of the date on which works are occurring. These will be detailed in the Letter of Conditions and include but are not limited to:

- Sewer and water mains testing (Notice of intention to carry out test)
- Sewer or water connection (Connection to live assets)
- Sewer pump station commissioning

## 14.4 Alteration to existing Coliban Water assets.

If, as a result of a proposed development, existing Coliban Water assets require alteration:

- The work must be approved by Coliban Water
- The owner must pay the actual cost of this work
- Only people authorised by Coliban Water are permitted to carry out the work
- The conditions associated with the work are included in the Letter of Conditions
- Applications may be required to be submitted via [an online form](#) accessed via the Coliban Water website.

## 14.5 Disinfection and water quality testing of mains

The water quality from new drinking water mains must be safe, clear and free from objectionable taste and odour before the mains are put into service. Non-drinking water mains must be tested to make sure the non-drinking water quality complies with the requirements before the main is accepted into service.

The [Coliban Water Supplement to WSA 03-2011-3.1](#) should be referenced for instructions on the acceptable process required to satisfy the disinfection of new water mains. Specific details are contained in section 19 & 20.

### 14.5.1 Responsibilities

The consultant or contractor must:

- Arrange for chlorination directly with a Coliban Water Accredited Contractor
- Provide all temporary pipe work and fittings needed for any chlorination works
- Give Coliban Water at least nine (9) full working days' notice to arrange any shutdowns that are needed
- Provide Coliban Water with test results before we issue Practical Completion for works.

New mains can be connected to existing mains only after water main construction is completed and water quality tests completed to Coliban Water's satisfaction. Tests results should be provided to the Coliban Water case manager nominated to facilitate the respective development.

Only Coliban Water employees or contractors are authorised to operate valves on Coliban Water assets.

#### 14.6 Connection with a shutdown of the main

Coliban Water or its contractors are the only authorised agencies allowed to work on Coliban Water assets. The Letter of Conditions detailing requirements for the subdivision or alternatively the case manager will provide contact details for you to arrange a water main shutdown. An [online application form](#) can be accessed via our website.

Fees and charges apply for this service as well as timing to allow for communication by Coliban Water with any customers that may be affected by the shutdown.

#### 14.7 Water shut off period

The contractor must try to minimise the duration of any planned water supply interruption that affects customers. The maximum period allowed for a planned shutdown is four hours. If a shutdown is likely to exceed this four hour limit, the contractor must provide customers with an alternative means of supply with Coliban Water's approval.

Under our Customer Charter, Coliban Water pays customer rebates under various circumstances for outages and certain supply interruptions and recovers the cost of these from the contractor.

#### 14.8 Work on live assets - sewerage connections

Only contractors with demonstrated prior experience should be engaged to perform connections to live sewer assets. A live sewer asset is an asset that either carries sewage or is connected to an asset that carries sewage.

Working on live sewer assets includes opening a maintenance/manhole cover, inserting tools into a maintenance hole or sewer shaft or entering a maintenance hole or sewer shaft. Working on live sewer assets poses particular risks, including:

- Limited entry and exit from the asset
- May contain a harmful atmosphere
- May pose a risk of fall-from-heights when at least two metres deep

Working on live sewer assets can be extremely hazardous and potentially life threatening.

All works must be performed in accordance with current Occupational health & Safety requirements. Following are links to valuable reference documents:

- [Occupational Health & Safety Act 2004](#)
- [Occupational Health and Safety Regulations 2017 \(Part 3.4 – Confined Spaces\)](#).
- [Compliance Code for Confined Spaces – 2008](#)

The consultant supervising works with the contractor is required to visibly check upstream and downstream access manholes to ensure there is no other contracted or emergency maintenance works coinciding with the proposed connection activity. Connection must not occur until all other unrelated works are finalised.

Any special details and costs associated with connections to larger sized sewers will be included in the Letter of Conditions. Coliban Water may require the consultant to provide written

advice about the construction method for the connection and CCTV of the constructed join where the new sewer is connecting to an existing main.

#### 14.9 Hydrant use and cross contamination

Coliban Water does not allow access to water via hydrants or valves however will consider metered connection to a lot within the subdivision and subsequent cut & seal removal of that connection.

Access to water via hydrants or plugs via direct connection is not permitted by Coliban Water and may be subject to fines or possible imprisonment in accordance with Section 289 of the *Water Act 1989*.

Class A recycled water may be available for construction purposes. More information about its use can be obtained from Coliban Water's case manager for your development

#### 14.10 Trench backfill requirements

Backfill and compaction of soils in excavations associated with the construction of water/recycled water supply and sewerage assets must be done in accordance with the relevant WSA Codes and Coliban Water Addendums and Supplements. Water WSAA 03-2011-3.1 & Sewer WSA 02-2002-2.3

#### 14.11 Working with pipes with asbestos

Some of Coliban Water's network has both asbestos-concrete (AC) and mild steel pipes (with an external coal tar enamel coating that may contain asbestos).

We require any contractor undertaking works on mains that may have asbestos to:

- Have a licence to handle and remove asbestos, and
- Submit a Safe Work Method Statement and Job Safety (risk) Analysis for the works to Coliban Water at least 10 working days before starting work; and
- Carry out works in accordance with the Occupational Health and Safety Act.

#### 14.12 Acceptance testing

Acceptance testing of the development works is a key hold point for completion of the works. Testing must be in accordance with the relevant WSAA code and Coliban Water's Addendums and Supplements. Acceptance testing includes but is not limited to:

##### 14.12.1 Water supply/recycled water

Water supply/recycled water testing includes:

- Visual inspection of all system components following installation
- Pressure testing of all system components
- Water quality to confirm the integrity of supply to new water supply areas and disinfection
- Compaction testing of all trench backfill

##### 14.12.2 Sewer

Sewer testing includes:

- Visual inspection of all system components following installation
- Ovality (deflection) testing for all flexible pipes
- Vacuum testing of maintenance structures and pipelines, where specified

- Infiltration testing to confirm potential infiltration from system jointing must occur where there is a high water table
- Compaction testing of all trench backfill
- CCTV inspection/laser profiling, as specified within a letter of conditions.
- Registered consultants are required to review all CCTV footage prior to submitting to Coliban Water. Any issues identified during consultant review must be rectified and additional CCTV footage provided as evidence to confirm identified defects have been resolved. This should be completed prior to requesting on site Practical Completion audits.

### 14.13 Construction completion

At the end of construction, the consultant must lodge the Construction Certification Form (F09H) signed by a representative of the consultant.

Registered Consultants should check the Letter of Conditions to ensure all requirements have been met and evidence required is provided to Coliban Water prior to seeking on site Practical Completion audits.

As-constructed information must be supplied in PDF format in accordance with Coliban Water's Addendums and Supplements. All other submitted documentation, including items requested in the Letter of Conditions, must be supplied in PDF format.

AutoCAD files - Details of Coliban Water's As Constructed Drawings and submission requirements are detailed in the Geographic Information System – Spatial Data Technical Specification, Section 4 & 5 linked here: [GIS Spatial Data Specification](#)

### 14.14 Acceptance of Works

Once construction is completed, the consultant and contractor submit a Construction Certification Form (F09H).

#### 14.14.1 Coliban Water Audits

Coliban Water performs onsite Practical Completion audits and combine these with other specific audit requirements such as CCTV review of all new sewer mains. Coliban Water responds to audits with any of the following:

- Negative Observation
- Non Conformance
- Satisfactory

If we acknowledge that the development works have been completed satisfactorily and all Negative Observations or Non Conformances addressed and following Practical Completion and or CCTV audit by Coliban Water then:

- Coliban Water issues an acceptance of works Certificate of Practical Completion letter. At this stage, and if all other requirements detailed in the Letter of Conditions or Notice of Requirements have been met, Coliban Water sends the consent for a Statement of Compliance to the Council.

The issuing of an acceptance of works Certificate of Practical Completion signals the start of the defects liability period.

The issuing of Practical Completion also confirms Coliban Water's acceptance of these gifted assets to Coliban Water.

## 15. Defects liability

The defects liability period (12 months) begins once Coliban Water issues the acceptance of works Certificate of Practical Completion to advise that it is satisfied the development works have been completed satisfactorily.

In cases where the type of asset, eg: a pump station, requires a longer timeframe, Coliban Water specifies this extended timeframe in the Letter of Conditions.

### 15.1 Auditing

Coliban Water may choose to audit the development works at any time during the defects liability period. Coliban Water will inform the developer, the consultant and/or contractor of any observations and/or non-conformances that need to be addressed.

### 15.2 End of defects liability period inspection

At the end of the defects liability period the consultant and contractor inspect the works to make sure that:

- Other work on the site has not damaged any other Coliban Water asset
- All surface fittings are at the final surface level
- All markings to locate hydrants and water services are visible
- There are no subsidence issues.

End of defects liability inspections should be carried out by the Consultant Engineer on behalf of the developer in a timely manner. The consulting engineer then submits End of Defects Liability Form (F09J).

If any minor defects were noted on the Certificate of Practical Completion, the consultant must provide evidence of these being rectified.

### 15.3 Final completion

Coliban Water will issue a Certificate of Final Completion at the end of the defects liability period.

## 16. Responding to faults

If a fault is found in the works and it is deemed to be a deficiency in the design or construction, Coliban Water responds according to whether the fault is an emergency. If the fault is:

- An emergency that needs immediate attention, Coliban Water will undertake the repair and recover costs from the developer, consultant and contractor.
- Not an emergency, Coliban Water notifies the consultant and contractor to remedy the fault. If the fault is not fixed in the required timeframe Coliban Water will undertake the repair and recover costs from the developer, consultant and contractor.

## 17. Shared assets

### 17.1 Coliban Water responsibilities

Coliban Water funds some assets in accordance with Essential Services Commission (ESC) guidelines. In general, the developer will fund the construction of reticulation infrastructure for pipelines larger than reticulation size required to service their development. Coliban Water will determine whether the cost is reimbursable. If deemed to be reimbursable the rules will apply according to the Coliban Water Shared Assets Procedure.



Coliban Water will require that reimbursable shared asset works are designed and constructed in accordance with the relevant standards, and as efficiently as possible. To achieve these objectives, the Developer must:

- Enter into an agreement for the provision of required works.
- Construct the works in accordance with the asset requirements specified within the Letter of Conditions
- Ensure the consultant follows Coliban Water's design and funding gateway process
- Involve Coliban Water actively in the design and construction procurement phases of the development works.
- Coliban Water may implement a Negotiated NCC specific to a nominated development service area to recover a share of the Coliban Water cost of providing that excess capacity to be utilised by future benefitting developments. Further details will be advised by Coliban Water and are summarised in [Coliban Water's NCC Negotiating Framework](#)

## 17.2 Shared cost assets

If Coliban Water requires a developer to design and construct reimbursable shared cost works, we will:

- Specifies the asset that must be constructed in the Letter of Conditions and discussed during consultation meetings
- Reimburses the developer for the cost of undertaking these works to provide excess capacity greater than that required to service the current development proposal.

By accepting the Letter of Conditions and specific works requirements the developer agrees to comply with Coliban Water's reimbursable shared asset works process.

## 17.3 Non- reimbursable

Coliban Water does not reimburse owners/developers the cost of:

- Any temporary works
- Special works such as water tanks (for water supply), or pumping stations and rising mains (for sewers) to support a satisfactory supply to a development
- Works that Coliban Water considers to be in excess of what is required to provide an efficient system.

## 17.4 Payment

Coliban Water reimburses the developer after the Certificate of Completion has been issued or as otherwise discussed and agreed prior to commencement.

The reimbursement amount is not specified in the Letter of Conditions. The amount is determined and agreed between the developer and Coliban Water and documented in subsequent correspondence from Coliban Water.

In general, the reimbursement amount is based on the lowest conforming quotation or tender for the relevant reimbursable shared asset works.

Coliban Water issues a purchase order for the agreed works. Receipt of this is the developer's confirmation of acceptance and trigger to commence works. The same requirements exist as with Developer Installed Works. Please refer to section 13 onwards for details.

## 17.5 Scope of works

The developer must make sure that the consultant project manages the works in accordance with the scope of works agreed with Coliban Water.

## 17.6 Reports required

The consultant may be required to prepare and present, as applicable, reports detailing:

- High level concept of proposed option
- Council planning and permit requirements
- Any signed agreements with affected property owners
- Other stakeholder consultation, permits and permissions
- Land and easement details
- Specialist survey requirements
- Quotes or results where applicable.
- Separate quotations/costings for the sizing of assets required by the subject development and the upsized component requested by Coliban Water

## 17.7 Procurement

The construction procurement method to be used by the consultant is determined according to the total value of the shared assets/reimbursable works and will be determined in accordance with Coliban Water's Procurement Policy and Procedure. The consultant provides quotations and estimates determining the total value of the reimbursable works based on the final detailed design authorised by Coliban Water.

Coliban Water then assesses this pricing prior to agreeing to pay.

The developer must seek quotes or tenders from only those contractors with demonstrated capability to undertake land development servicing works.

### **NOTE:**

Coliban Water may at its discretion direct the developer to seek quotes or tenders from only a Coliban Water contractor or supplier panel.

### 17.7.1 Quotations

Quotation and tender prices must include all costs associated with the works. These include, but are not limited to the following items:

- Design & Project Management component
- Set-out survey, as-constructed asset recording
- Backfilling of trenches
- Site restoration
- Traffic management
- Spoil disposal
- Environmental management
- Occupational health and safety compliance.

Where the procurement process has not been followed, Coliban Water will not be obliged to reimburse the developer's cost and will reimburse only an amount based on Coliban Water's assessment.

### 17.7.2 Shared Trenching

If shared trenching of Coliban Water assets with another utility's assets is proposed, Coliban Water requires the Consultant on behalf of the Developer to negotiate recovery of associated costs with the other utility. Horizontal and vertical clearances to assets must be observed in

accordance with the requirements specified within the appropriate WSAA Codes and Coliban Water's associated Addendums and Supplements.

Coliban Water will not authorise construction to proceed until a cost sharing agreement with the other utility is concluded.

On receipt of the developer's submission, and subject to concluding a cost sharing agreement with another utility, Coliban Water reviews the developer's recommendation and, if acceptable, issues an authorisation to proceed to construction.

The developer must not start construction until they have received Coliban Water's written authorisation to proceed.

- Cost
- Ability to carry out the work
- Past performance
- Conformance with tender requirements
- Occupational health and safety compliance record
- Any other relevant criteria.

Based on the developer's report, and before accepting the consultant's recommendation, Coliban Water may require the consultant to conduct interviews with tenderers.

At the end of the assessment and selection process, the developer must forward its recommendation including preferred tenderer, construction amount, consultant's fee and report to Coliban Water for formal authorisation.

## 17.8 Consultant fees

The developer must itemise the consultant's fees as part of the total construction amount. Provisional items, money and variations must be excluded from the consultant's fee calculation.

## 17.9 Specialist Consultant fees

Coliban Water will reimburse the developer for specialist consultant fees for items such as flora and fauna study, archaeological study, other developments etc.

The developer must include an itemised list of specialist consultant's fees as part of the total construction amount and submit this to Coliban Water for approval before proceeding with these services.

If specialist consultant services are required to be completed before construction procurement, a quotation for these services must be approved by Coliban Water.

## 17.10 Variations

If the contractor requests a variation to the reimbursable works, the consultant must:

- Submit details of the variation request including scope and cost to Coliban Water
- Make sure that works associated with the variation do not proceed unless and until Coliban Water has provided written authorisation.

Coliban Water will assess the variation request and provide a written response as soon as practicable.

In general, consultant's fees for variations will not be accepted unless justified by the consultant. The developer will be reimbursed only for the cost of an authorised variation as an adjustment to the total reimbursement amount for the relevant reimbursable works.

## 17.11 General

Coliban Water expects developers, consultants and contractors to:

- Design, construct and survey development shared asset works in accordance with Coliban Water's requirements and standards
- Make sure that the shared asset's design and construction complies with occupational, health and safety, and environment protection legislation

The developer, consultant and contractor are responsible for the quality of the development works and for their employees' health and safety during the development works.

## 17.12 Audit strategy

Coliban Water has a comprehensive audit strategy to assess whether developers, consultants and contractors comply with these requirements, and may audit any development work activity.

### NOTE:

Audits by Coliban Water will not satisfy the audit requirements consultants and contractors must undertake to maintain their Company's Certification.

# 18. Definitions

The following definitions apply in this manual:

**As-constructed Information** means the survey information describing the type, size and location of the newly completed Developer Installed Works.

**Constructed Certification Form (F09H)** means the form lodged and signed by the Consultant verifying the accuracy and correct format of the as-constructed information.

**Asset** means water or sewer infrastructure owned or to be owned by Coliban Water. Asset may include water main, recycled water main, sewer pipeline or associated structure (eg pump station or water tank).

**Combined Sewerage Drain** means privately owned and maintained sanitary drains servicing two or more properties that are separately titled.

**Connection Point** is the point where the service pipe from the premises connects with Coliban Water's water supply system or sewer network.

**Consent to Statement of Compliance** means a notice issued by Coliban Water to the appropriate Responsible Authority that it consents to issuing of a Statement of Compliance under section 21 of the *Subdivision Act* with respect to the Development.

**Construction Notification Form (F09K)** is a notification form to be completed by the Registered Consultant advising Coliban Water of intention to commence the construction phase of Developer Installed Works.

**Construction Certification Form (F09H)** means the form lodged and signed by the Consultant verifying that the Developer Installed Works have been constructed in accordance with the requirements detailed in the Letter of Conditions.

**Consultant** has the same meaning as Registered Consultant.

**Defects Liability Period** means the period of time between the date of issuing a Practical Completion Certificate and a Certificate of Completion in accordance with Coliban Water's Developer Installed Works procedure.

**Dependent Persons Unit (DPU)** is a temporary building which is installed, managed and removed by a Government Agency or Authority.

**Developer** means the person or other legal entity that requests a new connection to Coliban Water's infrastructure, including Shared Assets authorised to execute a transfer of the land. The Developer may also be the Owner. This manual refers to Owner/Developer in many instances, as the clauses will apply to them equally.

**Developer Installed Works** means the works to be designed and constructed according to Coliban Water's Letter of Conditions for the supply of water, recycled water (where applicable) and sewerage assets and infrastructure to service each Lot, and includes any works undertaken in response to a notice issued by Coliban Water during the Defects Liability Period.

**Dual Occupancy** means two dwellings on one Lot.

**End of Defects Liability Verification Form (F09J)** means the form lodged and signed by the Consultant at the completion of the Defects Liability Period notifying Coliban Water that he/she has completed their audit to confirm no defects are evident and affecting the Developer Installed Works.

**ESC** means the Essential Services Commission. The ESC is responsible for the economic regulation of Victoria's energy, water and transport essential services.

**Fronted by** (water, recycled water and or sewer main) means to have a water main abutting the property boundary that provides for a legal water/recycled water Tapping and/or sewer connection.

**Lot Control** means a sewer deep enough to enable sewerage to be discharged under gravity flow.

**Live Asset** means any pipe or other infrastructure which, at the relevant time:

- Is carrying water, recycled water or sewage, and
- Is in operation, and

has not been isolated from other Live Assets.

**Letter of Conditions** is a response provided by Coliban Water that details the specific and minimum requirements for the provision of water, recycled water and sewerage infrastructure necessary to service a proposed development.

**Letter of Practical Completion** means a letter issued by Coliban Water at the end construction and after audit of the works and signifying Coliban Water's acceptance of those gifted assets.

**Lot** means an area within a development that is separately titled or that is, or can be, individually metered for water or recycled water supply purposes.

**Main** means any pipe vested in, belonging to, or under the control of Coliban Water and used for conveying potable or recycled water also known as the water or recycled water main.

**MRWA** means Melbourne Retail Water Agency.

**Multi-Unit Development** means more than two dwellings on one Lot.

**New Customer Contributions (NCCs)** means a one-off, upfront payment levied by Coliban Water when a customer builds or develops a property (including subdividing a property) and/or connects to Coliban Water's water, sewerage or recycled water network. NCCs are a payment for the increased load that additional lots or further development of existing lots make on Coliban Water's existing and incremental infrastructure and services for the supply of water, sewer or recycled water networks (as applicable).

**Nominated Representative** means the person nominated by the consultant or contractor to verify and accept responsibility for the quality of the works on behalf of the consultant or contractor and recognised by Coliban Water as Key Personnel for that particular portion of the Development Works.

**OH&S** means occupational health and safety.

**Owners Corporation** means the entity that is created as part of a Plan of Subdivision in accordance with the *Owners Corporations Act 2006*. The Owners Corporation is responsible for the maintenance and administration of any common property and / or common services. For example, the Owners Corporation is responsible for any private water / recycled water or sewers within the Plan of Subdivision.

**Owner** means the person or other legal entity who is the registered proprietor of the land, or a person who is authorised to execute a transfer of the land. The Owner may also be the Developer. This Manual refers to Owner/Developer in many instances, as the clauses will apply to them equally.

**Parent Lot** means the Lot that existed immediately prior to initial subdivision.

**Plan of Subdivision** means a plan showing the subdivision of land, prepared in accordance with the Subdivision Act.

**Planning Permit** means the permit required under the Planning and Environment Act 1987 for a use or development of the land.

**Potable Water** is water that is treated to be safe for drinking and food preparation.

**Practical Completion Letter** is a letter issued by Coliban Water advising that the Developer Installed Works have been completed satisfactorily.

**Preliminary Design** is the initial design submitted by the Consultant on behalf of the Developer which is assessed by Coliban Water. A Letter of Conditions then determines any additional requirements or specific conditions to be included within the Verified design. Occasionally Coliban Water accepts the Preliminary design as a Verified version.

**Private Water Service** means an existing private water service connection that can include prior civil arrangements between property owners allowing connection to a water main that does not front the property being serviced

**Private Plumbing Works** is the plumbing within a property boundary that forms part of the building's internal and external plumbing needs.

**Registered Consultant** means a Consultant approved in accordance with Coliban Water's Accreditation Process to perform a particular category of work and includes the Consultant's Key Personnel.

**Registered Consultants List** means the lists of Consultants acknowledged by Coliban Water as having the necessary skills, experience, qualifications, expertise, management systems and capability to perform engineering and/or audit services in the categories of works for which the Consultant has been approved for listing within Coliban Water's licensed boundary.

**Reserve** means land that is set aside for public use. Reserves include general public open space, nature reserves, tree reserves, parks, public gardens, recreation reserves, sporting reserves, drainage reserves and sewerage reserves.

**Responsible Authority** means a responsible authority under the *Planning and Environment Act 1987*.

**Reticulation Assets** are generally defined as water mains or recycled water mains that are 150mm or less in diameter and gravity sewerage mains that are 225mm or less in diameter, and all associated assets including:

- Water or recycled water pump stations (where the pump discharges into a water or recycled water main of 150mm diameter or less).
- Pressure reducing valves (where connected to water or recycled water mains of 150mm diameter or less).
- Water and recycled water tanks (where the outlet main is 150mm diameter or less).
- Sewer pump stations, emergency storages and rising mains (where the gravity sewer inlet to the sewer pump station is less than or equal to 225mm diameter).
- Sewer pressure mains where the receiving gravity sewer main is less than or equal to 225mm diameter.

**Separate Occupancy** Section 145 of the Water Act discusses separate occupancies and refers to the principles set out in the Valuation of Land Act. A separate occupancy is defined in the *Valuation of Land Act* as *"If a portion of a parcel of land on which a building is erected is occupied separately, or is obviously adapted to being occupied separately, from other land in the parcel, that portion must be regarded as forming a separate rateable property and must be valued accordingly"*.

**Shared Assets** means water, recycled water or sewerage mains or pump stations, emergency storages or rising mains that are greater than the size required to service the proposed development and require upsizing as identified by Coliban Water to service future growth or infrastructure augmentation and all associated assets including:

**Subdivision Act** means the Subdivision Act 1988 (Vic).

**Super Lot** means an area of land that is intended to be subdivided into further Lots, also known as a stage lot.

**Tapping** means the connection of the internal water service to Coliban Water's water and/or recycled water main.

**Trade Waste** is any liquid matter that is discharged, emitted or deposited to our sewerage network as a result of any trade business or undertaking.

**VCAT** means the Victorian Civil and Administration Tribunal.

**Verified Design** is the final design ready for construction including specific details as required by the Letter of Conditions, relevant codes and standards.

**Water Act** means the *Water Act 1989* (Vic).

**WSAA** means Water Services Association of Australia

