

Application and Notification to Council

A Development Application be lodged with Council if the proposed rainwater tank:

- exceeds 3000 litres in capacity
- located on the front façade of the dwelling
- the height exceeds 1.8 metres above natural ground level when installed along the side the boundary setback of the dwelling
- overflow from the tank is not piped directly to an approved stormwater system
- the tank is located below ground or on land that requires excavation — underground tanks require additional protection against contaminants
- requires the installation of a pump
- colour does not blend in with colour of existing house.

A Development Application must be accompanied by plans, and specifications with that include the following information:

- a site plan showing location of tank in relation to the allotment boundaries and existing buildings
- an elevation showing tank dimensions and relationship to adjoining buildings
- a site plan indicating any service lines including stormwater in the vicinity of existing trees (Council's Tree Preservation Order will apply)
- manufacturers specifications outlining:

- type and size
- colour
- overflow disposal
- tank support eg. stand or concrete slab
- roof material where roof water collection takes place
- mosquito proofing.

In circumstances where a Development Application is **not** required, consideration **must** be given to adjoining property owners, in regard to placement.

Disclaimer

The information contained here is a guide only. It is recommended that the advice of the Customer Service or Land Use Management staff be sought in conjunction with any enquiries and Development Applications concerning the use of land within the Manly Council area.

Pump Installation

If the installation of a pump is required, it must be located and operated so as not to cause a noise nuisance, (as defined under the Noise Control Act), to adjoining properties.

Pumps shall not be used between 8.00 p.m. to 7.00 a.m. on a weekday and 8.00 p.m. to 8.00 a.m. on weekends and public holidays.

Where noise nuisance does occur, Council will require the construction of an acoustic enclosure to abate further nuisance.

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 and that the tank be completely drained and cleaned out at least every 12 months.

For further advice on health matters relating to rainwater tanks please contact Council's Environmental Health Officer on 9976-1511 **or**

Environmental Health unit
NSW Health Department
PO Box 798
GLADESVILLE NSW 2111
Ph: 9816 0373

Bibliography

South Australian Health Commission, National Environmental Health Forum Monographs, **Water Series No. 3 – Guidance on the Use of Rainwater Tanks** – David A Cunliffe. Dept. of Local Govt. Circular No. 95/73 dated 20 September 1995.



Fact Sheet No. 22

GUIDELINES FOR THE INSTALLATION OF Rainwater Tanks

With our increasing population and unrestrained use of water, our existing water supply will not be able to meet Sydney's future needs.

Whilst our rural counterparts realise the value of rainwater, in urban areas this essential commodity continues to be wasted.

Urban development and the hard surfaces in our cities reduce infiltration and the recharge of groundwater. When it rains, the resultant stormwater run-off, washes pollutants into our local waterways, greatly impacting on public, ecosystem health and recreational water quality.

Our continued mismanagement of rainwater in urban areas is of concern particularly as Australia is the driest inhabited continent on earth.

The average Australian uses 360 litres of water each day. Residential water use consumes 50% of all water supplied by Sydney water and it has been estimated that outdoor water use can be as high as 50% of our daily domestic use.

The reuse of rainwater from a Rainwater Tank to irrigate your lawn, plants, to wash your car and for washing clothes, conserves a valuable resource that would otherwise go to waste.

As an individual you can directly control your use of water. The way you use your domestic water supplies, dispose of your waste water and manage your garden will have an impact on local water quality and conservation.

This document will assist in providing guidance on tank installation, collection, care and storage of rainwater in a manner that should maximise the quality of water supplies.

1. Water Quality

Manly Council does not recommend the use of water from tanks for drinking or cooking. Tests have shown that tank water in urban areas, regularly fails to meet microbiological guidelines for drinking water.

Water quality in urban rainwater tanks is affected by:

- atmospheric pollution
- vehicle emissions
- faecal material from birds, possums, mice, rats, etc resulting in viral and bacterial contamination

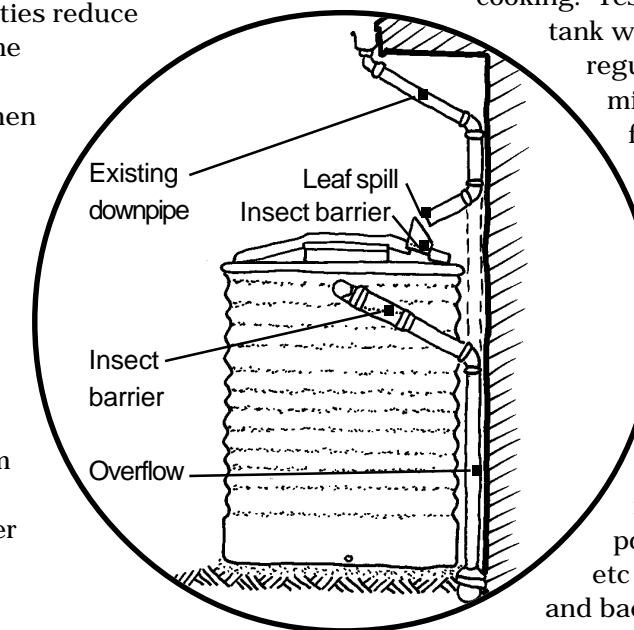
- roofing materials and paints, including lead from flashings
- leaves and dust
- trapped insects and animals
- domestic wood burners
- accumulated sludge in tank.

Council has prepared a Supplementary Note entitled "Rainwater Tanks and Drinking Water" for further information.

2. What Type of Tank

Tanks are available in a variety of shapes, materials and colours. You can install a traditional round tank or consider one of the slimline or rectangular tanks that are designed for restricted areas.

A 3000 litre tank is sufficient to store water for dry spells. Dimensions will vary with individual tank shapes however, this



equates to about 1 metre by 1.5 metre by 2 metres in size. The size of your tank will depend largely on the size of your roof catchment and your individual needs

The traditional tank is made from galvanised iron. Zinalume, concrete, fibreglass and plastic tanks are also available.

Aquaplate™ tanks are constructed from sheet steel which has a layer of food grade polymer film bonding to the inside frame. This polymer film is manufactured to meet Australian Standard 2070 “Plastic Materials for Food Contact Use” and is therefore far better suited for storage of drinking water (refer Supplementary Note - Drinking Water). Providing the polymer membrane is not damaged, this tank has a much longer life than a galvanised iron or zinalume tank.

Tanks are also manufactured from structural foam polypropylene. The main advantages of this tank is that it will not rust, may be relocated easily, is resistant to ultra violet light (UV) and is safe to store drinking water.

A food grade polyethylene tank is also available in a variety of colours and sizes. It has a corrugated profile, brass inlet/outlet, and is readily repairable and recyclable.

A slim line 350 litre tank is available, made from roto moulded food grade UV stabilised polyethylene which can be mounted on a brick wall using a wall mount kit. This tank is ideal for situations where water use is minimal.

Note:

Intense or prolonged periods of rain will exceed the capacity of your tank so it is essential that an overflow system is connected to the stormwater drainage system.

3. Tank Selection

When selecting a tank you should obtain sufficient information to enable you to make the right choice. You must also consider the following details to assess whether the tank will comply with Council’s guidelines:

- product specification for standard tanks
- size, colour, shape and capacity
- construction materials

colour and appearance

Certification of compliance for the tank confirming that it meets with Australian Standard AS/NZS2179-1994 and AS2180-1986.

Suitable location on the property. Consideration for adjacent property owners, particularly in regard to aesthetics and any noise (Refer – Pumps).

Installation

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

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 check the stability of the wall to which the tank will be mounted. The age and condition of the wall will affect its ability to support the weight of the tank.

No tank shall be affixed to the wall of the dwelling unless such attachment is certified by a Structural Engineer.

The following methods of installation are recommended:

The tank may be placed on an earth ring of concrete, brick or iron construction greater than the diameter of the tank so that it is not bearing on the wall. The concrete, brick or iron ring must be filled with consolidated material with 75 to 100mm of sand on the top surface.

The tank may be placed on 35-100mm level sand or the equivalent in stable soils 300mm greater than the diameter or the tank with a covering eg. gravel on exposed sand to prevent erosion by wind.

A reinforced concrete slab with diameter equal to or greater than that of the tank.

Tank stands with hardwood decking with gaps no greater than 50mm may be used to support the tank. The decking is to be supported structurally by

bearers sufficient to allow no deflection of decking when the tank is full.

Some tanks may be backfilled or buried except for the lid, but it is wise to check with the supplier or manufacturer that this is possible for the type of tank to be installed.

Roof Preparation

Prior to installation, roof gutters must be cleaned. If the building is surrounded by trees, gutter guards will be required to keep the tank free of leaves and debris.

Guttering specifically designed to exclude wind blown matter, debris and leaves is a viable option.

Regardless of roof material used, with all new roofs it is essential that all debris such as metal filings, mortar etc be removed and initial runoff be diverted from your tank to ensure optimum water quality.

Plumbing Connections

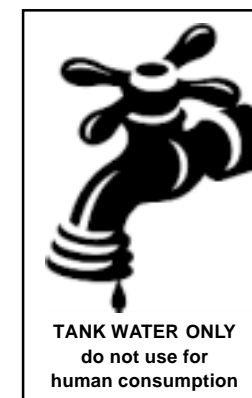
Sydney Water requires that the water collected in a tank is kept entirely separate from the reticulated water supply system, with no direct cross connection with mains water plumbing. This means that the tank water cannot be fed into the existing plumbing system.

The tap on the tank may be directly connected with a hose to an outdoor sprinkler (a wide bore hose is recommended), as long as the tank water pipe is not connected to any other pipe that brings water in from the mains system 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.

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.



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 shall not be directed to the sewer and must be covered with an insect-proof mesh.

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 and blend with and compliment the existing attached building, adjoining buildings and streetscape. Shrubs or climbing plants may be used to screen tanks if required.

Health & Safety

The tank must be covered or enclosed entirely and any lid must be designed to prevent children from willfully or accidentally entering, climbing or falling into the tank.

The tank must have suitable contaminant screens and contain a first flush system to prevent the entry of any animals or pollutants into the water supply.

Prior to use, the tank must be washed out to remove any contaminants which may be introduced during manufacturing and transportation. The first fill should be released to ensure that water is free of pollutants from the roof.

After any extended dry period it is good practice to let the first runoff bypass the tank to remove accumulated dust, bird droppings etc. For an average roof, 20–25 litres is sufficient. Provision for diverting the flow from the roof catchment should be made during installation of a new tank.

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.