

Recycled water connections procedure

This is a mandated procedure under the operational policy framework. Any edits to this procedure must follow the process outlined on the [creating, updating and deleting policy documents](#) page.

Overview

This procedure provides guidance for connecting recycled water for irrigation purposes at department schools and preschools. It outlines:

- minimum mandatory requirements
- responsible parties
- planning guidelines and procedures that must be followed to connect a school or preschool to a recycled water supply.

Scope

Recycled water is water generated from sewage, greywater, stormwater, rainwater, industrial or animal processes and treated to a standard that is appropriate for its intended use.

Recycled water can be supplied by either centralised schemes administered by state or local government, or by on-site privately managed systems.

This procedure applies to all employees, service delivery leads, contractors and subcontractors responsible for the connection and management of recycled water supplies at South Australian government schools and preschools.



Contents

Recycled water connections procedure.....	1
Overview	1
Scope.....	1
Detail.....	4
Mandatory requirements	4
Phase 1: connection feasibility assessment	5
Phase 2: project development.....	5
Phase 3: project implementation and acquittal	6
Operating recycled water connections	11
Contacts.....	12
Roles and responsibilities.....	13
School or preschool leader	13
Service Delivery Lead (SDL)	13
Asset Planning, Standards and Sustainability (APSS)	13
Department for Health and Wellbeing (DHW)	13
Office of the Technical Regulator (OTR).....	13
Environmental Protection Authority (EPA)	13
Department for Environment and Water (DEW).....	14
Definitions	14
harvested stormwater.....	14
treated wastewater.....	14
recycled water	14
stakeholder.....	14
stormwater	14
wastewater.....	14
water supplier.....	14
Supporting information.....	15
Related legislation.....	15
Related policies.....	15
Record history.....	15

Approvals.....	15
Revision record	15
Contact	16

Detail

This procedure is divided into the actions required to complete and maintain a recycled water connection:

- Mandatory requirements – to establish standard expectations for implementation of recycled water connections.
- Connection feasibility assessment – to assess viability of potential recycled water connections.
- Project development – to identify project goals, risks and strategies and obtain necessary approvals.
- Project implementation and acquittal – to complete installation, hand off water supply agreement and activation.
- Operating recycled water connections – requirements for ongoing system operation.

Mandatory requirements

This procedure is based on:

- [Australian Guidelines for Water Recycling](#) (AGWR)
- [SA Health guidance on recycled water](#)

Minimum mandatory requirements

The following mandatory requirements apply to all recycled water connections at schools and preschools:

- The Asset Planning, Standards and Sustainability (APSS) team manages and monitors recycled water connections and must be notified of all recycled water connections.
- Connections must comply with the AGWR and SA Health guidance where applicable.
- Connections are to be undertaken through the relevant Across Government Facilities Management Arrangements (AGFMA) service provider.
- Written approval from the Department for Health and Wellbeing (DHW) is needed to use treated wastewater for irrigation purposes and all recycled water for toilet flushing.
- Where a recycled water supplier will supply treated wastewater the department must verify that the supplier has received written approval from DHW to supply treated wastewater prior to activation of the connection.
- Where a mains water supply is present, the recycled water connection is to be designed to allow for the mains water supply to be used as a backup supply in the event the recycled water supply is not available.
- Recycled water will not be supplied unless a valid and signed water supply agreement (WSA) exists between the water supplier and the Minister or delegate.
- Connections will not be activated at a school or preschool until project handover is completed.

Identifying recycled water connections

This procedure is initiated when a possible new recycled water supply is identified, or where an upgrade or extension may occur to an existing recycled water connection at a school or preschool.

Water suppliers, service delivery leads (SDLs), schools or preschools interested in implementing, upgrading or extending a recycled water connection at a school or preschool must provide written notification to APSS at education.AssetSustainability@sa.gov.au

Phase 1: connection feasibility assessment

When an opportunity to connect a school or preschool to a recycled water supply is identified, APSS will undertake a feasibility assessment of the project proposal. The assessment will determine whether the proposed connection is ecologically, economically and socially viable.

Phase 2: project development

Projects that are deemed viable may proceed to project development.

APSS will engage with key stakeholders to develop a project scope of works and initiate negotiation of a WSA.

The project will not proceed to project implementation and acquittal until APSS has reviewed and endorsed in writing:

- a draft scope of works
- the water supplier has obtained all necessary approvals, licences and permits from relevant regulatory agencies (DHW approval or support to supply recycled water, [Essential Services Commission of South Australia \(ESCOSA\)](#) licence to supply recycled water).

Project scoping

APSS will engage with the SDL to develop the project scope. The project scoping will ensure compliance with AS/NZS 3500 Set (Parts 0-5) and comprise an initial site assessment and development of a scope of works.

Initial site assessment

An initial site assessment is recommended to support development of the scope of works. The initial assessment is intended to identify site-specific considerations likely to impact the scope of work to reduce the occurrence of variations. The initial assessment should consider the following:

- location of key infrastructure (such as connection point, irrigation system, water meters, etc) on the site plan
- identification of existing backflow devices and assessment of risk of cross-connections
- assessment of hydraulic requirements of the irrigation system and pressure and flow of the recycled water and mains water supplies.

Scope of works

The scope of works must address the following:

- a plan of the recycled water connection layout (refer to [recycled water connection cabinet design templates](#))
- installation of additional backflow devices
- alterations to pipework
- installation of signage
- cross-connection audit and backflow device inspection on completion of works.

All new and altered plumbing works must be inspected by the [Office of the Technical Regulator \(OTR\)](#).

Phase 3: project implementation and acquittal

Recycled water connections will not be activated until the APSS has reviewed the completed works and documentation and provided written approval for activation.

Water supply agreement (WSA)

A signed water supply agreement (WSA) between the water supplier and the Minister's delegate is required before a recycled water connection can be activated. The Minister has delegated authority to sign and execute WSAs to the Executive Director, Infrastructure. WSAs negotiated with recycled water suppliers must be reviewed by the Crown Solicitor's Office (CSO).

Retailers must be a [licensed recycled water operator](#) and comply with relevant Acts of Parliament and associated regulations, [Essential Services Commission of South Australia \(ESCOSA\) codes \(PDF 765KB\)](#) and rules, the AGWR, and any conditions of operation set by SA Health or other relevant authority.

WSAs will vary from one retailer to the next. The department requires the following child safety clause to be included in WSAs unless it can be demonstrated that the retailer will not need to access department property:

The [name of supplier] acknowledges that the customer operates a school on the customer's premises and that the customer and the customer representatives have a duty of care to the students in their care.

The [name of supplier] must ensure that [the supplier's] employees and contractors entering the customer's premises for maintenance or repairs and other related purposes have a complete and current screening and background check from the Department of Human Services Screening unit or they must be accompanied by the customer's representative and comply with the reasonable directions of the customer representative.

In addition to addressing standard contract requirements identified in regulations, codes, rules, licences, the AGWR, and SA Health guidance, WSAs should also address the following:

- identify the commencement date, term, expiry date and any renewal options for the WSA

- ensure any variations to the WSA are agreed and signed by both the retailer and the customer
- a definition of the Australian Recycled Water Guidelines Part 1 (ARWG) that is updated from time to time
- a description of the source of recycled water and the water quality type as described in the ARWG
- provisions for the retailer to report any defects in water quality to the customer, including target timeframe and communication methods
- retailer's commitment to make available a volume of recycled water to the customer's supply locations
- define the customer as the department and identify connected education and care facilities as supply locations
- identify and provide contact details for the retailer, customer representative, and supply location representative(s)
- identify billing information for each supply location, with invoices to be issued electronically and directed to the appropriate corporate email address for processing and payment
- a description of the retailer's and customer's infrastructure, connection points to the customer's property, irrigation area and permitted use
- site-specific operational parameters for each department education and care facility connected to the retailer's scheme including a description or map that details the areas to be irrigated with recycled water.

Engaging contractors

The SDL is responsible for procurement of services in line with the project scope of works and managing delivery of works. Project implementation must comply with AS/NZS 3500.1, this procedure and any requirements as stated by the department or other statutory bodies.

Project acquittal

The SDL is responsible for reviewing completed installation works and providing the installers completion report and supporting documentation to APSS who will not sign off on the project until all the documentation specified in the completion report is provided. The defects and liability period will not begin until the completion report has been accepted, in writing, as the final version of the document by APSS.

The SDL must update the school or preschool's preventative maintenance schedule to include cross-connection audits and backflow prevention device inspections.

Audits and inspections must comply with DIT technical data schedules:

- DIT TDS PL58: potable or non-potable water cross connection audit
- DIT TDS PL32: backflow prevention devices.

These are available through Ventia's Agency Portal. Please contact APSS if you require assistance accessing these documents.

Final approval

Harvested stormwater

APSS will authorise activation of a recycled water connection supplied with harvested stormwater upon completion of:

- a review of all documents requested through Phases 1-3
- meeting all requirements of the recycled water connections procedure
- a signed and valid WSA.

Copies of the completion report and supporting documentation will be included with the final WSA.

APSS will supply a copy of the signed WSA to education and care facility leaders and advise of any site-specific operating and maintenance requirements.

Treated wastewater

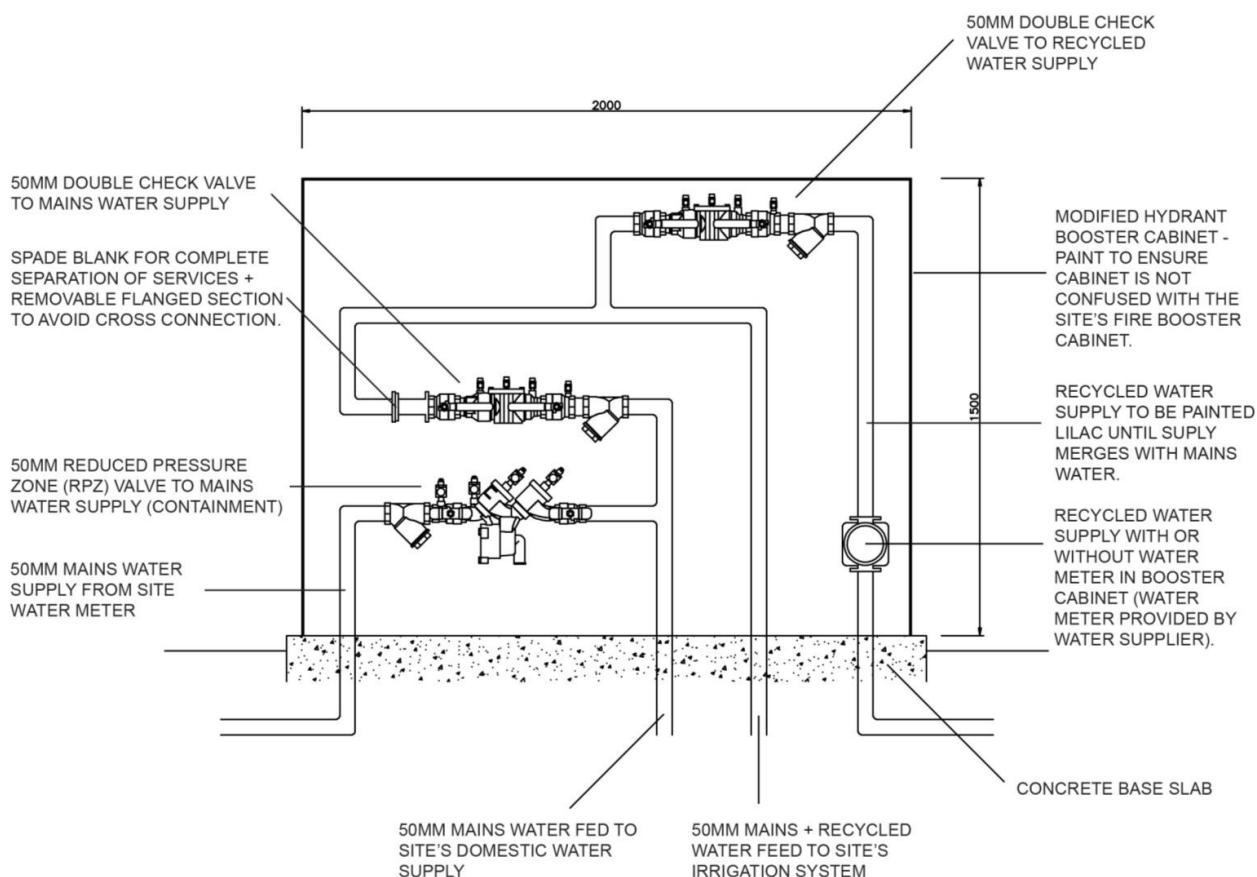
Where the recycled water connection will be supplied with treated wastewater, APSS will also seek a DHW letter of approval to use recycled water for irrigation. As part of the process APSS will develop a site-specific risk management plan.

Recycled water connections supplied with treated wastewater will not be activated until APSS have met with the site leaders to officially hand over the WSA, confirmed operating and maintenance requirements in accordance with the risk management plan, and provided approval to the water supplier to activate the recycled water connection.

Recycled water connection cabinet design templates

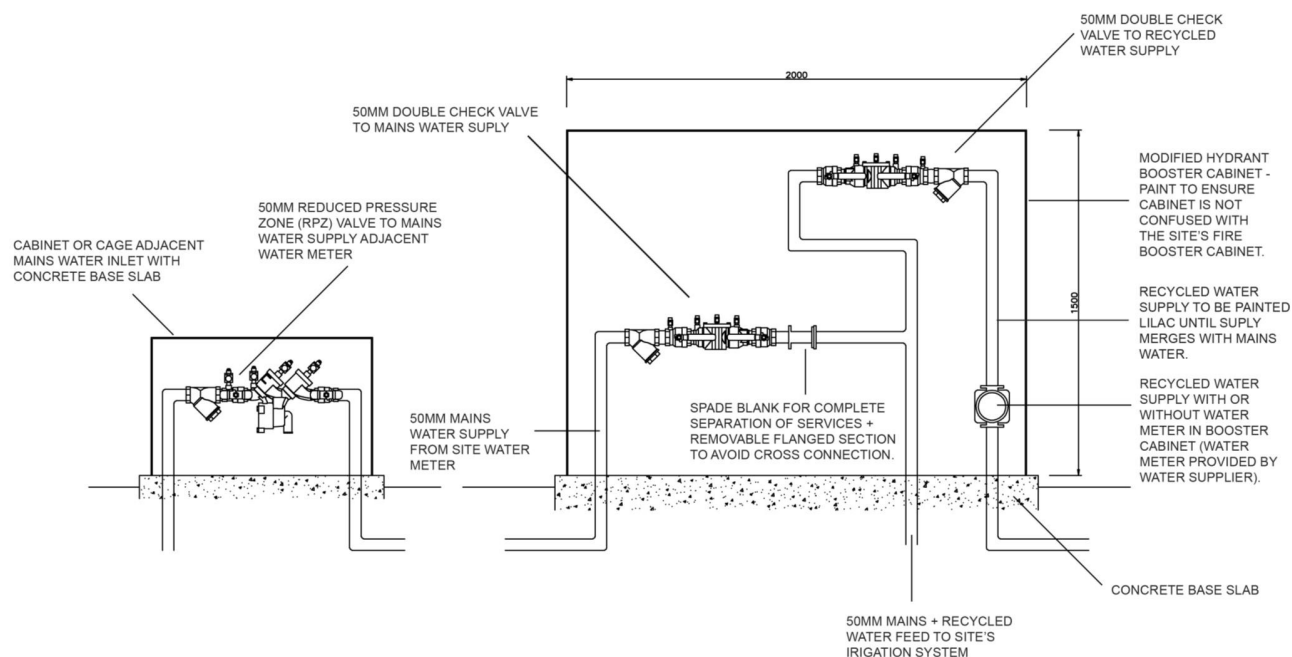
Option 1: single housing – mains and recycled water connection cabinet

The [single housing cabinet layout \(PDF 270KB\)](#) is a generic design for schools and preschools with a main and irrigation water supply feed adjacent to each other and all backflow protection devices are housed in one connection cabinet.



Option 2: separate housing – mains and recycled water connection cabinet

The [separate housing cabinet layout \(PDF 279KB\)](#) is a generic design for schools and preschools with a mains and irrigation water supply feed which are separated.



Recycled water connection warning sign template

Download a digital copy of the [warning sign – irrigated using recycled water \(PNG 189KB\)](#).



Operating recycled water connections

Work health and safety

The SDL, school, and APSS must ensure that work health and safety (WHS) for staff and contractors that work with recycled water systems is addressed, including:

- a copy of this procedure will be available to staff and contractors that work with or maintain services supplied by recycled water
- WHS guidelines for staff and contractors working with recycled water include:
 - recycled water must not be used for drinking purposes
 - staff and contractors must not eat or drink while working with recycled water
 - staff and contractors must wash their hands with soap and mains water after working with recycled water
 - staff and contractors must clean and dress wounds obtained while working with recycled water with antiseptic and appropriate medical dressing.

Breakdown maintenance

The school or preschool is responsible for all breakdown maintenance associated with department owned recycled water infrastructure installed on the property including:

- regular maintenance of the irrigation system to ensure there are no leaks
- verification that signage is not damaged or vandalised. Replacement of signs will be a site responsibility unless stipulated otherwise in the WSA.

The school or preschool must:

- raise breakdown maintenance as per standard operating procedures
- notify the SDL, APSS, and the water supplier in the event of a major breakdown, fault or failure at the school or preschool, such as a major leak, burst pipe or loss of supply so that an appropriate response can be coordinated between stakeholders
- not interfere with the main irrigation connection cabinet (installed between the boundary and the school or preschool's irrigation system) other than to identify where a breakdown has occurred and to shut off supply.

The water supplier is responsible for monitoring and maintaining water supplier owned infrastructure located on department property as identified in the WSA.

Upgrades and extensions

The school or preschool must consult with the SDL before altering or expanding the irrigation system or recycled water infrastructure.

The SDL and school or preschool must provide written notification to APSS and the water supplier before altering or expanding the irrigation system or recycled water infrastructure.

Irrigation management

The school or preschool must:

- only irrigate with recycled water between the hours of 8pm and 6am in areas where restricted access is required as a treatment or control for recycled water as defined in the AGWR
 - exception: schools and preschools with sub-surface irrigation systems may irrigate outside of the hours of 8pm to 6am as outlined in the WSA
- not operate spray irrigation systems when high winds are forecast
- replace sprinkler heads with lilac coloured sprinklers as part of ongoing maintenance so that the use of recycled water for irrigation is highlighted
- monitor irrigation system performance and implement water efficient irrigation schedules to avoid over-irrigation, including reduction of surface runoff and water pooling on the soil surface.

Contacts

Department for Health and Wellbeing (DHW), Water Quality Unit

Address: Water Quality Public Health Services, SA Health, PO Box 6 Rundle Mall, Adelaide SA 5000

Phone: 8226 7100

Email: WaterQuality@health.sa.gov.au

Website: [Water quality](#)

Office of the Technical Regulator (OTR)

Address: GPO Box 320, Adelaide SA 5001

Phone: 1300 760 311

Email: OTR.PlumbEnquiries@sa.gov.au

Website: [Office of the Technical Regulator](#)

Environment Protection Authority (EPA)

Address: GPO Box 2607, Adelaide SA 5001

Phone: 8204 2004 or 1800 623 445

Email: EPAInfo@sa.gov.au

Website: [EPA](#)

Department for Environment and Water

Address: GPO Box 1047, Adelaide SA 5001

Phone: 8204 1910

Website: [Department for Environment and Water](#)

Roles and responsibilities

School or preschool leader

In consultation with the SDL, ensure their school or preschool complies with this procedure when connecting or connected to recycled water.

Service Delivery Lead (SDL)

Implement works.

Engage and maintain contractors.

Update maintenance schedules and Panorama records.

Notifying the department of non-compliance with this procedure for all recycled water connections at department schools and preschools.

Asset Planning, Standards and Sustainability (APSS)

Monitor existing recycled water connections.

Engage stakeholders and provide oversight for new recycled water connections at department schools and preschool.

Ensure schools and preschools comply with this procedure.

Negotiate and implement recycled water supply agreements.

Review and update this procedure at least every 3 years.

Department for Health and Wellbeing (DHW)

Assess recycled water connections for schools and preschools.

Provide guidance to ensure the connection and established controls do not pose a risk to public health.

Office of the Technical Regulator (OTR)

Regulate plumbing, including cross-connection audits, backflow prevention device inspections and certificates of compliance.

Consult regarding plumbing controls in recycled water connections.

Environmental Protection Authority (EPA)

Licence water treatment plants.

Discharge treated wastewater and stormwater into aquifers.

Consult to ensure that school and preschool-specific environmental issues are addressed.

Department for Environment and Water (DEW)

Implement South Australia's [Water Security Statement 2022: Water for sustainable growth](#).

Where necessary, consult to assess stormwater collection schemes to identify any additional design or permitting requirements.

Designated agencies and personnel are only responsible for compliance with obligations or actions as specified under the terms of this procedure.

Definitions

harvested stormwater

Schemes that collect stormwater for storage and reuse from an external water supplier, including ASR, MAR, stormwater collection dams and storage tanks.

treated wastewater

Wastewater that has been treated to remove solids and other contaminants and disinfected to meet at least minimum standards for use in irrigation and toilets.

recycled water

Treated wastewater or harvested stormwater (refer to the [Australian Guidelines for Water Recycling \(AGWR\)](#)).

stakeholder

Individual or organisation involved in water supply and management at department schools and preschools.

stormwater

Rain from urban stormwater systems, roofs, roads, footpaths and other surfaces.

wastewater

Sewage or effluent.

water supplier

Organisation providing recycled water to the department school or preschool.

Supporting information

[Irrigated public open spaces](#) – SA Water

[Recycled water schemes: information for applicants \(PDF 198KB\)](#) – SA Health

[SA Health guidance on recycled water](#)

[Wastewater and recycled water incident notification form](#) – SA Health

Related legislation

[South Australian Public Health \(Wastewater\) Regulations 2013 \(SA\)](#)

[Work Health and Safety Act and Regulations 2012 \(SA\)](#)

Related policies

[Australian Guidelines for Water Recycling \(AGWR\)](#)

[Energy and water efficiency guideline \(PDF 221KB\)](#) (staff login required)

[National Construction Code Volume 3: Plumbing Code of Australia](#)

[On-site wastewater systems code \(PDF 2.8MB\)](#) – SA Health

Record history

Published date: August 2024

Approvals

OP number: 206

File number: DE20/10829

Status: approved

Version: 1.4

Policy Officer: Coordinator – Sustainability and Climate Change, Asset Planning, Standards and Sustainability

Policy sponsor: Senior Manager, Asset Planning, Standards and Sustainability

Responsible Executive Director: Executive Director, Infrastructure

Approved by: Director, Capital Projects and Technical Services

Approved date: 19 August 2024

Next review date: 19 August 2027

Revision record

Version: 1.4

Approved by: Director, Capital Projects and Technical Services

Approved date: 19 August 2024

Review date: 19 August 2027

Amendment(s): Minor edit – updated language to improve readability and understanding of document.

Version: 1.3

Approved by: Director, Capital Projects and Technical Services

Approved date: 13 March 2024

Review date: 13 March 2027

Amendment(s): Minor edit – WSA details updated for clarity, broken links and team contacts updated.

Version: 1.2

Approved by: Director, Capital Programs and Asset Services

Approved date: 23 June 2022

Review date: 23 June 2025

Amendment(s): Minor edit – procedure reviewed and updated. Process instructions comprehensively ordered on the new connection feasibility assessment checklist and removed from procedure content to maintain a single source of truth.

Version: 1.1

Approved by: A/Director, Capital Programs and Asset Services

Approved date: 7 June 2019

Review date: 7 June 2022

Amendment(s): Minor edit – procedure reviewed and updated. New branding applied to document, published as HTML document on EDi, edited for plain English in consultation with Communications Directorate.

Version: 1.0

Approved by: Senior Executive Group

Approved date: 28 January 2016

Review date: 28 January 2019

Amendment(s): New amalgamated procedure.

Contact

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