

Water is one of the most precious natural resources on our planet. This should be recognised especially in Australia, which is the driest inhabited continent in the world. The average Australian uses 360 litres of water per day in their own home alone. Residential water use takes up the largest part (59%) of all water supplied by Sydney Water.

The City Of Ryde encourages the use of rainwater tanks to enable residents to save water in their homes. Collecting rainwater from roofs and using it in the garden or laundry helps prevent the waste of valuable rainwater that would otherwise go directly into the stormwater system. This document will assist in providing guidance on tank installation and collection, care and storage of rainwater that should maximise the quality of water supplied.

Selecting a rainwater tank

Type of tanks

Rainwater tanks are available in a variety of shapes, materials and colours. You can install a traditional round tank, or consider one of the slimline rectangular tanks that are shaped to fit into under-utilised spaces such as those between buildings and fences. A 1,000 to 3,000 litre tank is a good size to store sufficient water for the garden in dry spells. A 2,000 litre tank has a size of about 2.4m long x 550mm wide by 1.5m high.

The tank must be prefabricated and enclosed.

Visual appearance

The rainwater tank, its associated drainage, plumbing and supporting structure must be designed and positioned in such a manner that it maintains the visual amenity of the immediate surrounds. Installation must not adversely affect the amenity of neighbouring premises.

You should select materials, colours and shapes that are compatible, blend with and complement the existing attached building, adjoining buildings and streetscape. Shrubs or climbing plants may be used to screen tanks if required.

A sign stating “rainwater” must be affixed to the tank.

Details of the tank

When selecting a tank, you should obtain the following information to enable you to make the right choice and demonstrate compliance with Council’s guidelines:

- Product specifications – size, shape and capacity, material colour and appearance
- A certificate of compliance for the tank confirming that it meets with Australian Standards AS/NZS 2179.1-2014, AS3500.3.1-1998 and AS/NZS 3500.3.2-1998
- A suitable location for the tank on property
- Consideration for the owners of the properties directly adjacent to the tank location.

Tank installation

The tank and support structure must be sited on suitable foundation material in accordance with the manufacturer’s or engineer’s details and comply with Building Code of Australia.

Note: Tanks must not be located on any existing footings.

Wall Mounted Tanks

Before deciding to purchase a wall mounted tank, it is essential that you have the stability of the wall, to which the tank will be mounted, checked by a structural engineer. The age and condition of the wall will affect its ability to support the weight of the tank. No tank is to be affixed to the wall of a dwelling unless such attachment is certified by a structural engineer.

Plumbing connections

Sydney Water requires that the water collected in a tank is kept separate from the reticulated water supply system, with no direct cross connection with mains water plumbing. This means that the tank water cannot be fed into the existing plumbing system.

If rainwater and mains water are interconnected, such as for back-up supply, then mains water must be isolated from rainwater with a suitable backflow prevention device as required by the Plumbing Code of Australia.

The tap on the tank may be directly connected with a hose to an outdoor sprinkler, so long as the tank water pipe is not connected to any other pipe that brings water in from the mains systems or drains to the sewerage system.

Installation must be in accordance with the Drainage and Plumbing Code AS3500.

All plumbing work must be carried out by a plumber licensed with the Department of Fair Trading.

Pump installation

If the installation of a pump is required, it must be located and operated so as not to cause offensive noise (as defined by the Protection of the *Environment Operations Act 1997*).

Pumps should not be used between 8.00pm to 7.00am on weekdays and 8.00pm to 8.00am on weekends and public holidays. Where noise nuisance does occur, Council will require the construction of an acoustic enclosure for noise abatement.

Overflow

Intense or prolonged periods of rain will exceed the capacity of your tank so it is essential that the overflow from the tank be piped directly into the stormwater drainage system serving the building. Overflow must not be directed to the sewer and must be covered with an insect-proof mesh.

Mosquito proofing

Council requires that all tanks be provided with adequate mosquito proofing. This may be achieved by installing a strainer with mosquito net to all inlet and outlet pipes.

Taps

Tank water supply taps are to be marked “Tank water only – do not use for human consumption” to prevent use for drinking water and cooking.

Maintenance

To ensure that the water collected from your roof is healthy, proper maintenance is required. Gutters and roofs should be cleaned and maintained regularly. Decaying leaves, bird and animal droppings and even lichen will contaminate water running off the roof.

Periodically tanks may require desludging. The bottom of the tank should be checked for sludge every 2 – 3 years, or if sediment is evident in the water flow. The strainer and mosquito proof mesh fitted to the tank must be cleaned and maintained in good condition. It is recommended that the strainer be checked and cleaned every 3 – 6 months. If the tank is fitted with a tap filter it is recommended that the cartridge be changed every 6 months.

FAQs

Legal requirements

Can I install a rainwater tank if I am renting?

Possibly – you would need to obtain approval from your landlord, either directly or via your rental agency.

Can I install a rainwater tank in a duplex/villa that I own?

Possibly – if your property is part of a strata plan, you will have to obtain approval from the body corporate and lodge a Development Application with your local Council.

Can I install my tank underground?

Yes, but you will need to lodge a Development Application with your local Council to install an underground rainwater tank.

Development consent

What are the costs of submitting a Development Application for a rainwater tank?

In those circumstances where a Development Application is required, fees will be dependent on the size and complexity of the system. For further advice on this, phone 9952 8222 to speak with a Customer Service Officer or book a free half an hour meeting with a planner.

How long does the Development Application process take?

Applications will be referred to Council’s Fast Track Assessment Team to expedite consideration and determination.

Health

Is rainwater safe to drink and for cooking purposes?

The NSW Department of Health recommends not drinking or cooking with rainwater collected in most urban areas. Rainwater is safe for watering the garden, washing the car, laundry washing or flushing the toilet.

For more information on health and rainwater tanks, please refer to NSW Health website www.health.nsw.gov.au

Technical

Can I connect my tank to the toilet or washing machine?

Yes, for more information visit Sydney Water’s website at www.sydneywater.com.au

Which size tank is most suitable for my property?

Tanks up to 10,000 litres may be installed without a Development Application where the installation complies with relevant SEPP (Exempt and Complying Development Codes www.planning.nsw.gov.au/exemptandcomplying). As an indication, a tank of between 2,000 and 4,000 litres is usually only sufficient to store water for the garden during dry spells. Your installer is in the best position to advise you on the most suitable size for your property.

What other fittings will I need?

Additional fittings to consider when purchasing a rainwater tank include:

- Gutter protectors to prevent leaves entering the tank
- First flush diverters to prevent the initial “dirty” water entering the tank
- Mosquito proofing of openings to prevent breeding
- Specialist plumbing, such as connections, pipes and fittings
- Backflow prevention valve to prevent mixing of tank water and mains water
- A tank stand.

Environmental

Which is the most sustainable type of tank?

The most sustainable type of tank varies depending on your situation.

Here are some important aspects to consider:

- Tanks manufactured locally will have less manufacturing and transportation emissions than those manufactured overseas or interstate
- A long warranty period may help ensure a long life for your tank
- Installation of a tank that is large enough to meet your water requirements.

What else can I do to save water in my home?

There are lots of water saving tips on-line to help you save money and the environment.

Sydney Water Waterwise Tips

www.sydneywater.com.au/SW/your-home/using-water-wisely/water-wise-tips/index.htm

Further reading

Your Home Australia's Guide to Environmentally Sustainable Homes 5th Edition

www.yourhome.gov.au/water



Comparison guide to rainwater tanks*

	Metal/Steel/Galvanised (Colorbond®)	Poly/Plastic	Fibreglass	Concrete	Bladder
Slimline	✓	✓			
Range of colours and sizes	✓	✓	✓		
In-ground option	✓	✓	x	✓	
Light-weight (easy to transport and less site preparation)	✓	✓	✓		
UV resistant		✓			
Resistant to rust and chemical corrosion	✓ (Rust-resistant lining)		✓		
Resistant to extreme temperatures	Check with your supplier	Susceptible in bushfire prone areas	✓		
Cost	✓	✓	x		
Ease to repair				✓	
Keeps water cool				✓	
Strong	✓	✓	✓	✓	
Long-lived	x	✓	✓	✓	
Space-saving		✓			✓
Algal growth in sunlight		✓	x	✓	
Damage potential	Corrosion	Seams may create weak points	Brittle and prone to cracking	Porous and prone to cracking	
Warranty	Various (up to 25 years)	Various (up to 25 years)	Various (up to 30 years)	Various (up to 25 years)	10 years
Custom made	✓	✓		✓	
Recyclable	✓	✓	x	✓	Check with your supplier

*Disclaimer:

The following characteristics will be affected by size, fittings, manufacturer, installation, maintenance, etc. Check all relevant characteristics with your installer. Negative characteristics may be addressed, for example, algal growth can be reduced by installing appropriate cover to protect the tank from sunlight.

Positive characteristics may vary with manufacture, for example, the quality, range of colours and sizes and cost.

For more information visit www.ryde.nsw.gov.au/sustainableresources