

Single Residential Development

1. Application

This development type applies to a single dwelling, or dwelling extensions, on a single title.

Usually a free standing home with associated yard space and ancillary buildings; e.g., sheds, garages, etc.



2. Objectives

- maintain availability of water during restrictions
- make more efficient use of water
- assist maintenance of garden / landscaping
- water supply for fire protection
- reduce flood risk
- prevent erosion
- improve water quality

3. Common Techniques

The following techniques are commonly used in water sensitive design strategies for single residential development. They are described in more detail in the relevant practice note.



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<i>Technique</i>	<i>Practice Note Reference</i>
Rainwater tanks	Practice Note No.1
Infiltration Devices	Practice Note No.2
Paving	Practice Note No.3
Landscaping	Practice Note No.4
Drainage Design	Practice Note No.5
Wastewater reuse	Practice Note No.6
Rain gardens & Bioretention Systems	Practice Note No.7
Vegetated swales and buffers	Practice Note No.8
Water Efficient Home (Fittings and Appliances)	Practice Note No.9

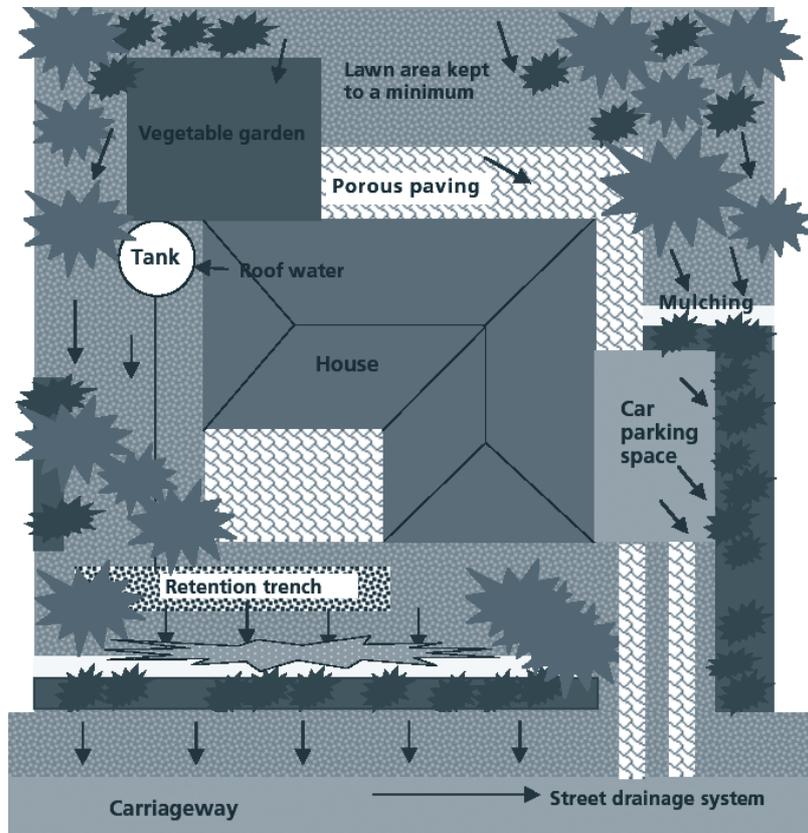
4. Site strategy

Any combination of the techniques (i.e., rainwater tanks, porous paving, filtration/ infiltration devices, landscape practices) listed above can be very effective at achieving the objectives mentioned above. For maximum effectiveness, these measures need to be carefully designed as part of an overall strategy that considers local site conditions.

The figure below shows a possible overall strategy for a typical suburban home. A rainwater tank supplies rainwater for toilet flushing, washing machine, and for outdoor use whilst water efficient fittings reduce mains water consumption elsewhere. During prolonged or heavy rain, water overflows from the rainwater tank to a retention trench. Stormwater runoff from paths, driveways and lawns is directed to garden areas. Excess runoff from impervious surfaces is directed to the retention trench, or overflows to the street drainage system.

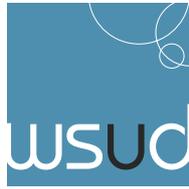
Landscape practices also influence selection of species to reduce water demand. Recycling greywater from washing machines, baths and showers could also water parts of the garden.





Example of an overall stormwater strategy for a typical suburban dwelling

Appendix A (Site Planning) provides more detail on how to prepare an integrated site plan that incorporates water sensitive design considerations.



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