Water and Sewerage Service and Installation Rules

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Updates in this edition (from September 2003 edition)…

- All references to “ACTEW Corporation” and “ActewAGL” replaced with “Icon Water”
- All references to “BEPCON” changed to “ACTPLA”
- AS 3500 specifically referenced as the “Plumbing Code of Australia”
- Appendix O Principle 8 updated to reflect a reduced access passage requirement
- ACTPLA and Icon Water definition updated

Icon Water Limited (ABN 86 069 381 960)

CONTENTS

Section 1. General

1.1 Icon Water Limited

The Australian Capital Territory water and sewerage network is owned by *Icon Water Limited*, a Territory- owned corporation, which is the utility licensed under the *Utilities Act 2000* to provide water and sewerage services in the ACT.

1.2 Introduction to the service and installation rules

The service and installation rules have been developed as a requirement of the *Water and Sewerage Service and Installation Code* (*December 2000).*

The principles and rules contained in this document establish the requirements, obligations and procedures to be followed by *Icon Water* and customers when establishing or maintaining a connection to the potable water, recycled water and sewerage networks.

The service and installation principles and rules contained in this document must in no way negate the condition defined in any law, regulation or utility code, unless those laws, regulations or utility codes expressly permit an alternative at the discretion of the utility.

1.3 Application of this document

The service and installation rules and principles in this document apply to the following:

1.3.1 The life cycle of water, recycled water and sewerage network connections, including:

- installation
- maintenance
- changes to size and capacity
- temporary supply
- replacement
- removal.

1.3.2 Non-standard connections, including but not limited to:

- change of location
- change of boundary.

1.3.3 Access and protection of connections and network assets.

1.4 Failure to comply with the service and installation rules

Failure of a customer to comply with the service and installation rules may result in:

- *Icon Water's* refusal to approve an application
- *Icon Water's* refusal to make the final tapping into the water main or cut-in to the sewer main
- restriction or disconnection of water supply
- disconnection of a sewerage service.

1.5 Connection guidelines

Where appropriate to assist customers, *Icon Water* will publish guidelines based on the service and installation rules to:

- assist customers and their agents to understand and carry out the approval processes and construction requirements required for connection to *Icon Water's* recycled water and sewerage networks
- establish approval lead times that are commensurate with the complexity and size of the project
- assist customers with the ongoing operation and maintenance of the connection
- detail the contestable and non-contestable services that *Icon Water* will offer to assist customers to connect to the networks
- advise the location and telephone number of information services where customers may obtain additional assistance.

1.6 Enquiries

All enquiries and matters related to the service and installation rules should be addressed to one of the following.

In person
Icon Water Service Centre
12 Hoskins Street
Mitchell ACT 2911
8.30am to 4.45pm, Monday to Friday

In writing
Icon Water
GPO Box 366
Canberra City ACT 2601

By telephone
Icon Water trade and technical enquiries telephone line (water)
6248 3111
8.30am to 5.00pm, Monday to Friday

By email
talktous@iconwater.com.au

Section 2. Principles

2.1 Water and sewerage service and installation principles

The following service and installation principles are the foundation of the general service and installation rules contained in this document. Proposals outside the ambit of the general rules will only be considered if they meet all the requirements of the service and installation principles.

Principle 1 Connections must be created, maintained and operated in a manner that preserves the environment, quality, security, reliability, amenity and safety of the water and sewerage networks.

Principle 2 Plumbing and drainage systems connected to *Icon Water* networks must be created, maintained and where necessary upgraded to a standard that preserves the environment, quality, security, reliability, amenity and safety of the water and sewerage networks or the systems of other customers connected to those networks.

Principle 3 The equipment, appliances, products, processes and practices of a customer must be controlled to protect the customer's plumbing system and the water network from intentional, inadvertent or accidental introduction of substances or noises that may impact on the environment, quality, security, reliability, amenity and safety of the water network or the plumbing systems of other customers connected to that network.

Principle 4 The discharge by the customer into the sewer connection must not result in:

4.1 unsafe conditions for personnel entering the sewerage network

4.2 unsafe conditions for the general public or public property (for example, conditions resulting from the disposal or accidental introduction of toxic, gaseous or explosive substances)

4.3 a loss of service or amenity of other customers connected to the network

4.4 blockages caused by the entry of non-domestic discharge, solids, debris or other unapproved substances listed in *Icon Water's* liquid discharge acceptance criteria

4.5 corrosion or damage that will shorten the planned life of the sewerage network assets, unless approved in the terms and conditions of a non-standard customer contract

4.6 flow rates in excess of the network design standards specified in the *Icon Water* water supply and sewerage standards

4.7 unwanted impacts on the network waste treatment processes

4.8 harmful discharge to the environment

4.9 the prevention of *Icon Water* to use treatment by-products or treated wastewater

4.10 any limitation of *Icon Water* to fully recover costs associated with acceptance of domestic and non-domestic discharges

4.11 an increase in the unfunded liability associated with the acceptance of domestic and non-domestic discharges.

Principle 5 Redundant connections must be disconnected in a manner that preserves the quality, safety and amenity of the water and sewerage networks. Disused assets must be removed or preserved in a manner that will not harm the environment or have an inequitable impact on future generations.

Principle 6 The customer's system must be constructed and maintained by accredited persons in a manner that is consistent with good trade practice and statutory obligations.

Principle 7 Alternative materials, special designs and non-standard locations for connections must not add significantly to the cost of operating, maintaining or replacing elements of the water or sewerage networks provided under the standard customer contract.

Principle 8 The boundary between *Icon Water's* water network and the plumbing system of a customer's premises shall be the designated connection as defined in the Water and Sewerage Network Boundary Code, unless otherwise agreed under the conditions of a non-standard customer contract.

Principle 9 The boundary between *Icon Water's* sewerage network and the sanitary drainage system of a customer's premises shall be the designated connection as defined in the Water and Sewerage Network Boundary Code, unless otherwise agreed under the conditions of a non-standard customer contract.

Principle 10 Customers must draw water downstream from the *Icon Water* isolation valve and meter assembly. The customer must not draw water from the connection upstream of the meter.

Principle 11 Water must not be drawn from a water connection by any persons without the installation of an *Icon Water* water meter, unless otherwise agreed under the conditions of a non-standard customer contract.

Principle 12 A connection must meet or exceed the performance standards specified in any applicable utility code or design standard.

Principle 13 All *Icon Water* equipment and network assets must be protected and made accessible in a manner consistent with the *Utilities Act 2000* (including relevant codes) and the pipe protection rules and principles at Appendix O. For a practical access guide see Appendix A.

Principle 14 Structures, obstructions, obstacles and the activities of others must not hinder the ability of *Icon Water* to install, test, replace or repair any connection or allied network asset on or surrounding the customer's property. For a practical access guide see appendix A.

Principle 15 Structures, barriers, obstructions, obstacles and the activities of others must not hinder the ability of *Icon Water* to read a water meter located on a customer's property. For a practical access guide see appendix A.

Principle 16 All costs associated with the creation, relocation, alteration, augmentation or removal of a connection must be borne by the customer.

Principle 17 The parties responsible for the funding of an extension, augmentation, relocation or removal of network assets that may be required to satisfy a customer's purpose must be identified before approval is granted.

Principle 18 Any extension of the network that is required to facilitate a new connection to a property must be constructed in accordance with *Icon Water* water supply and sewerage standards.

Principle 19 *Icon Water* is neither liable nor responsible for the inconvenience or costs borne by the customer associated with the rejection of an application that fails to comply with the rules and principles of this document. *Icon Water* will not alter the rules to accommodate the failure of a customer, or their agent, to obtain approvals at an early design stage of a project.

Principle 20 *Icon Water*'s acceptance of a non-standard solution in one location will not be considered as a precedent for other leases where standard connections can reasonably be achieved. *Icon Water* is not responsible for the inability of a project to proceed because of the economics of a standard or a non-standard solution.

Section 3. Sewerage (service and installation)

Rules for sewerage connections

The general rules for sewerage connections and associated network infrastructures are outlined below. These rules are based on the general principles in Section 2. Adherence to these rules will usually lead to *Icon Water's* approval. However, in addition, qualified design agents must make their own workability assessment based on site conditions, network location, lease conditions, special circumstances and good hydraulic practice.

Rule S1. Sewerage connection applications

A separate application is required for each property. An application is required in the following instances:

- for a new connection, a temporary connection, alterations or additions to a connection, relocation of a connection or removal of an existing sewerage connection
- for all proposals to alter, make additions to, or relocate an *Icon Water* network sewerage main for the purpose of providing a connection
- before making any non-domestic discharge to a sewerage connection that requires approval under rule S17
- before undertaking any demolition works, construction works, landscaping or earthworks on properties containing, planned to contain or in close proximity to an *Icon Water* sewerage connection or allied sewerage network asset.

Rule S2. Availability of the sewerage network to service a property

Icon Water will approve the installation of a new connection or the modification of an existing connection on the condition that:

- the existing network is close enough to permit a viable connection to be designed and constructed
- the proposed connection can be adequately accessed and maintained by *Icon Water* using standard equipment and work practices
- the additional sewage load does not have an adverse effect on the planned capability of the network to service other customers
- the load capacity of the network is sufficient to meet the customer's requirements
- the customer pays the costs associated with the provision of the new connection from the approved network sewer main with adequate capacity
- funding and construction lead times are identified for any network augmentation works that *Icon Water* determine are necessary to permit the network and treatment facilities to meet the customer's demand.

Icon Water is not responsible for any expense or liabilities incurred by the customer resulting from the failure of a customer to determine these conditions at the feasibility stages of a project.

Rule S3. Number of connections

Icon Water will approve one connection to the sewerage network for each property under the conditions of the standard customer contract.

Icon Water may approve more than one connection to the sewerage network under the conditions of a non-standard customer contract, only:

- where it can be demonstrated that security of supply is required to be greater than the levels of continuity delivered under the standard customer contract
- where a single connection cannot adequately meet the customer's discharge demand
- where the principles at Section 2 of this document can be achieved

- where the customer agrees to pay all service connection fees and annual supply charges for each connection.

Rule S4. Size of connection
Icon Water will approve a sewerage connection sized in accordance with *Icon Water* water supply and sewerage service standards.

Rule S5. The connection boundary
Icon Water will approve a connection in which the boundary (usually the tie) between the sewerage network and the customer's sanitary drainage system is located in accordance with *Icon Water* water supply and sewerage standards and the requirements of the Water and Sewerage Network Boundary Code.

Icon Water will approve a connection to a sewerage main traversing a customer's property only where connection to a main external to the property is considered by *Icon Water* to be impracticable. Where an internal connection is approved, the connection tie is to be located outside the pipe protection envelope (to minimise the risk of damage to the main when excavating the tie), see rule S21.

Icon Water may approve an alternative boundary between the sewerage network and the customer's sanitary drainage system (distance inboard or outboard of the property boundary) under the conditions of a non-standard customer contract only:

- where it can be demonstrated that security of access to the point of connection is required to be greater than the levels of security provided under the standard customer contract
- where *Icon Water* cannot provide a connection at the standard location
- where the principles in Section 2 in this document are achieved
- where the customer agrees to pay all service connection costs, fees and charges.

Rule S6. The point of entry into a property
Icon Water water supply and sewerage standards require the sewerage connection to enter a property at a location that will maximise the area of land that can be serviced by gravity sanitary drains (usually the lowest corner of a property).
Where in the opinion of *Icon Water* an optimum location is not viable, land title documents are to be notated to record the area of land that cannot be serviced.

Rule S7. Connections from neighbouring properties
Icon Water will approve a new connection or disconnection of a redundant connection serviced from a network main located in a neighbouring property subject to a conciliation process being undertaken in accordance with the connection from a third party property procedure at Appendix G.

Rule S8. The condition of the customer's installation
Icon Water will approve the installation and operation of a connection between the sewerage network and a customer's sanitary drains subject to compliance with the following:

- the customer's sanitary drainage system must be certified by an approved certification body, to the effect that the internal sanitary drainage system is fit for purpose and has been constructed in accordance with the Water and Sewerage Act, Water and Sewerage Regulations and the Plumbing Code of Australia (AS/NZS 3500) as administered and interpreted by ACT Planning and Land Authority *(ACTPLA)*
- the customer's sanitary drainage system and premises must be constructed in a manner that does not create a significant risk to the safety of *Icon Water* workers, members of the public or other customers connected to the network
- the customer's sanitary drainage system must be designed to eliminate the ingress of unapproved discharge

- the customer's sanitary drainage system must be designed to protect the interior of buildings from sewage surcharge and have the capacity to discharge surcharging wastewater (generated from the utility network or the customer's premises) effectively to the exterior of a customer's building.

Where it comes to the attention of *Icon Water* that the condition of an existing customer's sanitary drainage system does not meet any one of these requirements, *Icon Water* may initiate the notification of the failure of a customer's sanitary drainage system procedure to conform to *Icon Water* expectations described at Appendix H.

Rule S9. Grounds for disconnection from the sewerage network

Any one of the following conditions may constitute grounds for disconnection from the sewerage network:

- failure to comply with the rules and principles of this document
- failure to comply with the conditions of the standard customer contract
- failure to comply with the conditions of a non-standard customer contract
- failure of the customer to operate and maintain the sanitary drainage system in a condition that may pose a risk to the security, reliability or safety of the sewerage network or to the security, reliability, safety and environment of *Icon Water* staff or other connected customers.

Where isolation or disconnection of supply is required, *Icon Water* may initiate the isolation or disconnection of sewerage supply for the purpose of network protection procedure described at Appendix D.

Rule S10. Boundary risers

A boundary riser (inspection shaft) must be installed (in accordance with *ACTPLA* plumbing construction notes) whenever a new sanitary drainage system is constructed or a when the tie of a sanitary drainage system (without a riser) is unearthed for repairs. A protective access box must be fitted to all risers and the riser cap must be sealed to prevent the ingress of stormwater.

Rule S11. Design, construction, materials and structural integrity

The design, construction, choice of materials and the structural integrity of the connection are to comply with the current version of *Icon Water* water supply and sewerage standards in print at the time of application.

Rule S12. Installation, ownership, protection, maintenance and end of life replacement of connections

The customer's and the utility's obligations for installation, protection and maintenance of sewerage connection assets are detailed in the life cycle responsibilities for sewerage connection assets table at Appendix L.

The customer is also responsible for the following.

12.1 Ensure that the designated connection (tie) point remains free from unapproved encumbrances such as driveways, letterboxes, trees, fences, structures and retaining walls. Where access to sewerage infrastructure is impeded, *Icon Water* may require the removal of those encumbrances by the customer or the relocation of the connection at the customer's expense in accordance with the removal of unapproved encumbrances procedure at Appendix J.

12.2 Reinstate special pavement finishes in accordance with the *Icon Water* reinstatement policy at Appendix B.

12.3 Obtain *Icon Water* approval to site any building, structure or encumbrance on a property that contains or is in the vicinity of *Icon Water* sewerage assets. Network protection principles, rules and access requirements are at Appendix O.

12.4 Maintain the internal sanitary drains up to and including the point of connection (tie) to *Icon Water's* sewerage network. This includes repairs resulting from the penetration of plant or tree roots at the designated connection point.

12.5 Pay the cost of repairing damage to *Icon Water* assets resulting from excavation, construction or maintenance work undertaken by the customer, the customer's agent or contractor.

12.6 Pay the cost of removing blockages or repairing damage in the network at or downstream of the designated connection point caused by the introduction of unapproved discharge, see rule S17.

12.7 Seek compensation for the repair of damage to the customer's property resulting from an overflow or surcharge of sewage from the *Icon Water* network in accordance with the recommended procedure for seeking compensation for damage resulting from a sewage spill or water network burst at Appendix M.

12.8 Be responsible for the repair of damage resulting from all overflows or surcharges of sewage from the sewerage network into a customer's property when the customer's drainage system fails to meet the requirements of rule S8.

Icon Water is responsible for:

12.9 clearing blockages occurring in the main or in the connection downstream of the designated connection point in accordance with the Consumer Protection Code.

12.10 maintaining the sewerage connection in accordance with the Water and Sewerage Network (Design and Maintenance) Code.

12.11 reinstate landscape elements in accordance with the *Icon Water* reinstatement policy at Appendix B.

12.12 assisting customers, as a customer service and without admission of liability, to clean up external to a building after a sewage spill. For a description of the clean-up and reimbursement conditions see Appendix N. See also the procedure for seeking compensation for damage resulting from a sewage spill at Appendix M.

Rule S13. Contestable works

With the exception of creating or removing the junction at the sewer main, the installation of a connection is contestable work and may be undertaken by the customer's agent or by contracting *Icon Water*. When the customer engages persons other than *Icon Water* to undertake contestable works, the customer must:

- obtain *Icon Water*'s approval for the works.
- comply with *Icon Water* water supply and sewerage standards and other conditions requested by *Icon Water*
- only engage persons accredited by *Icon Water* (under the Contestable Work Accreditation Code) to undertake the works.
- inform *Icon Water* of the name of the proposed contractor.

The creation or removal of the junction at the sewer main is not contestable work and must be undertaken by *Icon Water* at the expense of the customer.

Rule S14. Reimbursement of sewer blockage investigations

If a customer (or their agent drainer) investigates a drainage problem on the customer's premises and discovers that the fault is in *Icon Water's* connection or network, *Icon Water* will reimburse costs commensurate with industry rates. A description of the reimbursement conditions are in Appendix N.

Rule S15. Removal of sewerage connections
A sewerage connection is deemed by *Icon Water* to be redundant when:

- a customer requests the removal of a connection
- a building and its associated plumbing and/or sanitary drainage systems are approved for demolition without plans for future development of the property
- a plumbing and/or sanitary drainage system is in a state of disrepair, vandalised, damaged or exposed to the ingress of unapproved non-domestic discharge, rainwater or flooding
- the water supply is not available to charge sanitary drainage water seals
- an alternative connection has been approved by *Icon Water*.

All redundant sewerage connections must be disconnected from the customer's sanitary drainage system in a manner directed and approved by *Icon Water*.

Where the future function of an unused connection cannot be determined by the customer within a reasonable period, or principles 1 to 7 of this document are contravened, the connection is to be completely removed and the main made good.

Where a future use of the connection can be determined within an agreed period, *Icon Water* may require that the connection be temporarily capped at a location determined by *Icon Water*.

Where a customer makes a request for a property to be permanently or temporarily disconnected from the sewerage network, or where *Icon Water* notifies a customer that a redundant service is to be permanently or temporarily disconnected, the customer must apply for disconnection by following the process described in *Icon Water's* connection and disconnection guidelines. All costs are to be borne by the customer.

Disconnected sewerage connection pipes must be made environmentally safe either by complete removal or safe burial in accordance with the directions of *Icon Water*.

Rule S16. Demolition of the customer's sanitary drainage system
The customer is to obtain *Icon Water* approval for the temporary capping or permanent removal of connection(s) before undertaking any demolition works affecting the customer's sanitary drainage system (see rule S15).

Where demolition works commence before *Icon Water* approval has been obtained, *Icon Water* may initiate the isolation or disconnection of sewerage services for the purpose of network protection procedure at Appendix D.

The customer (or their agent) is responsible to immediately notify *Icon Water* of all faults or damage to sewerage network assets caused by or discovered in the course of demolition works. The property owner is responsible to pay for the repair of *Icon Water* assets damaged by the customer's demolition works or resulting from faulty workmanship or materials in the customer's sanitary drainage system.

Rule S17. Types of waste acceptable for discharge into the sewerage network
Icon Water accepts domestic sewage into the *Icon Water* sewerage network under the conditions of the standard customer contract.

The type, quality and quantity of domestic and non-domestic wastes discharged by a customer into the *Icon Water* sewerage network must not exceed the limits established in *Icon Water's* liquid discharge acceptance criteria unless otherwise negotiated with *Icon Water* in a non-domestic sewage discharge agreement (see rule S18).

Rule S18. Non-domestic sewage discharge agreements
All customer premises generating, containing or storing non-domestic waste on their premises must, as a condition of connection, enter into a non-domestic sewage discharge agreement. The agreement is to establish the conditions under which *Icon Water* will accept the discharge, pre-treatment or the prevention of discharge of wastes into the sewerage network. Administration, load-based and volumetric fees may apply.

Application for the establishment of a non-domestic sewage discharge agreement is to be made in accordance with the procedure described in *Icon Water's* non-domestic waste acceptance policy.

Where a customer discharges unapproved non-domestic discharges to the sewerage network, *Icon Water* may initiate the procedure described in the non-domestic sewage discharge agreement.

Where a customer's premises generates, contains or stores non-domestic waste and does not have a non-domestic sewage discharge agreement with *Icon Water*, *Icon Water* may initiate the procedure for isolation or disconnection of sewerage supply for the purpose of network protection at Appendix D.

It is anticipated that agreements for pre-existing systems will be progressively implemented. A grace period will be permitted to give time for existing customers to implement the conditions required by *Icon Water*.

Rule S19. Storm and rainwater discharge to the sewerage network
Stormwater drainage systems and overland flows are not to be connected to, or discharge into the *Icon Water* sewerage network unless approved under the conditions of a non-domestic sewage discharge agreement.

Icon Water's approval for acceptance of stormwater into the sewerage network is discretionary and conditional upon *Icon Water's* assessment of the capability of the network and treatment facility to carry the additional load (see rule 2).

The quantity, retention and control of stormwater approved for discharge to the sewerage network must comply with the controls and limits established in a non-domestic sewage discharge agreement.

Rule S20. Pumped drainage connections
Sanitary drainage fixture outlets, floor wastes and internal maintenance holes that are lower than the required elevation above external overflow relief gullies, disconnector traps or network manhole covers must be serviced by holding tanks and sullage pumps constructed to *Icon Water's* approval. *Icon Water* will approve the connection of a pumped (rising) drainage system to the gravity network subject to:

- submission of the proposed volume and discharge rates
- acceptance by the customer of a maximum rate of discharge limits determined by
- *Icon Water*
- the rising sanitary drain must discharge into an access chamber (manhole) on the customer's property before discharging by gravity into *Icon Water's* connection
- establishment of a non-domestic sewage discharge agreement for the acceptance of septic waste (see rule S18).

Note – in-line sewage back-flow protection devices (reflux valves) are not considered by *Icon Water* to provide adequate long-term protection. Likewise, increasing the depth of a sewer main external to leases at extra public cost in order to permit gravity drainage of basement fixtures within specific leases, is not normally permitted.

Rule S21. Network asset protection and accessibility
Customers and their agents are responsible to protect and provide access to sewerage network assets in accordance with the pipe protection principles and rules at Appendix O.

Rule S22. Special designs
Whilst not encouraging special designs, *Icon Water* recognises that circumstances may arise where the installation of a connection cannot meet the conditions of one or more of the standard rules.

Icon Water may approve special connection designs only where:

- the design meets the requirements of the principles at section 2 of this document
- the design complies with statutory obligations
- a non-standard customer contract is negotiated for elements outside the conditions of the standard customer contract
- the responsibility for construction, ownership, access, maintenance and replacement of the various non-standard component parts of the connection are determined to the satisfaction of *Icon Water*
- special land access conditions are documented on relevant property titles
- the approvals of third party stakeholders or property owners are confirmed for the life of the asset in legally binding documentation
- all fees and costs are paid by responsible parties.

Section 4. Water and recycled water (service and installation) rules

Rules for water connections

The general rules for potable and recycled water connections and associated network infrastructures are outlined below. These rules are based on the general principles in Section 2. Adherence to these rules will usually lead to *Icon Water's* approval. However, in addition, qualified design agents must make their own workability assessment based on site conditions, network location, lease conditions, special circumstances and good hydraulic practice.

Rule W1. Water connection applications

A separate application is required for each property. An application is required in the following instances:

- for a new connection, a temporary connection, re-sizing a connection, re-sizing a meter, relocation of a connection or removal of an existing connection
- for all proposals to alter, make additions to, or relocate an *Icon Water* network water main for the purpose of providing a connection
- before undertaking any demolition works, construction works, landscaping or earthworks on properties containing, planned to contain or in close proximity to an *Icon Water* water connection or water network asset.

Rule W2. Availability of the network to service properties

Icon Water will approve the installation of a new connection or the modification of an existing connection on condition that:

- the existing network is close enough to permit a viable connection to be designed and constructed
- the proposed connection can be adequately accessed and maintained by *Icon Water* using standard equipment and work practices
- the capacity of the water main and connection is sufficient to deliver water within the permissible flow and pressure standards established in the Water and Sewerage Service Standards Code
- the additional demand does not have an adverse effect on the planned capability of the network to service other customers
- the capacity of the network is sufficient to meet the customer's requirements
- the customer pays the costs associated with the provision of the new connection from the approved network water main with adequate capacity
- funding and construction lead times are identified for any network augmentation works that *Icon Water* determine are necessary to permit the network and treatment facilities to meet the customer's demand.

Icon Water is not responsible for any expense or liabilities incurred by the customer resulting from the failure of a customer to determine these conditions at the feasibility stages of a project.

Rule W3. Number of connections

Icon Water will approve one connection to the water network for each property under the conditions of the standard customer contract.

Icon Water may approve more than one connection to the water network under the conditions of a non-standard customer contract only:

- where it can be demonstrated that security of supply is required to be greater than the levels of continuity delivered under the standard customer contract
- where a single connection cannot adequately meet the customer's supply demand
- where the principles at Section 2 of this document can be achieved

- where the customer agrees to pay all service connection fees and annual supply charges for each connection.

Rule W4. Size of connection
Icon Water will approve a water connection sized in accordance with *Icon Water's* water supply and sewerage standards, subject to the customer taking the following variables into account when sizing the connection and constructing their internal plumbing and irrigation systems:

- permissible minimum flow rates to be delivered by the network as prescribed in the Water Supply and Sewerage Service Standards Code.
- permissible minimum and maximum operational pressures delivered by the network as prescribed in the Water Supply and Sewerage Service Standards Code.
- the variation in pressure from main-to-main, street-to-street, block-to-block resulting from pressure zoning of the network for operational purposes
- the fluctuation of water pressure and flow rates in the network (within permissible code limits) according to seasonal demand or the daily usage of other customers on the network
- the interruption of the water supply from time to time (within permissible code limits) resulting from accidents, emergency maintenance, planned maintenance, pipe replacement, weather and acts of third parties
- pressure and flow rates available at the customer's connection may be reduced or increased (within permissible code limits) to accommodate network augmentation, optimisation strategies and growth of the network.

Where the customer has equipment or systems that require qualitative or quantitative standards for water that are outside the operational capability of the network to deliver, the customer is responsible to identify, design, provide and pay for the pre-treatment equipment necessary to measure and deliver the desired standards downstream of the connection.

Where the customer has appliances, equipment or systems that operate within a recommended minimum or maximum water pressure, the customer is responsible for the installation of pressurisation or pressure reduction devices downstream of the meter. For example, dialysis machines, dishwashers, washing machines, irrigation sprinklers, plumbing pipes under the Plumbing Code of Australia (AS/NZS 3500), flick taps and manufacturing equipment.

Rule W5. The connection boundary
Icon Water will approve a water connection in which the boundary (usually the isolation valve) between the water network and the customer's plumbing system is located in accordance with *Icon Water* water supply and sewerage standards and the requirements of the Water and Sewerage Network Boundary Code.

Icon Water will approve a connection to a water main traversing a customer's property only where connection to a main external to the property is considered by *Icon Water* to be impracticable. Where an internal connection is approved, the connection tie (boundary) is to be located outside the pipe protection envelope (to minimise the risk of damage to the main when excavating the isolation valve), see rule W24.

Icon Water may approve an alternative boundary between the sewerage network and the customer's plumbing system (distance inboard or outboard of the property boundary) under the conditions of a non-standard customer contract only:

- where it can be demonstrated that security of access to the point of connection is required to be greater than the levels of security provided under the standard customer contract
- where *Icon Water* cannot provide a connection at the standard location
- where the principles in Section 2 in this document are achieved

- where the customer agrees to pay all service connection costs, fees and charges.

Rule W6. The point of entry into a property
Icon Water will approve a water connection where the point of entry into the property is in accordance with the *Icon Water* water supply and sewerage standards and is free of encumbering pavements and structures defined by rule W24.

Customers wishing to construct pavements, landscape features and structures over an existing connection are to apply for relocation of the connection to another approved location.

Icon Water may approve an alternative point of entry into a customer's property only:
- where the conditions of rule 2 can be achieved
- where the principles in Section 2 in this document are achieved
- where the customer agrees to pay all service connection costs, fees and charges.

Icon Water may approve an alternative method of housing the isolation valve/meter assembly only:
- where the principles in Section 2 in this document are achieved
- where the customer agrees to pay all costs, fees and charges.

Rule W7. Isolation of supply
An *Icon Water* approved isolation valve must be fitted at the boundary between the network and the customer's plumbing system.

Rule W8. Connection from neighbouring properties
Icon Water will approve a new connection or disconnection of a redundant connection serviced from a network main located in a neighbouring property subject to a conciliation process being undertaken in accordance with the connection from a third party property procedure at Appendix G.

Rule W9. The condition of the customer's installation
Icon Water will approve the installation and operation of a connection between the water network and a customer's plumbing system only where:
- the customer's installation is certified by an approved certification body, to the effect that the plumbing system is fit for purpose and has been constructed in accordance with the Water and Sewerage Act, Water and Sewerage Regulations and the Plumbing Code of Australia (AS/NZS 3500) as administered and interpreted by *ACTPLA*
- any proposal to pump water from the connection has been approved by *Icon Water*
- the customer's plumbing system and premises have been constructed in a manner that does not create a risk to the safety of maintenance workers or members of the public, including the risk of electric shock
- noise or water-hammer in the customer's internal plumbing system does not cause damage to the network or disturbance to other customers connected to the network (see rule W18).

Where it comes to the attention of *Icon Water* that the condition of the customer's plumbing system does not meet any one of these requirements, *Icon Water* may initiate the failure of a customer's plumbing systems to conform to *Icon Water* expectations procedure at Appendix I.

Rule W10. Grounds for disconnection or restriction of supply
Any one of the following conditions may constitute grounds for disconnection or restriction of supply from the water network:
- failure to comply with the rules and principles of this document
- failure to comply with the conditions of the standard customer contract
- failure to comply with the conditions of a non-standard customer contract

- failure of the customer to maintain the plumbing system in a condition that may pose a risk to the security, reliability or safety of the water network or to the security, reliability, safety and environment of *Icon Water* staff or other connected customers.

Where isolation or disconnection of water supply is required, *Icon Water* may initiate the isolation or disconnection of water supply for the purpose of a network protection procedure described at Appendix C.

Where restriction of supply is required, *Icon Water* may initiate the restriction of water supply for failure to pay water accounts procedure at Appendix E.

Rule W11. Back-flow prevention

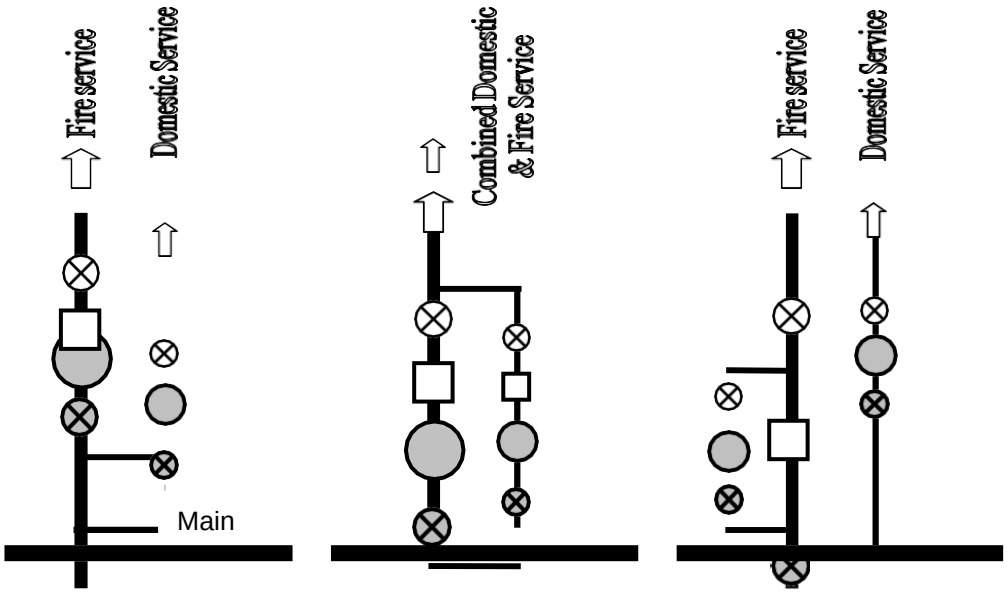
Icon Water will approve the installation and continued operation of a connection subject to:

- the water supply network serving the customer's plumbing, irrigation and fire service must be protected by back-flow protection devices (downstream of the meter) in accordance with the requirements of the Plumbing Code of Australia (AS/NZS 3500) as administered by *ACTPLA*
- all testable back-flow protection devices must be registered with *ACTPLA*
- all testable back-flow protection devices must be maintained in accordance with *ACTPLA*
- requirements
- properties with more than one connection from the potable water network must install *Icon Water* and *ACTPLA* approved back-flow prevention devices on all connections serving that property
- all pump installations that are used to boost the flow and/or pressure of water downstream of the point of connection must comply with *Icon Water* and *ACTPLA* back-flow protection requirements
- premises that have rainwater tanks, bore water supplies, greywater reuse systems, reticulated disinfected reclaimed water systems and other alternative water supplies must have back-flow protection equipment installed on the potable water connection in accordance with the Plumbing Code of Australia (AS/NZS 3500) as administered by *ACTPLA*
- alternative water plumbing systems and network serviced potable water plumbing systems constructed within the customer's premises are not to be physically interconnected.
- *Icon Water* will not approve zone back-flow protection devices as a means of separating these systems.

Where *Icon Water* has reasonable grounds to believe that a premises does not have adequate backflow protection and poses a significant risk of contamination to the drinking water network, *Icon Water* may require the customer to install a fully compliant device in accordance with the conditions of this rule. Failure of the customer to rectify the fault or eliminate the hazard, within a reasonable period may constitute grounds for disconnection of supply. If these conditions become evident, *Icon Water* may initiate the isolation or disconnection of water supply for the purpose of network protection procedure at Appendix C.

Rule W12. Configuration and metering of fire connections

In accordance with rule W3, *Icon Water* will generally approve only a single connection to each property. For this reason, *Icon Water* will only approve a single connection to provide both fire and domestic services to a property, unless special conditions apply.



Single connection
Separate fire service.
Separate domestic service.

System 1

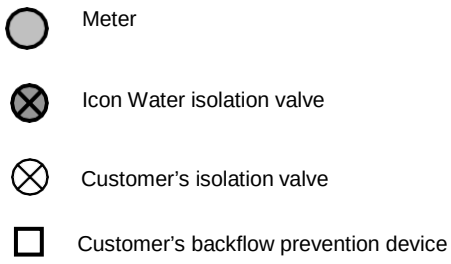
Single connection
Combined fire and domestic services.

System 2

Dual connection
Separate fire connection (with monitoring meter if required).
Separate domestic connection

System 3

Legend



Of the generic systems illustrated above, *Icon Water* will generally only approve System 1. Alternatively configured single connection systems such as System 2 will only be considered where *Icon Water* determines System 1 cannot be applied for technical reasons. *Icon Water's* decision will be final.

Separate fire and domestic connections illustrated below as System 3, will only be approved where a single connection cannot be designed to deliver the required combined fire and domestic flow or where small domestic flow could lead to water quality problems in a large single connection.

In the past, separate firefighting water supply connections (System 2) have not generally been metered and were approved on the condition that the water will be used only for the purpose of fighting fires. Where *Icon Water* has reasonable grounds to believe that the water is being used or has the potential

to be used for purposes other than firefighting, *Icon Water* will require a small *Icon Water* bypass meter be installed across the fire service back-flow protection device. Alternatively a suitable counterweighted non-return valve may be installed to enable the water flows to be measured.

The customer will be responsible for the full cost of providing non-standard metering facilities and to meet other costs as may be necessary to satisfy *Icon Water* and *ACTPLA* that the water network is adequately protected.

Rule W13. Retention times in oversized connections
Icon Water will approve oversized connections only under the conditions of a non-standard customer contract where the customer takes responsibility for water quality problems resulting from the long retention time or slow velocity of the connection.

Rule W14. Installation of meters – standard location
All potable water connections, other than dedicated fire services under rule W12 (system 3) must be metered.

A meter must be installed before the connection is made operational.

Specific protection and unhindered access requirements for metering equipment are to comply with the Water Metering Code, standard customer contract and Utilities Act. *Icon Water's* guideline for what constitutes practical unhindered access to a meter is described at Appendix A.

The construction of meter cabinets, pits, meter boxes and associated lids must comply with the design requirements of the *Icon Water's* water supply and sewerage standards.

The location of the meter is to comply with the *Icon Water's* water supply and sewerage standards, Water and Sewerage Regulations and the Network Boundary Code and the following additional requirements:

- meters must not be in locked enclosures unless approved to be fitted with an *Icon Water* keyed mechanism
- meters must not be located in isolated or distant places requiring customer guidance to find them
- meters serving properties with large frontages, multiple titles or dedicated entrance roads are to be located in consultation with *Icon Water* (generally on common ground and preferably near the main property entrance).

If any property is connected to the *Icon Water* water supply system without a water meter, *Icon Water* may initiate the notification to install a water meter procedure at Appendix F.

Rule W15. Installation of meters – non-standard location
Icon Water will approve a non-standard location for the metering equipment only under the following conditions:

- a standard location cannot reasonably be achieved at the design stage of a project
- the connection is served by an *Icon Water* main traversing the customer's property
- the alternative location of the water meter meets all the requirements for maintenance access, replacement access, reading access, public safety and meter protection required by the Water Metering Code and rule 24
- where the main is external to the property, an isolation valve (point of connection) must be installed within one metre of the property boundary closest to the network main. In cases where the main is internal to the property, the isolation valve must be installed within one metre (external) of the pipe protection envelope

- where the meter is located more than one meter inboard of the isolation valve, the customer is responsible for the maintenance, repair and replacement of all plumbing between the isolation valve and the meter.

Rule W16. Remote meter reading devices
The use of remote meter reading and data logging devices will be permitted provided all the principles of access for meter reading, maintenance, replacement and safety are maintained.

Remote reading and data logging devices, installed, operated and maintained by the customer, may be approved by *Icon Water* provided the installation falls within the scope of the standard customer contract and the following additional conditions are met:

- the device complies with all relevant requirements of the *Water and Sewerage Regulations 2001*
- the device complies with all relevant Australian standards
- the customer can adequately demonstrate that such devices and associated equipment do not pose a risk to the safety of maintenance workers or members of the public including the potential risk of electric shocks
- the devices and associated equipment do not pose a risk to the effective life and operation of the water network including the risk of pipe borne noise impacting on the water network and other customers being supplied from the network
- the customer is responsible to disconnect and reconnect remote reading devices, at no cost to *Icon Water*, when requested by *Icon Water* for the purpose of maintaining or replacing the meter
- the integrity of the *Icon Water* meter tamper seals is maintained.

Rule W17. Design, construction, materials and structural integrity
Icon Water will approve a connection if the design, construction, choice of materials and the structural integrity of the connection comply with the current version of *Icon Water's* water supply and sewerage standards in print at the time of application.

Rule W18. Installation, ownership, protection maintenance and end-of-life replacement
The customer's and the utility's obligations for installation, protection and maintenance of connection assets are detailed in Appendix K.

The customer is also responsible to:

18.1 ensure that the designated connection point and meter remains free from unapproved encumbrances including driveways, letterboxes, trees, fences, and retaining walls. Where access is impeded, *Icon Water* may require the removal of those encumbrances by the customer, or the relocation of the connection at the customer's expense by the application of the removal of unapproved encumbrances over the connection or network assets procedure at Appendix J

18.2 reinstate special pavement finishes in accordance with *Icon Water's* reinstatement policy (see Appendix B)

18.3 pay for any preventable damage to the connection, meter or meter housing

18.4 obtain *Icon Water* approval to site any building, structure or encumbrance on a property that contains or is in the vicinity of *Icon Water* water assets. Network protection principles, rules and access requirements are at Appendix O.

18.5 eliminate noise or water-hammer emanating from the customer's plumbing system with the potential to cause damage to the network or disturbance to other customers connected to the network.

18.6 seek compensation for the repair of flood damage to the customer's property resulting from an accidental burst of the water network in accordance with the recommended procedure for seeking compensation for damage resulting from a sewage spill or water network burst at Appendix M.

Icon Water is responsible for:

18.7 repairing restrictions, bursts or leaks occurring in the connection upstream of the designated connection point when advised by the customer

18.8 reducing noise and preventing water-hammer created within the water network from entering the customer's plumbing system

18.9 requiring customers to eliminate pipe borne noise or water-hammer that is impacting on other customers connected to the network

18.10 maintaining the water network in accordance with the Water and Sewerage Network (Design and Maintenance) Code

18.11 assisting customers, as a customer service and without admission of liability, to clean up flood damage external to a building after a water network burst. See the recommended procedure for seeking compensation for damage resulting from a sewage spill or flooding caused by a water network burst at Appendix M

18.12 reinstate standard finishes in accordance with *Icon Water's* reinstatement policy (see Appendix B).

Rule W19. Removal of water connections

All redundant water connections must be effectively isolated from the customer's plumbing system in a manner directed and approved by *Icon Water*.

- Where no future use of the redundant connection is intended, the connection is to be completely removed and the main made good.
- Where a future use of the redundant connection is intended within a reasonable period, the connection may be temporarily capped at the network boundary isolation valve.
- Where a customer makes a request to be permanently or temporarily disconnected from the water network or where *Icon Water* notifies a customer that a redundant service is to be permanently or temporarily disconnected, the customer must apply for disconnection by following the process described in *Icon Water's* connection and disconnection guidelines. All costs are to be borne by the customer.
- Disconnected sewerage connection pipes must be made environmentally safe either by complete removal or safe burial in accordance with the directions of *Icon Water*.

A water connection is deemed by *Icon Water* to be redundant when one or more of the following conditions apply:

- a customer requests the removal of a connection
- when a building and its associated plumbing systems are approved for demolition without submitting plans for future development of the property
- a plumbing system is exposed to vandalism, damage, or a back-flow contamination hazard
- water has not been drawn from the connection for more than 12 months
- an approved development application requires alternative connections.

Rule W20. Use of the isolation valve at the point of connection

The *Icon Water* isolation valve (stop-cock) at the network boundary (see rule W5) provides temporary isolation of the customer's plumbing system from the water network. The primary purpose of the isolation valve is to permit *Icon Water* to maintain or replace the meter. As a customer service, *Icon Water* permits customers to use the isolation valve to reduce the flow of water to the property when undertaking maintenance on the customer's plumbing system.

The *Icon Water* isolation valve is not to be used by the customer as a means of disconnecting a redundant connection (see rule W19).

Where the customer requires a guaranteed cessation of flow, the customer is responsible to install valves or devices in a secure enclosure on the downstream side of the meter. *Icon Water* does not guarantee that the *Icon Water* isolation valve will completely shut off the flow of water to the customer's plumbing system. The customer is responsible to pay for all water drawn from the connection regardless of the condition or "on-off" position of the isolation valve.

Icon Water is not responsible for the actions of persons who may turn the isolation valve on or off without the customer's knowledge.

Rule W21. Demolition of the customer's plumbing system
The customer is to obtain *Icon Water* approval for the temporary capping or permanent removal of water connection(s) before undertaking any demolition works affecting the customer's plumbing system, see also rule W19.

Where demolition works commence before *Icon Water* approval has been obtained, *Icon Water* may initiate the isolation or disconnection of water supply for the purpose of network protection procedure at Appendix C.

The customer (or their contractor) is responsible to immediately notify *Icon Water* of all faults or damage to water network assets caused or discovered in the course of demolition works. The customer is responsible to pay for the repair of *Icon Water* assets damaged as a direct result of demolition works undertaken by the customer or the customer's agent.

Rule W22. Contestable works
Installing or removing a main-cock or "T" junction at the network water main is not contestable works and can only be undertaken by *Icon Water*.
Installing or removing a connection pipe, isolation valve and meter assembly is contestable work and may be undertaken by the customer's agents or by contracting *Icon Water*. When the customer engages persons other than *Icon Water* to undertake contestable works, the customer must:

- obtain *Icon Water's* approval for the works.
- comply with *Icon Water's* water supply and sewerage standards and other conditions requested by *Icon Water*
- only engage persons accredited by *Icon Water* (under the Contestable Work Accreditation Code) to undertake the works.
- inform *Icon Water* of the name of the proposed contractor.
- require the contractor to prepare "works-as-executed" drawings to a level of detail required by *Icon Water*.

An *Icon Water* meter must only be removed with written permission or in the presence of an *Icon Water* representative at the time the main-cock or mains junction is being removed.

Rule W23. Reimbursement of water fault investigations
If, on behalf of a customer, a licensed plumber investigates a plumbing problem on the customer's premises and discovers that the fault is in *Icon Water's* connection or network mains, *Icon Water* will reimburse costs commensurate with industry rates.

Rule W24. Network asset protection and accessibility
Customers and their agents are responsible for protecting and providing access to water network assets in accordance with the pipe protection principles and rules at Appendix O.

The landholder is advised to utilise *Icon Water* clearance and location services.

All persons are to comply with the Utility Networks (Public Safety) Regulations.

Rule W25. Special designs
Whilst not encouraging special designs, *Icon Water* recognises that circumstances may arise where the installation of a connection cannot meet the conditions of one or more of the standard rules.

Icon Water may approve special connection designs only where:

- the design meets the requirements of the principles at Section 2 of this document
- the design complies with statutory obligations
- a non-standard customer contract is negotiated for elements outside the conditions of the standard customer contract
- the responsibility for construction, ownership, access, maintenance and replacement of the various non-standard component parts of the connection are determined to the satisfaction of *Icon Water*
- special land access conditions are documented on relevant property titles
- the approvals of third party stakeholders or property owners are confirmed for the life of the asset in legally binding documentation
- all fees and costs paid by responsible parties.

Appendix A

A practical guide to providing access to the components of water, recycled water connection and network assets

Icon Water employees, contractors and agents require unhindered access to read, inspect, test, replace or repair components of the water connection and water network assets.

A.1.0 As a working guide "unhindered" access to maintain the isolation valve and meter assembly is achieved when:

1.1 the customer retains a 1 metre radius zone clear of obstructions on all sides of the meter box/pit

Obstructions include, but are not limited to, trees trunks, tree branches lower than 2 metres above the ground, tree roots, fences, shrubs, hedges, rockeries, masonry walls, letterboxes, building footings, irrigation pipes, paths, driveways and garden edging. Lawn and low ground covers are acceptable provided they are prevented from growing over the meter box/pit and the customer understands they may be removed when *Icon Water* undertake maintenance works.

1.2 the customer keeps the meter box/pit in good condition and protects the isolation valve and meter from damage or flooding

1.3 the customer keeps the isolation valve/meter box/pit free of silt, vegetation, harmful insects and harmful objects such as needle sharps and other obstructions.

A.2.0 As a working guide "unhindered' access to read a water meter is achieved when:

2.1 the route from the roadway to the meter permits the meter reader walk comfortably, quickly, safely and directly to the meter over a firm surface without guidance or assistance

Undesirable meter reading obstructions include but are not limited to, tree branches lower than 2 metres above the ground, locking gates, fences, hedges, plants with thorns, retaining walls without steps, ponds, steep banks without steps and garden features that hide the meter box/pit from view.

2.2 the lid or a flap in the lid of the meter box/pit can be lifted with a standard lifting tool or by hand without strain or abrasion

2.3 the meter box/pit is free of silt, vegetation, spiders, soil, needle sharps and other obstructions.

A.3.0 As a working guide "unhindered' access to water network assets is achieved by maintaining a pipe protection envelope free of the obstructions accordance with *Icon Water* pipe protection principles and rules at Appendix O.

A practical guide to providing access to components of the sewerage connection and sewerage network assets

Icon Water employees, contractors and agents require unhindered access to inspect, test, replace or repair components of the sewerage connection and network assets –

A.4.0 **as a working guide "unhindered" access to rod, eel or camera the connection through a sanitary drainage boundary riser (where installed) is achieved when:**

4.1 the customer keeps the boundary riser sealed from flooding and retains a 1 metre radius zone clear of obstructions on all sides of the sanitary drainage boundary riser lid

Obstructions include, but are not limited to, trees trunks, tree branches lower than 2 metres above the ground, tree roots, fences, shrubs, hedges, plants with thorns, retaining walls without steps, ponds, steep banks without steps and garden features that hide the meter box/pit from view.

Note – boundary risers should be constructed to the satisfaction of *ACTPLA*.
Note – number 3, *Inspection shafts at property boundaries.* Special attention must be paid to the installation of a protection box at ground level.

A.5.0 As a working guide "unhindered' access to excavate the sewerage connection is achieved when:

5.1 a pipe protection envelope is kept free of unapproved structures over the full length of the connection, from the main to the tie point

Unapproved structures are defined in the network protection principles and rules at Appendix O.

5.2 the customer retains a zone clear of obstructions on all sides of the tie of a radius equal to the depth of the tie. For example, if the tie is 1.5 metres deep, keep a zone clear of obstructions of a radius 1.5 metres around the tie.

Obstructions include, but are not limited to, tree trunks, tree roots, tree branches lower than 3 metres, fences, shrubs, hedges, rockeries, masonry walls, letterboxes, building footings, irrigation pipes, paths, driveways and garden edging. Lawn and low ground covers are acceptable provided they are prevented from growing over boundary riser cap and the customer understands they may be removed or trampled when *Icon Water* undertake maintenance works.

A.6.0 As a working guide "unhindered" access to sewerage network assets is achieved by maintaining a pipe protection envelope free of the obstructions accordance pipe protection principles and rules at Appendix O.

Appendix B

Reinstatement policy for works undertaken by *Icon Water*

Outside the customer's property

1 *Icon Water* will reinstate excavated ground to approved pre-excavation reduced levels.
2 *Icon Water* will backfill and compact excavations in accordance with the design requirements specified in the *Icon Water's* water supply and sewerage standards.
3 *Icon Water* will reinstate like-for-like grass ground covers (for example, high-quality lawn with turf, dryland grass with topsoil and dryland seed).
4 *Icon Water* will reinstate basic paths and pavement gravel with gravel, grey concrete with grey concrete, bitumen with bitumen. *Icon Water* will only replace those segments of pavement that have been removed for the purpose of repairing, replacing or maintaining *Icon Water* assets (usually to the next expansion joint). *Icon Water* will not replace whole areas of pavement to maintain uniformity of appearance, colour, patterning or other visible ornamental features.
5 *Icon Water* will not undertake the reinstatement of special ornate path or driveway finishes. The property owner is responsible to replace all ornamental finishes. *Icon Water* will reimburse the customer with a fixed rate for Portland cement concrete or bitumen. Ornamental finishes, brick, concrete pavers, stencilled concrete, coloured concrete or unique features are not encouraged due to pattern matching and colour procurement difficulties. Special finishes can significantly increase site restoration costs.
6 Property owners who choose to landscape outside the property boundary take the risk that these features may be removed to provide unhindered utility maintenance or operational functions. *Icon Water* will not replace landscape features, trees, rocks, retaining walls, heavy garden edging etc., that are outside the property boundary. *Icon Water* will not approve the replacement of landscape features that will hinder future maintenance or access to *Icon Water* infrastructure. The property owner must bear the cost and responsibility for all permissible reinstatement of landscape features outside the property boundary.
7 *Icon Water* will not reinstate heavy or light-weight building structures or earthworks previously unapproved by *Icon Water*.

Inside the customer's property

1 *Icon Water* will reinstate excavated ground to pre-excavation reduced levels.
2 *Icon Water* will backfill and compact trenches in accordance the design requirements specified in the *Icon Water's* water supply and sewerage standards.
3 *Icon Water* will reinstate like-for-like grass ground covers (for example, high-quality lawn with turf, dryland grass with topsoil and dryland seed).
4 *Icon Water* will not reinstate any pavement, structure or obstruction, whether approved or unapproved, contained or partly contained within the envelope of protection or access route by the asset protection principles and rules at Appendix O.

Appendix C

Isolation or disconnection of water supply for the purpose of network protection

When *Icon Water* become aware that the condition of the customer's plumbing system and/or the operational practices of a customer pose a risk to the security, reliability or safety of the water network, or risk to the security, reliability, safety and environment of other customers connected to the network, the following steps may be taken by *Icon Water*.

Special note – wherever possible, an *Icon Water* worker(s) must make a reasonable effort to establish constructive, friendly dialogue with the property owner with the aim of quickly negotiating a solution without unnecessary confrontation or bureaucracy. Records of each step are to be kept as an audit trail.

Step 1 As soon as an *Icon Water* worker(s) becomes aware that a customer's plumbing system may be contaminated, or that there is an imminent risk of the customer's plumbing system becoming contaminated because of a customer's failure to take adequate protective measures, the *Icon Water* worker(s) must immediately protect the network by isolating supply in a manner that will guarantee the security of the network. As soon as reasonably possible the customer should be notified of actions proposed or taken to shut off supply so that the customer's plant and equipment can be protected. Note – by-pass steps 1 and 2 if there is no contamination or imminent risk of contamination.

Step 2 Notify ACT Department of Health. Take actions in consultation with health authorities to decontaminate the utility network and protect other customers connected to the network.

Step 3 Assess site conditions and hazards against contractual obligations in the company of the property owner and relevant tenants, if possible.

Step 4 Determine the severity of risks to the security, reliability or safety of the network, or risks to the security, reliability, safety and environment of other customers connected to the network.

Step 5 Notify the customer of their rights and obligations.

Step 6 Notify the customer of *Icon Water's* rights and obligations.

Step 7 Notify *ACTPLA* in writing, of any suspected failure of the customer's plumbing system to comply with the Plumbing Code of Australia (AS/NZS 3500).

Step 8 If a hazard represents a high risk to any person, network, environment or property, the *Icon Water* Network Protection Officer is to issue a verbal instruction to the property owner/tenant to immediately eliminate the offending hazard(s). If the customer is unwilling or unable to take action within a reasonable period, the officer in consultation with a branch or executive manager is to authorise the effective temporary isolation or disconnection of the customer's system from the network. All verbal notifications or actions taken by *Icon Water* are to be confirmed in writing to the customer within five working days.

Step 9 If a hazard represents a moderate or low risk to any person, network, environment or property, the *Icon Water* Network Protection Officer is to issue a network protection notice to the property owner advising them of the perceived problems and requesting the elimination of hazards within a nominated time period (usually 14 days). If the property owner is unable or unwilling to remove the offending hazard, the *Icon Water* Network Protection Officer is to issue a second network protection notice indicating *Icon Water's* intention to isolate or disconnect supply on a nominated date. If the property owner fails to take action, a branch or executive manager is to authorise the effective temporary isolation or disconnection of the customer's system from the network.

Step 10 When a customer's supply has been disconnected, the service is to be fully restored only when:

- the customer has provided reasonable evidence that their plumbing system complies with the *Water and Sewerage Act 2000* and the *Water and Sewerage Regulations 2001*
- the customer has met the requirements of eligibility for connection, as detailed in this document
- the customer is entitled to reconnection in accordance with the Consumer Protection Code
- all outstanding costs have been paid to *Icon Water*.

Appendix D

Isolation or disconnection of sewerage services for the purpose of network protection

When *Icon Water* becomes aware that the condition of a customer's sanitary drainage system and/or the unapproved operational practices of a customer pose a risk to the security, reliability or safety of the sewerage network, or risk to the security, reliability, safety and environment of other customers connected to the network, the following steps may be taken by *Icon Water*.

Special note 1 – wherever possible, an *Icon Water* worker(s) must make reasonable effort to establish constructive, friendly dialogue with the property owner with the aim of quickly negotiating a solution without unnecessary confrontation or bureaucracy. Records of each step are to be kept as an audit trail.
Special note 2 – non-domestic waste (tradewaste) agreements established between *Icon Water* and individual customers may contain alternative disconnection conditions that over-ride the steps in this procedure.

Step 1 As soon as an *Icon Water* worker(s) becomes aware that a customer's sanitary drainage system may be contaminated with unapproved discharge, or that there is an imminent risk of the customer's drainage system becoming contaminated because of the customer's failure to take adequate protective measures, the *Icon Water* worker(s) must immediately protect the network by isolating supply in a manner that will guarantee the security of the network. As soon as reasonably possible the customer should be notified of actions proposed or taken to isolate their drains from the network so that the customer's plant and equipment can be protected. Note – by-pass steps 1 and 2 if there is no contamination or imminent risk of contamination.

Step 2 Notify ACT Department of Health and/or Environment ACT in accordance with license requirements. Take actions in consultation with the authorities to decontaminate the utility network and protect other customers connected to the network.

Step 3 Assess site conditions and hazards against contractual obligations, in the company of the property owner and relevant tenants, if possible.

Step 4 Determine the severity of risks to the security, reliability or safety of the network, or risks to the security, reliability, safety and environment of other customers connected to the network.

Step 5 Notify the customer of their rights and obligations.

Step 6 Notify the customer of *Icon Water's* rights and obligations.

Step 7 Notify *ACTPLA*, in writing, of any known failure of the customer's drainage system to comply with the Plumbing Code of Australia (AS/NZS 3500).

Step 8 If a hazard represents a high risk to any person, network, environment or property, the *Icon Water* Network Protection Officer is to issue a verbal instruction to the property owner/tenant to immediately eliminate the offending hazard(s). If the customer is unwilling or unable to take action within a reasonable period, the officer in consultation with a branch or executive manager is to authorise the effective temporary isolation or disconnection of the customer's system from the network. All verbal notifications or actions taken by *Icon Water* are to be confirmed in writing to the customer within five working days.

Step 9 If a hazard represents a moderate or low risk to any person, network, environment or property, the *Icon Water* Network Protection Officer is to issue a network protection notice to the property owner advising them of the perceived problems and requesting the elimination of hazards within a nominated time period (usually 14 days). If the property owner is unable or unwilling to remove the offending hazard, the *Icon Water* Network Protection Officer is to issue a second network protection notice indicating *Icon Water's* intention to isolate or disconnect supply on a nominated date. If the property owner fails to

take action, a branch or executive manager is to authorise the effective temporary isolation or disconnection of the customer's system from the network.

Step 10 When a customer's supply has been disconnected, the service is to be fully restored only when:

- the customer has provided reasonable evidence that their sanitary drainage system complies with the *Water and Sewerage Act 2000* and the *Water and Sewerage Regulations 2001*
- the customer has met the requirements of eligibility for connection as detailed in this document
- the customer is entitled to reconnection in accordance with the Consumer Protection Code
- all outstanding costs have been paid to *Icon Water*.

Appendix E

Restriction of water supply for failure to pay water accounts

When a customer fails to pay a water account, the following steps may be taken by *Icon Water* to restrict supply.

Special note – wherever possible, an *Icon Water* worker(s) must make a reasonable effort to establish constructive, friendly dialogue with the property owner with the aim of quickly negotiating a solution without unnecessary confrontation or bureaucracy. Records of each step are to be kept as an audit trail.

Step 1 Carry out the notification procedure under Section 12 "disconnection or restriction of utility services to residential premises for failure to pay a customer account" of the Consumer Protection Code.

Step 2 If the customer fails to pay the debt, issue a network restriction notice to the property owner advising them of *Icon Water's* intention to restrict the water supply if the debt has not been recovered within a nominated time period (not less than 14 day). If the property owner is unable or unwilling to pay the debt within the nominated period, a branch or executive manager is to authorise the restriction of supply. A second network restriction notice is to be sent to the customer indicating the date on which supply will be restricted.

Step 3 An authorised officer is to carry out the effective temporary restriction of the customer's supply at the meter assembly. The restriction device is to be sized with regard to pressure at the site, to provide a restricted flow rate of not less than 2 litres per minute.

Step 4 When a customer's supply has been flow restricted, the service is to be fully restored only when:

- the customer has met the requirements of eligibility for connection as detailed in this document
- the customer is entitled to reconnection in accordance with the Consumer Protection Code
- all outstanding costs have been paid to *Icon Water*.

Appendix F

Notification to install a water meter

When *Icon Water* becomes aware that water is being drawn, without approval, from a water connection without a water meter, the following steps may be taken.

Special note – wherever possible, an *Icon Water* worker(s) must make a reasonable effort to establish constructive, friendly dialogue with the property owner with the aim of quickly negotiating a solution without unnecessary confrontation or bureaucracy. Records of each step are to be kept as an audit trail.

Step 1 Determine the ownership of the property.

Step 2 If possible give verbal notice to the customer of the requirement under the customer contract to install a water meter before water is drawn from the connection. Agree a date by which the meter will be installed by the customer's plumber (usually within 14 days).

Step 3 If the customer is unable or unwilling to comply with the request, send a written notice detailing the customer's obligation and *Icon Water's* rights under the customer contract and service and installation rules. Nominate a date by which a meter must be fitted.

Step 4 If the customer is unable or unwilling to comply with the written request, the officer, in consultation with a branch or general manager is to determine whether to install a meter, securely isolate the connection or disconnect at the main. Here, Appendix C applies.

Step 5 Undertake the work and confirm the decision to the customer, in writing, within five working days.

Step 6 Invoice the customer for the works.

Step 7 When a customer's supply has been secured or disconnected, the service is to be fully restored only when:

- the customer has met the requirements of eligibility for connection as detailed in this document
- the customer is entitled to reconnection in accordance with the Consumer Protection Code
- all outstanding costs have been paid to *Icon Water*.

Appendix G

Connection from a third party property

In circumstances where a water or sewerage connection must be serviced from a network located in an adjoining property, a conciliation process, including but not limited to the following steps, is to be undertaken by *Icon Water*.

Step 1 Determine the scope of work including all necessary site works on the neighbouring property.
Step 2 Obtain the property developer's (the land owner) written agreement to the preliminary scope of works and estimated costs.
Step 3 Inform the neighbour face-to-face and in writing about the scope of the works, their rights and *Icon Water's* authority to make a connection from the network located in their property.
Step 4 Consider any objections or additional requirements proposed by the neighbour. Negotiate reasonable proposals with the developer.
Step 5 Obtain the developer's written agreement to a final scope of works, program and costs.
Step 6 Obtain the neighbour's written agreement to a final scope of work and program.
Step 7 Inspect the completed project and restoration of the neighbour's property in the company of the neighbour and developer.
Step 8 Require the developer to rectify all defects.
Step 9 Notify all parties when the work is satisfactorily completed.
Step 10 Keep records of all steps of this conciliation process on a registered divisional project file.

Appendix H

Notification of the failure of the customer's sanitary drainage to meet *Icon Water's* sewerage network connection expectations

Where it comes to the attention of *Icon Water* that a customer's sanitary drainage system fails to comply with the connection requirements at rule S8, the following steps may be taken by *Icon Water*.

Special note – wherever possible, an *Icon Water* worker(s) must make a reasonable effort to establish constructive, friendly dialogue with the property owner with the aim of quickly negotiating a solution without unnecessary confrontation or bureaucracy. Records of each step are to be kept as an audit trail.

Typical examples – where repeated surcharges of sewage enter the interior rooms of a customer's premises because external relief protection is non-existent or fails to operate effectively. Where basement spaces are below the level of external relief devices.

Step 1 Notify the customer of *Icon Water's* concern about the anticipated impact of any perceived fault(s) on the customer's sanitary drainage system, the utilities network and other customers connected to the network.

Step 2 Advise the customer of *ACTPLA's* role in administering plumbing and drainage standards.

Step 3 Notify the customer of their rights and obligations under utility legislation.

Step 4 Notify the customer of *Icon Water's* rights and obligations under utility legislation.

Step 5 Notify *ACTPLA*, in writing, of the failure or potential for failure of the customer's installation to operate effectively when connected to the sewerage network. Request *ACTPLA* to investigate the fault and take remedial action.

Step 6 Initiate Appendix D to isolate the network if there is a risk to the network described in rule S8.

Appendix I

Notification of the failure of the customer's plumbing system to meet *Icon Water's* water network connection expectations

When it comes to the attention of *Icon Water* that a customer's plumbing system fails to comply with the water connection requirements at rule W9, the following steps may be taken by *Icon Water*.

Special note – wherever possible, an *Icon Water* worker(s) must make a reasonable effort to establish constructive, friendly dialogue with the property owner with the aim of quickly negotiating a solution without unnecessary confrontation or bureaucracy. Records of each step are to be kept as an audit trail.

Typical examples: Where backflow prevention devices do not exist or are suspected of not operating. Where water hammer or noise generated by the customer's plumbing system is impacting on the network or other customer's connected to the water network.

Step 1	Notify the customer of *Icon Water's* concern about the anticipated impact of any perceived fault(s) on the customer's plumbing system, the utilities network and other customers connected to the network.
Step 2	Advise the customer of *ACTPLA's* role in administering plumbing standards.
Step 3	Notify the customer of their rights and obligations under utility legislation.
Step 4	Notify the customer of *Icon Water's* rights and obligations under utility legislation.
Step 5	Notify *ACTPLA*, in writing, of the failure or potential for failure of the customer's installation to operate effectively when connected to the water network. Request *ACTPLA* to investigate the fault and take remedial action.
Step 6	Initiate Appendix C to isolate the network if there is a risk to the network described in rule W9.

Appendix J

Removal of unapproved encumbrances over the connection or network assets

In circumstances where unapproved structures, landscape features, earthworks or other encumbrances hinder the ability of *Icon Water* to maintain, repair, test, replace or gain access to network connections or assets, the following process is to be carried out, including but not limited to, the following steps.

Step 1 Verify conditions on site (in the company of the property owner if possible.)

Step 2 Determine the impact of structures and encumbrances on *Icon Water's* ability to gain access to maintain repair or replace the connection or network assets.

Step 3 Determine responsibilities and distribution of costs.

Step 4 Notify the customer of their rights and obligations.

Step 5 Notify the customer of *Icon Water's* rights and performance obligations.

Step 6 Seek the customer's support to remove obstacles that they are responsible for, within a time frame that is commensurate with risk and *Icon Water's* performance obligations.

Step 7 If an obstacle represents an immediate serious risk to any person, operation of the network or harm to the environment or property, the *Icon Water* Network Protection Officer is to issue a verbal instruction to the property owner/tenant to immediately remove the obstacle. If the customer is unwilling or unable to take action, the branch manager is to authorise removal of the obstacle and invoice the customer for the expense. All verbal notifications or actions taken by *Icon Water* are to be confirmed in writing to the customer within 24 hours.

Step 8 If the removal of an obstacle can be delayed, the *Icon Water* Network Protection Officer is to issue a network protection notice to the property owner advising them of the perceived problems and requesting removal of the obstacle within a reasonable time period. If the property owner is unable or unwilling to remove the offending hazard, the *Icon Water* Network Protection Officer is to issue a second network protection notice indicating *Icon Water's* intention to take remedial action or disconnect/restrict supply on a nominated date. If the property owner fails to take action, the branch manager is to authorise suitable action to take remedial action or remove the obstacle at the customer's expense.

Step 5 Keep the customer informed about the program, program changes and the impact of work on or near the customer's property.

Appendix K

Summary of life cycle responsibilities for water connection assets

The following table summaries the obligations of the customer and *Icon Water* for the costs, supply, installation, protection, maintenance and end of life replacement of components of the water supply connection. As defined in the Water Metering Code the Water and Sewerage Network Boundary Code and the *Icon Water* water supply and sewerage standards.

Water connection element	**Initial greenfield installation**	**New installation on an existing network**	**Protection and maintenance**	**End of life replacement**
Main cock or mains connector "T"	ACT Government contracted developer	*Icon Water* at the customer's expense	*Icon Water* at *Icon Water's* expense	*Icon Water* at *Icon Water's* expense
Connection pipe up to an isolation valve within 1 metre of the property boundary	ACT Government contracted developer	The customer at the customer's expense	*Icon Water* at *Icon Water's* expense	*Icon Water* at *Icon Water's* expense
Connection pipe up to an isolation valve more than 1 metre inside the property boundary	ACT Government contracted developer	The customer at the customer's expense Generally, not permitted	*Icon Water* at *Icon Water's* expense up to the property boundary The customer inside the property boundary at the customer's expense	*Icon Water* at *Icon Water's* expense up to the property boundary The customer inside the property boundary at the customer's expense
Point of connection isolation valve or stop-cock within 1 metre and inside the property boundary	ACT Government contracted developer	The customer at the customer's expense	Protected by the customer Maintained by *Icon Water* at *Icon Water's* expense	*Icon Water* at *Icon Water's* expense
Point of connection isolation valve or stop-cock more than 1 metre inside the property boundary	ACT Government contracted developer	The customer at the customer's expense Generally, not permitted	Protected by the customer Maintained by *Icon Water* at the customer's expense	The customer at the customer's expense

Relocation of an incorrectly located isolation valve or stop-cock to within 1 metre of the property boundary if required by *Icon Water*	Not applicable	Supplied and installed by the customer at the customer's expense	Protected by the customer	*Icon Water* at *Icon Water's* expense
A primary standard meter on a single approved connection	Not applicable	Supplied by *Icon Water* at *Icon Water's* expense Installed by the customer at the customer's expense	Protected by the customer Meter maintained by *Icon Water* at *Icon Water's* expense	*Icon Water* at *Icon Water's* expense
A primary 20 and 25mm standard meter on any additional approved connection	Not applicable	Supplied by *Icon Water* at the customer's expense Installed by the customer at the customer's expense	Protected by the customer Meter maintained by *Icon Water* at *Icon Water's* expense	*Icon Water* at *Icon Water's* expense unless agreed to the contrary under a negotiated customer contract
Internal deduct meters with a negotiated customer contract	Not applicable	By negotiation however, commonly supplied by *Icon Water* at the customer's expense Installed by the customer at the customer's expense	By negotiation however, commonly maintained by *Icon Water* at *Icon Water's* expense (under negotiated fee).	By negotiation however, commonly replaced by *Icon Water* at *Icon Water's* expense (under negotiated fee).
Internal deduct meters with no *Icon Water* agreement	Not applicable	Supplied by the customer at the customer's expense	The customer at the customer's expense	The customer at the customer's expense
20 and 25mm Approved Standard (domestic) protective box with lid (plastic or concrete)	Not applicable	Supplied by *Icon Water* at *Icon Water's* expense Installed by the customer at the customer's	The customer at the customer's expense	Supplied and installed by *Icon Water* at *Icon Water's* expense

		expense		
32mm or greater Approved Standard meter pit and lid(s)	Not applicable	Supplied and installed by the customer at the customer's expense	The customer at the customer's expense	Supplied and installed by the customer at the customer's expense
Non-standard meter cabinets, rooms or pits approved by *Icon Water* (that is rooms, cupboards or cabinets)	Not applicable	Supplied and installed by the customer at the customer's expense	The customer at the customer's expense	Supplied and installed by the customer at the customer's expense

Appendix L

Sewerage connection life cycle obligations: summary of life cycle responsibilities for sewerage connection assets

The following table summaries the obligations of the customer and *Icon Water* for the costs, supply, installation, protection, maintenance and end of life replacement of components of sewerage connection. As defined in the Water Supply and Sewerage Network Boundary Code and the *ICON WATER* water supply and sewerage standards.

Sewerage connection element	**Initial greenfield installation**	**New installation on an existing network**	**Protection and maintenance**	**End of life replacement**
Main connector	Developer under an *Icon Water* deed of agreement	*Icon Water* at the customer's expense	*Icon Water* at *Icon Water's* expense	*Icon Water* at *Icon Water's* expense
Connection pipe from the main connection up to a tie point within 1 metre (inside) of the property boundary	Developer under an *Icon Water* deed of agreement	The customer at the customer's expense	*Icon Water* at *Icon Water's* expense	*Icon Water* at *Icon Water's* expense
Connection pipe from the main connection up to a tie point more than 1 metre (inside) of the property boundary	Developer under an *Icon Water* deed of agreement	The customer at the customer's expense Generally, not permitted	*Icon Water* at *Icon Water's* expense up to the property boundary	*Icon Water* at *Icon Water's* expense up to a new tie point within 1 metre inside the property boundary
Connection pipe from the main finishing outside the property boundary	Developer under an *Icon Water* deed of agreement	The customer at the customer's expense Generally, not permitted	*Icon Water* at *Icon Water's* expense up to the property boundary	*Icon Water* at *Icon Water's* expense up to a new tie point within 1 metre inside the property boundary
Boundary riser inside the customer's property	Developer under an *Icon Water* deed of agreement	The customer at the customer's expense	The customer at the customer's expense	The customer at the customer's expense
Tie point at the nominated depth on the works as executed drawings	Developer under an *Icon Water* deed of agreement	The customer at the customer's expense	The customer at the customer's expense	The customer at the customer's expense

Tie point deeper than the nominated depth on the works as executed drawings	Developer under an *Icon Water* deed of agreement	The customer at the customer's expense Generally, not permitted more than 3 metres deep	*Icon Water* at *Icon Water's* expense	*Icon Water* at *Icon Water's* expense
Relocation of an incorrectly located tie connection point (outside the boundary) to an approved position within 1 metre inside of the property boundary if required by *Icon Water*	Not applicable	Supplied and installed by *Icon Water* at *Icon Water's* expense	*Icon Water* at *Icon Water's* expense	*Icon Water* at *Icon Water's* expense

Appendix M

Compensation for damage resulting from a sewage spill or flooding caused by a water network burst

In the eventuality that damage to a customer's property results from a burst water network main or from a surcharge of sewage from the sewerage network, an *Icon Water* worker(s) is to undertake the following process (situation permitting).

Step 1 Wherever possible, assist the customer to minimise damage.

Step 2 Assist the customer to remove solids and/or wastewater from the exterior of the building. Deodorise effluent to minimise unpleasant odours.

Step 3 Assist the customer to pump wastewater from the interior of the building only where a risk to structure or persons is imminent. Where there is a risk that an invasion of privacy, claims of further damage or accusation of theft could be made against *Icon Water* employees, *Icon Water* employees are to avoid entering the building.

Step 4 Call for backup from customer service officers or management where the customer is seeking compensation, distressed or in need of practical assistance or short-term accommodation.

Step 5 If the customer has property insurance an *Icon Water* worker(s) should recommend that the customer contact their insurance company as soon as possible and ask for a company agent (assessor) to attend. If the customer does not have property insurance cover, advise the customer that claims for damages may be made in writing to the claims officer, *Icon Water*, GPO Box 366, Canberra City, ACT 2601.

Step 6 The claims officer is to assess claims for damages against *Icon Water's* statutory and contractual obligations and advise the customer of their determination in writing within 10 working days.

Step 7 Liability claims in favour of the customer are to be processed in a timely manner giving due regard to the difficulties being experienced by the customer.

Appendix N

Sewer investigation reimbursement conditions

The property owner pays to remove blockages, correct faulty workmanship or replace faulty materials in the sanitary drains installed on the owner's property, at and upstream of the tie. The property owner pays for the clearance of roots that enter at the tie. The property owner pays for damage to the tie caused by root entry or excavation works.

Icon Water pays to remove blockages in the sewer lines owned by *Icon Water*. *Icon Water* is responsible to repair and maintain branch-lines and mains to a standard required to achieve its contractual and statutory obligations.

Icon Water will reimburse claims for investigatory work on a property owner's sanitary drainage system that are no more extensive than is necessary to demonstrate that a blockage is in the *Icon Water* main or branch-line. *Icon Water* will not pay for loss, damage or retrieval of equipment, eels or closed- circuit television cameras.

- Where ever possible reimbursement claim invoices are to be submitted by the drainer directly to *Icon Water*, not to the customer for payment.
- Work paid directly by the customer is best restricted to work associated with blockages in the internal sanitary drains, not in the *Icon Water* network. Claims submitted by the leaseholder will be considered, but will require validation from the drainer. Needless processing delays may result.
- Claims must be submitted within three months of the completion of the work.
- Claims must be submitted by a drainer that is licensed to operate in the ACT.
- Drainage work must be done in strict conformity to *ACTPLA* minor works permit conditions, *ACTPLA* plumbing notes and the Plumbing Code of Australia (AS/NZS 3500).
- Claims will not be paid unless objective evidence is supplied to conclusively demonstrate that the blockage was in the *Icon Water* sewer main or branch-line.
- *Icon Water* will not reimburse claims for blockages that have resulted from the entry of unapproved non-domestic wastes from the property (see section 4, "minimising risks").
- Claims are to be supported by numbered invoices, detailing labour, materials, plant and equipment costs together with a description of the work undertaken. Supporting documentation is to include the customer's name, house number, street name (or block and section), suburb, date(s) attending, a copy of the *ACTPLA* minor works permit, drainer's telephone number, fax and postal address.
- *Icon Water* will pay reasonable industry rates commensurate with the scope and complexity of the work. A guide schedule of rates is available on request.
- The drainer is to undertake all necessary internal sanitary-drainage work, together with reinstatement of the landscape on the customer's property, to the satisfaction of the customer. *Icon Water* will only pay for repairs to paths and driveways outside the lease boundary to the value of standard concrete or bitumen. The additional cost of special finishes (for example, stamped, coloured, cobblestone, etc.) must be borne by the leaseholder. Costs for the repair or replacement of unapproved encumbrances over the drain are to be paid by the property owner.
- Legal action may be taken where there is evidence of fraud. Disputes are to be submitted in the first instance to the Manager –Customer and Community affairs.

Appendix O

Network connection and asset protection principles and rules
Pipe protection principles

The following general principles are the guides that *Icon Water* will use when assessing the impact of proposed construction works or existing structures in the vicinity of *Icon Water* water and sewerage pipes or registered easements. These principles underpin all the standard rules in this document.

1 All persons wishing to undertake landscape, civil or building works are responsible for determining the presence and precise location, depth and nature of *Icon Water* water and sewerage assets that may be affected by the works.

Special note – pipe detection technologies may help to determine the route of some metallic pipes or trace-wires on plastic pipes, however the precise location and depth of water and sewer pipes must be verified by pot-holing (physical exposure).

2 No building loads are to be transferred to *Icon Water* pipes or installations regardless of whether or not those pipes or installations are inside or outside the lease boundaries.

3 *Icon Water* construction and maintenance crews must have sufficient room to be able to dig up, repair, replace or install new pipes in the future using suitable contemporary plant and equipment.

4 Access structures (for example, manholes) must not be buried, hidden or made difficult to find.

5 The property owner must design buildings and structures so that they will not cause disadvantage to, nor be damaged by, the equipment and common contemporary work practices employed by *Icon Water* to maintain and construct its assets.

6 Transit along an *easement* or *pipe protection envelope* is not to be blocked.

7 The property owner must not store materials that hinder access along an *easement* or *pipe protection envelope*.

8 Access to *Icon Water* assets at the rear of the property must not be impeded by structures. Icon Water access requirements are dependent upon pipe size and pipe depth (as tabulated below) for “simple” cases for pipes sized less than or equal to DN225. Complex or non-standard” cases (e.g. involving pressure sewers, multi-unit developments with tenant fences crossing the pipe protection envelope, those where an access passage is not straight, those deeper than 3.0 metres etc.) are to be managed via a registered easement on the property title.

Depth to Pipe Invert (for DN225 and below) (metres)	**Maintenance Access Passage Requirements**	
	Width Clearance (metres)	**Height Clearance (metres)**
< 2.2	1.80	2.65
2.2 – 3.0	2.50	2.85

Note: Clearance is measured from the edge of any obstruction (e.g. post, planter box, air conditioning unit, underside of eaves etc.) which causes the minimum width or height clearance.

9 No permanent heavyweight structure is to be built within an easement or *pipe protection envelope.*

10 The leaseholder (or agent) is responsible to ensure that changes to easements or title conditions are approved by *Icon Water*, recorded on the lease title and a copy of the registered documents delivered to *Icon Water*.

11 Emergency access to *Icon Water* assets by *Icon Water* personnel, plant and equipment must be available 24-hours a day, seven days a week.

12 Access to *Icon Water* water and sewerage mains must be through the property on which the mains are located. Neighbouring properties must not be disadvantaged.

13 Special design proposals must not create additional operating or maintenance costs for

14 *Icon Water*, now or in the future. Lightweight structures may be allowed over or near non-pressure pipes, provided the structure is noted on the title as conditionally approved with no financial or legal liability attributed to *Icon Water* for future removal, reinstatement or for any other resulting circumstances.

15 Where lightweight structures or low walls have been conditionally approved, future removal or replacement, whether undertaken by the owner or *Icon Water*, will be at the owner's cost.

16 Where special solutions are proposed to protect *Icon Water's* assets, a specially designated senior officer can only approve the proposal. All costs must be borne by the applicant.

17 Special design proposals must not create a situation where safe public conditions or safe work practices are not readily achievable.

18 A suitably qualified representative of the property owner must certify that applications comply with the rules and principles of this document.

19 Pipe protection principles apply to new work. Previously approved work and conditions remain valid until:

- minor alterations or additions conflict with the rules or principles in this document
- major alterations, additions or redevelopments provide an opportunity to upgrade all or part of the installation to comply with the rules and principles in this document
- regulations require compliance with safety, security, maintenance or amenity standards
- the installation, in the opinion of *Icon Water*, represents a significant hazard to the operation of the water or sewerage network or the safety of the public or *Icon Water* employees.

20 Applications to extinguish easements or relocate existing *Icon Water* infrastructure must be formally approved by *Icon Water* and registered with the ACT Planning and Land Authority's survey office.

21 Dual easements containing sewer and stormwater assets must be approved in writing by both *Icon Water* and ACT Stormwater. The minimum easement width for a dual easement (sewer and stormwater) is 3500mm.

22 *Icon Water* is neither liable nor responsible for the inconvenience or costs associated with rejection of applications or the removal of non-compliant obstructions. *Icon Water* strongly

recommend that pipe detection experts and/or a register surveyor verify the presence and precise location of *Icon Water* assets at the early design stage of a project. *Icon Water* will not bend the rules for projects at documentation or construction stage. Failure to obtain timely approvals is the responsibility of the applicant.

23 As a condition of approval, *Icon Water* may require the property owner or their agent to apply for an "Easement in Gross" to be added to their property title. "Easements in Gross" are commonly required, but not limited to:

- special conditional approvals
- changes of asset ownership from a leaseholder to *Icon Water*.

The leaseholder (or the leaseholder's agent) is responsible for determining whether *Icon Water* water and sewer pipes exist on their land and to precisely locate the pipes to the accuracy necessary to comply with pipe protection rules and meet building construction tolerances.

Pipe protection rules

Explanations

The following rules describe how *Icon Water* apply the generic pipe protection principles (in the previous section) to common construction situations. Adherence to these rules will usually lead to *Icon Water's* approval, unless there are some unusual circumstances. In all cases, qualified design agents must make their own assessment based on the pipe protection principles, site conditions, special circumstances and good practice.

The term *pipe protection envelope* used in the following rules, means the space within which *Icon Water* requires unhindered access to *Icon Water* water and sewerage assets. The *pipe protection envelope* runs above, to both sides and the full length of *Icon Water* mains and is shown in illustrations by a heavy dotted line. The intent of *pipe protection envelopes* and easements are complementary. A registered easement defines the two-dimensional length and width of the *pipe protection envelope* on a plan.

Rule 1. Safe work

All works approved under *Icon Water's* pipe protection principles or general rules must permit safe work in the operation, emergency or planned maintenance and the construction of assets.

Rule 2. Permanent and lockable structures

Commercial buildings, basements, houses, extensions, additions, garages, enclosed structures, below-ground swimming pools, garden sheds, brick barbecues, and any other permanent or lockable structure that may hinder *Icon Water's* access to the *pipe protection envelope* (or easement) must comply with all rule 2 conditions.

2.1 Footings and below ground building services or elements

- Footings are not permitted at all within the *pipe protection envelope*.
- No footing or building element is to transmit any loads to buried pipe or access structures regardless of whether those pipes or access structures are outside the *pipe protection envelope*, inside or outside of the property boundary.

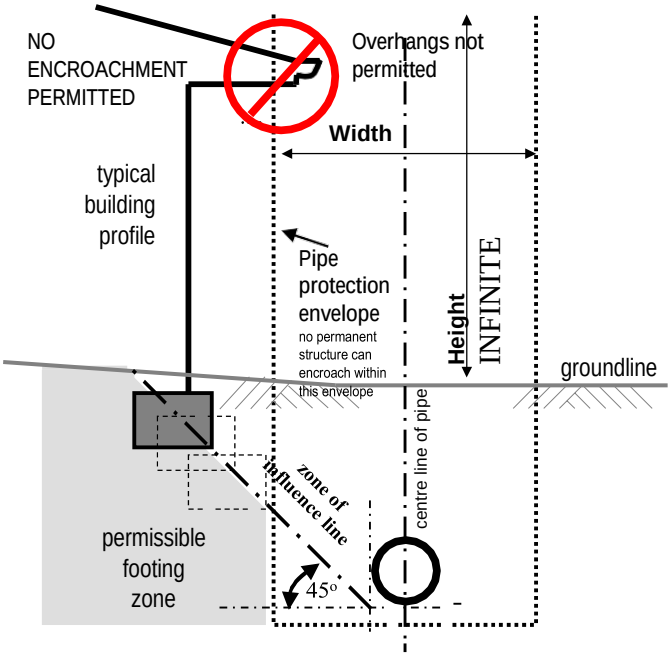
  Note – *Icon Water* does not permit concrete encasement of pipes to carry loads transferred from structures.

- Building structures must remain stable during the excavation of an un-shored trench for a water or sewerage pipe.
- No features of the foundation design are to impact on the stability of a pipe excavation trench.

2.2 Above ground structures

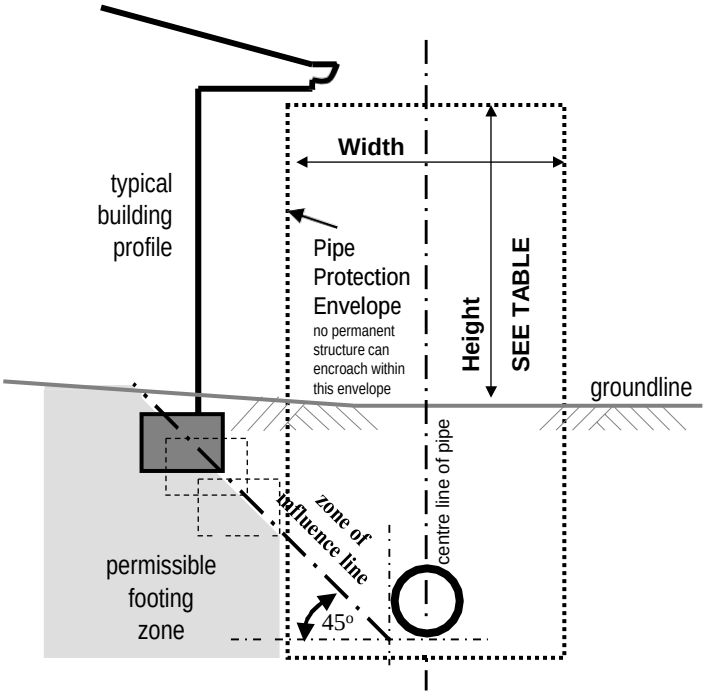
- Walls must not encroach within the *pipe protection envelope*.
- Awnings and overhangs must not encroach into the *pipe protection envelope* of water mains, sewer mains under pressure or gravity sewer mains regardless of whether those pipes are inside or outside the property boundary, on a neighbouring property, the verge, parkland or government land.
- In addition, designers should seek information from *Icon Water* engineers in each specific case to ensure that the design of structures in the vicinity of water or sewer mains satisfactorily addresses all hazards and risks. Risks include but are not limited to, damage resulting from ground subsidence following a burst pipe, or water jetting at high velocity from a hole in a pressure pipe.

See separate tables for *pipe protection envelope* dimensions applicable to pressure pipes and gravity mains.



Water mains and rising sewer *pipe protection envelope*
Rule 2. (applicable to pressurised pipes)

Depth of pipe (below ground)	**Pressure pipe size** (nominal diameter)	**Pipe protection envelope** (minimum width)	**Pipe protection envelope** (height above ground)
less than 5000mm	100 to 150mm	2500mm	infinite
less than 5000mm	300 to 450mm	3500mm	infinite
less than 5000mm	600mm or greater	by application	infinite
less than 5000mm	multiple pipes	by application	infinite
greater than 5000mm	all sizes	by application	infinite
greater than 5000mm	greater than 600	by application	infinite
greater than 5000mm	multiple pipes	by application	infinite
***Icon Water* structures** (chambers, trunk sewers, pump stations, etc.)	**Pressure pipe size**	**Pipe protection envelope** (minimum width)	**Pipe protection envelope** (height above ground)
all	all	by application	by application



Gravity sewer *pipe protection envelope*
Rule 2. (applicable to non-pressure pipes)

Depth of sewer pipe (below ground)	**Sewer size** (nominal diameter)	**Pipe protection envelope** (minimum width)	**Pipe protection envelope** (height above ground)
less than 5000mm	100 to 225mm	2500mm	3000mm
less than 5000mm	300 to 375mm	3500mm	3000mm
less than 5000mm	525mm or greater	by application	3000mm
less than 5000mm	multiple pipes	by application	3000mm
greater than 5000mm	all sizes	by application	by application
greater than 5000 mm	greater than 375	by application	by application
greater than 5000 mm	multiple pipes	by application	by application
***Icon Water* structures** (chambers, trunk-sewers, buildings etc)	**Sewer size**	**Pipe protection envelope** (minimum width)	**Pipe protection envelope** (height above ground)
all	all	by application	by application

Rule 3. Permanent lightweight, open structure

3.1 Carports, pergolas, verandahs, decks, shade structures and other permanent light-weight open structures are permitted over *Icon Water* pipes, subject to compliance with all other rule 3 conditions and submission of a written application to *Icon Water* for approval.

3.2 Permanent lightweight structures are not permitted at all within a *pipe protection envelope* or easement containing (or intended to contain) a water main or a pressurised sewer pipe due to the potential for damage if a pipe should burst.

3.3 Permanent lightweight structures are not permitted within a *pipe protection envelope* or easement if access of personnel or machinery is blocked. Unsuitable structures include sheds, roller doors, internal fences, outhouses, building extensions, glasshouses, sunrooms and narrow gates, etc.

3.4 Some intrusion into the air space of a *pipe protection envelope* is permissible where the obstruction can be easily rotated out of the *pipe protection envelope* by *Icon Water* staff.

3.5 The footings of permanent lightweight structures must obey the rules for permanent lockable structures, see rule 2.

3.6 Concrete pavements within lightweight structures are generally permissible. Joints should be located to facilitate access to short lengths of pipe (maximum 3 metres), without extensive damage to the slab and to minimise the chance of having to dismantle the structure.

3.7 Driveways and pavements are not permitted over water connection pipes, meters or stop-cocks. Driveways and pavements are not desirable over sewer connection ties or boundary risers.

3.8 Demountable light-weight structures that are open (unlockable) and can be dissembled or moved by unskilled labour are generally permissible, unless there are special or unusual circumstances that make the presence of the structure undesirable or otherwise prohibited. *Icon Water* will dismantle these structures in an emergency or where it is not possible to agree within the required time frame for the owner to carry out the work. The owner is responsible for dismantling demountable structures in non-emergency (planned) situations where *Icon Water* gives more than seven days notice to move a structure. *Icon Water* will not reimburse owners the costs for dismantling and reinstating demountable structures.

3.9 Light-weight permanent structures, where permitted, which cannot be readily taken down as in rule 3.6, must have enough room for vehicles or appropriate construction machinery to operate over the centre of the pipe. The minimum clear height is 3000mm for pipes less than 3500mm deep.

Above-ground swimming pools, pool decking and equipment, where permitted, must be small scale, light-weight, readily demountable and must be capable of being quickly disassembled or moved safely by unskilled personnel.

Rule 4. Services

Permanent water pipes, irrigation pipes, sanitary drains, stormwater drains, electricity cables, telephone cables, communication cables, gas pipes, aerial wires, or other services that are not the property of *Icon Water* are not permissible within the *pipe protection envelope* or easement.

Rule 5. Fences, retaining walls, fill, excavation and landscaping

5.1 Demountable fences, such as timber and steel, are generally permitted to cross or run beside easements or *pipe protection envelopes* without the need to have footings that comply with rule 2 “zone of influence conditions”.

5.2 Brick or masonry fences and retaining walls may be permitted if:

- it runs parallel to the pipe or easement along the property boundary
- footings do not extend into the *pipe protection envelope* appreciably (say 300mm)
- footings are no closer than 1000mm from the centreline of the main
- the footing design allows the pipe to be safely excavated to its full depth along the length of the wall (see rule 2 “zone of influence conditions”)
- in the case of water or sewer mains under pressure, the wall and the footings are specially designed to prevent damage and collapse in the event of a burst pipe
- the fence runs perpendicular (or no more than 15 degrees off the perpendicular) to the pipe or easement and is designed to bridge the easement or *pipe protection envelope* without transmitting any loading to existing or future pipes. The design must allow perpetual and 24-

- hour access for personnel and machinery. This may need to be guaranteed by the creation of another easement for access purposes.

5.3 Earth fill, changes to natural ground levels, earth banks, retaining structures or other landscaping features:
- must not impose loads that exceed pipe design limits
- must not hinder access along the full length of the pipe protection envelope
- must not render the ground slope difficult or unsafe for machinery to operate
- must not add to *Icon Water's* operational expense by requiring specialised equipment to access or excavate mains.

Ground levels are not to be altered so as to hide, cover or increase the as-constructed depth of *Icon Water* infrastructure (that is, mains, connections, stop-cocks, meters, manholes, valves, hydrants, etc.).

Rule 6. Paving and driveways

Ornamental finishes, brick, concrete pavers, stencilled concrete, coloured concrete or unique features are not encouraged due to pattern matching and colour procurement difficulties. Special finishes can significantly increase site restoration costs. However, pavements are generally permitted within the *pipe protection envelope* (easement), subject to the following.

6.1 Care being taken to place joints and other design features to minimise difficulties and eliminate safety hazards when excavating pipes for maintenance.

6.2 Outside the property boundaries, *Icon Water* will pay for the compaction of trenches and the replacement of bitumen and standard concrete pavement. *Icon Water* will not reinstate special finishes. The leaseholder is responsible to replace all ornamental finishes, including pavers, brick, ornamental concrete, gravel, etc. and pay all costs additional to bitumen or standard concrete.

6.3 Inside the lease boundaries, the leaseholder is fully responsible for the replacement of all conditionally approved pavement, including bitumen, standard concrete, ornamental finishes, pavers, brick, stencilled concrete, gravel, etc. at their own expense.

6.4 *Icon Water* will only replace those segments of pavement that have been removed for the purpose of repairing, replacing or maintaining *Icon Water* assets. *Icon Water* will not replace whole areas of pavement to maintain uniformity of appearance of colour, patterning or other visible ornamental features.

Rule 7. Access structures and other installations

7.1 Apart from pavement at ground level, no structures or obstructions of any type are permitted to be constructed closer than 1000mm from the perimeter of access structures and other installations required to operate *Icon Water* assets (for example, sewer manholes, lamp-holes, valve spindle covers, hydrants, meter boxes, meter pits, scour valve outlets, etc.). Access must be available at all times, day and night.

7.2 Pot plants and other portable objects are not to be placed within a 1000mm radius of an *Icon Water* access structure. No objects should be placed in a location that hides the asset from view or hinders access to any sewer manhole, water meter, hydrant, valve or network access structure.

7.3 Ground levels are not to be altered so as to divert stormwater runoff towards manholes valves, meters or other surface fittings.

7.4 No person is to store materials inside an easement or *pipe protection envelope*. The property owner is responsible to remove any obstructing materials when requested by *Icon Water*. *Icon Water* is not responsible for any damage to stored materials moved by *Icon Water* in an emergency (see also rule 10).

Rule 8. Trees and landscape vegetation
8.1 No trees are to be planted in an easement or *pipe protection envelope*.

In order to minimise root damage, trees should be planted so that the mature canopy does not reach over the easement or *pipe protection envelope*. *Icon Water* is not responsible for the damage to the leaseholder's trees caused by *Icon Water* excavation works in an easement or *pipe protection envelope*.

8.2 Shrubs and plants (without invasive roots) are permitted, provided that they can be easily removed using hand tools or light earth-moving equipment. *Icon Water* will restore excavated ground to a condition similar to its original level. *Icon Water* will seed a replacement lawn but the leaseholder is responsible for watering. The leaseholder is also responsible for the restoration of landscape features and the replacement of shrubs removed by *Icon Water* when working in an easement or *pipe protection envelope*.

8.3 Valuable plants, plants that may attract a preservation order or engender an emotional attachment and plants which take long periods to achieve desired outcomes should be avoided in an easement or *pipe protection envelope*.

Rule 9. Special designs
Whilst not encouraging special designs, *Icon Water* recognises that circumstances may arise where the building of a substantial permanent structure over an easement or within the *pipe protection envelope* may be justified.

This may be accomplished by diverting *Icon Water* assets around the site or employing design features that:

- protect the asset in its current location
- do not create public or workplace safety hazards
- do not impede entry or require special provision for maintenance access, pipe renewal, enlargement or extension
- do not increase *Icon Water's* operations or maintenance costs
- do not put at risk a neighbour's property, or impact on them unacceptably in any other way.

Engineering, landscaping, architectural or specialist consultant advice may be required to certify that any special proposals comply with *Icon Water* pipe protection principles.

Rule 10. Compensation
Icon Water will seek compensation for costs borne by *Icon Water* for removal of any unapproved structures.

Appendix P

Definitions

accredited
means accredited by *Icon Water* or another accrediting agency under the Contestable Work Accreditation Code.

Icon Water
means *Icon Water* Limited ABN 86 069 381 960.

ACTPLA
means ACT Planning and Land Authority, a division of the ACT Government.

connection (sewerage)
a collective term describing the whole assembly of pipework and fittings transporting sewage from the customer's sanitary drains to the sewerage network mains. The connection includes but is not limited to the tie collar usually located just inside the property boundary, jump-up(s), the branch pipework drains and the junction at the main.

connection (water)
a collective term describing the whole assembly of pipework and plumbing fittings delivering water from the network water mains to the isolation valve and meter assembly at the designated connection point. The connection includes but is not limited to the main-cock, branch pipework, isolation valve, dirtbox and meter.

connection points
means the point or points at which the *water network* or *sewerage network* is connected to a customer's equipment, as defined in the Network Boundary Code, or as otherwise agreed with the customer in writing.

easement
means anything registered on the property title as a water or sewerage easement, or shown as such on the deposited plan at the Registrar-General's Office.

equipment
includes water and sewerage pipes and other water and sewerage infrastructure and equipment.

government or authority
in the Commonwealth of Australia, any Australian state or territory or any local government, and any minister, department, statutory authority, corporation or agency (including *ICRC*) having jurisdiction and authority over a party.

ICRC
means the Independent Competition and Regulatory Commission, which is the ACT regulator for competition and pricing.

***negotiated customer* contract**
means a contract to which section 95 of the *Utilities Act 2000* applies.

sewerage services
means the utility services listed in section 13 of the *Utilities Act 2000,* other than services for discharge of trade waste (that is anything other than ordinary domestic discharge in ordinary domestic volumes).

water and sewerage networks
means the *water network* and the *sewerage network.*

water and sewerage services
means the supply of water, other than recycled (or non-potable) water, and the provision of *sewerage services*.

domestic sewage
means sewage defined in *Icon Water's* published sewerage discharge acceptance criteria.

non-domestic discharge
is defined in *Icon Water's* published sewerage discharge acceptance criteria.

pipe protection envelope
is defined in *Icon Water's* publication *Building over or near water and sewerage assets.*

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