

Cleaner water.  
Lots of it.

# RAIN HARVESTING

by Blue Mountain Co

HANDBOOK

# Contents

<b>4 Pillars to Designing a Rain Harvesting System</b>	<b>2</b>
01 Understand your needs	4
02 Understand your environment	6
Vegetation	8
Fine particles	10
Unwelcome intruders	12
Hidden activity	14
Seasonality	16
<b>03 Apply the 8 Rain Harvesting Steps</b>	<b>18</b>
Limit sources of contamination	20
Plan for volume	22
Filter leaves and debris	24
Divert the first flush	26
Secure the system	28
Managing standing water	30
Consider a safety net	32
Monitor and maintain	34
<b>04 Design and install your system</b>	<b>38</b>
Residential	40
Residential with underground tank	42
Acreage	44
School	46
Rural	48
Rural with shed	50
Commercial	52
<b>Our range</b>	<b>54-95</b>
Blue Mountain Co Gutter Mesh	96
Rain Harvesting Design Service™	98

## What is Rain Harvesting?

A common misconception about collecting rainwater is that all you need is a tank, gutters, a few downpipes and some rain.

However, this approach, which we call “tanking”, cannot be relied upon to deliver the volume – and quality – of water you need.

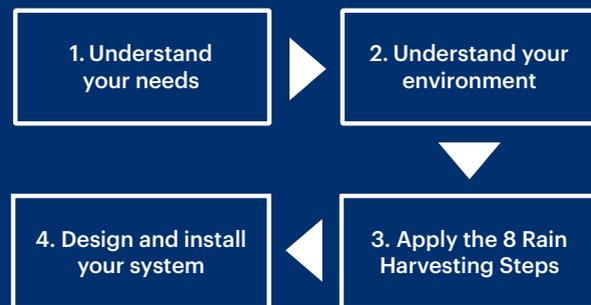
In contrast, taking a Rain Harvesting approach involves using tested and proven principles and equipment, so you get cleaner rainwater and lots of it for use in and around your property.

Rain Harvesting systems can be installed on homes and buildings of all shapes and sizes, including commercial buildings. They can be used to supply all your water needs, or leveraged for specific tasks such as flushing toilets or watering gardens.

Whatever your needs, location and situation, at Blue Mountain Co we guide you through the process to design and install the ideal Rain Harvesting system for you.

# 4 Pillars to Designing a Rain Harvesting System

The 4 Pillars of Rain Harvesting System Design outline a process for creating the right Rain Harvesting system for you - or improving your existing one. No matter where you live or what you use your rainwater for, these pillars will empower you to design a Rain Harvesting system that delivers cleaner rainwater and lots of it for use in and around your property.



## 1. Understand your needs

To design the right Rain Harvesting system it is important to start with understanding the volume and quality of rainwater you need.

## 2. Understand your environment

Understanding your surrounding environment is as simple as considering challenges posed by:

-  Vegetation
-  Fine particles
-  Unwelcome intruders
-  Hidden activity
-  Seasonality

## 3. Apply the 8 Rain Harvesting steps

Successfully managing your needs and environment can be achieved by applying the following 8 Rain Harvesting steps:

- 1 Limit sources of contamination
- 2 Plan for volume
- 3 Filter leaves and debris
- 4 Divert the first flush
- 5 Secure the system
- 6 Manage standing water
- 7 Consider a safety net
- 8 Monitor and maintain

## 4. Design and install your system

Based on Pillars 1, 2 and 3, you now have the information to design and install the right system for you. To do this, use our standard system designs, download the Rain Harvesting System Audit or ask for the Rain Harvesting Design Service™.

# 1. Understand your needs

Whether you're installing a new system or improving an existing one, the first consideration to building the right system for your property is to understand your needs.

## How will you use your rainwater?

While every Rain Harvesting system should be designed to give you cleaner rainwater and lots of it, how you intend to use the water you collect will influence aspects of your system design.

Rainwater is most commonly used for drinking, internal appliances such as toilets and washing machines, and irrigation.

Write a simple list of all the ways in which you intend to use your rainwater and this list will inform your decisions about the quality and quantity of rainwater you need.

## How much rainwater you need

Water consumption varies considerably from task to task and person to person. When estimating your water needs, it's important to consider factors including:

- The number of people in your home
- Your property's size and outdoor needs (garden irrigation, outdoor cleaning, swimming pool top-ups)
- Lifestyle factors (number/frequency of guests, shower/bath use, laundry and car washing habits)
- Size and efficiency of your water-using appliances (dishwashers, washing machines, shower heads)
- Your water conservation habits (for instance, if you partially or completely fill your washing machine drum before washing)

Past water bills, estimates based on your planned water use or data from meters and gauges can all help you more accurately forecast your water needs.



## 2. Understand your environment

There are many environmental factors that can have an impact on your Rain Harvesting system. Understanding each of these and applying the correct steps to overcome these challenges will ensure you design a Rain Harvesting system that delivers cleaner rainwater and lots of it for use.

Understanding your surrounding environment is as simple as considering challenges posed by:

-  Vegetation
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## Vegetation

Leaves, flowers, berries and other vegetation in your gutters, downpipes and tanks can reduce the quality and quantity of your rainwater supply and may even damage your Rain Harvesting system.

### ADDRESS WITH THESE RAIN HARVESTING STEPS

- ① Limit sources of contamination
- ② Plan for volume
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- ⑦ Consider a safety net
- ⑧ Monitor and maintain



## Common issues

### Water loss

Vegetation on your roof and in your gutters can reduce the volume of water you capture due to splashing, spillage and obstructed water flow.

### Pest problems

Obstructed water flow creates pooling water in your gutters. This can attract mosquitoes, possums and other pests that contaminate your system as they use this pooled water to drink and breed.

Animals on overhanging trees can also contaminate your water as they leave behind urine, faeces, fur, feathers, hair and discarded food.

### Gutter gardens

Decomposed vegetation in your gutters can support the growth of weeds and moss, further obstructing and contaminating your water.

### Anaerobic fermentation

In wet systems\*, anaerobic fermentation can occur as broken-down leaves submerged in water-filled pipes produce sludge, nasty smells and foul water that's pushed into your tank the next time it rains.

\* Systems with underground pipes that hold water

### Ph & tannins

Submerged leaves in your system can increase your water's acidity, while the tannins they release can turn your water yellow or brown.

### Maintenance issues

Broken-down leaves and other vegetation can form sediment that ends up in your tank, blocking treatment systems and increasing the loading on your pumps and filters.

## Fine particles

Compounds, chemicals, micro organisms from animal by-products, rotting leaves and decomposing animals can contaminate your rainwater.

### ADDRESS WITH THESE RAIN HARVESTING STEPS

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### Common issues

#### Roof to tank

Organic and inorganic fine particles that end up on your roof can be washed into your tank when it rains, lowering your rainwater quality or even rendering your supply unfit-for-purpose.

#### Visible & invisible

Some particles cause cloudiness as they're suspended in your rainwater. Others fully dissolve or are too small to see. All can be problematic if they end up in your rainwater supply.

#### Organic particles

Organic fine particles can be alive (bacteria, viruses, etc.) or come from decomposed vegetation and dead animals. They can also come from food, fur, feathers, faeces, germs and other nasty things pests leave behind.

#### Inorganic particles

Inorganic fine particles may come from many kilometres away or from nearby, ending up as "dry depositions" on your roof.

Dry depositions are particles from the atmosphere which are blown onto roof tops (vegetation, pollens, bird and animal faeces).

#### Your building

Building materials (especially asbestos and lead flashing, paint and solder) can contaminate your water as they corrode, crack, flake, degrade from UV or leach chemicals.

#### Road traffic

Road dust and exhaust fumes from the roads in your area can end up as inorganic particles in your system.

#### Agriculture & industry

Farming and industrial activity can leave fine particles from dust, soot, heavy metals, pesticides, herbicides and other chemicals.

#### Natural phenomena

Salt from sea-spray, desert dust and ash from volcanoes and bushfires can all end up on your roof and in your system.

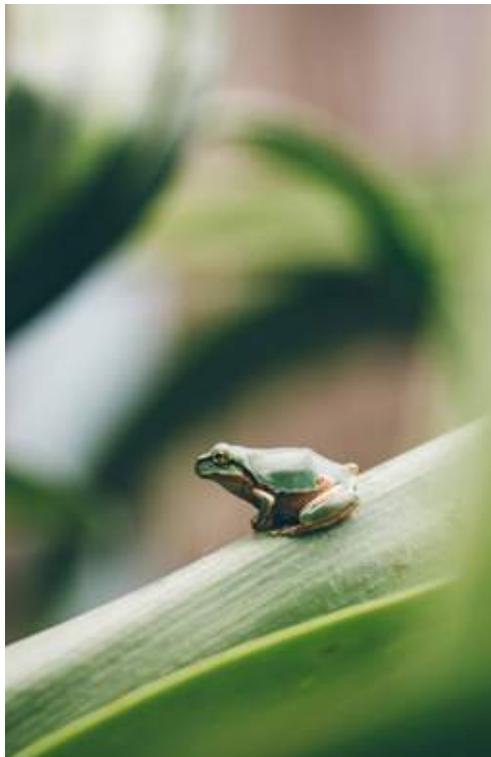


## Unwelcome intruders

Sunlight, insects, animals, groundwater and dirty stormwater are all unwelcome “intruders” that can reduce your rainwater quality.

### ADDRESS WITH THESE RAIN HARVESTING STEPS

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## Common issues

### Mosquitoes & insects

Still water in your pipes and tanks is an ideal breeding ground for mosquitoes. These unwelcome intruders can spread diseases such as malaria, dengue fever and Zika virus.

### Uninvited animals

Frogs, toads, lizards, snakes, rats, possums, birds and other pests all find your pipes, gutters and tanks enticing places to drink, eat, hang out and breed. All these animals are bad news for your water quality.

### Sunlight

Sunlight typically enters rainwater tanks through the inlets on top. It creates the perfect environment for algae to thrive in, making it a very unwelcome intruder that can lower your water quality.

### Stormwater

Tank overflow pipes often connect to stormwater drains. Without proper precautions, flooding, tidal events and blockages can push dirty stormwater from the drain into your pipes and tank, seriously threatening your water quality.

### Groundwater

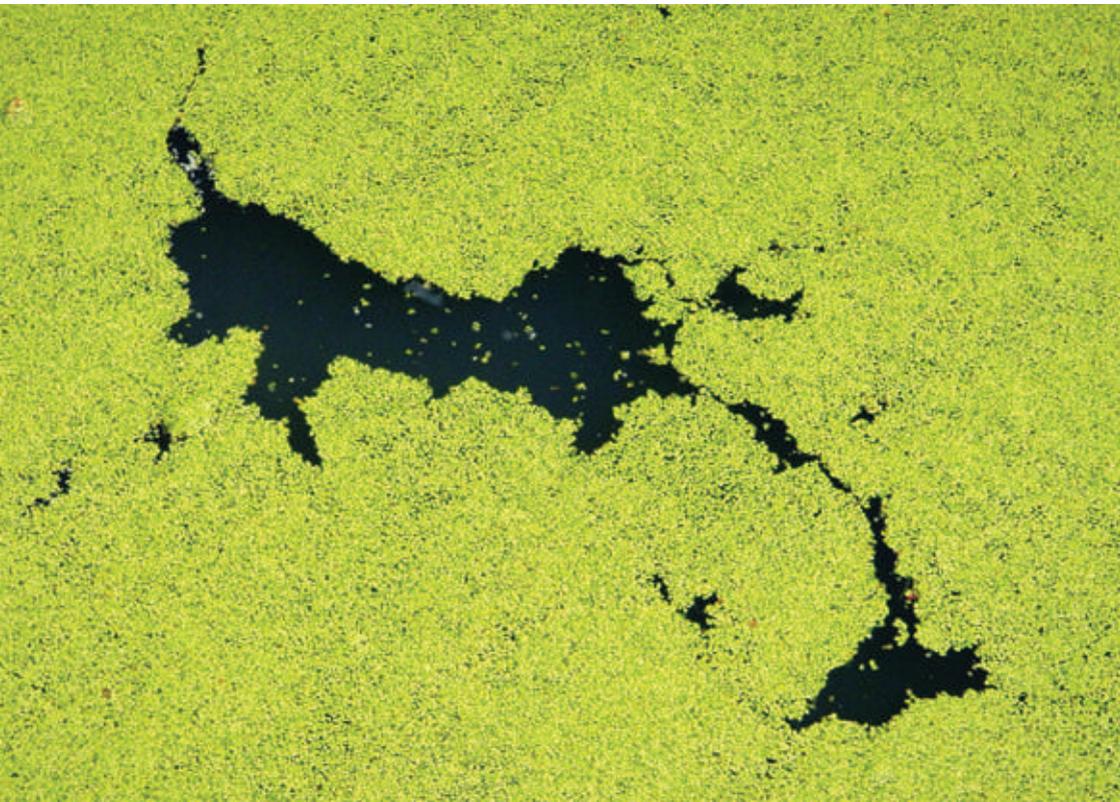
The low inlets on in-ground tanks make them vulnerable to groundwater contamination during floods and storms, particularly if your tank is downhill from septic systems or natural waterways.

## Hidden activity

Without proper precautions, the hidden natural and mechanical processes that occur in your tanks and pipes can affect the health of your rainwater.

### ADDRESS WITH THESE RAIN HARVESTING STEPS

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### Common issues

#### Anaerobic fermentation

Wet or “charged” systems feature pipes that carry rainwater underground to your tank. The water remains in your pipes between rain events and can become stagnant.

Anaerobic fermentation occurs when leaves or other organic matter breaks down in these water-filled pipes. It produces sulphides that can make your water cloudy, smelly and discoloured. This fouled water then goes through to your tank when it rains.

#### Sediment re-suspension

Organic and inorganic sediments rest on the bottom of your rainwater tank.

They can include harmful particles, including heavy metals. When this sediment is stirred by water flow it can resuspend in your tank water, becoming hazardous to your health and increasing the loading on your pumps and treatment systems.

#### Algae growth

Algae is a photosynthetic organism that thrives in sunlight and contaminates water. Sunlight creates an environment for algae as it enters your tank through openings and inlets.



Weather patterns and the average rainfall for your area are important considerations when designing your Rain Harvesting system.

**ADDRESS WITH THESE  
RAIN HARVESTING STEPS**

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**Common issues**

**Roof area**

For every 1mm of rainfall on 1 square metre of roof, you can collect 1 litre of rainwater, so you will want to ensure that you have connected as much roof area as is practical to your tank.

**Tank size**

If you experience seasonal rainfall, or your peak rainfall and water use times differ, you'll need bigger or multiple tanks to capture enough water for drier times.

**Rainfall seasonality**

Rain falls more frequently than most people realise. Even in places with very seasonal rainfall patterns, rain fall event frequency can be surprisingly regular. Consult your national or local weather services to determine the rainfall frequency for your area.

**System design**

Not having enough rainwater can be caused by a number of factors. Surprisingly, low rainfall is often not the key culprit.

Instead, miscalculations (not connecting enough roof area, under-specifying your tank size, overestimating your predicted rainfall), changes in requirements (using your rainwater for more activities than originally planned), compromised water quality and system inefficiencies are often the main causes of volume shortages.

**System inefficiencies**

Inefficiencies around your Rain Harvesting system can reduce the volume of water you collect. These inefficiencies may include partially or fully blocked gutters and downpipes, leaking pipes, or "water bounce" at your tank inlets, which occurs when fast-flowing water splashes off your tank screen rather than going through into your tank.



### 3. Apply the 8 Rain Harvesting steps

The 8 Rain Harvesting steps describe the steps you must take to ensure your Rain Harvesting system delivers the quality and quantity of rainwater you need. This includes designing your system for volume, using multiple, progressive layers of protection to keep contaminants out, and regularly monitoring and maintaining your system so that it continues to deliver cleaner rainwater and lots of it.

- ① **Limit sources of contamination**
- ② **Plan for volume**
- ③ **Filter leaves and debris**
- ④ **Divert the first flush**
- ⑤ **Secure the system**
- ⑥ **Manage standing water**
- ⑦ **Consider a safety net**
- ⑧ **Monitor and maintain**



# 1 Limit sources of contamination

Prevention is always better than cure, so we recommend you assess – and address – the risks in, on and around your property to minimise threats to your Rain Harvesting system.

## OVERCOMES CHALLENGES POSED BY:

-  Vegetation
-  Fine particles
-  Unwelcome intruders
-  Hidden activity
-  Seasonality

## Audit & prepare your property

Prevention is better than cure, so we recommend that you do all you can to limit sources of contamination.

Examine your property and surroundings to identify the degree to which your Rain Harvesting system is exposed to risks from vegetation, fine particles and unwelcome intruders. Then limit them.

### In particular, we recommend that you:

- Trim or relocate vegetation (especially overhanging trees)
- Remove leaves and debris from your roof and gutters
- Replace hazardous building materials (especially lead flashing, asbestos, peeling paint, and toxic, rusting or deteriorating materials)
- Attend to pest control as appropriate
- Determine whether your system has a mild, moderate or severe risk of exposure to potential fine particle contaminants (this is important later – see 4 Divert the First Flush).

## PRODUCTS THAT HELP

**Gutter Mesh** can be installed over your gutters to help keep leaves, vegetation and pests out of your Rain Harvesting system. This reduces opportunities for animal-borne contamination, sediment build-up and leached tannins, limits fuel for anaerobic fermentation and prevents blockages so you can harvest better quality rainwater and more of it.

**Gutter Outlets** are installed under the gutter to minimise contaminants by reducing the build-up of unwanted dirt and debris where water drains into your downpipes.



## 2 Plan for volume

You can't control the rain, but you can forecast your requirements and design a system that meets your needs, maximises water capture efficiency and improves your ability to avoid shortages.

### OVERCOMES CHALLENGES POSED BY:

-  Vegetation
-  Fine particles
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### Calculate what you can harvest

The volume of water you can harvest largely depends upon your rainfall (measured in millimetres over time) and your roof size (measured in square metres). National or local weather services such as the Bureau of Meteorology in Australia can provide historical rainfall data for your area, while you can calculate your roof size by looking at your building plans or using Google Maps.

### Calculate your water needs

Past water bills, estimates based on your planned water uses or data from meters and gauges can all help you more accurately forecast your water needs.

### Plan for seasonality

If you experience seasonal rainfall or if your peak rainfall and water use times differ, you'll want bigger tanks to capture enough water for drier times.

You will also want to ensure you have connected as much roof area as is practical to your tank.

### Specify your system

Balancing the volume of rainwater you need with the volume you can harvest will inform your decisions regarding tank numbers and size. You should also design your Rain Harvesting system with appropriate products to minimise water loss.

### PRODUCTS THAT HELP

**Maelstrom Filter** is a revolutionary Rain Harvesting product that efficiently filters large volumes of water at high flow rates with minimal water loss.

**Tank Gauges** monitor how much water is in your tank and how much water you use.

**High Level Tank Overflows** raise the level at which your tank begins to overflow, offering a simple way to boost the volume of water your tank can store.



## 3 Filter leaves & debris

Leaves and debris are the root cause of many of the potential issues you can experience with your Rain Harvesting system – so it pays to do all you can to keep them out.

### OVERCOMES CHALLENGES POSED BY:

-  Vegetation
-  Fine particles
-  Unwelcome intruders
-  Hidden activity
-  Seasonality

### Use layers of protection

Filtering leaves and debris prevents water contamination and reduces the threat of hidden activity in your pipes and tanks. For optimum rainwater quality and quantity, it's important to use multiple, progressive barriers to filter leaves and debris at different stages across your Rain Harvesting system.

### PRODUCTS THAT HELP

**Leaf Eater Rain Heads** keep leaves and debris out of your downpipes with their 955 micron screens. This stops your pipes and tanks from getting blocked with leaves and debris.

**Maelstrom Filter** efficiently filters large volumes of water at a single point. The filter's 180 micron screen allows it to filter vegetation particles five times smaller than standard rain heads and tank screens. The Maelstrom Filter can be installed on your tank in place of a tank screen, or before the tank on a wall or in a pit.

**Tank Screens** with 955 micron mesh are legally required in some countries and regions (including many Australian states) to prevent mosquitoes from breeding in your tank. They also provide additional leaf filtering over the area where water directly enters your tank.

**Maintenance Trays** sit on top of your tank screen to catch leaves and other debris for easy removal and maintenance.



## 4 Divert the first flush

The first few millimetres of rain wash most of the hazardous particles off your roof; keeping this dirty water out of your tank helps protect your rainwater from contamination.

### OVERCOMES CHALLENGES POSED BY:

-  Vegetation
-  Fine particles
-  Unwelcome intruders
-  Hidden activity
-  Seasonality



### Incorporate first flush diversion

First flush diversion protects your rainwater quality by minimising the volume of suspended and dissolved fine particles that end up in the water you harvest.

A vital part of any Rain Harvesting system, first flush diverters channel, capture and isolate the most contaminated rainwater from your roof in special diversion chambers. You can then manually empty this water or automatically release it into stormwater or your garden.

### Calculate your diversion needs

The following guidelines are designed to help you calculate how much water you should divert for your rain harvesting system.

- Areas with low pollution (open fields, no trees, no bird droppings or animal matter, clean environment) – divert 0.5 litres per square metre of roof

- Areas with higher pollution (leaves and debris, bird droppings, animal matter/ carcasses, pollution) – divert 2 litres per square metre of roof

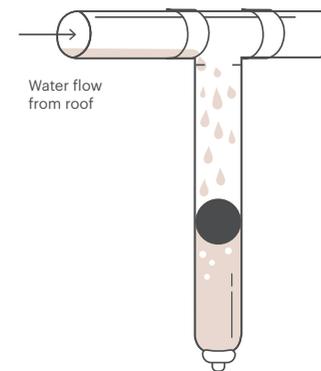
This calculation will allow you to determine what length and size of pipe or pipes you need for your diversion chambers.

### PRODUCTS THAT HELP

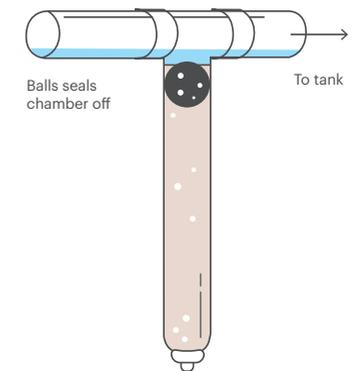
**First Flush Diverters** are installed using a T-junction or high-flow inlet to which the diversion chamber is fitted. As the chamber fills with the initial dirty water from your roof, a ball rises until it seals the inlet, allowing the rest of your rainwater, which is much cleaner, to flow directly to your tank.

First Flush Diverters can be installed on a wall, at the tank or inground.

First flush of contaminated water is diverted into chamber



Once chamber is full, fresh water flows to tank



## 5 Secure the system

By securing your Rain Harvesting system's entry and exit points, you can keep animals, insects, sunlight and dirty water out in order to reduce hidden activity and preserve your rainwater quality.

### OVERCOMES CHALLENGES POSED BY:

-  Vegetation
-  Fine particles
-  Unwelcome intruders
-  Hidden activity
-  Seasonality



### Secure entry & exit points

Every inlet, outlet or other opening on your Rain Harvesting system provides an opportunity for unwelcome intruders to get in. It's critical to secure these entry and exit points to protect the water you harvest.

When designing your system, you should also consider and secure your water against the potential for stormwater flooding and contamination from nearby septic tanks. This may influence decisions about your tank's location and whether it's above- or below-ground.

### PRODUCTS THAT HELP

**Leaf Eater Rain Heads** feature 955 micron mosquito-proof screens that prevent insects and other animals from entering and breeding or living in your downpipes.

**Flap Valves** allow the unimpeded flow of water from your pipe outlets while preventing insects and animals from getting in.

**Maelstrom Filter** features a double-filter system that copes with large volumes of fast-flowing water. When installed on your tank-top, it keeps sunlight, insects and other animals out of your tank.

**Tank Screens** are installed in tank inlets to keep mosquitoes and other pests out, but to allow water to pass through at full flow.

**Air Gaps** contain 955 micron mosquito-proof screens to keep insects and animals out of your tank overflow pipes while also preventing stormwater in drainage systems from back-flowing into your tank.

**Mozzie Stoppa™** insect-proof tank overflow screens prevent insects and other animals from entering your tank through the overflow outlet.

## 6 Manage standing water

Harvesting high quality rainwater is half the battle won, but to ensure your water remains reliable and fit-for-purpose, you also need to prevent and manage hidden activity in your pipes and tanks.

### OVERCOMES CHALLENGES POSED BY:

-  Vegetation
-  Fine particles
-  Unwelcome intruders
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### Prevent sediment resuspension

Preventing sediment stirring and resuspension protects your water quality and minimises the load on your pumps and treatment systems. In addition to keeping as much sediment as possible out of your tanks with screens and filters, you can use tank vacuums to suck up the sediment that ends up at the bottom of your tank and expel it during overflow events.

### Drain “charged lines” in wet systems

Draining water-filled pipes or “charged lines” after rainfall events is a simple and effective way to prevent water fouled by anaerobic fermentation and leached tannins from getting into your tank.

### Prevent algae growth

Keeping sunlight out of your tank will prevent algae growth.

### PRODUCTS THAT HELP

**Solar Shields** prevent algae growth by allowing water to pass through your tank inlets while keeping sunlight out. Some also calm the entry of water into the tank to minimise sediment resuspension.

**First Flush Inground Diverters** can be used to drain water from your pipes, transforming your wet system into a dry system to eliminate opportunities for anaerobic fermentation and tannin leaching.

**Sliding Gate Valves** can be manually opened to drain the water from your pipes and turn your wet system into a dry system.

**Wet-Dry Valves** can be programmed to automatically drain the water from your pipes after rainfall events.

**Vent Cowls** enable the healthy circulation of air inside your rainwater tank.

**Automatic Tank Vacuums** draw sediment-laden water out from the bottom of your tank during overflow events. This helps prevent resuspension and keeps sediment build-up in check.



## 7 Consider a safety net

In addition to maximising the quality of water in your rainwater tank, we recommend that you consider filtering and treating water immediately before use for even higher standards of protection.

### OVERCOMES CHALLENGES POSED BY:

-  Vegetation
-  Fine particles
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### Consider your treatment needs

Water treatment systems are the last step in quality control before your water exits a tap.

Additional treatment may not be essential for every Rain Harvesting system, so you should match your treatment system to your needs and purposes. For example, you may not need water treatment if you're using rainwater to wash your car or water the garden. However, if human or animal health are a concern, water treatment is recommended.

Always consult a specialist to determine which water treatment systems are right for your needs and situation.

### PRODUCTS THAT HELP

**Whole House Self-Cleaning Filtration Systems** are available in 2 and 3 stage configurations filtering down to 10 micron. They reduce sediment, lime scale, rust, colour, odour, chlorine, heavy metals and protozoa.

**Triple Action Filtration Systems** filter your water to remove sediment (down to 15 microns), colour and odour, making your water fit-for-purpose for use in your laundry, hot water systems, dishwasher, toilets and outdoors.

## 8 Monitor and maintain

By regularly monitoring and maintaining your Rain Harvesting system, you can keep it running optimally, ensure you don't run out of water unexpectedly, and make informed decisions about any necessary improvements.

### OVERCOMES CHALLENGES POSED BY:

-  Vegetation
-  Fine particles
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-  Seasonality

### Inspect and maintain your system

Adopting a regular maintenance routine for your Rain Harvesting system will help you identify and address potential problems before they affect your rainwater quality or quantity.

### Monitor water volumes

Monitoring your water consumption and your available supply is incredibly important. When you know how much water is in your tank, you won't run out unexpectedly. Monitoring also reveals how much water you use for different tasks and activities, how quickly your tank refills and the balance between your rates of water capture and use.

The more you understand these factors, the more you can make informed decisions about your water use and about potential improvements to your Rain Harvesting system.

### Maintenance checklist

Make maintenance a breeze with our handy Rain Harvesting maintenance checklist. Download it today at [rainharvesting.com.au](http://rainharvesting.com.au)

### PRODUCTS THAT HELP

**Tank Gauges** easily monitor how much water is in your tank. You may wish to check your tank gauge daily, weekly or even after certain activities, so you can better plan your water consumption.

**Maintenance Trays** sit on top of your tank inlets and can be easily lifted off to clean away any captured leaves and debris.

**Mozzie Stoppa Easy-Clean** has a screen that can be easily removed for maintenance.

**Automatic Tank Vacuums** draw sediment-laden water out from the bottom of your tank during overflow events.





## Apply the 8 Rain Harvesting Steps

- 1 Limit sources of contamination**
  - Check your roof surface materials and trim overhanging vegetation
  - Install gutter mesh to prevent blockages
- 2 Plan for volume**
  - Consider your annual rainfall, seasonality, roof surface area and rainwater needs
  - Use a Maelstrom filter to minimise water loss and a high level tank overflow to boost storage volume
- 3 Filter leaves and debris**
  - Use Leaf Eater rain heads or a Maelstrom filter to keep leaves, debris and mosquitoes out of your system
- 4 Divert the first flush**
  - Install first flush diverters to keep the most contaminated rainwater out of your rainwater tank
- 5 Secure the system**
  - Use a tank screen and insect-proof screens to keep out leaves, mosquitoes and animals
  - Install an air gap to prevent stormwater backflow
- 6 Manage standing water**
  - Use a wet-dry valve or first flush inground diverter to drain your pipes in between rainfall events
  - Install a Maelstrom or solar shield to block sunlight and prevent algae growth
- 7 Consider a safety net**
  - Use an appropriate rainwater filter after your pump to reduce sediment, colour and odour
- 8 Monitor and maintain**
  - Install a tank gauge to monitor your water level and usage
  - Use a Mozzie Stoppa Easy-Clean for simple overflow maintenance

## 4. Design and install your system

Based on Pillars 1, 2 and 3, you now have the information you need to design and install the right system for you.

To do this, use our standard system designs, download the Rain Harvesting System Audit or ask for the Rain Harvesting Design Service™.

### Use our standard system designs

Developed by our Rain Harvesting specialists to suit a range of contexts and buildings, our collection of standard Rain Harvesting system designs can offer inspiration – or even an exact blueprint – for creating your new Rain Harvesting system or improving your existing one.

View our system designs in this handbook or visit [rainharvesting.com.au](http://rainharvesting.com.au)

### Download the Rain Harvesting System Audit

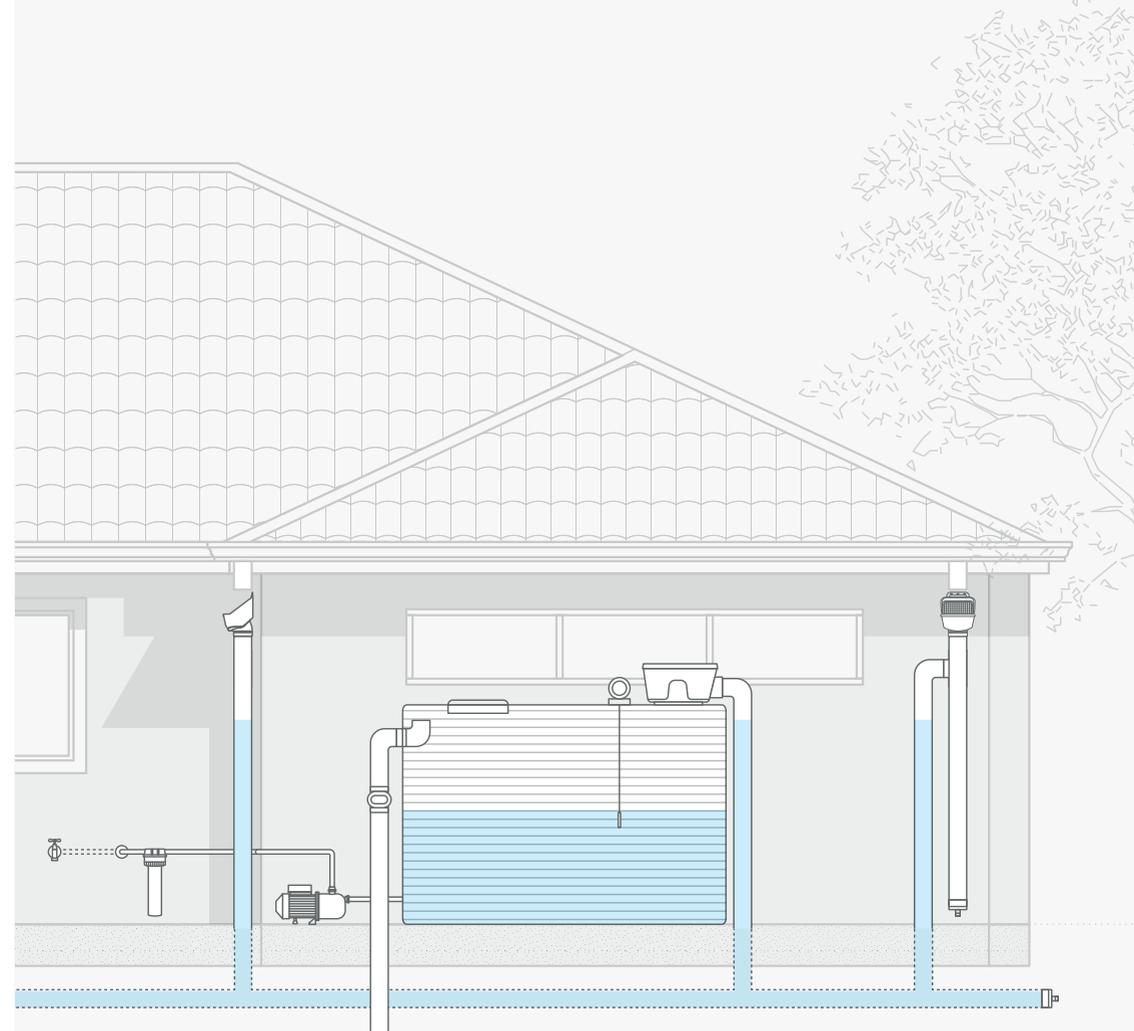
Available as a PDF download, the Rain Harvesting System Audit is a straightforward checklist that allows you to audit your existing Rain Harvesting system to identify what you can do to improve it.

Download the audit at [rainharvesting.com.au](http://rainharvesting.com.au)

### Get expert assistance by using the Rain Harvesting Design Service™

Our Rain Harvesting specialists have the experience and technical knowledge necessary to help you design a Rain Harvesting system that addresses your needs and environment. This tailored, in-depth service will provide you with a comprehensive Rain Harvesting system design for your property and is available for free.

Simply visit [rainharvesting.com.au](http://rainharvesting.com.au) to request your free system design or call +61 (0)7 3248 9600.



# Residential



## PRODUCTS INSTALLED ON THIS RAIN HARVESTING SYSTEM:

### 1 Limit sources of contamination

- Gutter Mesh
- Gutter Outlets



### 2 Plan for volume

- Maelstrom Filter
- High Level Tank Overflow
- Tank Gauge



### 3 Filter leaves and debris

- Leaf Eater Advanced Rain Head
- Maelstrom Filter
- Tank Screen



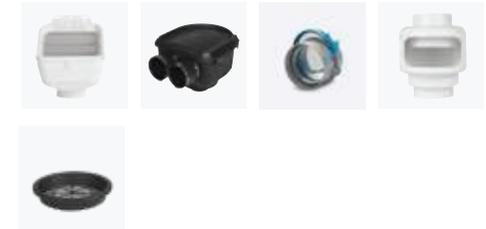
### 4 Divert the first flush

- First Flush Plus Water Diverter



### 5 Secure the system

- Leaf Eater Advanced Rain Head
- Maelstrom Filter
- Mozzie Stoppa Easy-Clean
- Air Gap
- Tank Screen



### 6 Manage standing water

- Solar Shield
- Wet/Dry Valve
- Maelstrom Filter



### 7 Consider a safety net

- Rainwater Filter
- UV Filter



### 8 Monitor and maintain

- Tank Gauge
- Mozzie Stoppa Easy-Clean



# Residential with underground tank



## PRODUCTS INSTALLED ON THIS RAIN HARVESTING SYSTEM:

### 1 Limit sources of contamination

- Gutter Mesh
- Gutter Outlets



### 2 Plan for volume

- Maelstrom Filter (In-ground)



### 3 Filter leaves and debris

- Leaf Eater Original Rain Head
- Maelstrom Filter (In-ground)



### 4 Divert the first flush

- First Flush Delta (In-ground)



### 5 Secure the system

- Leaf Eater Original Rain Head
- Flap Valve
- Maelstrom Filter (In-ground)



### 6 Manage standing water

- First Flush Delta (In-ground)



### 7 Consider a safety net

- Rainwater Filter
- UV Filter



### 8 Monitor and maintain

# Acreage



## PRODUCTS INSTALLED ON THIS RAIN HARVESTING SYSTEM:

### 1 Limit sources of contamination

- Gutter Mesh
- Gutter Outlets



### 2 Plan for volume

- Maelstrom Filter
- High Level Tank Overflow
- Tank Gauge



### 3 Filter leaves and debris

- Leaf Eater Slimline Rain Head
- Maelstrom Filter
- Tank Screen



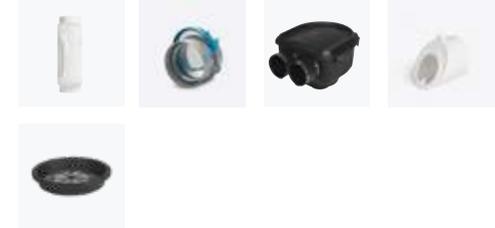
### 4 Divert the first flush

- First Flush Delta (In-ground)



### 5 Secure the system

- Leaf Eater Slimline Rain Head
- Mozzie Stoppa Easy-Clean
- Maelstrom Filter
- Flap Valve
- Tank Screen



### 6 Manage standing water

- First Flush Delta (In-ground)
- Solar Shield
- Maelstrom Filter



### 7 Consider a safety net

- Rainwater Filter
- UV Filter



### 8 Monitor and maintain

- Tank Gauge
- Mozzie Stoppa Easy-Clean



# School



## PRODUCTS INSTALLED ON THIS RAIN HARVESTING SYSTEM:

### 1 Limit sources of contamination

- Gutter Mesh
- Gutter Outlets



### 2 Plan for volume

- Maelstrom Filter
- High Level Tank Overflow
- Tank Gauge



### 3 Filter leaves and debris

- Leaf Eater Original Rain Head
- Maelstrom Filter
- Tank Screen



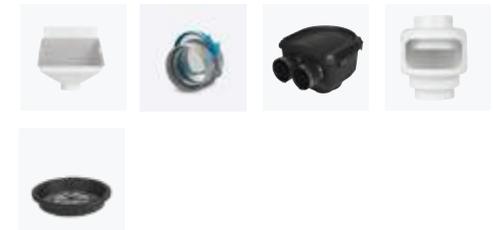
### 4 Divert the first flush

- First Flush Plus Water Diverter



### 5 Secure the system

- Leaf Eater Original Rain Head
- Mozzie Stoppa Easy-Clean
- Maelstrom Filter
- Air Gap
- Tank Screen



### 6 Manage standing water

- Solar Shield



### 7 Consider a safety net

- Rainwater Filter
- UV Filter

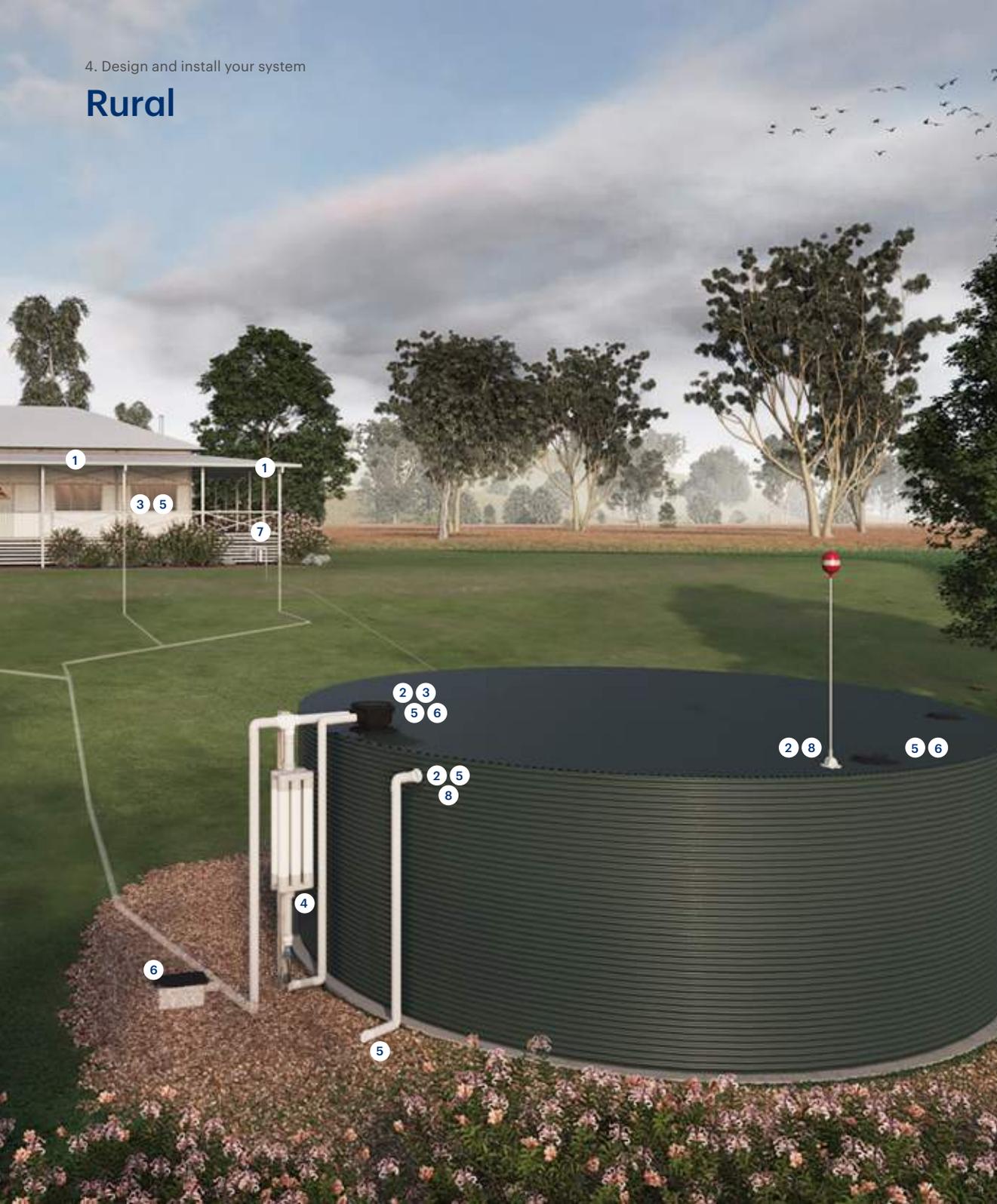


### 8 Monitor and maintain

- Tank Gauge
- Mozzie Stoppa Easy-Clean



# Rural



## PRODUCTS INSTALLED ON THIS RAIN HARVESTING SYSTEM:

### 1 Limit sources of contamination

- Gutter Mesh
- Gutter Outlets



### 2 Plan for volume

- Maelstrom Filter
- High Level Tank Overflow
- Tank Gauge



### 3 Filter leaves and debris

- Leaf Eater Slimline Rain Head
- Maelstrom Filter



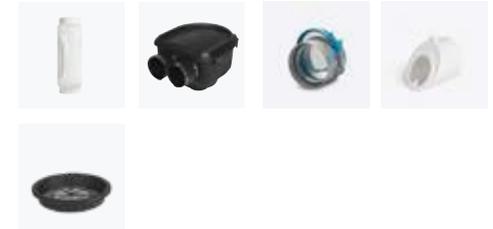
### 4 Divert the first flush

- First Flush Delta (Post/Wall)



### 5 Secure the system

- Leaf Eater Slimline Rain Head
- Maelstrom Filter
- Mozzie Stoppa Easy-Clean
- Flap Valve
- Tank Screen



### 6 Manage standing water

- Solar Shield
- Wet/Dry Valve
- Maelstrom Filter



### 7 Consider a safety net

- Rainwater Filter
- UV Filter



### 8 Monitor and maintain

- Tank Gauge
- Mozzie Stoppa Easy-Clean



# Shed



## PRODUCTS INSTALLED ON THIS RAIN HARVESTING SYSTEM:

### 1 Limit sources of contamination

- Gutter Mesh
- Gutter Outlets



### 2 Plan for volume

- Maelstrom Filter
- High Level Tank Overflow
- Tank Gauge



### 3 Filter leaves and debris

- Maelstrom Filter
- Tank Screen



### 4 Divert the first flush

- First Flush Delta (Post/Wall)



### 5 Secure the system

- Maelstrom filter
- Mozzie Stoppa Easy-Clean
- Flap Valve
- Tank Screen



### 6 Manage standing water

- Solar Shield



### 7 Consider a safety net

### 8 Monitor and maintain

- Tank Gauge



# Commercial



## PRODUCTS INSTALLED ON THIS RAIN HARVESTING SYSTEM:

### 1 Limit sources of contamination

- Gutter Mesh
- Gutter Outlets



### 2 Plan for volume

- Maelstrom Filter
- High Level Tank Overflow
- Tank Gauge



### 3 Filter leaves and debris

- Maelstrom Filter



### 4 Divert the first flush

- First Flush Delta (Post / Wall)



### 5 Secure the system

- Maelstrom Filter
- Mozzie Stoppa Easy-Clean
- Air Gap
- Tank Screen



### 6 Manage standing water

- Solar Shield



### 7 Consider a safety net

### 8 Monitor and maintain

- Tank Gauge
- Mozzie Stoppa Easy-Clean





## Our range

Whatever your needs, location and situation, we have the products you need to create the ideal Rain Harvesting system for you. With more than 25 years' experience in Rain Harvesting, our extensive product range is the result of careful testing, innovation and refinement.

- Maelstrom Filter
- Rain Heads
- First Flush Diverters
- Wet/Dry Valve
- Tank Screens and Solar Shields
- Tank Overflows and Screens
- Post-Tank Filters
- Monitoring Gauges
- Rainwater Tank Accessories

# Maelstrom Filter

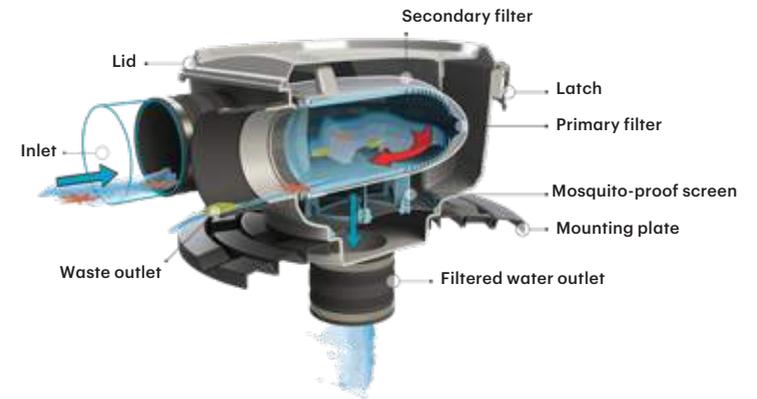
Our revolutionary Maelstrom filter sets a new standard in pre-tank rainwater filtering. The Maelstrom's unique U-shaped filter keeps leaves and debris down to 180 microns out of your tank while significantly increasing your water catchment efficiency, even at high flow rates (96% at 10 litres per second in wet systems\*).

## Product benefits

- A single-point rainwater filter with a ground-breaking U-shaped design
- The 180 micron filter screens particles five times smaller than a standard tank screen
- Reduces the hassle of maintenance through self-flushing
- Blocks out light that supports algae growth
- Can be installed in a variety of pre-tank locations
- Reduces the frequency and cost of tank cleaning by lowering sediment build-up
- Mounting plate fits 300mm, 400mm and 500mm tank openings, or can be used for mounting in-tank, on-wall or in a pit

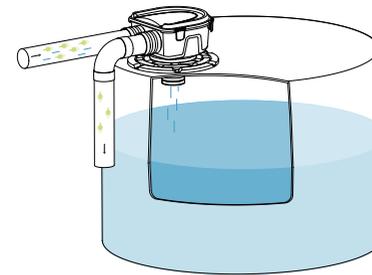
## APPLIES TO THESE RAIN HARVESTING STEPS

- 1 Limit sources of contamination
- 2 Plan for volume
- 3 Filter leaves and debris
- 4 Divert the first flush
- 5 Secure the system
- 6 Manage standing water
- 7 Consider a safety net
- 8 Monitor and maintain



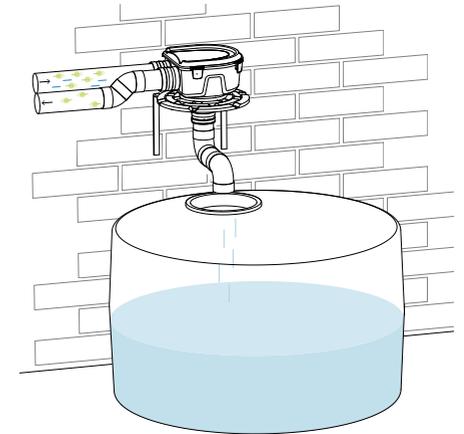
## On-Tank

Maelstrom On-Tank eliminates the problem of water splashing off your tank inlet screen, especially at high flow rates. Its phenomenal water catchment efficiency (96% at 3,600 litres/hour in wet systems) gives you more water, faster, so you can take full advantage of every raindrop.



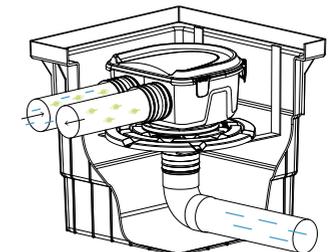
## Pre-Tank

Maelstrom Pre-Tank can be mounted on your wall or at another convenient place before your tank. For dry systems, it can even be used in place of rain heads, offering centralised, super-fine filtering to keep leaves and debris out of your rainwater.



## In a Pit

Maelstrom Pit allows you to filter the rainwater you harvest at one central point for easy cleaning and maintenance. This is ideal for dry Rain Harvesting systems – especially those with below-ground tanks.



\*For wet/charged system configuration with clean water flow

## Maelstrom Filter



### Maelstrom

Maelstrom's advanced design combines super fine filtration and super-high water catchment efficiency to give you cleaner rainwater and lots of it.

RHML01 100mm



# Rain Heads

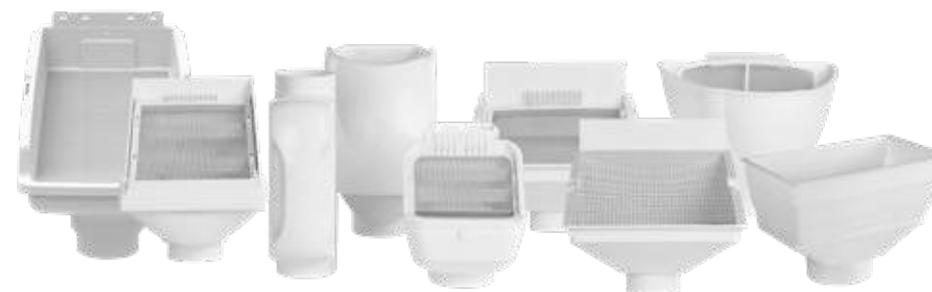
Easy to install and available in a range of options to suit your needs, our signature rain heads improve the quality of the rainwater you harvest by keeping leaves, mosquitoes and other insects out of your Rain Harvesting system.

## Product benefits

- Keep leaves and debris out of your pipes and tank to prevent clogging, blockages, anaerobic fermentation and tannin leaching
- Prevent the entry of mosquitoes, insects and vermin with 0.955mm stainless steel mesh screen
- Prevent mosquito intrusion to charged lines (in wet systems)
- Reduce the risk of eaves flooding by preventing downpipe blockages and backflow
- Paint to match your property's architecture

## APPLIES TO THESE RAIN HARVESTING STEPS

- 1 Limit sources of contamination
- 2 Plan for volume
- 3 Filter leaves and debris
- 4 Divert the first flush
- 5 Secure the system
- 6 Manage standing water
- 7 Consider a safety net
- 8 Monitor and maintain



## Comparison table

Product	Size (mm) H x W x D	Screen	Integrated cover	VH Pivot*	Outlet size/s
Leaf Eater Original	 289 x 275 x 188	Double	No	No	90mm or 100mm
Leaf Eater Plus	 289 x 275 x 188	Single	No	No	90mm or 100mm
Leaf Beater	 295 x 201 x 175	Single	No	Yes	90mm or 100mm
Leaf Eater Slimline	 321 x 100 x 168	Single	Yes	No	90mm
Leaf Eater Ultra	 395 x 206 x 220	Single	Yes	Yes	90mm or 100mm
Leaf Eater Advanced	 242 x 194 x 168	Single	No	Yes	90mm or 100mm
Leaf Catcha (Round)	 220 x 280 x 185	Single	No	No	90mm / 100mm (Dual fit)
Leaf Catcha (Rectangle)	 210 x 289 x 180	Single	No	No	90mm / 100mm (Dual fit)
Leaf Eater Commercial	 542 x 366 x 369	Single	No	No	150mm

\*Vertical and Horizontal Pivoting Outlet

## Rain Heads



### Leaf Eater Original

Keeping leaves, mosquitoes and debris out of rain harvesting systems for over 17 years.

**RHLE01** 90mm  
**RHLE06** 100mm



### Leaf Eater Plus

A Leaf Eater™ Original with a Clean Shield™ screen for improved leaf shedding and even easier maintenance.

**RHLE08** 90mm  
**RHLE09** 100mm

## Rain Heads



### Leaf Eater Advanced

A compact mosquito-proof rain head for small spaces awkward places, with an outlet that swivels to suit both horizontal and vertical downpipes.

**RHAD01** 90mm  
**RHAD02** 100mm



### Leaf Eater Commercial

Designed for commercial applications, this PVC rain head incorporates a maintenance-friendly single screen to keep leaves, debris, pests and mosquitoes out of your rain harvesting system.

**RHCL60** 150mm



### Leaf Eater Slimline

A sleek, streamlined rain head with an anti-splash cover and red overflow indicator. Ideal for decks and verandas - a stylish finish to any home.

**RHSL01** 90mm



### Leaf Eater Ultra

A feature-packed rain head that keeps leaves and mosquitoes out of your pipes - and looks good doing it.

**RHUL01** 90mm  
**RHUL02** 100mm



### Leaf Beater

A mid-sized rain head for tighter spaces, with an outlet that swivels to suit both horizontal and vertical downpipes.

**RHLB20** 90mm  
**RHLB21** 100mm



### Leaf Catcha Rectangle

A simple, bucket-style rain head ideal for easy-to-reach places that can also be used as a catchment device for tank overflows.

**RHLC01** 90mm / 100mm Dual fit

## Rain Heads



### Leaf Catcha Round

A simple, bucket-style rain head ideal for easy-to-reach places that can also be used as a catchment device for tank overflows.

**RHLC20** 90mm / 100mm Dual fit



### Clean Shield™ Screen

Upgrade your Leaf Eater Original or Leaf Eater Plus rain heads with this leaf-shedding, mosquito-proof, easy-clean replacement screen.

**RHAC01** Leaf Eater Original / Plus Clean Shield™ Screen



### Clean Shield™ Screen

Upgrade your Leaf Beater rain heads with this leaf-shedding, mosquito-proof, easy-clean replacement screen.

**RHAC02** Leaf Beater Clean Shield™ Screen



# First Flush Diverters

Our first flush diverters play an essential role in protecting your rainwater quality. By isolating the first flush of contaminant-laden water from your roof, diverters keep organic and inorganic fine particles out of the rainwater you harvest so you enjoy the benefits of cleaner rainwater for your property.

## Product benefits

- Minimise the amount of suspended and dissolved organic and inorganic fine particles entering your tank
- Reduce sediment build-up in your tank and sediment load on your post-tank pumps and filtration systems
- Protect household fixtures and appliances (i.e. washing machines, toilet cisterns, etc.) by lowering sediment and tannin deposits
- Drain wet system pipes to prevent anaerobic fermentation and tannin leaching
- Diversion volume easily custom-built through use of standard pipes
- The best way to keep fine and dissolved particles out of your tank
- Automatic reset valve drains after rainfall events
- Comes in kit form for easy installation and customisation

## APPLIES TO THESE RAIN HARVESTING STEPS

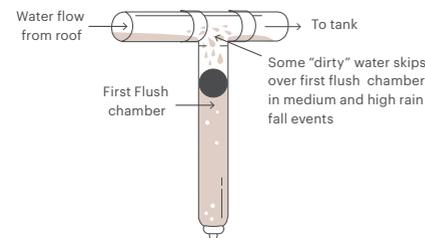
- 1 Limit sources of contamination
- 2 Plan for volume
- 3 Filter leaves and debris
- 4 Divert the first flush
- 5 Secure the system
- 6 Manage standing water
- 7 Consider a safety net
- 8 Monitor and maintain



## How it works

First flush diverters are installed at each downpipe that supplies water to the tank, or where the downpipes enter the tank. They utilise a dependable ball and seat system. As the water level rises in the diverter chamber, the ball floats and, once the chamber is full, the ball rests on a seat inside the diverter chamber, preventing any further water from entering. The subsequent flow of water is then automatically directed along the pipe system to the tank.

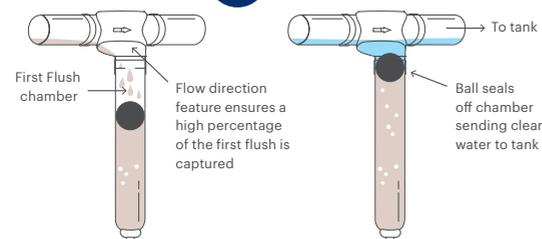
## Standard Tee



The standard First Flush tee allows some "dirty" water to skip over the entry to the first flush chamber in medium to high rainfall events and enter your rainwater tank.

## First Flush Plus Tee

NEW



The First Flush Plus Tee's patented design allows less "dirty" water to skip over or bypasses the first flush chamber. The tee incorporates a unique flow direction feature that forces fast-flowing water into the diversion chamber, preventing the dirtiest water from entering your rainwater tank. In a medium rainfall event\*, four times less "dirty" water bypasses the first flush diversion chamber = 97% of the first flush is diverted.

## How much water to divert

In calculating the amount of water to divert, consideration should be given to (1) the surface area of the roof, and (2) the amount of pollutant on the roof and gutters. The following factors can be used as a guide in determining the volume of water to be diverted.

POLLUTION FACTOR FOR THE ROOF	
MINIMAL POLLUTION	SUBSTANTIAL POLLUTION
<b>DIVERT 0.5L PER M<sup>2</sup></b> Open field, no trees, no bird droppings, clean environment	<b>DIVERT 2L PER M<sup>2</sup></b> Leaves and debris, bird droppings, various animal matter, e.g. dead insects, skinks, etc.

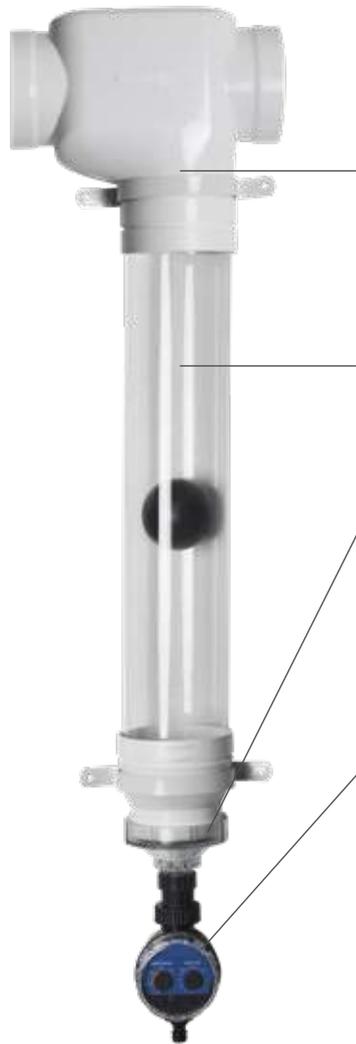
The above quantum are the results of preliminary testing. Individual site analysis and field testing is required to more accurately assess the quantum to be diverted in each individual case.

DIVERSION FACTOR FOR A FIRST FLUSH WATER DIVERTER	
MINIMAL POLLUTION	SUBSTANTIAL POLLUTION
<b>M<sup>2</sup> ROOF AREA X POLLUTION FACTOR = LITRES TO BE DIVERTED</b>	
<b>Example for a minimal polluted roof of 100m<sup>2</sup></b> 100 x 0.5 = 50 Litres to be diverted	<b>Example for a heavily polluted roof of 100m<sup>2</sup></b> 100 x 2 = 200 Litres to be diverted

\* 3 litres per second

# First Flush Technologies

Our patented new First Flush Plus Tee, Advanced Release Valve and Rapid Exit Release Funnel all combine to take first flush diversion to the next level – delivering you cleaner rainwater and more of it with less maintenance.



## First Flush Plus Tee – NEW

- The specially designed, patented First Flush Plus Tee forces fast-flowing water into the diversion chamber, preventing the problem of dirty water “skipping” over the traditional T-junction gap during heavy rainfall. This helps prevent the dirtiest water from entering your tank

## Customisable Chamber

- The diverter chamber is customisable, just add the appropriate pipe length to divert the required volume of first flush

## Rapid Release Exit Funnel – NEW

- Incorporating a transparent, Rapid Release Exit Funnel, the Advanced Release Valve’s larger aperture outlet and funnel shape draws sediment into the exit flow. This results in reduced build up and blockages plus it’s transparent exit funnel allows for easy visual inspection

## Advanced Release Valve – NEW

- The Advanced Release Valve is an electronic first flush diversion valve which is programmable to give you greater control over the frequency of your first flush. This allows you to determine how regularly your diversion chamber empties so you can maximise rainwater yield without compromising quality



First Flush diverters are available in kit form

**First Flush Advanced**  
Pictured above

## First Flush Diverters



### First Flush Advanced

Incorporating our patented First Flush Plus Tee and Advanced Release Valve, the First Flush Advanced gives you cleaner rainwater and more of it with less maintenance.

**WDDP20** 100mm



### First Flush Plus

The First Flush Plus Tee’s specially designed inlet solves the problem of fast-moving dirty water “skipping” over the first flush chamber, ensuring the dirtiest water does not enter your tank.

**WDDP11** 100mm



### First Flush Downpipe

The traditional first flush diverter for downpipe installations with customisable chamber and slow release valve

**WDDP01** 90mm

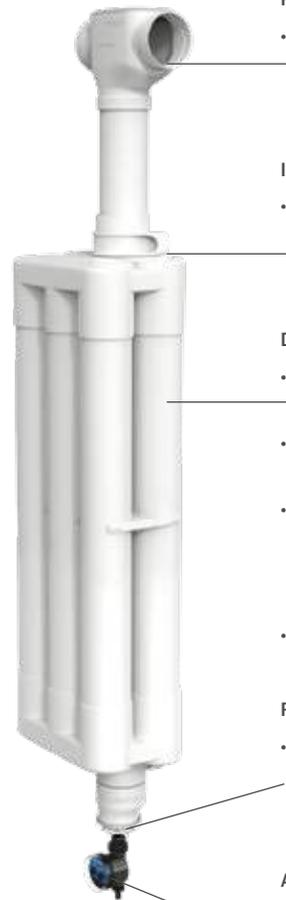
**WDDP02** 100mm

# First Flush Delta Technologies

Large volume first flush diversion made easy.

The First Flush Delta range incorporates a revolutionary chamber design that uses 100mm pipe for simple installation and high volume diversion.

1m Delta High Volume chamber = 73 litres of diversion!



**First Flush Delta Post/Wall**  
Pictured above

### First Flush Plus Tee – NEW

- The specially designed, patented First Flush Plus Tee forces fast-flowing water into the diversion chamber, preventing the problem of dirty water “skipping” over the traditional T-junction gap during heavy rainfall.

### Integrated ball and seat – NEW

- This unique design ensures that the first flush ball remains close to the seat, even in high flow events, ensuring the diverter seals as soon as the chamber is full. No more lost balls when cleaning your outlet either!

### Delta High Volume Chamber – NEW

- Easily divert large volumes of first flush with the Delta High Volume Chamber
- Using multiple 100mm pipes to create the diversion chamber, the Delta’s revolutionary design makes installation simple
- The Delta chamber is customizable to suit your first flush requirements
  - 1m Delta chamber = 73 litres of diversion
  - 2m Delta chamber = 115 litres of diversion
- For larger volumes, consider the Delta manifold installation configurations (see next page)

### Rapid Release Exit Funnel – NEW

- The transparent, Rapid Release Exit Funnel’s larger aperture outlet and funnel shape draws sediment into the exit flow. This results in reduced build up and blockages and it’s transparent exit funnel allows for easy visual inspection

### Advanced Release Valve – NEW

- By allowing you to program the frequency of your first flush chamber empties, the electronic Advanced Release Valve allows you to maximise rainwater yield without compromising quality

\* First Flush Plus tee supplied with Delta Post/Wall



### First Flush Delta Post/Wall

A large volume first flush diverter that makes installation easy by utilising 100mm pipes for the chamber and incorporates the patented First Flush Plus tee and Advanced Release Valve to optimize first flush performance. 1m of Delta Chamber = 73 litres

**WDPW10** 100mm



### First Flush Delta Commercial

The Delta Commercial is available to suit 150mm and 225mm downpipes, allowing you to enjoy the easy install benefits of using 100mm pipes for the first flush chamber. For larger volumes, consider the Delta manifold installation options (see next page).

**WDCL15** 150mm

**WDCL22** 225mm



### First Flush Delta In-Ground

Divert the dirtiest water and transform your Rain Harvesting system from “wet” to “dry” with this large volume inground first flush diverter. Utilising 100mm pipes for the chamber makes installation simple and the Advanced Release Valve reduces outlet maintenance. 1m of Delta Chamber = 73 litres

**WDIG10** 100mm

### DELTA DIVERSION CHAMBER CALCULATOR

Chamber Volume in Litres	Total Length in Millimetres
30	185
40	374
50	564
60	753
70	942
80	1132
90	1321
100	1511
110	1700
120	1889
130	2079
140	2268
150	2458
180	3026
200	3405

#### NOTES

- Delta end caps were calculated to hold 14.32L each.
- 1m of 100mm UPVC pipe holds 8.8L
- For AUST 100mm pipe inserts 80mm into end caps x 6 (480mm of 100 UPVC = 4.2L)
- 14.32 - 4.2 = 10.12L/end cap

The above figure is total volume of delta end cap excluding the liquid contained within the 6x pipe chambers.

# First Flush Delta Installation Configurations

Large diversion volume requirements are easily solved with the First Flush Delta range. Each chamber can hold 115 litres within a 2m diversion chamber and by installing multiple Deltas in a series your first flush volume quickly adds up!

## First Flush Delta Manifold Installation with single flush point

Installing multiple First Flush Deltas in a series makes it easy for you to divert and manage large volume first flush diversion. Connecting the First Flush Delta's outlets together allows you to use a single flush point and makes draining the first flush chamber simple. The single flush point can be easily directed or connected to one location for draining the first flush.



Delta Post/Wall pictured

## First Flush Delta Manifold Installation with multiple flush points

Another installation option is to connect multiple First Flush Deltas in a series and incorporate multiple flush points. This is ideal for situations where the First Flush Deltas cannot be positioned closely next to each other and connecting the outlets is impractical. It also allows for faster first flush draining and for the first flush to be drained to multiple locations.



Delta Commercial 225mm pictured



# First Flush Upgrades

Upgrade your existing First Flush diverter with the patented Advanced Release Valve to enjoy cleaner rainwater and lots of it - with less maintenance.

The Advanced Release Valve is an electronic first flush diversion valve which is programmable to give you greater control over the frequency of your first flush. This allows you to determine how regularly your diversion chamber empties so that you can maximise rainwater yield without compromising quality.

Easily retrofits to all Rain Harvesting First Flush Diverters – 90mm, 100mm, post/wall, inground, 150mm and 225mm.



## Advanced Release Valve

Lets you control how regularly your diversion chamber empties, while the transparent exit funnel facilitates easy visual inspection. Can be installed to replace any existing first flush diverter outlet.

WDRV01



## First Flush Primary Filter Screen

This 0.955 micron primary filter screen helps to keep the first flush outlet clear and reduce maintenance frequency.

WDAC22



# Wet/Dry Valve

For “wet” Rain Harvesting systems, it is important to drain your charged lines after it rains to remove any water remaining in the pipes. Draining this water prevents it from being coming stagnant and discoloured due to anaerobic fermentation and tannin leaching - and most importantly, stops it from being fed into your rainwater tank at the next rainfall event.

“Wet” Rain Harvesting systems are any systems where the pipes leading to the rainwater tank hold water between rainfall events, this typically occurs when pipes leading to the rainwater tank are underground.

## Product benefits

- For wet Rain Harvesting systems, the wet-dry valve makes draining charged-lines (water-filled pipes) easy
- The valve’s drain size allows for efficient draining and minimises the risk of clogging
- The wet-dry valve’s electronic auto-release timer allows you to set the frequency at which your charged lines are drained

## APPLIES TO THESE RAIN HARVESTING STEPS

- ① Limit sources of contamination
- ② Plan for volume
- ③ Filter leaves and debris
- ④ Divert the first flush
- ⑤ Secure the system
- ⑥ Manage standing water
- ⑦ Consider a safety net
- ⑧ Monitor and maintain



## Wet/Dry Valve



## Wet / Dry Valve

Automatically drain your charged lines after it rains using our wet-dry valve and prevent problems with tannin leaching and anaerobic fermentation.

DRYV01 100mm

# Tank Screens and Solar Shields

Available in a range of sizes, our tank screens and solar shields prevent leaves, debris, mosquitoes, vermin and sunlight from entering your rainwater tank via the tank inlet. This helps to preserve your rainwater quality by reducing nutrient loads, light and algae growth, and preventing mosquitoes from using your rainwater to breed in.

## Product benefits

- Prevent mosquitoes, insects and other vermin from entering your tank
- Filter leaves and debris to keep them out of your tank
- Reduce light and algae growth in your tank
- Decreased maintenance time with easy-clean guardian
- Multiple sizes available to suit all tank inlets
- Mosquito-proof 316 stainless steel mesh with 0.955mm aperture
- AS4020 compliant

## APPLIES TO THESE RAIN HARVESTING STEPS

- 1 Limit sources of contamination
- 2 Plan for volume
- 3 Filter leaves and debris
- 4 Divert the first flush
- 5 Secure the system
- 6 Manage standing water
- 7 Consider a safety net
- 8 Monitor and maintain



## Tank Screens and Solar Shields



### Tank Screen

Mosquito-proof your tank inlets without interrupting the flow of water into your tank with our stainless steel 0.955mm aperture tank screens.

- TASS20 200mm
- TASS06 300mm
- TATS01 400mm
- TASS11 500mm Square base
- TATS02 500mm Round base (NEW)



### Maintenance Tray

The Maintenance Tray solves the challenge of cleaning fixed and difficult-to-reach tank inlet screens. It sits on top of these screens to become a second, removable screen with an easy-to-reach protruding handle.

- TMTG01 300mm
- TMTG02 400mm



### Tank Covers

Prevent algae growth by keeping sunlight out of your tank without interrupting the flow of rainwater.

- TASS23 300mm
- TASS21 400mm
- TASS22 500mm



### Solar Shields

Designed to fit under your tank screen, the Solar Shield's patented design maximises the flow of rainwater into your tank while keeping sunlight out to prevent algae.

- TASS24 300mm
- TASS25 400mm
- TASS26 500mm

# Tank Overflows and Screens

Effectively manage overflowing water and make it easy to connect standard plumbing fittings to your tank with our tank overflows. All our overflows can also be paired with mosquito-proof screens or flap valves, and some are high-flow options used to increase your tank's rainwater storage capacity.

## Product benefits

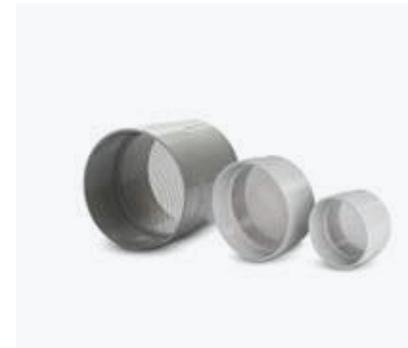
- Effectively manage overflowing water
- Prevent entry of mosquitoes, insects and pests into your tank
- Fit standard plumbing fittings to your tank
- High-level options to easily increase your tank's water storage capacity
- Range of sizes and types to suit different tanks and stormwater pipes
- Also available in kit form
- AS4020 compliant

## APPLIES TO THESE RAIN HARVESTING STEPS

- 1 Limit sources of contamination
- 2 Plan for volume
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- 6 Manage standing water
- 7 Consider a safety net
- 8 Monitor and maintain



## Insect-Proof Tank Overflow Screens



### Mozzie Stoppa Original

With a 0.955mm mosquito-proof stainless steel screen, the Mozzie Stoppa Original protects your rainwater quality by stopping mosquitoes, larger insects and animals from getting into your tank via your tank overflow pipes.

- TATO61 50mm
- TATO05 90mm
- TATO17 100mm



### Mozzie Stoppa Easy-Clean

Protect your rainwater quality by keeping mosquitoes and other pests out of your tank with this easy-clean, spring-loaded hinge mosquito-proof outlet screen.

- TATO27 90mm

## Standard Tank Overflow



### Tank Overflow Corrugated

A standard tank overflow for corrugated tanks. A male outlet, it features a corrugated flange for easy installation.

- TATO33 90mm
- TATO34 100mm



### Tank Overflow Flanged

A standard tank overflow outlet for flat-sided tanks. This outlet features a flange with provided screw holes for straightforward installation.

- TATO62 50mm
- TATO29 90mm
- TATO22 100mm

## High Level Tank Overflow



### Tank Overflow High Level

Manage your tank's overflowing water and boost your rainwater tank's capacity with a high level tank overflow.

- TATO10** 90mm High Plain
- TATO12** 90mm High Flanged
- TATO09** 90mm Extra High Flanged
- TATO18** 100mm High Flanged

## Standard Tank Overflow Kits



### Tank Overflow Kit

Stop mosquitoes getting in through your tank overflow with this all-parts-supplied, easy-install 50mm standard overflow kit.

- TATO64** 50mm

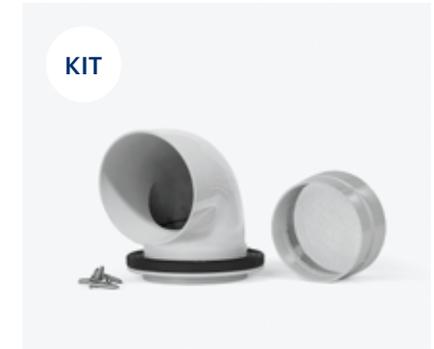
## High Level Tank Overflow Kits



### Tank Overflow Kit High

Manage your tank overflow while increasing capacity by approximately 90mm and mosquito-proof your tank with this all-parts-supplied, easy-install kit.

- TATO11** 90mm



### Tank Overflow Kit Extra High

Manage your tank overflow while increasing capacity by approximately 115mm and mosquito-proof your tank with this all-parts-supplied, easy-install kit.

- TATO60** 90mm



### Tank Overflow Kit

Stop mosquitoes getting in through your tank overflow with this all-parts-supplied, easy-install 90mm standard overflow kit.

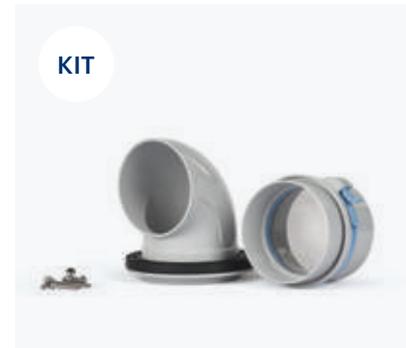
- TATO45** 90mm



### Tank Overflow Kit

Stop mosquitoes getting in through your tank overflow with this all-parts-supplied, easy-install 100mm standard overflow kit.

- TATO24** 100mm



### Tank Overflow Kit High Easy Clean

Store more rainwater by increasing your tank's capacity by approximately 90mm and mosquito-proof your tank with this easy-clean, all-parts-supplied, easy-install kit.

- TATO31** 90mm



### Tank Overflow Kit High

Stop mosquitoes getting in through your tank overflow with this all-parts-supplied, easy-install 100mm standard overflow kit.

- TATO23** 100mm

### Air Gaps



#### Air Gap

Protect your rainwater from contamination by preventing stormwater backflow – and mosquitoes – from entering your tank through your outlet pipes.

**TAAG01** 90mm

### Flap Valves



#### Flap Valve Vent Screen

Keep mosquitoes and animals out of your tank outlets and pipes without restricting tank ventilation or the flow of fast-moving water.

**TAFV01** 50mm

### Flap Valves



#### Flap Valve Plain

Keep mosquitoes out of your tank outlet and pipes while allowing water to flow out unimpeded with this plastic flap valve.

**TAFV03** 100mm



#### Flap Valve Vent Screen

Keep mosquitoes out of your tank outlets and pipes without restricting tank ventilation or the flow of fast-moving water with a flap incorporating 0.955mm stainless steel mesh.

**TAFV04** 100mm



#### Flap Valve Vent Screen

Keep mosquitoes and animals out of your tank outlets and pipes without restricting tank ventilation or the flow of fast-moving water with a flap incorporating 0.955mm stainless steel mesh.

**TAFV02** 90mm (Male)



#### Flap Valve Vent Screen

Keep mosquitoes out of your tank outlets and pipes without restricting tank ventilation or the flow of fast-moving water with a flap incorporating 0.955mm stainless steel mesh.

**TAFV12** 90mm (Female)



#### Flap Valve Vent Screen

Designed for commercial or high flow applications, this 150mm flap valve incorporates a 0.955mm stainless steel mesh screen to keep mosquitoes and other animals from entering tank outlets and pipes.

**TAFV15** 150mm

# Post-Tank Filters

Our range of post-tank filters provide additional quality control to ensure you get cleaner rainwater for use in and around your property. By reducing colour, odour and particles in your rainwater immediately before use, they improve the quality of rainwater where it is used for drinking water and protect internal appliances, toilets and more from sediment damage and tannin stains.

## Product benefits

- Ideal for a wide range of rainwater harvesting systems including whole of house, dual supply and single use
- Reduce colour, odour and sediment (down to 10 microns) in your rainwater immediately before use
- Improve the quality of rainwater where it is used as a drinking water supply by removing sediment, reducing taste, odour and colour, and removing heavy metals and protozoa
- Protect internal appliances (i.e. washing machines, toilets cisterns, tap ware, etc.) from sediment damage and tannin stains
- Italian made, high quality UV-resistant heavy-duty housings
- Replaceable cartridges

## ADDRESS WITH THESE RAIN HARVESTING STEPS

- 1 Limit sources of contamination
- 2 Plan for volume
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- 8 Monitor and maintain



## Post-Tank Filters



### Whole House Self-Cleaning Three-Stage Filtration System (Slim)

This high performance whole of house system features three-stage filtration for longer cartridge life. The self-cleaning 90 micron filter and the second stage 10 micron heavy-duty sediment filter reduces lime, scale, rust, sand and other fine sediment. The final filtration stage reduces colour, odour, chlorine, VOC, heavy metals and protozoa (giardia, cryptosporidium).

WFRW31 10"



### Whole House Self-Cleaning Two-Stage Filtration System (Slim)

Filtering down to 10 micron, this two-stage whole of house system features the self cleaning 90 micron sediment filter and second stage filtration to reduce colour, odour, chlorine, VOC, heavy metals and protozoa (giardia, cryptosporidium).

WFRW23 10"



### Whole House Two-Stage Filtration System (Large)

Two stage whole of house filtration featuring a 10 micron heavy-duty sediment filter to remove rust, lime, scale, sand and other sediment and second stage filtration to reduce colour, odour, chlorine, VOC, heavy metals and protozoa (giardia, cryptosporidium) down to 10 micron.

WFRW21 10"

WFRW22 20"



### Triple Action Filtration System (Slim)

Filter fine sediments, colours and odours down to 10 microns for use around your property with this single stage triple action filter.

WFRW11 10"

WFRW12 20"

Post-Tank Filters



**Triple Action Filtration System (Large)**  
This large capacity, single stage filter reduces fine sediments, colours and odours down to 10 microns for use around your property.

**WFRW13** 10"  
**WFRW14** 20"



**Multi-Action Filter Replacement Cartridge (Slim)**

Activated carbon block filter which reduces colour, odour, chlorine, VOC, heavy metals and protozoan (giardia, cryptosporidium) down to 10 micron.

**WFRC11** 10"  
**WFRC12** 20"

Post-Tank Filters



**Triple Action Filter Replacement Cartridge (Slim)**

Pleated 15 micron filtration cartridges which reduces sediment, colour and odour.

**WFRW03** 10"  
**WFRW04** 20"



**Heavy-duty Sediment Replacement Cartridge (Slim)**

25 micron polypropylene, heavy-duty sediment filter which reduces scale, lime, rust, sand and other fine sediment.

**WFRC31** 10"  
**WFRC32** 20"



**Multi-Action Filter Replacement Cartridges (Large)**

Large capacity, activated carbon block filter which reduces colour, odour, chlorine, VOC, heavy metals and protozoan (giardia, cryptosporidium) down to 10 micron.

**WFRC13** 10"  
**WFRC14** 20"



**Triple Action GAC Filter Replacement Cartridge (Slim)**

10 micron polypropylene and granular activated carbon filter which reduces fine sediment, chlorine, taste and odour.

**WFRC21** 10"  
**WFRC22** 20"



**Heavy-duty Sediment Replacement Cartridge (Large)**

25 micron polypropylene, heavy-duty sediment filter which reduces scale, lime, rust, sand and other fine sediment.

**WFRC33** 10"  
**WFRC34** 20"

# Monitoring Gauges

Our monitoring gauges make it easy to monitor your rainwater tank level. Easy-to-read screens and reliable technology help you better understand your water consumption and take control of your water use.

## Product benefits

- Measure stored water at a glance
- Easy-to-read dial face with Empty and Full indicators
- No batteries or wiring required
- Utilises a reliable float system
- Suitable for all existing and new tanks
- Suitable for all vented tanks above- and below-ground up to 2.5 metres (100 inches) in height
- Able to be securely installed on a wide variety of tank shapes (dome-topped, flat, peaked)
- UV resistant

## APPLIES TO THESE RAIN HARVESTING STEPS

- ① Limit sources of contamination
- ② Plan for volume
- ③ Filter leaves and debris
- ④ Divert the first flush
- ⑤ Secure the system
- ⑥ Manage standing water
- ⑦ Consider a safety net
- ⑧ Monitor and maintain



## Monitoring Gauges



### Tank Gauge

Monitor your rainwater supply with this easy-to-read, tank-top water level indicator.

TATG02

# Rainwater Tank Accessories

Our range of rainwater tank accessories help you finish building a rainwater harvesting system that delivers cleaner rainwater and lots of it.



Photographer credit: Christopher Frederick Jones

## Vent Cowls

Improve ventilation in your rainwater tank to increase your water's oxygen content and prevent stagnation with our vent cowls range.

### Product benefits

- Improve ventilation and oxygen circulation in your rainwater tank
- Increase oxygen content in stored rainwater to prevent stagnation
- Promote more efficient water flow
- Mosquito-proof 0.955mm aperture stainless vent screen

### APPLIES TO THESE RAIN HARVESTING STEPS

- ① Limit sources of contamination
- ② Plan for volume
- ③ Filter leaves and debris
- ④ Divert the first flush
- ⑤ Secure the system
- ⑥ Manage standing water
- ⑦ Consider a safety net
- ⑧ Monitor and maintain



### Vent Cowl

Mosquito-proof and designed for easy installation onto pipe.

- TAVC03** 50mm  
**TAVC01** 100mm



### Vent Cowl Weatherproof

Mosquito-proof, with a removable cap to prevent the entry of sunlight that promotes algae growth and a flange for easy installation.

- TAVC10** 50mm  
**TAVC11** 100mm

## Gutter Outlets

Extend the life of your gutters and improve water flow with these easy-to-install below-the-gutter gutter outlets.

### Product benefits

- Reduce snags and water pooling around the gutter outlet
- Reduced gutter corrosion associated with water pooling
- Reduce opportunities for mosquitoes to breed
- Attach to multiple gutter shapes and downpipe sizes
- Paint to match your downpipes or gutters

### APPLIES TO THESE RAIN HARVESTING STEPS

- 1 Limit sources of contamination
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- 8 Monitor and maintain



### Gutter Outlet Round

- GSGO01 75mm
- GSGO03 90mm F
- GSGO04 90mm M
- GSGO09 100mm



### Gutter Outlet Rectangular

- GSGO07 100x50mm
- GSGO08 100x75mm



### Gutter Outlet Half Round

- GSGO05 90mm
- GSGO06 100mm

## Auto Tank Vacuums

Automatically remove sediment from the bottom of your tank to improve your rainwater quality and prevent sediment resuspension with our auto tank vacuums.

### Product benefits

- Automatically vacuums the sediment off the bottom of the tank in the area of the outtake pipe every time the tank overflows - clean the base of your tank without sacrificing stored water
- Customise your pipe length to suit your tank height
- Improve stored rainwater quality
- In kit form for easy installation

### APPLIES TO THESE RAIN HARVESTING STEPS

- 1 Limit sources of contamination
- 2 Plan for volume
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### Auto Tank Vacuum Concrete

Suitable for installation on concrete tanks.

- TAVK02 90mm



### Auto Tank Vacuum Flat wall

Suitable for installation on flat wall tanks.

- TAVK03 90mm

# Blue Mountain Co

## GUTTER MESH

Gutter mesh can be installed over your gutters to help keep leaves, vegetation and pests out of your Rain Harvesting system. This reduces opportunities for animal-borne contamination, sediment build-up and leached tannins, limits fuel for anaerobic fermentation and prevents blockages so you can collect better quality water and more of it.

### APPLIES TO THESE RAIN HARVESTING STEPS

- ① Limit sources of contamination
- ② Plan for volume
- ③ Filter leaves and debris
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- ⑦ Consider a safety net
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Sold in all-inclusive kits for easier installation, our extensive range includes gutter mesh made from both aluminium and steel. By providing you with more choice and with a range of different apertures (hole sizes), we make it easier to match the right mesh to your property so you enjoy greater peace of mind and years of hassle-free gutters.



2mm Steel Gutter Mesh



4mm Steel Gutter Mesh



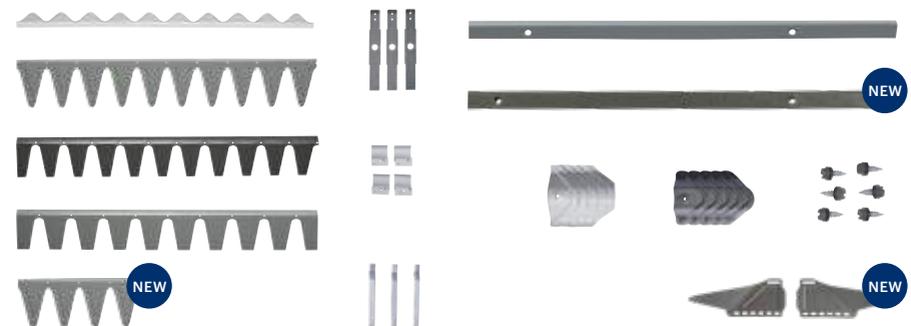
5.4mm Steel Gutter Mesh



4mm Aluminium Gutter Mesh

### COMPONENTRY

The unique suite of componentry developed by Blue Mountain Co is the reason our gutter mesh can be fitted to an array of roof types.



To find the product that's right for you, use our simple online tool - MeshMatcher™ [meshmatcher.com.au](http://meshmatcher.com.au) or call (07) 3248 9600

# Rain Harvesting Design Service™

Improve your existing rain harvesting system or design a new one with the help of our Rain Harvesting experts and our free system design service

## Why should you do it

Our Rain Harvesting specialists have the experience and technical knowledge necessary to help you design a Rain Harvesting system that delivers cleaner rainwater and lots of it.

This tailored, in-depth service will provide you with a comprehensive Rain Harvesting system design for your property and is available for free.

## What's involved

Simply complete the online Rain Harvesting Design Service form which captures your needs and system requirements. Share as much information as you have available and don't be concerned if you can't answer all the questions. Our Rain Harvesting experts are also available on (07) 3248 9600 to discuss your system and any special requirements you have.

## What you'll receive

Our Rain Harvesting experts will review your system and needs to determine your optimum Rain Harvesting design. Your design will be documented in a comprehensive report that includes all the information you need to install and maintain your system.

Simply visit [rainharvesting.com.au](http://rainharvesting.com.au) to request your free system design or call +61 (0)7 3248 9600.





The 4 Pillars of Rain Harvesting System Design outline a process for creating the right Rain Harvesting system for you, or for improving your existing one. No matter where you live or what you use your rainwater for, these pillars will empower you to design a Rain Harvesting system that delivers cleaner rainwater and lots of it for use in and around your property.

Visit [rainharvesting.com.au](http://rainharvesting.com.au) or contact us +61 (0)7 3248 9600 for more information and expert assistance to design your Rain Harvesting system.

**Disclaimer**

You acknowledge and agree that the information, data, advice, opinion, plan or other thing (Material) provided to you by Rain Harvesting Pty Ltd (ABN 11 113 300 093) (we, us, our) is provided "as is" without any representation, warranty, indemnity or guarantee as to the performance, accuracy, timeliness, completeness, merchantability or fitness of the Material for any particular purpose or application. The Material may contain errors, mistakes, inaccuracies and may not be complete. We expressly exclude any liability for such performance, accuracy, timeliness, completeness, merchantability or fitness of the Material for any particular purpose or application, to the maximum extent permissible by law. Unless we expressly specify otherwise, we disclaim all responsibility and liability for any third party provided advice or provision of services, or failure to advise or provide services. The disclaimers above are subject to the rights, warranties, guarantees and remedies relating to the provision of services that you have under, and that cannot be excluded, restricted or modified under, the Australian Consumer Law. For more information, please see our Services Purchase Terms at [www.bluemountainco.com.au](http://www.bluemountainco.com.au)

# RAIN HARVESTING

by Blue Mountain Co

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