

Land Development Manual

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1.0	Introduction	5
1.1	General.....	5
1.2	Service area	5
1.3	Servicing advice.....	6
1.4	Planning permit and planning scheme	6
1.5	Plan of subdivision.....	6
2.0	Land development principles	7
2.1	Our commitment	7
2.2	Policy environment	7
2.3	Land development principles	7
2.4	Review process	8
3.0	Servicing requirements.....	8
3.1	Subdivisions	8
3.2	Greenfield subdivision requirements	10
3.3	Provision of easements and reserves	12
3.4	Land tenure guidelines.....	12
3.5	Infill (brownfield) subdivision and site redevelopment.....	14
4.0	Design.....	14
4.1	General.....	14
4.2	Sewer reticulation design.....	15
4.3	Water reticulation design	15
4.4	Roof water harvesting design.....	15
4.5	Temporary works design.....	16
4.6	Sewerage pump station design.....	16
4.7	Sewer rising main design.....	16
4.8	Water supply pumping station design	16
4.9	Design documentation requirements.....	16
5.0	Construction	17
5.1	General.....	17
5.2	Construction requirements	17
5.3	Acts and regulations	18
5.4	Commencement of works	18
5.5	Notification of works to neighbouring or affected properties	18
5.6	Vehicle access.....	18
5.7	Work on live assets.....	19
5.8	Pipe, fittings and materials	19
5.9	Bedding material	19
5.10	Practical completion.....	20
5.11	Early release of practical completion and subdivision compliance	20

5.12	Commencement of maintenance period and takeover of assets	20
5.13	End of maintenance period	21
5.14	Maintenance period bond	21
5.15	Insurance and indemnity.....	21
5.16	Survey	22
6.0	Quality and testing requirements	22
6.1	Testing of sewers.....	22
6.2	Sewer laser profiling and CCTV acceptance testing	23
6.3	Testing of water mains.....	23
6.4	Wannon Water auditing	23
6.5	Wannon Water auditing	23
6.6	Corrective action	24
7.0	Miscellaneous	24
7.1	Plumbing.....	24
7.2	Plumbing.....	24
7.3	Supply by agreement.....	24

1.0 Introduction

1.1 General

This Land Development Manual outlines the process for developers to provide water, sewerage and/or roof water harvesting services when developing land.

For the purposes of this manual, the term 'development' refers to projects involving either:

- The subdivision of land or existing buildings
- The construction of buildings or tenements, that may or may not be subject to subdivision
- The connection of single allotments to our services.

Development may range from large-scale residential, commercial or industrial proposals to individual customers seeking a single connection.

1.2 Service area

We provide water, sewerage and roof water harvesting services to the towns set out in the service area map below.



1.3 Servicing advice

We can provide servicing advice to land owners and developers to assist with council planning applications and to determine potential costs and infrastructure works associated with land development. Please contact us to seek servicing advice..

Important note: Any information we provide as part of this preliminary servicing advice is not binding upon us. You must not undertake any commitment based on any information we provide until you have agreed to a formal Offer of Conditions.

1.4 Planning permit and planning scheme

Many developments requiring water, sewerage and/or roof water harvesting services may also require planning permission. Usually this permission will be in the form of a planning permit issued by the relevant municipal council acting as a responsible authority under the *Planning and Environment Act 1987*.

As authorised under section 145 of the *Water Act 1989*, we have the legal right to impose conditions relating to the connection to our systems.

We participate in the planning process in a number of ways. These include:

- As a formal referral authority for specified planning permit applications pursuant to Section 55 of the *Planning and Environment Act 1987*
- As the recipient of informal notification by a municipal council of a proposed planning permit application (typically pursuant to Section 52 of the *Planning and Environment Act 1987*)
- Where we become aware of a planning permit application.

When a planning permit application is referred to us, we are permitted to direct the relevant council to:

- Refuse the permit application
- Impose a set of conditions in relation to water, sewerage and/or roof water harvesting services which must be included by the municipal council in any planning permit issued
- Request more information to assess the permit application.

We may also play a role in more strategic planning. This may include:

- Involvement in planning scheme amendments
- Requests for development plan overlays (and the plans pursuant to them) to be approved.

1.5 Plan of subdivision

If land is to be subdivided, we can impose requirements for the subdivision through the planning process and under the Subdivision Act 1988. This includes the requirement for easements or reserves for our purposes.

2.0 Land development principles

2.1 Our commitment

We will work with developers to ensure we continue to support growth and development within the region in a cost-effective, efficient and equitable manner for the community.

2.2 Policy environment

We will always follow legislation including, but not limited to the:

- *Water Act 1989*
- *Planning and Environment Act 1987*
- *Subdivision Act 1988*
- *Environment Protection Act 1970*
- *Occupational Health and Safety Act 2004*
- *Privacy and Data Protection Act 2014*

We are willing to go beyond the requirements of legislation, subject to the principles set out below.

2.3 Land development principles

- (a) We will always operate in accordance with our risk appetite statement.
- (b) We will always aim to maintain equity between developers.
- (c) We will maintain or improve standards and keep prices as low as possible for existing customers and new customers having regard to the following:
 - The cost of provision of services is equitable across current and future generations
 - Outcomes must always provide the best value
 - We will only undertake capital investments where the investments represent capital expenditure that would be incurred by a prudent service provider acting efficiently to achieve the most viable servicing outcomes
 - We will not do anything that leads to a perverse outcome.
- (d) We will always make decisions that are consistent with and help deliver on our strategic direction, customer promises and policy statements.
- (e) We will make decisions based on current zoning arrangements as at July 2018. If land is zoned Residential One, we will provide the **shared assets** (or equivalent interim assets as we determine) required within a reasonable timeframe, provided that all relevant land owners cooperate and support the works.
- (f) We will consider temporarily funding **reticulation assets** where the decision to do so is consistent with these principles.

Shared asset definition

- (a) Any water main 225mm in diameter or larger
- (b) Any sewer main 300mm in diameter or larger

Reticulation asset definition

- (a) Any water main less than 225mm in diameter
- (b) Any sewer main less than 300mm in diameter

These definitions are consistent with the methodology used to calculate new customer contributions and the definitions are consistent throughout Victoria.

2.4 Review process

- (a) We will review these principles in light of new legislation, obligations or other requirements as required e.g. potential changes related to Integrated Water Management.
- (b) Where a request does not satisfy these principles:
 - We will explain the reasons why a request does not satisfy these principles
 - We will ensure that our Complaints and Disputes Policy is followed.
- (c) Where agreement cannot be reached, we will inform developers of the opportunity to have the matter referred for independent review, including, but not limited to referral to the following:
 - Energy and Water Ombudsman (Victoria) – EWOV;
 - Victorian Civil and Administrative Tribunal – VCAT; or
 - Another independent third party as agreed by us and the developer.

3.0 Servicing requirements

3.1 Subdivisions

3.1.1 General

A separate point of connection to the water and sewer services is required to be made available for each individual lot within a subdivision.

The provision of the services to the individual lot is the responsibility of the property owner or developer by entering an agreement (offer of conditions or minor works offer of conditions) with us. The applicable fees and extent of works required will be detailed in the offer.

It is the responsibility of the developer to fund the design, project management, construction, survey and asset recording of all reticulation works required for that particular development.

For all subdivisions, easements are to be created according to the land tenure guidelines set out in this manual.

Where the development contains existing private and/or combined connections to properties outside the proposed development, reticulated water and sewerage services must be provided to serve these properties outside the proposed development.

Where a development is to be constructed on or over existing shared services (for example, a combined sewer drain), the developer must establish a separate connection point directly to a Wannon Water asset and extend services to rectify the combined drain and/or individually service the dwellings or properties.

3.1.2 Residential subdivisions

All residential subdivisions must be provided with a reticulated water supply and sewerage service in serviced towns. Reticulated water must be constructed across the entire frontage of each lot, or otherwise as we determine.

Reticulated sewer is to extend through the subdivision at a depth sufficient to service the upstream catchment.

A 20mm wet tapping and water service is to be provided to all allotments created by the subdivision from the water main into the allotment conforming to the requirements of our standard drawings.

3.1.3 Non-residential subdivisions

Generally, all industrial and commercial subdivisions need to be provided with a reticulated water supply and sewerage service in serviced towns. Reticulated water is to be constructed across the entire frontage of each lot, or otherwise as we determine.

Reticulated sewer is to extend through the subdivision at a depth sufficient to service the upstream catchment.

Water tapplings and water services must not be provided to industrial or commercial subdivisions as the size of the future tapping is unknown at the time of subdivision. Conduits for future water services can be provided under road pavement from back of kerb to back of kerb if required by council or the road owner.

3.1.4 Boundary realignment or consolidation

Where a subdivision property boundary is realigned and causes the water and/or sewerage service to cross property boundaries, the service must be disconnected at the property boundary and new tapplings and/or internal sewer connections will be required.

We will request that works be undertaken to ensure the sanitary drain connection to any of the lots is wholly contained within the boundary of that lot or contained within a private easement.

It is generally not acceptable to have private plumbing and pipework crossing property boundaries. Exceptions to this may be an Owners' Corporation subdivision or a private easement in a small lot subdivision where the lots are generally less than 500 square metres.

Easements must be provided on boundary realignments and consolidations as per the land tenure guidelines set out in this manual. Any required alteration to connections or Wannon Water infrastructure is at the cost of the landowner or developers.

3.1.5 Owners' Corporation subdivision

An Owners' Corporation is a body that has been incorporated by registration of a plan of subdivision or a plan of strata or cluster subdivision in accordance with the *Subdivision Act*.

All allotments within an Owners' Corporate must have equal liabilities in the Plan of Subdivision schedule if connected to common services.

We require reticulated assets to service individual lots within an Owners' Corporate subdivision if water supply or sewer reticulation is required to extend to service other land parcels.

All allotments within an Owners' Corporate subdivision are to be have water supply and sewerage connections extended into the allotment boundary. When a bulk meter on a single water service is required, the bulk meter is to be installed according to our standard drawings.

3.1.6 Residential two-lot and dual occupancy development

A dual occupancy is a property with two or more units, shops or occupancies without an Owners' Corporation. The subdivision of a dual occupancy without an Owners' Corporation requires that the properties have separate water supply and sewerage services (no combined services).

We will require reticulated assets to service individual lots within a dual occupancy subdivision if water supply or sewer reticulation is to extend to service other land parcels.

Where allotment sizes within a dual occupancy development are greater than 500 square metres, developments are to be serviced by Wannon Water reticulated services through an agreement (Offer of Conditions).

3.1.7 Multi-occupancy subdivision

Generally multi-occupancy subdivisions will include an Owners' Corporation. If an Owners' Corporation is not required for the subdivision, the developer must enter into an agreement (Offer of Conditions) for the extension of reticulation assets at the cost of the developer to individually service the lots within the subdivision.

3.1.8 Subdivision of multi-occupancy developments

Existing developments can include ground level and multi-storey occupancies or units.

Where a subdivision of an existing unit development involves a building that is already serviced, we will generally not require a new reticulation sewerage service unless combined sewer drains need to be separated. Individual meters to units will need to be installed if they do not exist.

Where lots are to be connected by internal private services, formation of an Owners' Corporation is mandatory. The Owners' Corporation will be responsible for maintaining, operating and replacing these services.

If an Owners' Corporation is not created for the development, we will require separate connections to each lot.

Where existing multi-occupancy buildings are subdivided, the provision of individual metering for the water supply to occupancy is required.

Where any existing house connection branch is to be utilised for a development, it must be renewed or have its condition assessed (including CCTV inspection). An inspection shaft to surface must be provided within one metre of the sewer drain entering the property boundary or within one metre of the Wannon Water sewer traversing the property. Any variation of the inspection shaft's location must be approved by us.

3.1.9 Redevelopment and changes to subdivisions

Where an existing service is to be realigned or renewed due to redevelopment or changes to the subdivision of land, the property owner is liable for all associated costs.

3.2 Greenfield subdivision requirements

General

For developments greater than 20 allotments, or areas where servicing issues are known or anticipated, we can provide preliminary servicing information on request.

3.2.1 Roof water harvesting and recycled water

Generally, the provision of roof water harvesting or recycled water infrastructure is not required. If we require the provision of roof water harvesting or recycled water infrastructure, conditions will be placed on the planning permit and requirements specified in the Offer of Conditions.

Roof water harvesting new customer contributions (NCCs) do not apply for subdivisions required to connect to the roof water harvesting system. Water NCCs are also reduced in areas where the developer is required to construct roof water harvesting works.

3.2.2 Offer of conditions

Where water and/or sewer infrastructure must be constructed to service a development or subdivision, the developer is required to engage a civil consulting engineer who must apply to us for an offer of conditions for the construction of infrastructure to service the subdivision or development. The following form can be downloaded from our website and submitted by the consultant **Form 1 – Request for offer of conditions**.

Once the developer and the consulting engineer accept the offer of conditions **Form 10 – Offer of conditions acceptance**, an agreement exists with Wannon Water for the provision of water, sewer and/or roof water infrastructure to service each lot in the development.

The offer of conditions will state the extent and sizing of the required works, the auditing and connections fees, new customer contributions, the defects liability period, the maintenance period and any other identified requirements.

The offer of conditions will also identify or ensure:

- Infrastructure to be designed to allow any future extension of infrastructure to service the land that is external to the subdivision
- Water mains that are required to be extended for operational reasons (for example: system operation, security of supply or to ensure water quality)
- That the works provide water supply and sewerage services in accordance with the following documents:
 - This Land Development Manual
 - All relevant Wannon Water/WSAA design and survey manuals, general construction specifications, and standard drawings
 - All other documents related to the construction of works by agreement
 - Ensure that any works not within the scope of Wannon Water/WSAA manuals, specifications, or drawings are carried out under individual works specifications approved by us.
- The engaged civil consulting engineer to be responsible for the design, contract administration, supervision, survey and quality of the works
- The supply of all materials and carrying out of all works, unless otherwise specified, on the design drawings and special conditions in the offer. All materials must be in accordance with the WSAA approved products listing, Wannon Water Supplementary Specification or as approved by us
- An agreement to pay us fees for audits and re-auditing
- The provision of written notice of the name of the appointed consultant on the application for the offer
- The provision of written notice if a new consultant is appointed during the term of the agreement. This notice must include the name of the new consultant and be given no later than five (5) working days after the appointment is made
- The provision of written notice if the whole of the land subject to the agreement is sold or transferred before the works are complete. This notice must be given no later than five (5) working days after the agreement or contract to sell the land is signed
- That all directions from the consultant or us in regard to quality and installation of works are followed.

3.2.3 Fees and contributions

All current fees and contributions are stated in our Pricing Handbook. The offer of conditions will state the fees and contributions applicable to the subdivision and/or development.

3.2.4 Defects liability and maintenance period bond

The defects liability bond required to be lodged by the developer will be stipulated in the offer of conditions and is calculated at 5 per cent of a set rate amount for the construction of water and sewer mains. A minimum defects liability and maintenance bond of \$2,000 applies if the 5 per cent calculation is less than \$2,000.

The defects liability period is for a minimum period of one year from when we grant compliance. The maintenance period is for a two-year period from the issue of the end of defects notice.

Note that the defects and maintenance period bond will not be used or drawn upon where third party damage has occurred unless incorrect as-constructed information is the reason for the damage occurring.

3.3 Provision of easements and reserves

3.3.1 General

We require:

- Reserves or easements over all proposed and existing sewers not located within road reserves on certified Plans of Subdivision
- Reserves or easements over all proposed and existing water mains not located within road reserves on certified Plans of Subdivision
- Easements over existing or proposed sewers and water mains
- Reserves or easements over all proposed pumping stations, water towers, tanks and other infrastructure
- Easements as required for access to Wannon Water sewer and water supply infrastructure
- Private easements in favour of other lots as required.

3.3.2 Easements

Easements are required to comply with section 12 (1) of the *Subdivision Act* and be specified on the Plan of Subdivision as being in favour of Wannon Region Water Corporation, or:

- The developer may create easements to cover water and sewer assets in accordance with the *Transfer of Land Act* and supply a dealing number from the titles office
- Where specified in the offer of conditions, easements or reserves must also be created over water and sewerage works external to the subdivision at the developer's cost
- The use of Section 12 (2) of the *Subdivision Act* to cover existing common sewer drains is not acceptable. Separation of services is required for all clear title subdivisions unless otherwise approved by us.

3.3.3 Reserves

Where a subdivision is planned for land that contains a strategic Wannon Water asset such as a water tower, tank or major pump station, a reserve will be required instead of an easement.

3.4 Land tenure guidelines

3.4.1 General

These guidelines will assist in determining appropriate protection for Wannon Water's assets within the subdivision (internal) and land development works outside the plan of subdivision

(external). It is envisaged they will apply in the majority of cases. Any projects that fall outside these guidelines are to be assessed on a case-by-case basis.

In unique circumstances, purchasing of land may be required. The need for this will be assessed on a case-by-case basis.

3.4.2 Sewerage assets

Sewer asset location is required to be in accordance with WSAA Code and Wannon Water supplementary specifications or manuals, and is based on a single pipe in an easement.

Sewerage easements may only be shared with stormwater pipes with clearance as per the WSAA Code. Sewerage easements can also be shared with roof water harvesting works subject to appropriate clearance.

Where mains are deeper than three metres, easements/reserves must be widened by approximately one metre for every metre depth increase, up to a maximum of six metres wide. Sewers deeper than five metres should generally be in a reserve.

3.4.3 Water supply assets

Water asset location is required to be in accordance with WSAA Code and Wannon Water Supplementary Specification and is based on a single pipe in an easement.

Reservoirs, tanks, water towers and stand pipes

The structure is required to be located on land we own or on land over which we have management control, such as Crown land.

Developers are required to provide us with a land reserve for water tanks and water towers when requested as per section 136 of the *Water Act*.

Major valves or metering installations

Installation is to be located on land we own or on land over which we have management control, such as Crown land.

Depending on the size of the installation, it may be installed in the road reserve if no alternative is available.

Water mains through council reserves should be designed to take into consideration the following:

- The water main to be constructed in a location which will have least effect on any council plans for the reserve and provide us with the most unrestricted future access to the main
- Locating water mains alongside concrete paths/tracks would provide the best access for us
- Wannon Water's **Asset Protection Policy** that restricts building within three metres of a water main
- Marker posts or signs to be used to assist in highlighting the presence of a water main through the reserve
- In the absence of any further advice from council, water mains in open space reserves (i.e. not walkways) should generally be located parallel with property boundaries, unless there is an obvious straight-line link to another supply
- Above-ground and surface water main features like valves and fire plugs should generally be located in road reserves rather than through the reserve.

3.5 Infill (brownfield) subdivision and site redevelopment

3.5.1 Water supply assets

The redevelopment of an existing serviced property will at times require the extension of Wannon Water reticulation assets. Whether the redevelopment is a boundary realignment, Owners' Corporation subdivision, clear title subdivision or multiple occupancy, each lot or occupancy is required to be provided with a water supply and sewerage connection at the developer's cost.

In the roof water harvesting catchment area, the provision of roof water harvesting connection is also required.

3.5.2 Residential two-lot subdivision

The following is general advice that may require altering, depending on the surrounding area's sewerage and water supply servicing needs.

The subdivision of a single lot into two lots requires the developer to provide sewerage and water supply services to both properties. For provision of sewerage services, the use of a private easement for lots created that are less than 500 square metres in area is generally allowed.

A sewer reticulation extension is required to be provided by the developer for two-lot subdivisions that create lots that are greater than 500 square metres in area, unless the proposed lots cannot be developed further. Water mains must be extended to service both lots or as we require for security of supply.

4.0 Design

4.1 General

The design of works associated with the provision of water and sewerage services must be carried out in accordance with the relevant Wannon Water and Water Services Association of Australia (WSAA) Standard Drawings, Specifications and Design Manuals. Designs outside the scope of these documents may only be undertaken with our written approval. The design must incorporate any and all parameters we require for particular works.

The consultant is required to:

- Own a copy of the Melbourne Retail Water Agencies (MRWA) version of the Water Services Association of Australia (WSAA) Reticulation Codes and where applicable other codes i.e. Pressure Sewer Code.
- Supply the local council, service providers and relevant authorities with a copy of the drawings submitted to us.
- Obtain all necessary permits
- Give all notices and pay all fees as required by relevant laws, regulations and by-laws.

The consultant is responsible for coordinating the design of the works with any works, operations and services involving us unless alternatively specified in the offer of conditions. This responsibility extends to coordination with councils, other authorities, service providers and individuals that may have a direct or indirect interest in the construction and location of other service providers proposed infrastructure works. Any requirements affecting the construction methods must be included on the design drawings.

All works must be designed and constructed in accordance with the environmental requirements for the area.

Designs are to be lodged with a fully completed **Form 20 - Consultant certification** signed by the responsible design representative, accompanied by supporting documentation specified on the verification form and any other relevant information to enable us to perform a complete design audit.

All supporting calculations and civil drawings, including other services and road design are to be made available on request.

4.2 Sewer reticulation design

Reticulation design must be in accordance with Wannon Water's Technical Standards and the Melbourne Retail Water Agencies (MRWA) version of the Water Services Association of Australia (WSAA) Codes. Wannon Water's Supplements to the WSAA codes overrides the corresponding WSAA clauses. The most recent version of the MRWA WSAA Codes will generally be applied.

The design is required to provide sufficient capacity and gravity control for the catchment upstream of the development wherever possible. The developer's consulting engineer is required to obtain our approval to provide any lot with only limited gravity control. Lots approved for limited gravity control are required to have the area of control identified on the design drawings and reflected on the Plan of Subdivision.

At the developer's cost, sewer is to be designed and constructed to extend through the subdivided land to the neighbouring property boundary, including crossing any road that is being built as part of the subdivision works.

Sewers should be designed to service natural catchments in most instances and not deepened to service land beyond ridge lines unless we provide prior approval.

Where subdivisions or land parcels cannot be serviced via an extension of gravity sewers, the developer must contact us to establish the preferred option of providing sewerage services.

4.3 Water reticulation design

Reticulation design must be in accordance with Wannon Water's Technical Standards and the Melbourne Retail Water Agencies (MRWA) version of the Water Services Association of Australia (WSAA) Codes. Wannon Water's Supplements to the WSAA codes overrides the corresponding WSAA clauses. The most recent version of the MRWA WSAA Codes will generally be applied.

Reticulation mains must be sized according to the minimum requirements of the WSAA Water Reticulation Code and Wannon Water's requirements.

Particular emphasis is to be placed on water quality within the network. Special consideration must be given to reducing water supply dead-ends by utilising connecting mains. Where dead-end water mains cannot be avoided, the water main diameter must be downsized so no further extension of the water main can occur.

4.4 Roof water harvesting design

For relevant subdivisions, the design and construction of roof water harvesting infrastructure must be provided by the developer. Roof water harvesting is an initiative that allows for the collection and transportation of roof water from future roof tops to a raw water reservoir. This allows additional environmental flows into and lessens the dependence on the Gellibrand River to provide water to Warrnambool and surrounding towns.

4.5 Temporary works design

The design of temporary works required to provide services for a development is the responsibility of the developer's consulting engineer. The design of temporary works must allow for the future transfer of the temporary system to the permanent system.

4.6 Sewerage pump station design

Sewerage pump station design must be in accordance with Water Services Association of Australia (WSAA) Code and our requirements.

Due to the infrequent nature of developments requiring the construction of a sewerage pump station, we have not developed a supplementary specification to the WSAA code. This is due to the time required to keep information relevant and to keep up with the latest technology.

The developer's consulting engineer is required to contact us for our requirements for sewerage pump station and associated infrastructure design. Generally the consultant will be responsible for the capacity design and construction of the pump station civil works and the provision of services, including three-phase electricity. We will provide, at the developer's cost, the PLC, Programming, SCADA, Comms and Pump Station Commissioning. For a fee, we can develop a tender specification, seek quotes and assess the quote that offers best value.

The offer of conditions will stipulate the scope of the works to be provided by the developer, and the works we will provide at the developer's cost.

4.7 Sewer rising main design

Sewer rising main design is to be in accordance with the relevant Water Services Association of Australia (WSAA) Code and our requirements.

The sewer rising main must be a minimum class 12 Polyethylene or mPVC or OPVC pressure pipe and must be designed to minimise or exclude the installation of air valves or scour valves.

Due to the infrequent nature of developments requiring the construction of a sewer rising main, we have not developed a supplementary specification to the WSAA code. The developer's consulting engineer must contact us for project specific requirements.

4.8 Water supply pumping station design

Generally, we will design and construct water supply pumping stations. The only pump station that would be designed and constructed by developers is to service land that cannot be adequately serviced due to lack of pressure by the existing water reticulation network. The booster pump station design could include a storage tank, feeder main and chlorine injection and monitoring station.

Water supply booster pump stations and associated works are normally temporary works and require decommissioning by the developer when permanent water supply becomes available.

4.9 Design documentation requirements

Upon acceptance of the agreement (offer of conditions) by the consultant and developer including payment of requested fees, designs must be electronically lodged with a completed **Form 20 - Consultant certification**.

No construction works can commence prior to design being approved for construction or notification of **Form 25 - Commencement of works**.

4.9.1 WSAA standard drawings – water supply

WSAA standard drawings approved by us for use in water main construction works can be found in *The Water Supply Code of Australia WSA 03-2002-2.3 Melbourne Retail Water Agencies Edition – Version 1*.

4.9.2 Wannon Water standard drawings – water supply

We have developed standard drawings that drawings take precedence over WSAA standard drawings. These are located on our website.

4.9.3 WSAA standard drawings – sewerage

Standard drawings approved by us for use in sewer construction works can be found in *The Sewerage Code of Australia WSA 02-2002-2.3 Melbourne Retail Water Agencies Edition – Version 1*.

Specific standard drawings have been removed from WSA 02-2014 Version 3.1, and instead, replaced with figures to accompany the relevant clauses. Some figures provide additional detail that is not provided in previous versions of the code.

4.9.4 Wannon Water standard drawings – sewerage

We have developed standard drawings that take precedence over WSAA standard drawings. These are located on our website.

4.9.5 Water and sewer design drawing – general notes

The general notes for placement on design drawings are available for download as AutoCAD 2000 format DWG files. These notes can be found on our website.

5.0 Construction

5.1 General

Unless specified otherwise in the offer of conditions, the developer is responsible for the construction of all new works, and for arranging the connections of these new works to our live assets. Live connections works must be undertaken by our employees or an approved contractor with our supervision or approval.

Note: Our requirements take precedence over equivalent Water Services Association of Australia (WSAA) documentation. Any works not defined in the WSAA Codes, specifications or drawings must be carried out under specifications approved by us.

The developer is required to meet all the commencement requirements before construction can begin. The developer is required to ensure that all water and sewerage construction works provided meet sustainable standards of environmental care.

5.2 Construction requirements

All works will be constructed:

- In accordance with the design criteria in relevant design manuals including meeting specifications criteria
- In accordance with the Standard Conditions and Agreement
- In accordance with the relevant WSAA Codes and our supplementary specifications
- In accordance with the consultant's quality system and under the consultant's control and supervision

- WSAA approved products or, if they do have WSSA approval are authorised and approved for use by us
- Using pipes, fittings and materials approved by us. All pipes, fittings and associated items are required to be handled, stored and installed in accordance with manufacturer's requirements.

Works may have to be removed or replaced at the developer's cost if they are not completed strictly in accordance with the design (including approved variations), or do not meet our construction standards.

All property and street boundaries must be located by survey pegs.

The construction of the works shall be carried out in accordance with the relevant standard drawings, specifications and project specifications. The contractor will ensure that they have all the required documentation on site while works are being undertaken. The consultant is responsible for ensuring that the contractor has all relevant documentation on site while undertaking the works. Constructed works which do not meet standards will not be accepted.

Sewer pipe and fittings that are stained internally or have excessive amounts of solvent cement, and which do not meet requirements of Australian Standard 2032 or the pipe manufacturer's requirements will not be accepted.

Unless alternatively specified in the offer of conditions, the developer or their representative must obtain all necessary permits for the works and give notice and pay fees as required by relevant laws, regulations or by-laws affecting the works.

Contractors must have appropriate levels of insurances and Workcover.

5.3 Acts and regulations

All works must be constructed in accordance with:

- Acts of Parliament of the Commonwealth of Australia and the State of Victoria
- Regulations and by-laws made under these acts
- Regulations, by-laws and orders of any Commonwealth or State public authority.

5.4 Commencement of works

The consultant must lodge a **Form 25 - Notice for the commencement of works** with us prior to construction works starting. The consulting supervising engineer will provide a copy of the Worksafe notification of the commencement of works as required by regulation.

5.5 Notification of works to neighbouring or affected properties

Written notification must be provided to neighbouring properties and properties that could be affected by construction works at least two weeks prior to works commencing. This notification is required to include a 24-hour contact number to respond to neighbouring property issues or complaints. If we have to intervene or act as a dispute arbiter, additional auditing costs will be incurred by the developer.

5.6 Vehicle access

The developer's contractor is required to maintain safe vehicle access to properties affected by construction works or negotiate other arrangements with affected property owners.

5.7 Work on live assets

We retain the responsibility and authority for the physical connection of works into our live assets. Only Wannon Water personnel and/or approved contractors are permitted to break into an existing live asset or enter designated confined space such as sewer access chambers. Consultants are required to submit a **Form 45 - Request to connect** providing the number of working days' notice specified on the specific form prior to the desired time for the work.

The developer must pay us for all costs incurred in connections into our live assets.

Alterations to the water supply network to facilitate servicing of new developments usually require planned shutdowns of "live" assets. We assume sole responsibility for performing all shutdowns of "live" assets.

We will endeavour to undertake connections on the requested date, however this will be dependent on workloads and availability of required fittings. As such, the scheduled date and time of connection works shall be mutually acceptable for all involved parties.

Prior to submission of any **Form 45 - Request to connect**, the consulting engineer will ensure all existing services which cross the proposed alignment or run parallel to it are potted, located and identified (so that vertical and horizontal relationship to the proposed works is ascertained) to ensure there is sufficient clearance to:

- Allow connection works to be undertaken without risk of harm to people or damage to other infrastructure
- Allow future maintenance tasks to be undertaken with easy access, without risk of harm to people or damage to other infrastructure.

Where planned shutdowns of "live" assets are required, we will only allow a contractor a maximum shutdown period of four hours between the hours of 9am and 2pm on a Wannon Water working day. Therefore, it is advisable for the contractor to ensure all preparations to connect into "live" assets are ready for immediate start once the assets are shut down.

Our key objective is to minimise inconvenience to customers and all endeavours should be made to complete the work to required standards within the shortest possible timeframe.

5.8 Pipe, fittings and materials

The developer is responsible for the supply of all fittings required to extend from the connection works into our live assets. As part of the connection fee, we will supply the connection fitting (i.e. tapping saddle or sewer branch). All pipes and fittings must be in accordance with the WSAA approved products listing and as approved by us.

5.9 Bedding material

We have adopted some of the bedding materials specifications contained within WSAA document "Product Specifications For Products And Materials", which is available for download from the WSAA website. All works will use bedding materials that conform to one of the following WSAA specifications:

- **WSA PS-350** Compaction Sand For Pipe Embedment
- **WSA PS-351** Processed Aggregates for Pipe Embedment - *The following size aggregates specified in WSA PS-351 are approved for use:*
 - 14mm Graded aggregate*
 - 5mm Single-size aggregate*
 - 7mm Single-size aggregate*

10mm Single-size aggregate

- **WSA PS-359** 7mm Processed Aggregate For Pipe Embedment
- **WSA PS-361** Embedment / 5 mm Minus Sand
- **WSA PS-362** Well Graded Crushed Rock for Pipe Embedment

5.10 Practical completion

When the works are complete, the consultant must submit the following form:

- **Form 60 - Notice as to practical completion of construction.**

The consultant must certify that the works have been constructed in accordance with our requirements.

A site audit will be undertaken to ensure the completed construction is in accordance with our guidelines. If non-conformances are present, compliance may be withheld until the issues are resolved.

We will then process the submitted information and issue a Statement of Compliance, if applicable, to the appropriate municipal council and will notify the consulting Engineer of the “Commencement of Defects Liability Period”. This is providing that all other requirements of the offer of conditions have been met, including all payments.

Unless otherwise specified in the offer of conditions, the due date for completion of construction is twelve (12) months from the date of the offer. If requested, we will consider an extension of time of no more than 12 months to bona fide developers provided that:

- A town planning permit for the development is current
- The council has certified the subdivision plan
- Road construction plans have been approved by the council.

Should the audit of as-constructed information supplied show that the information is inadequate and requires correction and resubmission, additional auditing fees will apply (minimum of two hours auditing fee).

5.11 Early release of practical completion and subdivision compliance

We do not offer the early release of practical completion or issue a Statement of Subdivision Compliance to council prior to all works being completed, including the provision of correct as-constructed information and quality testing information.

If we ever grant early release and subdivision compliance, a legal agreement stipulating the works required to be completed on title is required, as well as a bond payment in excess of the cost of the remaining works. Note – it is not our intention to provide early release or early subdivision compliance; this would only be undertaken for exceptional circumstances at our discretion.

5.12 Commencement of maintenance period and takeover of assets

A one-year maintenance defects liability and two-year maintenance period will commence upon being issued compliance by us. During this period, the consulting engineer and developer will be responsible for any defects that are a result of poor workmanship, construction faults or inconsistency between the as-constructed information submitted and the actual asset location. Third party damage is not included, unless caused by incorrect as-constructed information.

If an audit by us results in any defect being identified, the consulting engineer will be notified of the non-conforming items and requested to rectify these within 90 days. If notification has not been received on the corrective action of the non-conformance within this timeframe, we will undertake the works at the consulting engineer's or developer's expense.

The consulting engineer and developer will also be responsible for payment of compensation claims by plumbers for costs incurred due to the provision of incorrect as-constructed information.

5.13 End of maintenance period

At the end of the maintenance period, the consulting engineer will have inspected the works and deemed them to be in accordance with our standards.

If our resultant audit Water results in any defect being identified, the consulting engineer will be notified of the non-conforming items and requested to rectify these within one month. If notification has not been received on the corrective action of the non-conformance within this timeframe, we will undertake the works at the consulting engineer's expense or developer's expense.

5.14 Maintenance period bond

A refundable maintenance bond in the form of a cheque or bank guarantee is required to cover a three-year warranty period, which includes the initial 12-month defects liability period.

This bond is to be submitted with the as-constructed information or with the payment of the New Customer Contributions. The amount of the bond will be advised in the offer of conditions.

For works where the bond amount calculates less than \$2,000, the minimum bond amount of \$2,000 is applied.

A minimum bond is also required for non-subdivisional work such as site redevelopments, roadworks and drainage works that require alteration to existing sewers and water mains.

We will draw on the subdivision maintenance bond if we undertake corrective works and no payment for corrective works is received from the developer. The bond or the remaining bond amount will be returned at the end of the maintenance period.

5.14.1 Bank guarantees

The banking institution supplying the guarantee must be currently listed with the Australian Prudential Regulation Authority and the following is required:

- There must be no expiry date noted on the bank guarantee
- The bank guarantee is for the correct amount as stated on the Offer of Conditions
- The extension listed is the correct extension as listed on Offer of Conditions
- There is a brief description of the purpose of the guarantee.

5.15 Insurance and indemnity

Before starting construction, the consulting engineer and the developer are required to ensure that insurance has been arranged as set out below.

5.15.1 Construction insurance

The developer or the developer's representative must ensure that the contractor has in place third party liability insurance of at least \$10 million on behalf of Wannon Water, the owner,

the consultant, the contractor and all subcontractors and sub-consultants. This insurance is to cover the cost of rectifying the works and/or liabilities to third parties.

5.15.2 Consultant's insurance

The developer must ensure that the consultant has professional indemnity insurance in the consultant's own name, with a minimum limit of liability of \$1 million.

5.15.3 WorkCover

The developer or the developer's representative must ensure that any contractor engaged is registered as an employer under the provisions of the Accident Compensation Act (WorkCover).

5.16 Survey

We require as-constructed information on the depth and location of all new water pipes, fittings and associated structures in a format suitable for creation of the asset records within our Geographic Information System (GIS). This includes the provision of roof water harvesting infrastructure as-constructed information when stipulated in the offer of conditions.

We require as-constructed information on the height and location of all new sewerage assets associated with gravity sewers and pressure (rising) mains, in a format suitable for recording of the asset data in the GIS. Locations are to be with respect to the adjacent road and title boundaries using direct measurement ties to title pegs, running chainages and offsets or by use of MGA coordinates. All heights are to AHD unless otherwise stipulated.

Where required in an offer of conditions, as-constructed information must be provided for works such as pump stations, tanks and temporary assets, including the provision of operational manuals and electrical/circuitry diagrams and drawings.

We also require photos to be provided in the as-constructed submission of all details (prior to backfilling) and all manholes (internal) as per the design drawings.

6.0 Quality and testing requirements

6.1 Testing of sewers

During construction of sewers, the consulting engineer will arrange trench compaction testing to be undertaken. Compaction testing must be witnessed by a consultant engineer and random locations chosen by the consulting engineer and not the contractor.

Upon completion of works and prior to connection, the consulting engineer will arrange for pressure testing of sewer mains and maintenance holes. We are required to be notified **Form 35 – Notice of testing** with three clear days before final testing. If the tests are not successful, retesting will be required. This will result in a second visit by our employees and additional auditing charges (minimum two hours). Failure to provide the required notice may result in our refusal to accept the as-constructed records until the water pipelines are re-tested in the presence of a Wannon Water employee.

The consulting engineer and contractor are responsible for inspecting and ensuring that jetting of all pipes, fittings and maintenance structures are clean and free of staining, foreign matter and debris prior to undertaking ovality ball testing, laser profiling, gradient profiling, CCTV acceptance testing, connection to live assets and gifting of the asset to us.

Ovality ball testing is only required for sewer construction works with less than 50 metres of new sewer construction where CCTV acceptance testing is not required in the offer of conditions.

6.2 Sewer laser profiling and CCTV acceptance testing

In addition to required quality testing in the WSAA codes, CCTV acceptance testing and laser profiling is required for the construction of 50 metres or more of new sewer or as stipulated in the offer of conditions, or unless otherwise approved by us.

6.3 Testing of water mains

During construction of water mains, the consulting engineer will arrange trench compaction testing to be undertaken. Compaction testing must be witnessed by the consultant engineer and random locations chosen by the consultant engineer and not the contractor.

Upon completion of works and prior to connection, the consulting engineer will arrange for pressure testing of water mains in accordance with the WSAA Water Supply Code of Australia WSA 03-2002 MRWA edition at the correct test pressure corresponding to the design head for the water main. All results are required to be recorded for practical completion and provided to us as part of the as-constructed records.

Prior to undertaking hydrostatic pressure testing of the water main, the consultant must give us the required notice in writing **Form 35 – Notice of testing** to ensure that we have the opportunity to witness these tests. We are required to be notified **Form 35 – Notice of testing** with three clear days before final testing. If the tests are not successful, retesting will be required. This will result in a second visit by our employees and additional auditing charges (minimum two hours). Failure to provide the required notice may result in our refusal to accept the as-constructed records until the water pipelines are re-tested in the presence of our construction auditor.

6.4 Wannon Water auditing

We do not supervise construction of developer works. The consultant is entirely responsible for supervision of the construction contractor and the quality of the works. We may audit any part of the works at any time, including but not limited to:

- Onsite documentation
- Design
- Construction
- Survey
- Asset recording
- Safety
- Environmental controls.

Construction works are subject to a minimum level of monitoring and surveillance by us. Additional monitoring and surveillance will be based on our risk assessment for each activity.

Where rectification works are required, we will require evidence. This can be by resubmitting new test results or photographic evidence. If we have to attend the site, an additional auditing fee may be charged.

6.5 Wannon Water auditing

Written observations or non-compliance notice will be issued if there are concerns that our requirements are not being met. This could include OH&S observations or construction non-compliance issues noticed by our officers.

We reserve the right to notify Worksafe of observed OH&S concerns prior to referral to the engineering consultant.

Recurring non-compliance may lead to reassessment of the consultant's and contractor's ability to undertake development works and meet our requirements.

6.6 Corrective action

Corrective action, in most cases, will be required from the consultant within a stated period.. Failure to respond to such cases may lead to reassessment of the consultant's and contractor's ability to undertake development works.

The consulting engineer will be charged additional auditing fees for the issue of a non-compliance and analysis of corrective actions.

7.0 Miscellaneous

7.1 Plumbing

For plumbing connection applications and advice, refer to our website. The connection to the water supply and sewerage system for infill developments where no extension of reticulation mains is required, is managed through the plumbing section on the website.

All new customer contributions, connection fees and charges must be paid prior to approval of the application.

7.2 Plumbing

Responsible authorities (usually municipalities) administering planning schemes are required to forward subdivision plans, proposed development and land use proposals to us for comment where the development occurs within a designated potable water supply catchment in which we harvest water.

We have developed documentation to assist landowners in meeting drinking water catchment protection requirements.

7.3 Supply by agreement

Water (drinking and non-drinking) supply agreement customers are generally those occupants of rural properties who draw water from our mains at various locations. Water is transferred by private extensions or from tapplings directly on transfer/bulk supply mains. These private extensions and infrastructure are owned and maintained by the customer(s).

Generally, no new water supply agreements will be issued for existing properties on the fringe of serviced towns. A water main extension must be provided by the property owner and gifted to us, provided minimum pressure and flow can be achieved. This allows others to use or extend the water main to service additional properties.

Water supply agreements may also be required where the minimum prescribed water supply pressure and flow cannot be guaranteed. An example is the supply of water to a multi-storey building where a private pump station and break tank is required.