Coliban WATER

Recycled Water

September 2008

Requirements for Connection

Installation, Testing and Commissioning

This fact sheet has important information for customers and plumbers seeking to connect public open spaces and industrial sites to the recycled water supply. It sets out Coliban Water's requirements to ensure the safe delivery of recycled water.

Public Open Spaces and Industrial Uses

It is important that customers ensure that all plumbing works for the use of recycled water on site are carried out by a licensed plumber registered with the Plumbing Industry Commission (PIC). The work must be fully tested and commissioned prior to the system being put into service.

Standards that Apply

All plumbing works on site must be undertaken in accordance with the following standards and documents:

- AS/NZS 3500:2003 – National Plumbing and Drainage Code;
- Plumbing Industry Commission – Recycled Water Plumbing Guide;
- EPA Victoria – Dual Pipe Water Recycling Schemes: Health and Environmental Risk Management;
- AS1319:1994 – Safety signs for the Occupational Environment;
- The Public Open Space or Industrial Health and Environmental Management Plan (HEMP) applicable to the site;
  Connection Process

Applications for connection to the recycled water supply must be made to Coliban Water's office (37– 45 Bridge Street, Bendigo) and not through Coliban Water's Quick Connect Agents.

Recycled Water Connections and Backflow Prevention

All connections made to the recycled water supply are to be metered in accordance with Coliban Water's standard requirements. The connection application must include a design of the irrigation system showing the layout of the piping, position of the sprinklers, solenoid valves and any below ground bayonet connections.

Recycled water meters shall be:

- Located at property boundaries, and installed above ground in an accessible position;
- Be protected from damage and have due regard to all Occupational Health and Safety requirements for public areas; and
- Coloured lilac in accordance with AS 2700S:1996 (p.23).

An appropriate containment backflow prevention device must be installed downstream of the recycled water meter, (Minimum requirement: Medium Hazard) and registered in accordance with Coliban Water's Backflow Prevention requirements.

A commissioning test and ongoing annual testing of the device is required to ensure that it is operating correctly. Only plumbers with an endorsed license in Backflow Prevention can carry out this test. A copy of the backflow prevention test must be provided to Coliban Water within seven days of the test being carried out.

The supply pressures from the recycled water supply can potentially be quite high in some locations. The customer / plumber is responsible for investigating the need for a pressure reducing valve on any connections to the recycled water supply.

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Existing Potable (Drinking Water) Connections to Site

Coliban Water requires the installation of a containment backflow prevention device, specifically a Reduced Pressure Zone Device (RPZD), on all drinking water connections/services to a customer's site where recycled water is in use. The backflow prevention is to protect the wider community (the water mains in the street) from any accidental cross-connections within the customer's property.

The same testing regime is required for the containment backlow prevention device installed on the drinking water connection(s) to a customer's site, as for a recycled water connection to the site.

Should any existing drinking water connections to site no longer be required, the water service must be cut and sealed at the water main and the meter returned to Coliban Water.

Onsite Plumbing and Signage

All plumbing works undertaken on site are to comply with AS/NZS 3500.1:2003 - Part 1 Water Services. The performance of the recycled water system is the responsibility of the customer

Recycled water and drinking (potable) water infrastructure above-ground are to be separated by at least 100 mm, and below-ground infrastructure by at least 300 mm.

All above-ground recycled water fittings (pipework, valves, meters, backflow prevention devices, pit covers, solenoid covers etc) are to be clearly identifiable and coloured lilac in accordance with AS 2700S:1996 p.23.

For existing irrigation systems, it is recommended that a master solenoid valve be installed as close as possible to the recycled water meter assembly to ensure that the existing main lines up to individual sprinkler station solenoid valves are not under constant pressure.

Recycled water tap outlets in publicly accessible areas are to be kept to a minimum. Only taps (preferably 5/8") with removable handles are to be used. Warning signs are to be placed no further than 150 mm from the tap handles. These signs are to read **"Do Not Drink".**

The public must be informed that recycled water is in use at the site by the installation of warning signs at all site entrances reading **"Recycled Water in Use. Do Not Drink"**. Any dams or tanks used to store recycled water must also have appropriate signage. All prohibition signs are to comply with AS 1319:1994.

Testing and Commissioning of the Recycled Water System

It is important to ensure that the recycled water system on site is fully tested and commissioned prior to being put into service by the customer. This includes both the new infrastructure installed (metering, backflow prevention, and pipework) and the overall operation of the recycled system as a whole where it incorporates any infrastructure already in place. It is the responsibility of the installing plumber to test and commission the works.

All new infrastructure installed must be tested and commissioned in accordance with the relevant requirements AS/NZS 3500:2003 – National Plumbing and Drainage Code.

Of particular importance is the testing and commissioning of the recycled water system as a whole to ensure that there are no cross-connections between the recycled water and drinking water supplies on site. The broad process as outlined in Section 9.6 of AS/NZS 3500.1: 2003 must be followed to test that the correct supply (recycled water or drinking water) is provided to all the respective outlets throughout the site.

A copy of the Compliance Certificate and all test results for the testing and commissioning works undertaken on site (including for cross-connections) are to be forwarded to Coliban Water.

Inspections and Audits Required

Coliban Water will carry out audits on all unregulated plumbing works at site (i.e. open space irrigation systems downstream of any master solenoid valve installed) to ensure that all of Coliban Water's requirements have been met.

Once the plumbing works at site have been completed and Coliban Water has received a copy of all test results, the PIC Compliance Certificate, and as-constructed information for the site (i.e. a plan showing the location of all pipework etc); a final audit of the site will be carried out by Coliban Water in conjunction with the plumber and the customer. The audit will check that the appropriate metering and backflow prevention has been installed; all above ground recycled water infrastructure has been coloured lilac; the necessary prohibition signs are in place; and the testing for cross-connections has been completed.

The customer's recycled water system must not be put in to service until final approval has been given by Coliban Water for the infrastructure, site management plan and the 'Agreement to Sell Recycled Water' has been signed by both the customer and Coliban Water.

Any amendments or changes to the system, once installed, will be subject to the same approval process.

Further Information

For further information, contact the Recycled Water Officer at Coliban Water on 1300 363 200.