



BLADDER TANK INSTALLATION GUIDE

1. SELECTING A TANK

Our quoted lengths and widths are the dimensions when the tanks are empty. The tanks will get narrower and shorter as they fill. The quoted height is what the tanks will reach under gravity fed stormwater. The height of the tanks can also be limited – see below. The required clearance above the tank is 30mm (3cm). The quoted volume is the volume when the tank reaches its quoted height.

2. PLACEMENT AND GROUND PREPARATION

Wet Earth Bladder Tanks are specifically designed for placement under houses or verandas, but can be used in other locations as long as the following conditions are satisfied.

For under house use the most important aim is to prevent any water from getting under the house. These guidelines are designed to prevent or minimise the chances of water loss under the house.

2.1. *Level Ground*

The aim is to position the bladder tank so that it will not roll or slip. We do not recommend locating a bladder on a surface with an angle greater than 5 degrees (12:1).

Where the bladder tank is to be placed on a surface with a slope, digging a 20cm deep channel about half the width of the bladder tank along its length will provide additional stability. Care must be taken when digging near walls and supports so that these are not destabilised.

2.2. *Ground Type*

The ground surface should not have sharp edges, or be of a material that causes slipping or scratching.

Sand is an ideal surface, and in many cases soil is also good. Concrete is generally ok, but some concrete surfaces might scratch the surface of the tank over a number of years.

Tanks are supplied with a Geotextile Tank Protector which provides additional protection from puncture, slipping and scratching.

2.3. *Don't Lean*

We do not recommend that bladder tanks lean against walls or structural supports as they can weigh a significant amount when full and could contribute to movement over time.

2.4. *Minimise Sunlight*

To maximise the lifespan of your tank we encourage you to minimise direct sunlight exposure to your tank. While the tanks are UV stabilised, the heat and drying effect of direct sunlight can impact the material over time.

In most cases tanks are located under a house or veranda/deck which reduces exposure so sunlight protection is not necessary. If a part of your tank is exposed to direct sunlight we recommend covering it eg with shade cloth.

3. CONNECTING YOUR TANK

The aim of connecting your tank is to maximise water collection, while allowing water to overflow into your stormwater when your tank is full. It is also important to take into account that bladder tanks change shape as they fill and hence the fitting locations on the tank can move. All our tank inlet and outlet fittings are located on the tank ends which minimises this movement.

The following diagrams show possible ways of connecting your bladder tank. These diagrams use our Bladder Tank Pipe, which has some flexibility while being almost impossible to collapse.

Diagram 1: Connecting your tank to stormwater downpipe (example 1)

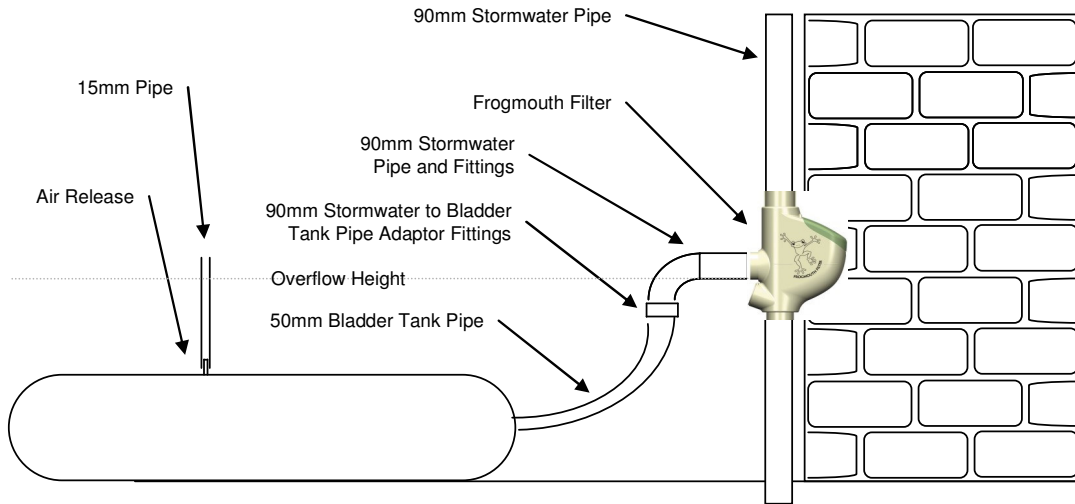


Diagram 2: Connecting your tank to stormwater downpipe (example 2)

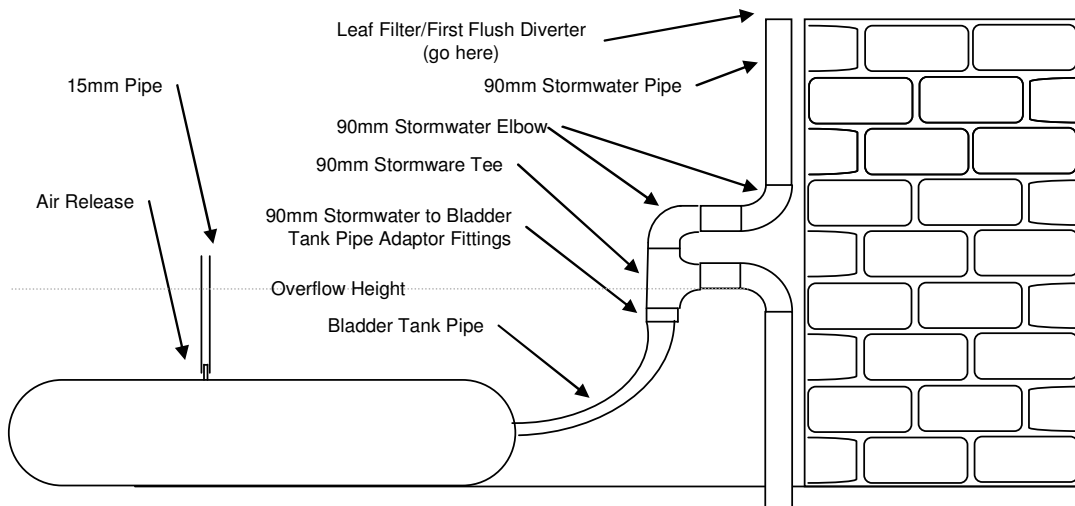
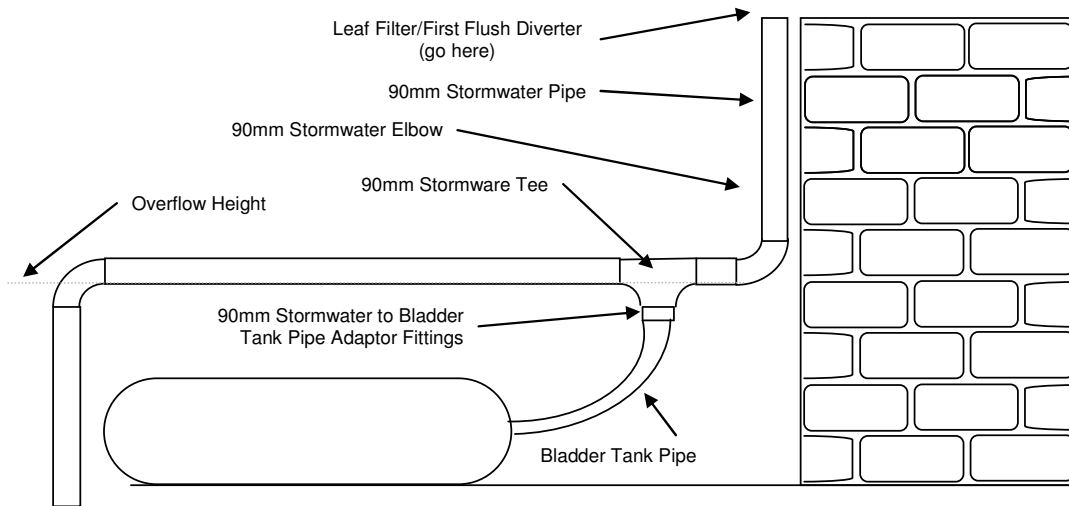


Diagram 3: Connecting your tank to stormwater downpipe (example 3)



3.1. Inlet and Outlet Fittings

Our tanks have three (3) 50mm male threaded connections. The tanks have two (2) 50mm male threaded connections on one end and a single 50mm male threaded connections on the other end. This allows for the inlet and outlet to be at the same or different ends. Tanks can also be supplied with female connections on request.

When putting thread tape on fittings you should put enough on the fitting so that it makes it hard to manually turn. In some cases this may require up to 20 turns - clockwise when thread is facing you.

3.2. Air Release

Our tanks come with a 15mm barbed fitting in the middle at the top. This fitting allows air to escape as the tank is filling. This improves the rate at which the tank can fill. To prevent any water coming out of this when your tank is full we recommend connecting some 15mm clear pipe, 12mm garden hose or 13mm poly pipe to it and making sure the top of this pipe is above your overflow level. This is shown in Diagram 1 on page 2.

3.3. Bladder Tank Pipe

Our Bladder tank pipe is unique in that it is flexible and can be shaped, yet it will not collapse. A 1m length of pipe can be bent into a circle without collapsing.

We recommend using a 1-2m length of pipe with a 90-degree bend as shown in the images above. To change the shape or straighten the pipe it is necessary to warm up the pipe. Once warmed up and reshaped the pipe will retain its new shape and will provide flexibility around that new shape. The easiest way to reshape the pipe is to leave it outside on concrete/paving in the sun for about an hour before attempting to reshape. Poring boiling water over it can also help.

To connect Bladder Tank Pipe to fittings we recommend putting some water-based lubricant (ie KY Jelly) or dish-washing detergent (less preferable) on the fitting to make it easier to slide into the pipe. You will need to dip the end of the pipe in fresh boiling water for 60 seconds. Make sure that the boiling water covers at least as much of the pipe as the fitting needs to slip into. The pipe will become soft and stay soft for about 10 seconds and should slip over the fitting.

It is important to ensure that you bladder tank pipe has a bend in it as shown in the diagrams above. This allows three-dimensional movement of the tank fitting which ensures stable connections.

3.4. Tank Height

The heights we list for the tanks are the heights at which they will achieve their quoted volume. The tanks will actually fill higher than this level. You can limit your tank to this height or lower if you do not have the height space. You do this by the height you position the overflow system (illustrated in the diagrams) so that the tank will overflow when it reaches the required height. Your overflow should be no more than 200mm above the quoted height of the tank.

Tanks should never be filled above their quoted height using a pump. Doing this will void the bladder tank warranty. Bladder tanks are designed to support gravity filling pressures and will not support pump filling pressures.

3.5. Leaf Filter and First Flush Devices

We strongly encourage the use of Leaf filters to keep leaves and other debris out of your bladder tank. Wet Earth suggests the use of the Frogmouth Filter or Leaf Eater/Leaf Beater to keep leaves out of your system. These items can be found on our website in the water tank section.

We suggest that you consider installing a first flush diverter system. Whether this is required will depend on local regulations, your location and what you plan to use your water for. Wet Earth has the Rain Harvesting First Flush Diverter on our website. Note that in many cases it is easier to use a Leaf Eater or Leaf Beater with your First Flush device than a Frogmouth Filter.

3.6. Cascading Tanks

Wet Earth Bladder tanks can easily be joined together. The tanks have a 50mm female threaded outlet fitting on each end, which allows the outlet connection to be at either end of the tank.

To connect your tanks together we recommend using our Bladder Tank Pipe. Depending on your situation you may need to use some of the following fittings. These fittings are all on our website under: Water Tanks > Flexi Bladder and Pillow Tanks - Domestic Fittings.

- NyGlass Threaded Elbow MF (male/female) 50mm (used to keep the bladder tank pipe bent)
- NyGlass Hose Tail 50mm
- 50mm Bladder Tank Pipe (per m)
- 50mm Bladder Tank Pipe Clamp

4. LEGAL

Most areas in Australia require work on stormwater systems to be undertaken by a licensed Plumber. As a result Wet Earth strongly encourages you to get a Plumber to do the actual connection to your downpipe / stormwater system.

Wet Earth thanks you for your interest in our Bladder Tanks.
If you have questions or comments on this guide then please email
sales@weteearth.com.au