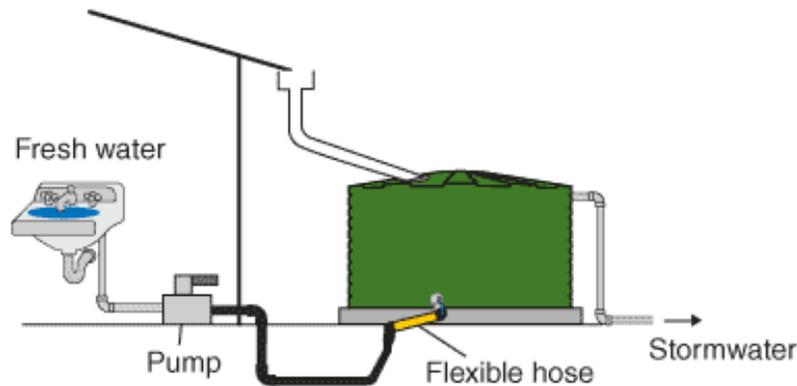


## Tank at Ground Level



Positioning the tank at ground level is the most common form of installation. A small household pressure pump is placed in the outlet line to give tap pressure to several outlets and to the hot water system.

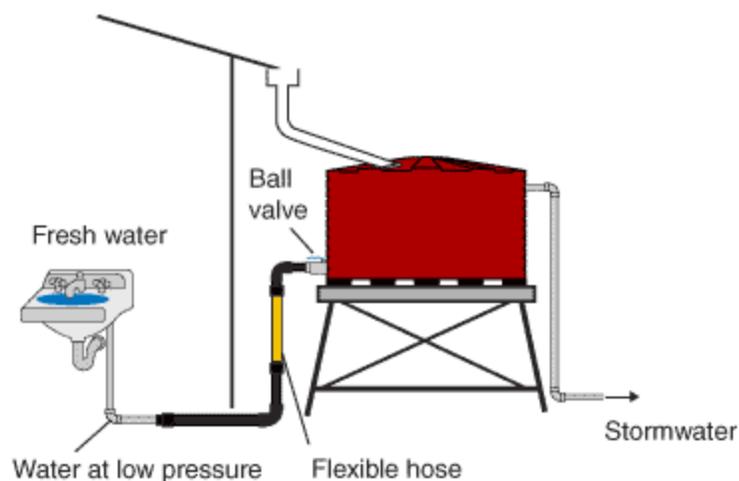
Household pressure pumps range from 103 – 276 kPa (15 - 40 psi)

Council mains are generally around 276 kPa (40 psi)

Note that the tank inlet strainer must be lower than the gutter, allowing at least a slope of 4% or more for the downpipe.

Two or more downpipes can feed into one tank but the overflow volume must match the downpipe volume. In this case the tank would need to have two overflows installed, the same size as the downpipes.

## Tank on Stand



A tank on a stand can gravity feed water to a tap without the use of a pump. If a pump is normally used, some water will still flow when power is not available.

In most cases, unless the tank is very high, the pressure will be low. If a higher pressure is required, a smaller but higher header tank should be used. The smaller tank is easier to support. (One cubic metre of water = 1 Ton and so, 1 litre of water = 1 Kg).

Interesting facts on water pressure

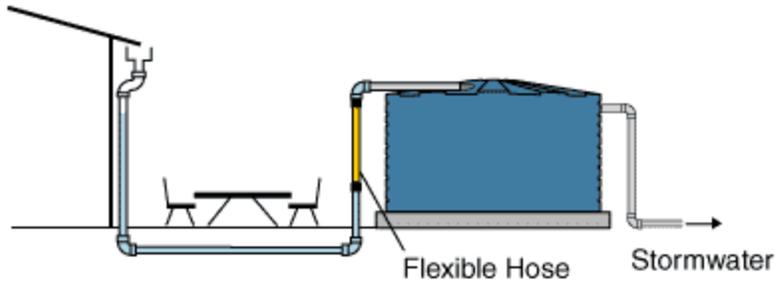
Council mains are generally 276 kPa (40 psi)

Household pumps range from 103 - 276 kPa (15 - 40 psi)

A tank on a stand at 10 metres (33 ft) will give 103 kPa (15 psi)

1 metre gives 10.3 kPa (1.5 psi)

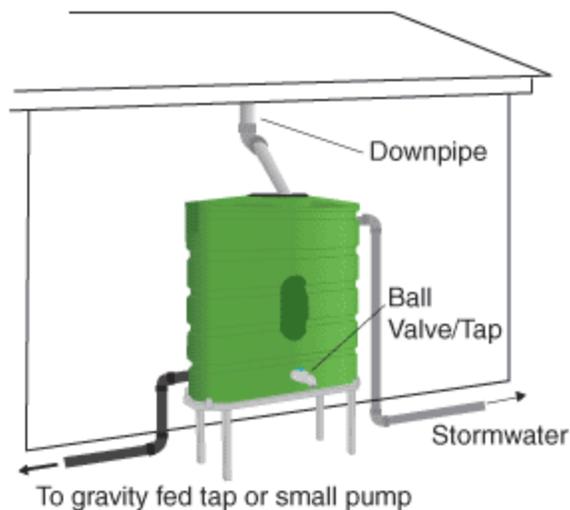
## Tank Away from the Building



For aesthetic or other reasons, it may be an advantage to position the rainwater tank away from the building. This can be done and the area between the building and the tank can then be used. The top strainer in the tank must still be below the gutter level allowing a 4% downpipe slope into the tank.

Note that water will stay in the u-shaped downpipe section after rain to the level of the strainer. To prevent algae growing in the water, it is necessary to put a bend in the top downpipe to exclude most of the light. A mosquito mesh across the downpipe top may also be necessary.

## Small Kitchen Tank

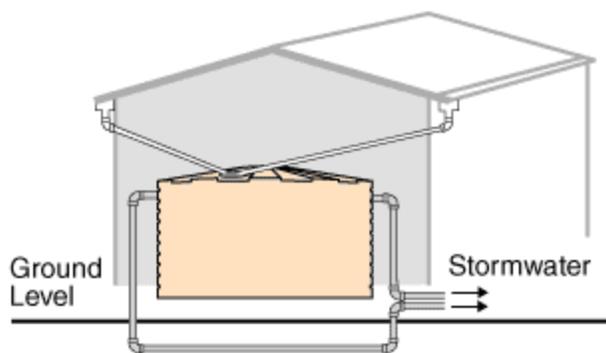


The small slimline tank is ideal if all that is necessary is to supply drinking water.

Rainwater can be delivered from a ball valve/tap on the side of the tank or gravity fed from the rear. The pressure can be raised by elevating the tank to fit under the eaves.

These tanks are also useful for filling fish tanks or for watering special plants etc

## Tank Position for Maximum Catchment



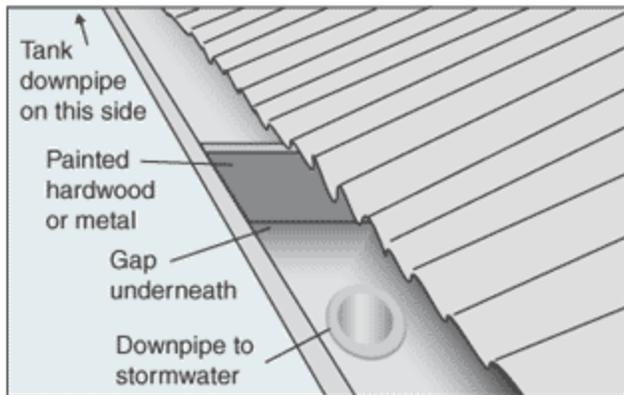
To take advantage of the maximum catchment available from a shed or house roof, it is ideal to place the tank(s) at the end of the building. Downpipes can be fed from both gutters into the one tank.

Please note that the downpipe capacity must match the overflow capacity. For example, two 90mm downpipes would require two 90mm overflows.

Note also, that tank overflows can go below the ground and come up again, to meet stormwater run off.

See "Roof Gutter Management" to increase collection if there are also downpipes at the other end of the building.

## Roof Gutter Management

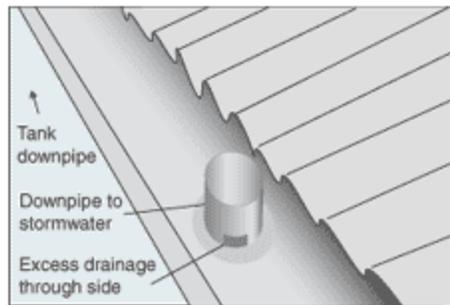
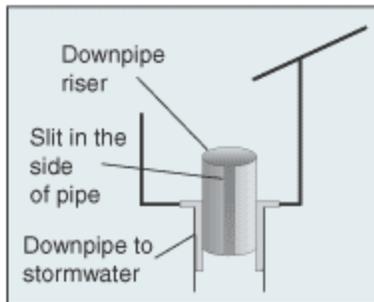


If there are two downpipes draining the same gutter section, it is desirable to direct most of the collected water to the downpipe that feeds into the rainwater tank.

### Gutter Separator method

A wood or metal separator can be placed  $\frac{3}{4}$  the height of the gutter to direct most of the water flow into the tank downpipe. There is a gap beneath the separator so that water does not lie in the gutter. Gutters must dry out completely after rain. If the rain is heavy, the excess water will flow over the top of the separator and be drained by the stormwater downpipe.

### Downpipe Riser method



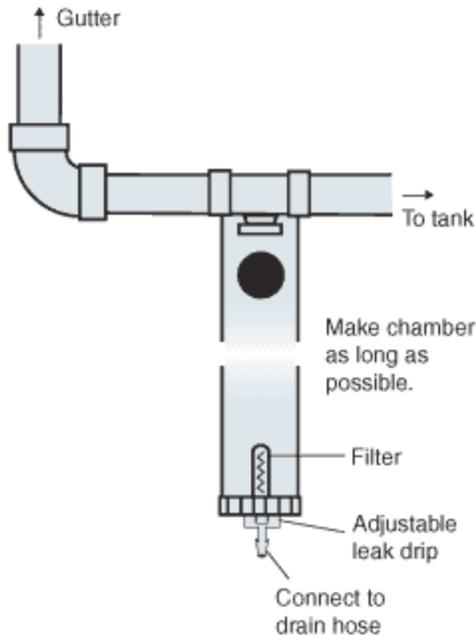
The downpipe riser method works exactly the same with excess water flowing over the top of the riser. After rain, water is drained by either a hole in the side of the riser at gutter base level or by a slit in the side. Flat galvanised sheeting can be rolled into a pipe shape leaving a gap for excess drainage. Silicon can be used to prevent the riser being washed away.

The action of any of these should be observed during heavy rain and adjusted accordingly.

Two downpipes can be run into the same tank from either end of the gutter, but then there must also be two overflows installed in the tank. The downpipe volume must always equal the tank overflow capacity.

Please check local plumbing regulations for safety

## First Flush Diverter



If you are serious about clean water, it is a good idea to install a water diverter on every tank downpipe. This works by diverting the first flow of water from the roof into a chamber and not into the collection tank.

As the chamber fills, the floating plastic ball rises up the pipe until it reaches the top and seals the opening. This allows the rainwater to flow into the collection tank. The ball is also necessary to stop the flowing downpipe water sucking dirty water out of the chamber.

At the bottom of the chamber there is an adjustable dripper and manual valve to drain the dirty water after rain.

There are other types of water diverters but this one seems the simplest. You supply your own pipe and set it up to suit your situation.

## Preparing for the arrival of your tank

### Decide on your Fittings

Please advise us if you need any extra fittings or valves. We supply and fit on delivery a strainer and overflow. Extra fittings are available on request. If your local shire or council requires a pressure-tested valve, these can also be supplied for an additional charge. All other plumbing work to and from the tank are the responsibility of the purchaser.

### Prepare Access for Delivery

Please note that the truck and trailer is big and needs a lot of clear access. Please check gates, roads, roundabouts, crossings and overhanging trees on your property so that we can deliver your tank without damage. If delivery cannot be made to your site – crane or other equipment hire is at purchaser's expense.

### Organise Assistance

The delivery driver will need help to unload your tank from the truck, so could you please have persons available to assist at time of delivery. If assistance cannot be provided then hire or use of any equipment is at purchaser's expense. I.e. crane hire, 4WD tractor hire, backhoe hire, front-end loader hire.

Truck: 21.3m long, 2.5m wide, 5.2m tall (70' long, 8'2" wide, 17' tall)

**9 609 - 15 064 Litres** 2 people + driver

**22 710 - 23 031 Litres** 3 people + driver

**29560 - 36 407 Litres** 4 people + driver  
**47 950 Litres** 5 people + driver

## When your tank arrives

### Secure Your Tank

It is recommended that you put at least 25mm (1") of water into the tank or otherwise secure your tank from being blown away. We take no responsibility for tanks being damaged in this way.

## Above Ground - Correct Method

### On Pad

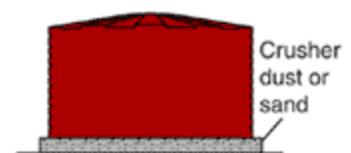
1 Prepare a reinforced concrete pad that is level and greater than the diameter of tank.

Prepare an earth ring greater than the diameter of the tank so no part of the tank is bearing on the wall. Fill is to be consolidated fill with 50-75mm (2-3") of sand on top surface.

2 Tank must be rolled into position or manoeuvred by crane, at purchaser's expense, if truck access is poor.

3 Tank must be tied down

Continue onto 4 below

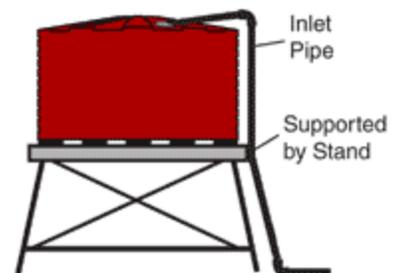


### On Tank Stand

1 Prepare a stand that has hardwood decking with gaps no greater than 50mm (2"). Decking should be supported structurally by bearers strong enough to prevent sagging of decking when tank is full.

2 Tank must be lifted into place by crane. (Crane hire at purchaser's expense.)

3 Tank must then be tied down to stand.



**4 Water Inlet** - It is recommended that water be directed into tank through strainer. Fixed inlets must be supported and have flexible hose fitted (similar to outlet instructions) inlet pipe must be supported by stand.

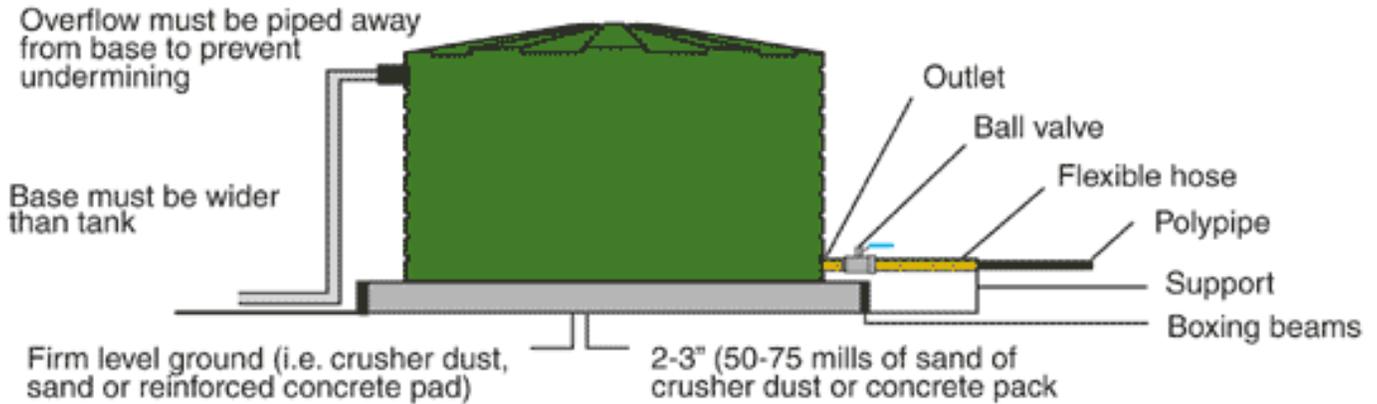
**5 Water Outlet - Plumbing** - Connect your outlet pick up. Flexible hose at least 300mm (12") in length must be placed

between the valve and other plumbing.

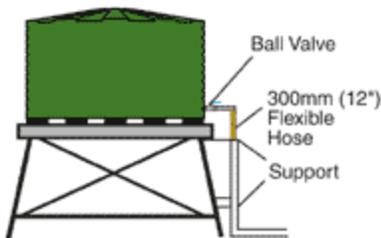
**Important: Water volume of the inlet must equal water volume of the overflow.**  
eg. 2x 100mm (4") inlets = same capacity overflow

**Water Outlet - Overflow** - Connect overflow. Water must be piped away from tank.

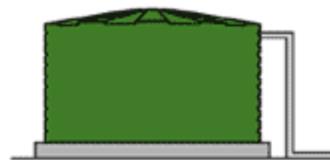
### If these Steps are not followed Guarantee is Null and Void



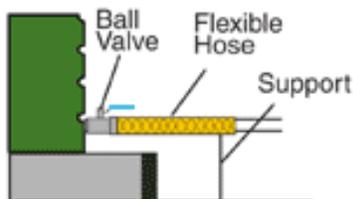
### Important points when plumbing tanks



Pipe work for tanks on stand must be supported by the stand, not the tank, with flexible hose to allow for any movement



Tank overflow must be taken away from tank to avoid undermining tank base.

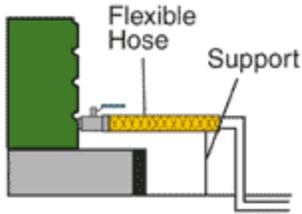


#### SUPPORT

Pipe must be supported. If not, this may cause water leakage and damage to the tank.

#### FLEXIBLE HOSE

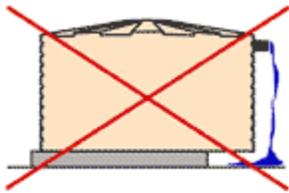
When pipe work is exposed and over long distance, insert a length of flexible hose to absorb shocks and movement.



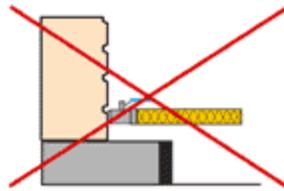
### UNDER GROUND

To avoid running over pipe and in turn breaking fitting, take pipe directly into ground. It must have a flexible hose fitted.

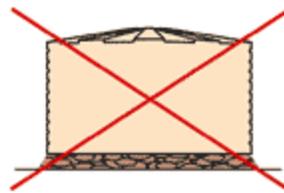
### These errors will void your Guarantee



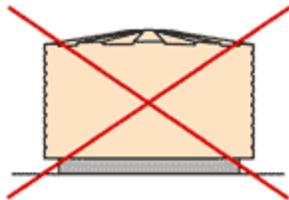
Tank base undermined - inadequate overflow length.



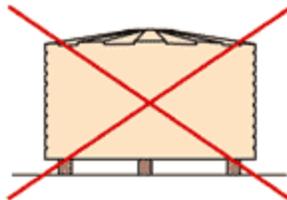
Unsupported pipe work puts excess strain on the fittings and tank wall.



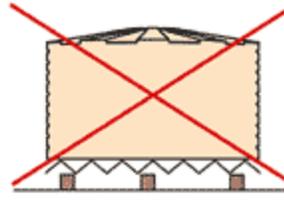
Rocky and uneven ground with little or no base preparation.



Must not have undersized base. Circumference of tank must be supported.



Wooden sleepers are generally too uneven and untrue to use for base support.



Don't use corrugated iron decking as it must be supported by a hardwood decking with spacing of 50mm (2") underneath. It is better to remove the iron.

### Water Facts

Water or ice covers about 80% of the world.

Only 1% of the world's water is suitable for human needs, 97% is salt water in the ocean and 2% is ice.

An average person can survive for nearly two months without food, but less than a week without drinking water.

The human body loses 3 to 3.5 litres of water in an average day. Exercise and climatic conditions may increase this.

An average tap flows at a rate of 20 litres per minute, depending on how far it is turned on.

## The Average Amount of Water Used in General Household Activities

Toilet flush - single cistern	10 litres	2.2 gallons
Toilet flush - dual single flush	5 litres	1.1 gallons
Toilet flush - dual full flush	10 litres	2.2 gallons
Bath	100 litres	21.9 gallons
Shower (10 minutes)	200 litres	43.9 gallons
Dishwasher load	50 litres	10.9 gallons
Washing machine load	150 litres	32.9 gallons
Brushing teeth with tap running	5 litres	1.1 gallons
Drinking, cooking, cleaning per person per day	10 litres	2.2 gallons
Hand basin per use	5 litres	1.1 gallons
Garden sprinkler per hour	1000 litres	210.0 gallons
Garden dripper per hour	4 litres	0.9 gallons
Car washing with hose	200 litres	43.9 gallons
Hosing driveway	100 litres	21.9 gallons

### Reasons for buying a Rainwater Tank

If you are contemplating buying a tank to harvest rainwater, it is possible that you are doing so for one or more of the following reasons:

When town water is not available to your property

You want to water animals away from a water supply

You wish to store water at an economical cost

You see the value in pure fresh natural rainwater

You want to collect water for bushfire use

You need to satisfy Council requirements to collect rainwater from sheds or garages

You wish to collect rainwater run-off for environmental considerations

You want to save money on your water bills

You are a subsistence farmer who wishes to become as independent as possible, for either philosophic or environmental reasons, or both.

You need a backup for other water supplies

Your water supply is salty or hard, has odours or contains heavy metals

You understand that rainwater is good for the garden

You wish to drink pleasant tasting water

You consider rainwater better for your family's health

You do not want chemicals added to your drinking water

You want to take control of the water your family drinks

In some suburbs, new houses are now required to install a rainwater tank of a certain capacity. In some other areas, both city and country, Councils have introduced a cash-back plan for those who install a rainwater tank.

The cost of water is already high and it is set to rise substantially in the near future

You may need to conform to the "BASICS" requirements.