



Water sensitive urban design

Litter and sediment traps

Summary

Litter and sediment traps are devices that retain 'gross pollutants' (litter and debris greater than 5mm) and coarse sediments (particles greater than 0.5mm). They are available in several configurations and designs and many are proprietary products.

This brochure is part of a series that explain various aspects of water sensitive urban design. Please see [Water sensitive urban design in Western Australia](#) for background information on water sensitive urban design.

Main benefits

- Litter and sediment traps capture gross pollutants and coarse sediments.
- They are used in piped systems and as pre-treatment to some structures such as constructed wetlands.
- They might be required to retrofit piped outlets to water bodies where overland flow is not possible due to site constraints.
- Litter traps are suitable for targeting high litter generation areas.

Design factors

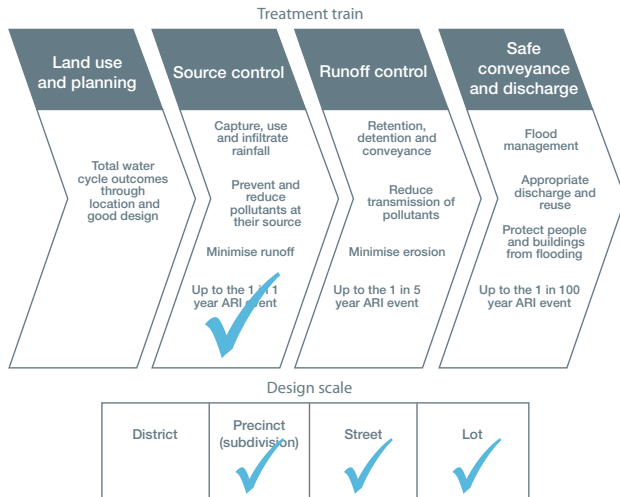
- Consider the possibility that trapped material may be remobilised during high flows.
- Public and occupational health and safety requirements should be met.

Target pollutants

- litter
- coarse sediment

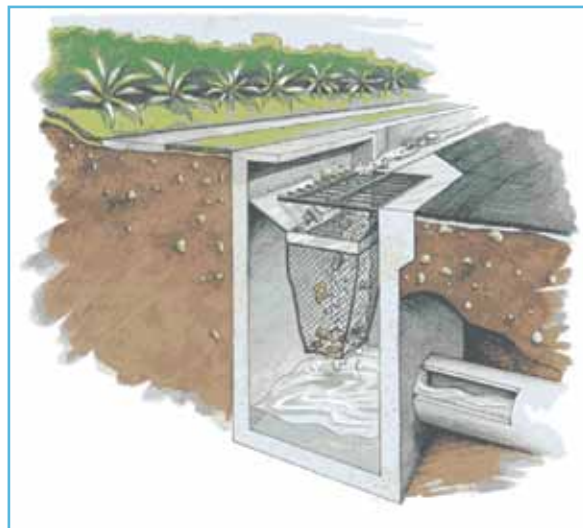
- The recommended steps for finding the optimum location of litter and sediment management systems are:
- Identify areas of high litter generation from field inspections, land-use maps and by consulting council officers and community catchment groups.
 - Determine the drainage pathways for each of these areas by examining drainage plans and through field inspections.
 - Determine whether an 'at source', 'in transit' or 'end of pipe' system would be most suitable for each area.
 - Select the areas where the most gross pollutants will be trapped per dollar spent on the project.

Where they can be used in the water sensitive urban design process



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Side entry pit trap – material trapped in basket for later removal



Release nets – netting installed on pipe outlets to collect litter



Gross pollutant traps require regular maintenance

Required reading

A guide to the selection of a stormwater pollutant trap, 2006, JDA, report prepared for the Foundation for the Technical Advancement of Local Government in Western Australia.

Australian runoff quality: a guide to water sensitive urban design, 2006, Engineers Australia, available at <www.arq.org.au>.

Stormwater management manual for Western Australia, 2004–07, Department of Water, available at <www.water.wa.gov.au>. See Section 6.1 of Chapter 9 – Structural controls.

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