

CASE STUDY: Integrated Water Cycle Management

APPENDIX 4: Water Sensitive Urban Design

(extracted from *Info Sheet 5-5* of the *Porters Creek Wetland CD-ROM* available to Schools through Gosford and Wyong Councils).

This Info Sheet looks at possible solutions to these problems, using “Water Sensitive Urban Design” (WSUD).

What is Water Sensitive Urban Design?

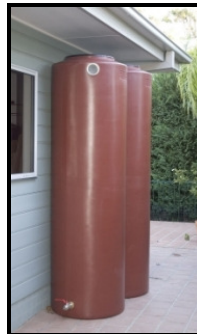
Water Sensitive Urban Design begins by recognising that rainwater is a valuable resource, not a waste product. If you design urban areas so that they use rainwater more efficiently and in much the same way as the original bushland, then you are using WSUD. Of course your new designs will only work if the people who live and work in the new suburbs do the right thing. This means that Water Sensitive Urban Design not only needs clever new design ideas, it also needs people who understand and manage it.

Techniques of Water Sensitive Urban Design

WSUD uses many different techniques such as rainwater tanks, porous paving, grass swales and constructed wetlands to capture, clean and recycle rainwater.



Porous paving



House tanks



Pebble swale

Some steps to follow in doing Water Sensitive Urban Design?

Step 1: Map the existing environment and investigate how rainwater flows through it.

Step 2: Draw a simple diagram that describes how rainwater behaves in your sub-catchment (stormwater engineers would make a mathematical model for this step).

Step 3: List the rainwater and stormwater objectives of your design

Step 4: List the developer’s objectives for your sub-catchment (i.e. how big is the subdivision and where is it will be placed, how many houses wanted, how many shops and car parks)

Step 5: Select the methods and devices you think will achieve your rainwater and stormwater objectives, e.g. rain tanks, gardens, absorption trenches, swales (stormwater engineers would use their model to select the best mix of these things).

Step 6: Create your water sensitive design for the subdivision.

Of course, in the real world, you also have to find investors to provide finance, a construction company to build it and home buyers to purchase it when it is finished. And only then will you be able to test it to see if it is really water sensitive.

