

Environmentally Sustainable Design and Energy Efficiency Information Sheets

Information Sheet – Water Efficiency and Usage

A well designed dwelling or addition helps to reduce water usage, finds ways to take advantage of water that is captured on site, and can assist with improving water quality for water which flows back into our important waterways.

Water Sensitive Urban Design (WSUD)

Water Sensitive Urban Design (WSUD) integrates water cycle management into the built environment (ie. into planning, design and construction).

Water Sensitive Urban Design recognises that all water streams in the water cycle are valuable resources including rainwater (collected from the roof), runoff (including stormwater, collected from all impervious surfaces), potable water (drinking water), groundwater, greywater (water from bathroom taps, showers and laundries) and blackwater (from toilets and kitchen sinks). Some examples of WSUD measures are outlined below.

Rainwater Tanks

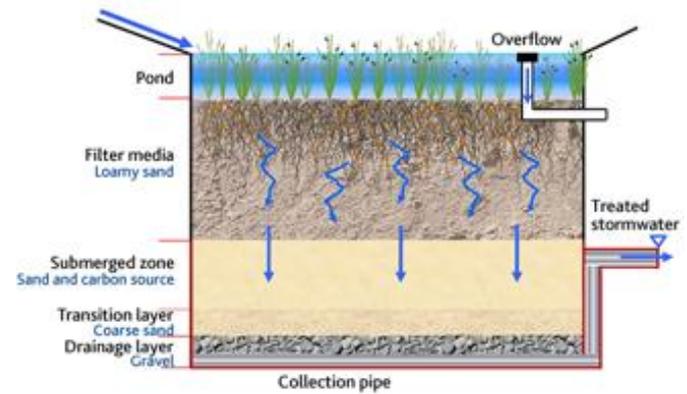
- The purpose of a rainwater tank is to collect and store stormwater captured from roofs, downpipes and gutters.
- Rainwater tanks have become a common site across Victoria in recent years, and they come in a range of shapes, sizes and colours
- Rainwater tanks enable the conservation of mains water
- Their installation can help to reduce water bills through water reuse
- Rainwater tanks help to treat stormwater and protect local streams from pollutants which are produced from residential uses
- Tank water can be used to water gardens, wash clothes and flush toilets, which assists with reducing the demand on drinking water



Raingardens

- Raingardens are specially designed garden beds that use plant and soils to help with the capturing, filtering and cleaning of stormwater
- They assist with minimising stormwater runoff to stop pollutants entering our waterways
- Raingardens have layers of mulch, planting (native plants work well, but any species can be used) and soil, with a drain underneath to reduce flooding risk
- Raingardens work in the following manner (Source: Melbourne Water):
 - Water collects and settles on the garden surface
 - Water soaks through the plants and filter media, trapping rubbish and sediment on

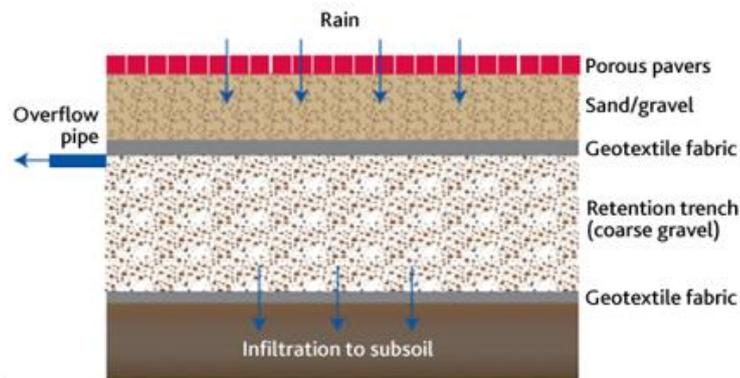
- the surface
 - Plants use the nutrients in the stormwater, and toxins stick to the soil
 - The soil and plant roots work together to naturally filter the water and remove pollutants
- Rainwater gardens can come in different forms including planter boxes, in-ground, swale, and vegetable gardens



Source: Melbourne Water

Porous paving

- Paved surfaces including roads, footpaths, driveways and courtyards cover a significant area within our environments
- A lot of these surfaces are 'impervious', which means that rainwater can not pass through them into the ground below. Instead, it runs off into the stormwater, carrying pollutants into our waterways and putting additional pressure on the stormwater system.
- To stop this occurring, we need to reduce the amount of 'impervious surfaces' by incorporating porous paving, which comes in a range of styles and finishes (ie asphalt, modular pavers that are concrete, ceramic or plastic)



Porous paving layers

Source: Melbourne Water