



Water Sensitive Urban Design (WSUD) improving Stormwater Management using:

Home & Business stormwater options

Aim of Water sensitive urban design (WSUD): is to manage urban stormwater as a resource and protect receiving waterways and aquatic ecosystems from stormwater pollution. WSUD involves the use of infrastructure, landscape or garden features to improve stormwater quality and reduce an excessive amount of stormwater entering our waterways.

Better stormwater management options

There are a number of ways to re-use or treat stormwater around the home or business.

Some options include:

- **Water tanks**
- **Permeable paving**
- **Rainwater gardens, wetlands or ponds**
- **Stormwater soakage trenches and pits**
(if site suitable for infiltration measures)
- **Biofiltration systems (basins or swales)**
- **Vegetated roof, swales or buffers**

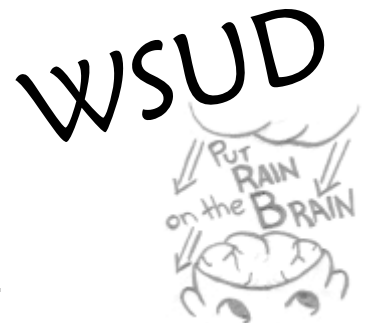


Figure. Example of a vegetated swale (instead of a drain)

Will this improve my life & environment?

YES! some of these options will:

- Reduce potable water use
- Prevent pollutants entering our waterways
- Reduce excess stormwater flow from your property
- Create a water smart garden that can be easier to care for.



What options work best?

This depends on the desired water quality outcome or captured water use, site constraints e.g. space, steepness, soil properties, rainfall, and what is allowed in your area) & your budget. Some options can be more easily retrofitted into an older home (e.g. water tank), whilst others are major structural elements (e.g. vegetated roof) that need careful design.

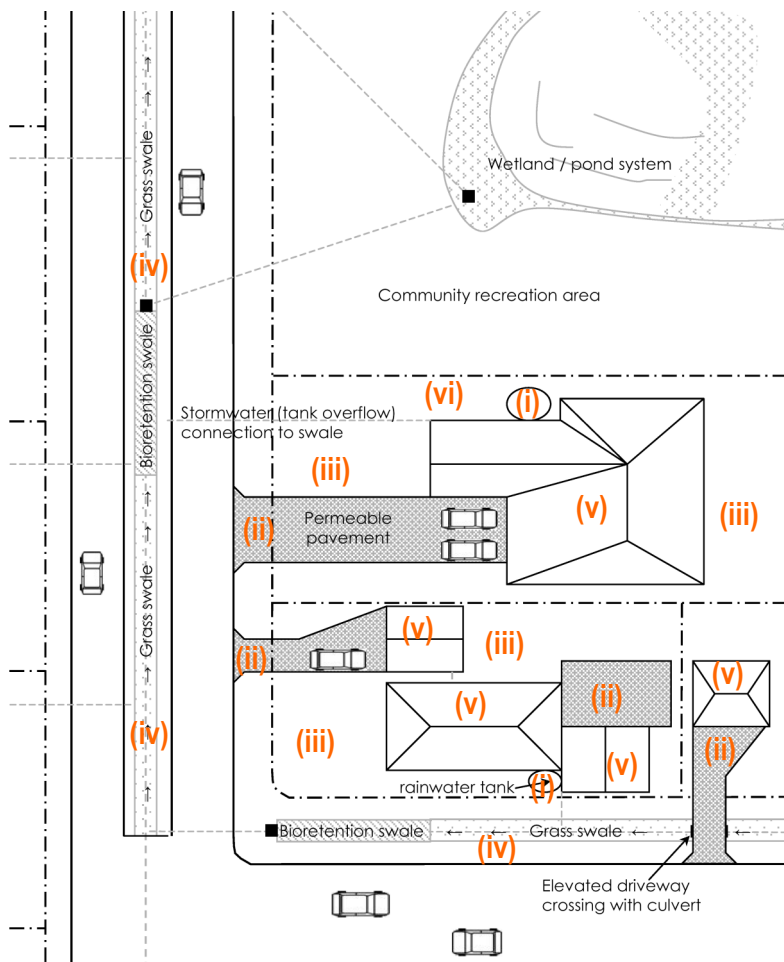


Figure. An aerial plan view of an urban area with WSUD features. These include:

i) **Water Tanks** such as this stream-line model.



ii) **Permeable Paving** On driveway surface to let water soak into the soil.



iii) **Rainwater Gardens** Great way to use rain off your roof if rain water tanks are undesirable.



iv) **Vegetated Swales & Biofiltration Systems** Stormwater runoff from the properties and roadways is being conveyed and treated in grass swales and biofiltration swales.



v) **Green roof top gardens** A dramatic way to build, that uses the rain falling on top of the building.



http://en.wikipedia.org/wiki/Image:Green_Roof_at_Vend%C3%A9e_Historial%2C_Jes_Lucas.jpg

Detailed design information for WSUD Engineering Procedures for Tasmanian conditions can be downloaded from:
<http://www.derwentestuary.org.au/index.php?id=9>

Acknowledgement: Most of the photos are from the *WSUD Engineering Procedures: Stormwater (Melbourne Water 2005)*

The Derwent Estuary Program (DEP) is a regional partnership between local governments, the Tasmanian state government, commercial and industrial enterprises, and community-based groups to restore and promote our estuary. The DEP was established in 1999 and has been nationally recognised for excellence in coordinating initiatives to reduce water pollution, conserve habitats and species, monitor river health and promote greater use and enjoyment of the foreshore. Our major sponsors include: Brighton, Clarence, Derwent Valley, Glenorchy, Hobart and Kingborough councils, the Tasmanian state government, Southern Water, TasPorts, Hydro Tas, Norske Skog Boyer and Nyrstar Hobart Smelter.

For further enquiries please contact your local council or visit the DEP website www.derwentestuary.org.au



Derwent Estuary Program