

Introduction to Water Sensitive Design

The water sensitive design (WSD) section of the Great Lakes Development Control Plan (Chapter 11) was developed in order to reduce the impact of stormwater on waterways in the MidCoast Council local government area.

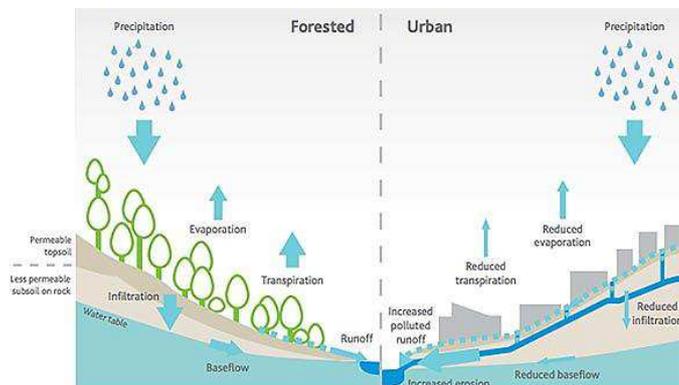
Why do we need water sensitive design?

Rain events result in stormwater that flows over hard surfaces fast tracking untreated water carrying pollutants such as nitrogen, phosphorous, sediments, pathogens and heavy metals into our waterways.

Nitrogen occurs naturally in rainfall and in natural landscapes it soaks into the ground and is taken up by plants. However, in urban areas hard surfaces such as roofs, roads, driveways and footpaths direct nitrogen carrying run-off into our waterways.



Algae bloom fuelled by excess nutrient levels in Pipers Creek, Wallis Lake



Change in water cycle. Source: Melbourne Water

Nitrogen and other excess nutrients fuel algal blooms. Algal blooms can be unsightly, choke our waterways and limit fishing and swimming activities. Some algae pose a threat to human health. They also stop light reaching marine plants which need energy from the sun to survive.

Marine plants provide habitat for a healthy system. Key industries such as tourism, fishing and oyster growing rely on our rivers and lakes. Healthy waterways in turn support a healthy economy.

In 2009, the Great Lakes Water Quality Improvement Plan recommended that water sensitive design be incorporated into all new development. Raingardens have been selected as one of the most effective ways to reduce nitrogen and sediment loads. The raingardens act as a filter to achieve the goal of improving the quality of stormwater run-off before it enters our waterways.



Woolworths Supermarket car park, Tuncurry: Raingardens constructed in commercial development in Forster-Tuncurry



Commercial business, Forster



Car Park Wallis Street, Forster: Upgrades to Council's car parks and other infrastructure incorporate water sensitive design



Pipers Bay raingarden, Forster: One of many raingardens constructed on Council land treat nutrients from existing urban areas

More information on how water sensitive design is applied can be found in Chapter 11 of the Great Lakes Development Control Plan and other fact sheets on Council's website.

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