

Guide to installing a rainwater tank in Lismore City



Introduction

Rous Water and Lismore City Council are committed to providing a secure supply of high quality water that is healthy for the region's population and the environment. While the region's existing water sources comfortably meet the demand for water in the short to medium term, it is essential and responsible to plan for long-term demands. Rous Water has developed the Future Water Strategy to guide long-term water planning through three key actions.

Key Action 1 – Maximise water efficiency through demand management and conservation.

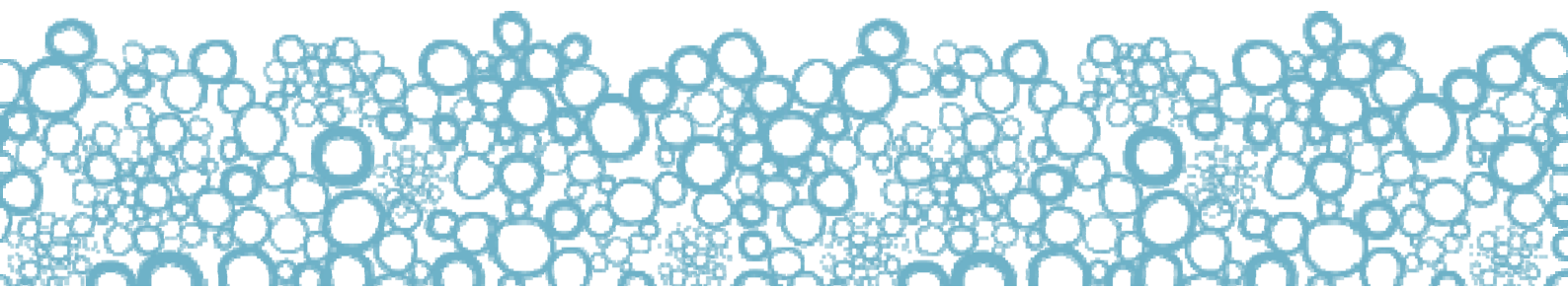
Key Action 2 – Investigate increased use of groundwater as a new water source.

Key Action 3 – Investigate the suitability of water re-use as an additional new water source.

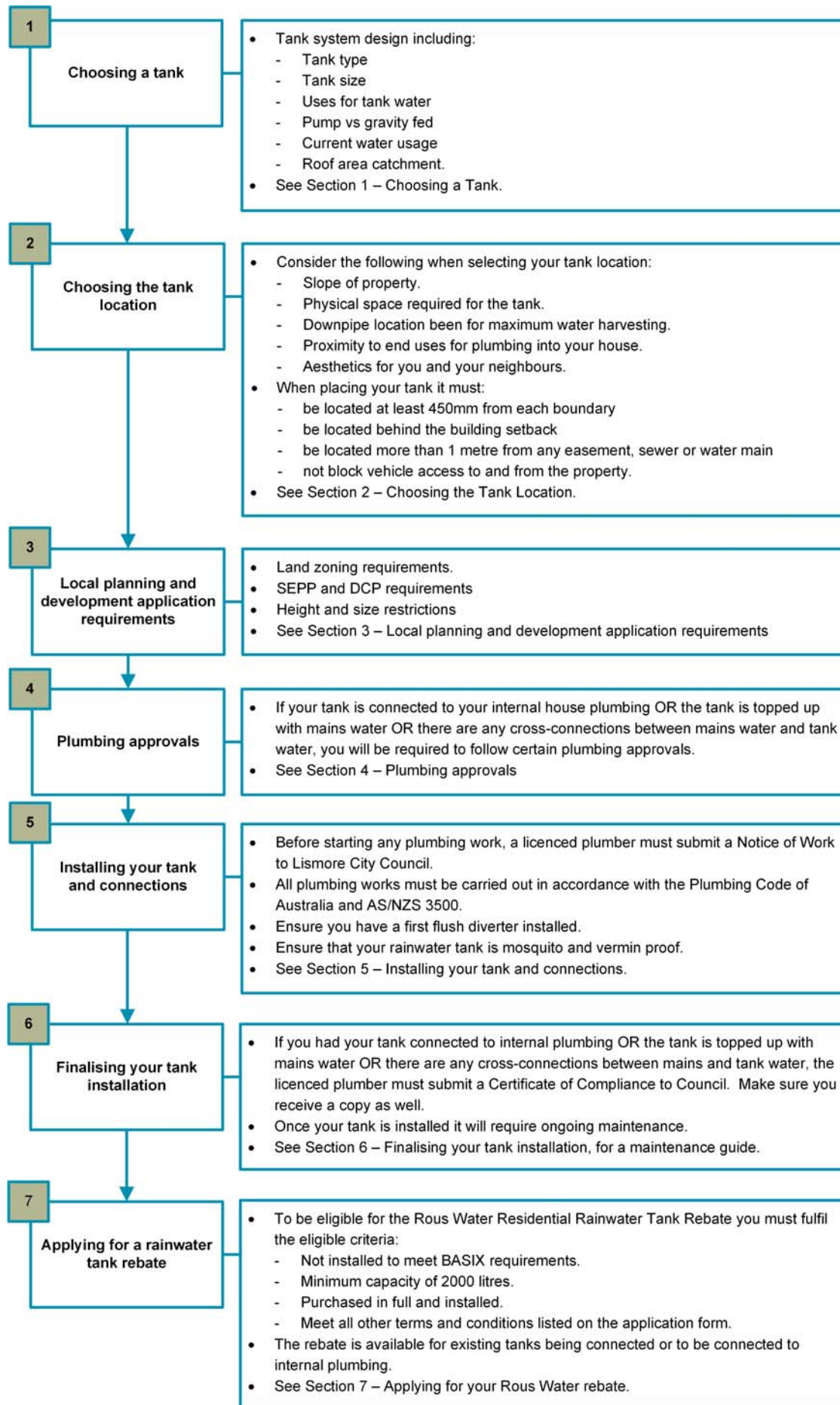
By installing a rainwater tank, you are actively contributing to the long-term sustainability of the region's water supply by reducing the demand on the water supply, infrastructure and environmental health.

Rainwater tank planning process

Below you will find a flow chart outlining the approval process for rainwater water tanks in the Lismore City Council area. If you do not understand any part of the flow chart, look up the relevant section in this document for more detailed information.



Rainwater tank planning process





Choosing the type of tank

Rainwater tanks are manufactured from a variety of materials, each with their own advantages and disadvantages. Factors such as initial cost, maintenance and repair costs, environmental cost (both production and disposal), warranty length, size of the tank, and base support costs must be considered. For residential purposes, polyethylene and stainless steel are the most common. Poly tanks are cost effective, strong and lightweight, but can let some light in which promotes algae growth. Stainless steel is also strong, durable, and blocks out most light preventing algae growth. However, stainless steel can be expensive to construct and transport. It is important that you do your research to find the tank that best suits your needs and budget.

Note: If your property is in a land zone identified as a potential bushfire zone, it is recommended that tanks be made out of a non-combustible material such as concrete or metal, and avoid polyethylene and fibreglass.

Choosing the size of the tank

When choosing the size of your rainwater tank you will need to consider a number of factors. The most effective and popular sizes are between 3,500 and 8,000 litres when the harvested water is used for flushing toilets, washing clothes and watering a garden. However, you may find that a smaller or larger tank is better suited to your usage. Factors you should consider:

- The outdoor and indoor uses for the rainwater tank
- Your current water consumption
- Local area rainfall
- Size of roof catchment.

Uses for rainwater

Rainwater can be used both indoors and outdoors. Watering gardens, washing cars, topping up swimming pools, bush fire protection, and watering animals are common outdoor uses of rainwater. Rainwater can also be used indoors for flushing your toilet and washing your clothes. When rainwater from tanks is connected to internal plumbing or rainwater tanks are topped up with mains water, the appropriate plumbing approvals and installation processes need to be followed. This process is outlined in detail in Section 4 - Plumbing approvals, of this document. For more information about the uses of rainwater, visit [NSW Health](#).

Drinking rainwater

In urban areas, the public water supply remains the most reliable source of good quality drinking water for the community. NSW Health recommends that people use the public water supply for drinking and cooking because it is filtered and disinfected. For more information, read the NSW Health Publication, [Rainwater Tanks Where a Public Water Supply is Available – Use of](#).

Current water consumption

Your current water consumption can be found on your water bill. The bathroom and laundry are responsible for 40-60% of water consumption of a typical household. However, this varies based on the number of people, size of toilets, length of showers, and top loader vs frontloading washing machines. Using a 'home water calculator' can also help you identify areas of high consumption and areas where to save water. Reducing your water consumption will reduce the need for an unnecessarily large tank, further reducing expenditure.

Local area rainfall

The Lismore City Council area on average receives 1,174 millimetres of rain a year, with January being the wettest month and September being the driest based on data from the Bureau of Meteorology.

Size of roof catchment

The area of your roof determines how much of this rainfall is captured. For every millimetre of rain that falls on one square metre of roof, one litre of water is captured. For example, a roof with an area of 100m² will capture 100 litres of water for every 1 millimetre of rain. The average area of a small house is 100m² – 150m², 150m² – 200m² for a medium house, and greater than 200m² for a large house. If you are unsure of your roof area, there are online tools available to help you estimate your roof area. Search for "roof area calculator". There are also online tools to help you estimate the size of tank you need. Search for "rainwater tank calculator".

Pumps vs gravity fed

You will need to determine if the tank will use gravity to supply water, otherwise it will require a pump. Some appliances such as washing machines will require a minimum pressure to work. Discuss with your tank / pump supplier or plumber. It is a legislative requirement that pumps be sound proofed or located and operated in a manner as not to cause an offensive noise. Electric pumps must be installed by a licensed electrician.

Section 2 – Choosing the tank location



The location of the tank on your property is governed by a number of physical and legislative factors. Physical factors relate to how your property is laid out, the position of the house, and investigating the most efficient way to harvest rainwater.

Consider the following when selecting your tank location:

- **Slope of the property.** The most suitable will be an area on level ground. The tank will need to be mounted on an appropriate base or stand so that it is safe and sturdy. Full rainwater tanks are very heavy with one litre of water weighing one kilogram e.g. a 5,000 litre tank will hold 5,000 kilograms of water, and then add on the weight of the tank itself. Check with the tank manufacturer for what the most appropriate base is for your type and size of tank. Common bases include sand, concrete slabs and metal frame stands. For large tanks or tank stands, consult the manufacturer, a builder or an engineer for structural support advice. If you need to excavate an area, you may require a *Development Application*.

Note: If you require more than one metre of cut and fill, or you have a structural component, a Complying Development Certificate or a Development Application will be required. Contact Council on 1300 87 83 87 for more information.

- **Physical space.** Rainwater tanks can be quite large and require an adequate amount of space. Be sure to measure the anticipated location before purchasing and the measure the space required for delivery. If the delivery truck cannot fit into your property, you may require a crane or other method to install your tank. Remember to account for space for any guttering, any pumps and plumbing connections such as mains water top up and connecting overflow to an existing stormwater drainage system. If you require a stand or concrete base for your tank, they will add extra height and may require more ground space.

Note: If you need to remove or prune trees or vegetation, ensure you have the correct Council approval before hand. A Development Application is required for the removal of native vegetation. Contact Lismore City Council on 1300 87 83 87 for more information.

- **Downpipe location.** You should aim to connect as many downpipes to feed your tank as practical to maximise the water collected and reduce lost water. If downpipes need to be diverted or extended it will increase installation costs.
- **Proximity to uses.** Similar to the downpipes, the closer the tank is to its intended uses such as flushing toilets or the laundry, the cheaper the installation costs will be.
- **Aesthetics.** Modern tanks come in a variety of colours and shapes which can add a nice design element to your property. Large tanks or highly visible tanks may obstruct your own or your neighbour's views. Consider your surroundings when choosing a site for your tank. If your tank has a height greater than 2.4 metres including any stand, you will require a *Development Application*.

Legislative factors deal with the positioning of the tank related to property boundaries, easements and other buildings. These requirements are mandatory for the development to be lawful. There are some general requirements from the State Environmental Planning Policy Subdivision 32 Rainwater tanks (above ground) (simply referred to as 'SEPP' in this document) that must be adhered to.

SEPP Requirements:

- The tank must be located at least 450mm from each boundary.
- The tank must be located behind the building setback.
- The tank must be at least 1m from any easement, sewer or water main.

Section 3 – Local planning and development application regulations

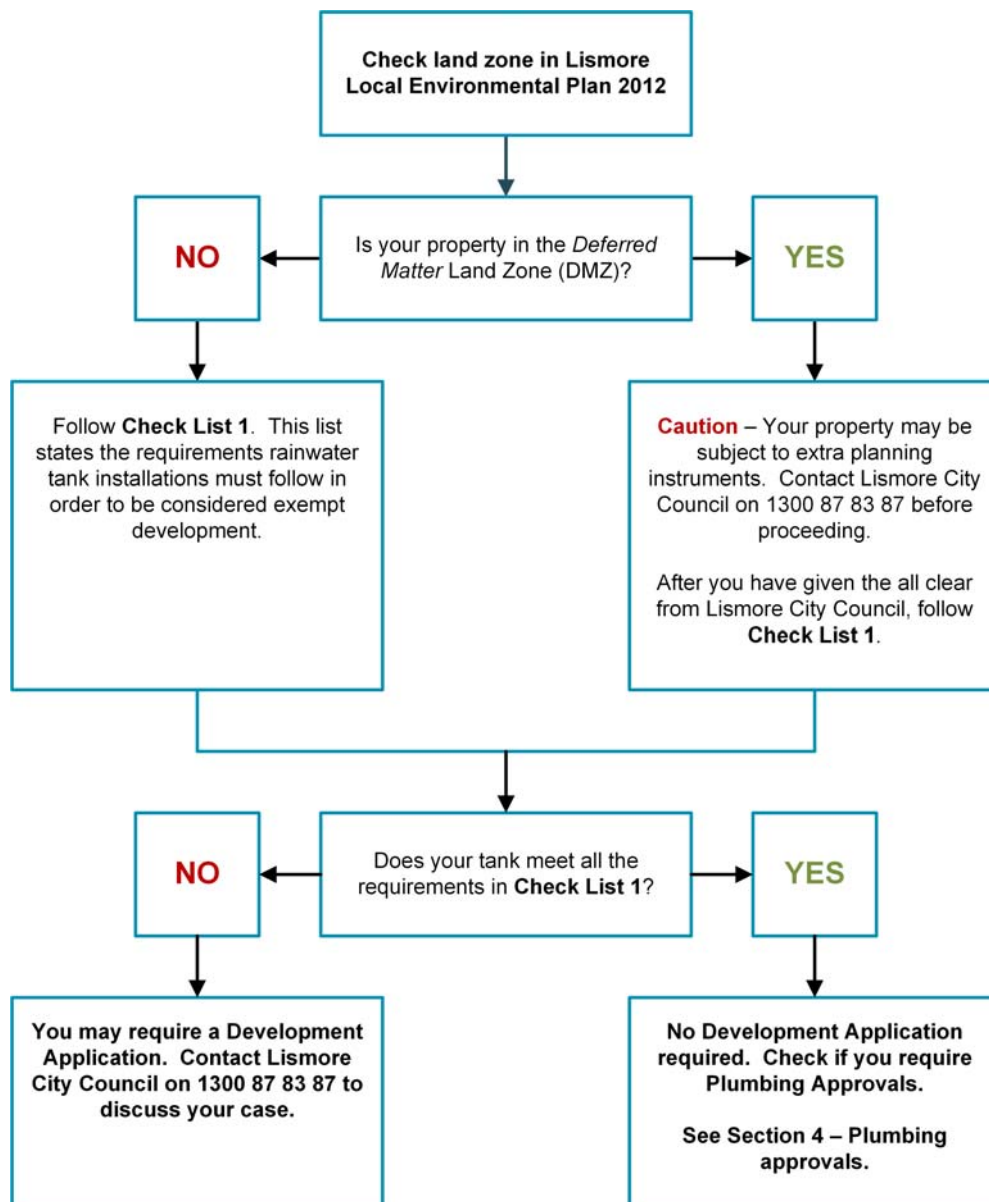


Depending on your planned tank size and the location of your property, you may be subject to specific local planning regulations. To find your property land zone, check the [Lismore Local Environmental Plan 2012 \(LEP 2012\) Maps](#) or visit the [Electronic Housing Code website](#).

Development applications

Many types of home renovations and minor building projects do not need require a *Development Application* to be lodged with Council. These projects are referred to as exempt developments, and as a general rule, rainwater tanks are considered an exempt development. However, there are situations where installing a rainwater tank will require a *Development Application*. To determine if you require a *Development Application*, use the following flow chart. For more information contact Lismore City Council on 1300 87 83 87.

Development application flowchart



CHECKLIST 1			
SEPP 2008 - Exempt and complying development requirements subdivision 32 rainwater tanks (aboveground)		Yes	No
1.	Is your property in a land zone <i>other than</i> RU1, RU2, RU3 or RU4? Note: To find your property land zone visit the Electronic Housing code website.		
2.	Is the tanks capacity less than 10,000 litres?		
3.	The tank must be at least 450mm from each boundary of the property.		
4.	If your property is in land zones RU1, RU2, RU3 or RU4, the tank must to be located more than 10 metres from each boundary.		
5.	The tank must be located behind the building line of any road frontage.		
6.	The tank must not rest on the footings of an existing building including retaining walls for support.		
7.	The installation of the tank must not require the cut and fill of more than 1 metre below or above the existing ground level.		
8.	The tank must be fitted with a first flush diverter.		
9.	The tank must have a have sign attached stating that the water in the tank is rainwater.		
10.	The tank must be constructed and installed to prevent mosquitoes entering and breeding.		
11.	The tank must have its overflow connected to an existing stormwater drainage system that does not discharge to an adjoining property or cause a nuisance to adjoining owners.		
12.	The tank must be at least 1 metre from any registered easement, sewer main or water main.		
13.	If your property land zone is a heritage item or a draft heritage item, the tank must be located in the rear yard.		
14.	Any pumps attached to the tank must be housed in a soundproof enclosure as to not create an offensive noise and in the case of an electric pump, be installed by a licensed electrician.		
15.	The tank must be installed aboveground.		

If you have answered 'No' to any of the items on the checklist, you may require a *Development Application*. Contact Lismore City Council on 1300 87 83 87 for more information.

Development applications

- If you have answered 'No' to any of the items on the checklist above you may require a *Development Application*.
- If your tank meets all of the requirements, except its capacity is greater than 10,000 litres, you will require a *Development Application*.
- If you are unsure about any checklist items or if your tank requires a Development Application, contact the Lismore City Council on 1300 87 83 87 for more information.

Note: This document applies to rainwater collected from roofs only and does not include any use or collection of rainwater from surface water drains or sub-surface agriculture drains.

Development application costs

If a *Development Application* is required, you will have to pay some fees and charges associated with your rainwater tank installation. The amount you pay varies depending on the cost of the development. All fees and charges are in accordance with the Council's adopted Fees and Charges Policy for that particular financial year.

- If the total development cost is less than \$5,000, the cost is \$110.
- If the total development cost is \$5,001 to \$50,000, the cost is \$170 plus an additional \$3 for each \$1,000 (or part of \$1,000) of the estimated cost.
- For more information on the costs of Development Applications see the Lismore City Council [Fees and Charges 2015/16](#) on their website.

Although your rainwater tank may not require a Development Application, you may still require Plumbing approval.

Section 4 – Plumbing approvals



Application for approval to carry out an activity

An Application for approval to carry out an activity (sometimes called a *Section 68*) is required for any plumbing works associated with your rainwater tank in the following situations:

- Connecting your tank to internal plumbing such as toilets or laundry.
- Having the rainwater tank topped up from mains water.
- If there is any cross-connection between rainwater and mains water.

The form is to be completed by a licensed plumber before the commencement of any work and submitted to council. Currently Lismore City Council has no fees for *Application for Approval to Carry out an Activity* for rainwater tanks with a capacity less than 10,000 litres. Approvals are given within 7-14 days.

No Section 68 Application or fees and charges are required if the rainwater tank is a standalone installation for outdoor use only and complies with all requirements in the State Environmental Planning Policy 2008 (Exempt and Complying Development Codes) (see Checklist 1).

Notice to commence work

The Notice to Commence Work form is to be filled out by the same licensed plumber and submitted to Council at least two days prior to commencing the work. There are no fees for Notice of Work however; Lismore City Council requires an inspection fee of \$147 to be paid on lodgement of the Notice of Work. An inspection will be required once your tank is installed. For more information, visit the Lismore City Council's webpage on Plumbing Works. The form can be downloaded from the NSW Fair Trading Website.



Plumbing requirements

- Ensure that you have followed the correct planning approvals before your tank is installed. For more information, see Section 4 – Plumbing approvals.
- All plumbing works must be carried out in accordance with Plumbing Code of Australia and AS/NZS 3500 by a licensed plumber. For more information, visit the [NSW Fair Trading](#) website.
- Ensure the appropriate backflow prevention devices are installed if your tank is connected to internal plumbing, is topped up from mains water or if there are any cross-connections between mains water and tank water.
 - A backflow prevention device prevents rainwater from the tank mixing with the mains water supply. Your plumber will know the appropriate device to install.
- Ensure that the tanks overflow is connected to an existing stormwater drainage system.
- Ensure that a “Rainwater in use” sign is affixed to your tank and clearly visible.

First flush diverters

All rainwater tanks should be fitted with first flush diverters. A first flush diverter is a device which is connected to your downpipes just before the entrance to the rainwater tank that prevents the initial rainfall off the roof from entering the tank. They are beneficial because they stop contaminants such as animal droppings, sediment, insects and debris from entering the rainwater tank. First flush diverters are easy to install, can be cheaply purchased from hardware stores and are an essential part of protecting your rainwater supply. NSW Health recommends a first flush diverter for the first 20-25 litres to ensure all debris, bird droppings and other contaminants are prevented from entering the rainwater tank.

Mosquito and vermin proofing

It is a legislative requirement that your rainwater tank be constructed and installed to prevent mosquitoes entering and breeding. All access points excluding the inlet and any overflows should be kept shut with close fitting lids to prevent mosquitoes from entering. Inlets and overflows should be covered with closely fitting, removable insect proof screens.

Section 6 – Finalising your tank installation



Certificate of compliance

If your rainwater tank installation did not require a Section 68, no *Certificate of Compliance* is required.

If your rainwater tank installation did require a Section 68, the licensed plumber completes three *Certificates of Compliance*. The certificates are a part of the Notice of Work form. The plumber keeps one, submits one to council and gives one to the owner. The applicant or the plumber can organise the final inspection. Once it is completed, the final Plumbing Certificate will be issued to the licensed plumber and a copy to the applicant.

Congratulations, your rainwater tank is now lawfully installed and fully functional. Remember to keep copies of all of your paper work as they will be required if you wish to apply for any rebates. For more information on rebates, see Section 7 – Applying for a rainwater tank rebate.

Maintaining your rainwater tank

Maintenance of your rainwater tank should be carried out in accordance with the manufacturer's specifications. Below is a guide to rainwater tank maintenance. Please note that this is only a guide and that, tanks of certain sizes, material types or with specific uses may require more thorough or different levels and types of maintenance. Follow the manufacturer's maintenance recommendations.

Maintenance frequency	Component and criteria	Maintenance action
After every rain event	Empty first flush diverter.	Inspect first flush diverter for correct operation. Look for cracks, clear debris and ensure smooth drainage
Every 3-4 months	Check roof and gutters are free of debris and no water is pooling.	Remove debris and clean gutters. Gutters may need to be repaired to ensure water flows to downpipes.
	Check screens on inlets.	Rinse screens and remove any large debris. Check for holes, repair, and replace as necessary. Remember – it is a legislative requirement that your rainwater tank prevents mosquitoes from entering and breeding.
Annually	Check for over-hanging tree branches.	Where safe, consider pruning back. Check overhead for power lines.
	Inspect tank for presence of rats, birds and frogs.	Remove any infestations, identify point of entry and repair.
	Check condition of rainwater in use signage.	Replace if damaged or faded. Remember – it is a legislative requirement that your rainwater tank has appropriate signage indicating rainwater is in use.
	Check plumbing and pump connections are watertight.	Repair any leaks as necessary.
	Check pump installation is still at appropriate sound levels.	Modify and repair as required.
Every 2-3 years	Check for the presence of sludge.	Sludge can be removed via a siphon (minimum diameter 50mm) or by draining and rinsing. Clean inside but be careful not to damage protective lining. Professional cleaners are available.
	Drain, clean out and check the condition of the tank walls and roof. Check for holes, cracks and deterioration.	Repair any tank defects.
	Drain tank and check sediment levels.	Remove accumulated sediment to ensure outlets are not blocked.

Section 7 – Applying for a rainwater tank rebate



A rebate is available for the installation of new rainwater tank/s for a residential property and/or connection of an existing tank to internal connections such as the toilet and laundry. The eligibility criteria are as follows:

- Must be a residential town water customer in Byron, Ballina, Lismore or Richmond Valley Council areas.
- The rainwater tank must be installed and completely paid for.
- For new homes and major renovations, any tank volume or internal connection required by BASIX (Building Sustainability Index) will not be eligible for a rebate. Tank volumes or internal connections not required by BASIX may be eligible.
- The rainwater tank must have a minimum volume of 2,000 litres.
- Properties that have previously received rebates from Rous Water may not be eligible.
- Meet all other terms and conditions listed on the rainwater tank rebate application form.

Visit the Rous Water website to download the [Rainwater Tank Rebate Application form](#).

There are two parts to the Rous Water Residential Rainwater Tank Rebate:

1. **Tank capacity rebate.** To help with purchasing your rainwater tank, this rebate is linked to the size of your rainwater tank. To qualify for the Tank Capacity Rebate, your tank does not need to be connected to internal plumbing. It must be used for at least one outdoor uses including but not limited to watering gardens and topping up swimming pools.

Tank capacity rebate	Rebate amount
2,000 litres to 4,499 litres – Used for at least one outdoor use.	\$200
4,499 litres to 8,999 litres – Used for at least one outdoor use.	\$800
9,000 litres and above – Used for at least one outdoor use.	\$1000

2. **Internal connection rebate.** To help with the cost of connecting your rainwater tank to toilet/s and or washing machine. For internal connections to be eligible for this rebate, they must have gone through the relevant plumbing approvals explained in Section 4 – Plumbing approvals.

Internal connections	Rebate amount
Rainwater tank connected to a toilet.	Additional \$620
Rainwater tank connected to a washing machine.	Additional \$550

How to apply for the rebate

You apply for the rebate after your tank has been installed and any plumbing work is completed. You will need to do the following:

- Download the Residential Rainwater Tank Rebate Application Form from the Rous Water website.
- Read and understand the terms and conditions of the rebate offer as listed on the Rainwater Tank Rebate Application Form.
- Complete all relevant information and sign the Rainwater Tank Rebate Application Form.
- Attach receipts demonstrating proof of purchase, installation indicating payment has been made in full.
- Where your tank installation has required a development approval from local council, attach a copy of your development application. Where your tank installation is part of a BASIX requirement, attach a copy of your BASIX certificate.
- Where the rainwater tank is connected to internal plumbing, attach a copy of your Certificate of Compliance making sure it is completed and signed by the licensed installing plumber.
- Applications can be submitted the following ways:
 - Delivered in person to the Rous Water Administration Centre, Level 4, 218-232 Molesworth Street, Lismore.
 - Posted to Rous Water, PO Box 230, Lismore, NSW 2480.
 - Scanned and emailed to water@rouswater.nsw.gov.au.
 - Faxed to (02) 6622 1181 (include name, subject and return contact details).

Note: Incomplete applications may be returned or rejected. Please ensure that you read each page of the application form and fill out all the necessary information. If you have any questions regarding your rebate or the rebate process please call Rous Water on (02) 6623 3800.

When will I receive the rebate?

The rebate will be paid into your bank account within 30 days of receiving the completed Rainwater Tank Rebate Application Form and required receipts after verification of your application details.

Appendix 1 – Weblinks (in order of appearance)



Rous Water Future Water Strategy

<http://www.rouswater.nsw.gov.au/page.asp?f=RES-LDO-72-56-37>

NSW Health Rainwater Tanks

http://www.health.nsw.gov.au/environment/water/Documents/rainwater_tanks.pdf

NSW Health – Rainwater Tanks Where a Public Water Supply is Available – Use of

http://www0.health.nsw.gov.au/policies/gl/2007/GL2007_009.html

Bureau of Meteorology, Climate Statistics for Lismore Airport AWS

http://www.bom.gov.au/climate/averages/tables/cw_058214.shtml

State Environmental Planning Policy Subdivision 32 Rainwater tanks (above ground)

<http://www.legislation.nsw.gov.au/inforcepdf/2008-572.pdf?id=6041d1ad-eb39-45a7-f7a2-9e3acb4f2f73>

Lismore Local Environmental Plan 2012 (LEP 2012) Maps

<http://www.legislation.nsw.gov.au/mapindex?type=epi&year=2013&no=66>

Electronic Housing Code

https://www.onegov.nsw.gov.au/GLS_Portal/snsw/LicenceForm.mvc/NewApplication?formId=fb97e90a-878b-4995-8314-beaf3bbd9aa6&agencyID=c5f16c24-350e-4402-9751-adfaf870ed14

Native Vegetation Act 2003

<http://www.legislation.nsw.gov.au/xref/inforce/?xref=Type%3Dact%20AND%20Year%3D2003%20AND%20no%3D103&nohits=y>

Lismore City Council - Fees and Charges 2015/16

<http://www.lismore.nsw.gov.au/page.asp?f=RES-LJA-12-06-77>

Lismore City Council - Application for Approval to Carry out an Activity

<http://www.lismore.nsw.gov.au/page.asp?f=RES-DBZ-80-64-45>

Lismore City Council - Notice of Work form

www.lismore.nsw.gov.au/page.asp?f=RES-LPD-43-36-18

Lismore City Council - Webpage on Plumbing Works

http://www.lismore.nsw.gov.au/cp_themes/default/page.asp?p=DOC-CZB-38-23-84

NSW Fair Trading – Plumbing code, standards and notes

http://www.fairtrading.nsw.gov.au/ftw/Tradespeople/Plumbers_and_drainers/Plumbing_code_standards_and_notes.page

Lismore City Council - Certificate of Compliance

www.lismore.nsw.gov.au/page.asp?f=RES-VMR-16-01-62

Rous Water Residential Rainwater Tank Rebate Application form

<http://www.rouswater.nsw.gov.au/page.asp?f=RES-ZQK-87-72-53>