Office of the Technical Regulator

Standard for Dual Reticulation Infrastructure

This Standard is published by the Technical Regulator pursuant to section 66 of the *Water Industry Act 2012* (the Act). This Standard has been gazetted on 14 May 2026 and comes into effect on that date.

The purpose of the Standard is to prescribe the minimum requirements and responsibilities of all parties involved in dual reticulation infrastructure to ensure the safety and reliability of the water services provided to South Australian consumers.

Section 1 — Scope and general

1.1 — Scope

This Standard sets out requirements for the safe design, installation and construction of dual reticulation infrastructure including up to the point of connection to a property. This Standard is in addition to requirements set out in the Water Services Association of Australia (WSAA) codes.

1.2 — Objective

To ensure the safety and reliability of non-drinking water infrastructure and to prevent any adverse impact on drinking water supplies associated with dual reticulation infrastructure.

1.3 — Definitions

Drinking water:

Water that is intended primarily for human consumption.

Non-drinking water:

1. Water which is not intended for human consumption (e.g. drinking and cooking).
2. Any water other than drinking water (as determined by the Department for Health and Wellbeing) which may include recycled wastewater, stormwater, bore water, ground water, lake water and river water.

NOTE: For the purpose of this Standard, recycled water sourced from wastewater and stormwater is a defined subset of non-drinking water. The primary focus of this Standard is recycled water.

Property:

A building or area of land, or both together.

Dual reticulation:

Refers to properties which are supplied or have access to both reticulated drinking and reticulated non-drinking water.

Section 2 — Requirements

The design, installation and construction of dual reticulation infrastructure and connections to a property shall comply with the following:

2.1 — Water meter assembly and associated fittings

(i) Prior to installation, non-drinking water meters including pipes and fittings associated with the meter shall be a permanent purple colour no

Continued over page

darker than Jacaranda P24 or Purple P12 and no lighter than P23 Lilac, in accordance with AS 2700 (refer to Figure 1). The purple coating on non-drinking water meters and associated fittings shall be corrosion and UV resistant to ensure protection in outdoor environments.
NOTE: The best practice for coating non-drinking water meters is the application of powder coating to ensure compliance with durability and corrosion resistance requirements.

(ii) The non-drinking water meter shall not be interchangeable with the drinking water meter.
NOTE: This may be achieved by dissimilar thread connections for the meter connections to the inlet and outlet tail pieces.

(iii) There shall be a minimum of 300 mm separation between the drinking water and non-drinking water meters and the non-drinking water meter shall be located on the left-hand side of the drinking water meter, when facing the property from the street (refer to Figure 2).

(iv) Where the drinking water meter and non-drinking water meter are located in inground boxes, they shall be in separate boxes. The content of all inground boxes shall be clearly and permanently identified on the cover of the box.

(v) In dual reticulation areas, backflow prevention devices shall be installed downstream of the drinking water meter outlet riser at the property in accordance with the Plumbing Code of Australia.
NOTE: Backflow prevention devices may be required to be installed to the non-drinking water meter connection points. Refer to the National Construction Code Volume 3 for site specific information where this may apply.

2.2 — Water infrastructure pipework

(i) The drinking water meter shall be installed, activated and commissioned prior to activating and commissioning the non-drinking water service.

(ii) The non-drinking water isolation valve shall be locked off prior to commissioning.

(iii) Non-drinking water infrastructure pipework shall be permanent purple colour no darker than Jacaranda P24 or Purple P12 and no lighter than P23 Lilac and labelled as non-drinking water.

(iv) Labelling and identification of non-drinking water pipework shall be in accordance with AS 1345, except the colour should be in accordance with 2.2 (iii) of this Standard.

(v) Purple marking tape identifying the content of the pipe shall be installed above the buried non-drinking water pipework.
EXCEPTION: Marking tape may be omitted where below ground non-drinking water pipework is directionally bored provided that:

(a) Clause 2.2.(iii) and 2.2.(iv) above are complied with; and

(b) The location of non-drinking water pipework is recorded and documented so that it is readily available to any person involved with excavation work in the vicinity of the non-drinking pipework.

(vi) There shall be a minimum 300 mm separation between the inground drinking water and non-drinking water pipework.
NOTE: For further information on separation distances from other utility services, refer to the relevant Standards or Codes of practice.

(vii) The connection pipes for the recycled water system and drinking water system shall not cross.

(viii) Non-drinking water infrastructure pipework shall be constructed using pipe materials and pressure class specifications equivalent to those prescribed for drinking water systems. For detailed requirements, refer to *WSA-03-2011, Water Supply Code of Australia* and the relevant Product Specifications.

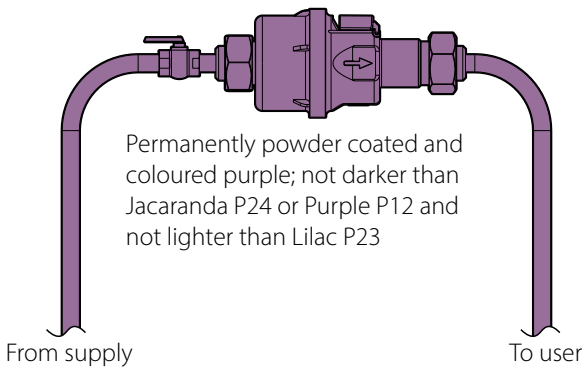

Figure 1 — Non-drinking water meter assembly

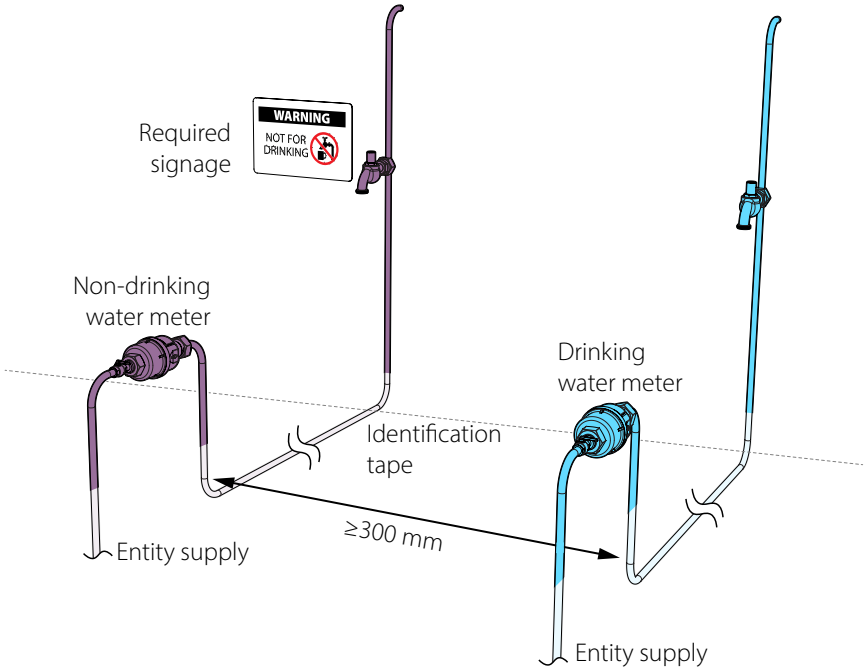

Figure 2 — Residential property with dual reticulation supplies

2.3 — Infrastructure inspection proces

(i) Once construction is completed, each section of the drinking water and non-drinking water infrastructure installation shall be inspected for compliance by a recognised expert.

(ii) Documentation of infrastructure inspections shall be retained by the owner/operator of the infrastructure.

2.4 — Property commissioning process

(i) A cross-connection test in accordance with AS/NZS 3500.1 must be carried out by an appropriately licensed person in conjunction with the water industry entity who supplies the non-drinking water. This occurs when the non-drinking water service is activated. The results of this cross-connection test must be retained by the water industry entity.

(ii) Upon activation of the non-drinking water supply at each property, a test distinguishing the two water sources shall be carried out at the meter and recorded by the water industry entity.
NOTE: The recommended test is a Total Dissolved Solids (TDS) test (refer to Appendix 1).

(iii) Where work is carried out on dual reticulation infrastructure connected to the property, a test distinguishing the two water sources shall be carried out at the meter on completion of work and recorded by the water industry entity.

(iv) Alterations to drinking water or non-drinking water pipework downstream of the water industry entity point of connection shall be carried out by an appropriately licensed plumbing contractor. The installation must be certified using an Electronic Certificate of Compliance (eCoC) which must be provided to the customer and the Office of the Technical Regulator.

R. FAUNT

TECHNICAL REGULATOR

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Appendix 1

(informative)

Total dissolved solids (TDS)

The amount of total dissolved solids/salts in water (TDS) is used to determine the salinity of water and is measured in mg/L or parts per million (ppm). Electrical Conductivity (EC) is the ability of water to conduct electricity through the metals, minerals and salts in solution and is measured in microSiemens per cm (µS/cm) which is also known as an 'EC Unit'. A TDS meter often measures EC, which is then converted to a TDS measurement. It is not necessary to conduct a TDS test if drinking water is servicing the non-drinking water pipework.

TDS testing can be easily done with a handheld device. Non-drinking water will often have a higher and more variable TDS value than drinking water, which will be more stable over time, therefore the TDS test is an important method to verify that the water flowing from an outlet is from the correct source water.

Generally, drinking water supplies in South Australia have a TDS concentration below 600 mg/L, which is considered to have "good" palatability under the Australian Drinking Water Guidelines (ADWG).

The SA Water website provides information on water quality information for drinking water including TDS values.

It is recommended that a record is kept of TDS results measured to understand the normal range of values for drinking and non-drinking water in a certain area.

Example of procedure for TDS Test at the meters

1. **Drinking Water**

   Turn the water meter off – disconnect the drinking water meter outlet arm. Rinse the sample container with demineralised water, turn the drinking water meter on and fill the sample container to a minimum of 40 ml and undertake the test.

2. **Non-drinking Water**

   Turn the water meter off – disconnect the non-drinking water meter outlet arm. Rinse the sample container with demineralised water, turn the non-drinking water meter on and fill the sample container to a minimum of 40ml and undertake the test.

3. **Recording**

   Record all test results and take appropriate action.

NOTE: For information on calibration and operation of the TDS meter refer to the manufacturer's user guide.