

Water Sensitive Urban Design

How do I use Water Sensitive Urban Design on my site?

The Council has asked you to use Water Sensitive Urban Design (WSUD) in your building project and you're not sure what to do. Is your site fairly small or will your building take up most of the land? You can still use Water Sensitive Design if you plan early enough in your project design.

Read the other Council fact sheets and information about Water Sensitive Urban Design. This will make it easier to understand what is being asked of you. The Council can provide further assistance on how to select and size the WSUD most appropriate for your site and project design.

Water Sensitive Urban Design for roof areas

For almost any development, one of the simplest solutions is to use a rainwater tank to collect roof water, then to use this water for toilet flushing. This also provides a great way to save water and helps you meet any requirements for reducing use of the mains, potable water supply.

For residential development, a separate rainwater tank can be supplied to each dwelling so that there is clear ownership of the tank. This idea also works well for free standing or attached commercial and industrial buildings. The tank can be sized so that virtually all of the roof water is used for sanitary cisterns with a top-up from the mains supply when there is less rain or when demand is greater than supply.

Rainwater tanks can also be used in high rise buildings, but the supply of rainwater from the roof is likely to be less than the total demand from all toilet use. A larger tank is also usually required (or several smaller tanks) because of the size of the roof area for most high rise buildings.

If you don't want to use a rainwater tank, there are other solutions. These will be the same as the solutions described for outdoor areas.



Water Sensitive Urban Design for outdoor areas

Using Water Sensitive Urban Design to treat the stormwater from outdoor areas is very flexible and offers great design choice. The most effective treatment in Moreland will be gained from using a bioretention system (also called a bioretention cell). The system is built into the landscape design like any other design element and can be placed above or below ground (above ground placement is essential when there is no underground storm water pipe to connect to). The system can be constructed to the Council's standard design drawing using off-the-shelf products, and all the stormwater to be treated by the system is drained to it.

Landscape planting is part of a bioretention system and helps remove pollutants. The size of the system will depend on the size of the area from which the stormwater is collected and drained to the system.

Other options for outdoor areas include grass swales, infiltration (generally not well suited for use in Moreland) and mini wetland systems. Each of these systems works differently on stormwater pollutants. Any combination of elements can be used in your landscape design.