Stormwater Garden

Research within South East Queensland catchments have shown urban stormwater runoff to be one of the main causes of reduced water quality in our local waterways and Moreton Bay. Over the next 20 years an additional one million people are expected to move to South East Queensland. Continuation of traditional urban development practices as the population increases will result in further degradation of the regions' waterways.

What is Water Sensitive Urban Design?

Water Sensitive Urban Design (WSUD) is a philosophy of planning and designing urban developments to allow the stormwater system to more closely match Brisbane's natural water cycle. In Brisbane, WSUD consists of a range of approaches that can be integrated to:

- protect waterway health by improving stormwater quality and reducing run-off
- minimise undesirable urban flooding
- provide habitat for native wildlife
- slowdown stormwater, reduce high flows and decrease erosion of the waterways
- increase the options for reuse, which in turn decrease the demand on potable water.

Water Sensitive Urban Design is another way Brisbane City Council is achieving our vision for the city's future.

What is a Stormwater Garden?

A Stormwater Garden is an element of WSUD that captures stormwater from the road in a recessed garden bed. This slows the flow rate, allowing the water to infiltrate vertically through the garden where it is filtered and cleaned by natural environmental processes (e.g. soil filtration). The clean water is then allowed to flow on into our waterways and Moreton Bay.
Making Brisbane a Water Smart City

How does it work?

Stormwater Gardens treat stormwater through a process called "biofiltration". Biofiltration allows stormwater to pond on top of a recessed garden, where it slowly filters through the garden bed (filter media). As the water flows through the filter media a combination of physical (detention and vertical filtration), biological and chemical (nutrient uptake and transformation) processes allow the contaminants to be filtered out. The clean water then flows out of the Stormwater Garden and into our waterways and Moreton Bay.

By using the physical, chemical and biological processes that occur naturally within the Stormwater Garden it more closely relates to the natural environmental processes that would treat the water as if it had landed on an undisturbed forested catchment. The processes help decrease the negative impacts of population growth and urbanisation on our waterways and Moreton Bay.

Why remove sediment and nutrients?

As the water flows off the road it collects sediment and other contaminants such as oil and petrol from leaking cars. Sediments, nutrients and contaminants that are washed off the road have negative impacts on our waterways and Moreton Bay.

Excess nutrients can cause algal blooms, which choke the waterways, and decrease biodiversity. Some algal blooms can also cause skin irritation to humans and other mammals. Sediment that gets washed into the bay can smother and kill many aquatic plants, including sea grasses, which provide a vital food source and habitat for many marine animals.

Preventing sediments, nutrients and general pollution entering the waterways and Bay helps create a clean and green Brisbane.

For more information on WSUD devices refer to Brisbane City Council’s Water Sensitive Urban Design guidelines on www.brisbane.qld.gov.au

You can help protect our waterways by:

- making sure that motor vehicles do not leak oil or other chemicals, such as brake fluid
- reducing the amount of fertilisers used in your garden
- composting grass clippings and garden waste in a compost bin
- designing your garden to minimise stormwater run off by directing rainfall onto garden beds and lawn where it can soak rather than flowing directly to the stormwater system
- minimising the area of bare ground in the garden by planting ground covers such as lawns, shrubs and trees to prevent your topsoil being washed into waterways
- reporting any spillage of chemicals or oils, whether accidental or deliberate, to Council on (07) 3403 8888.

For more information visit www.brisbane.qld.gov.au or phone Council on (07) 3403 8888.