



Our Harbour / Our Life / Our Future

DARWIN HARBOUR WATER SENSITIVE URBAN DESIGN STRATEGY



Water Sensitive Urban Design in New Development

New subdivision developments in the Darwin region all need to apply Water Sensitive Urban Design (WSUD) principles. This will mean:

- protecting natural creeks and other waterways on site;
- reducing potable water demand through measures such as water efficient fittings and appliances, rainwater harvesting and wastewater reuse;
- treating urban stormwater for reuse and/or discharge to receiving waters;
- matching the natural water runoff regime as closely as possible;
- minimising wastewater generation and treating wastewater to a standard suitable for effluent reuse opportunities; and
- integrating stormwater management into the landscape, creating multiple use corridors that maximise the visual and recreational amenity of the development.

New subdivision developments need to demonstrate that they can meet the objectives shown in the table to the right.

WSUD Objective	Performance Measure/Target
Potable Water Conservation	No quantitative potable water conservation objective has been specified, however a 20% water conservation target is considered technically feasible and is suggested as an interim target
Stormwater Quality	Stormwater discharged from development areas to be treated in accordance with best practice: <ul style="list-style-type: none"> • 80% reduction in the mean annual load of Total Suspended Solids (TSS) • 60% reduction in the mean annual load of Total Phosphorus (TP) • 45% reduction in the mean annual load of Total Nitrogen (TN) • 90% reduction in the mean annual load of Gross Pollutants
Waterway Stability	It is recommended that a waterway stability objective is not adopted at this stage. Further technical investigation is required to refine and test the practicality and achievability of the objective

Preparing a Water Sensitive Urban Design Strategy

When a development application is made for a new subdivision, a **Water Sensitive Urban Design Strategy** should be submitted with the development application. The WSUD Strategy should demonstrate how the WSUD objectives will be met in the new subdivision. Preparing a WSUD Strategy involves the following steps:

1. Establish the site context:

- Climate
- Natural capital
- Local ecology
- Landscape attributes (view lines, key site features)
- Physical infrastructure (within the site and the broader region)
- Development imperatives (e.g. demographic, density, land uses)

2. Interpret the physical setting, including the topography and drainage, geology, soils and groundwater, existing development

3. Establish key desirable outcomes / performance objectives, including objectives for the built and natural environment

4. Collaborate amongst an interdisciplinary team including urban planners, engineers, WSUD specialists and landscape architects to develop urban design and infrastructure solutions responsive to the above.

5. Critique and review solutions against key desirable outcomes (often competing uses of public open space)

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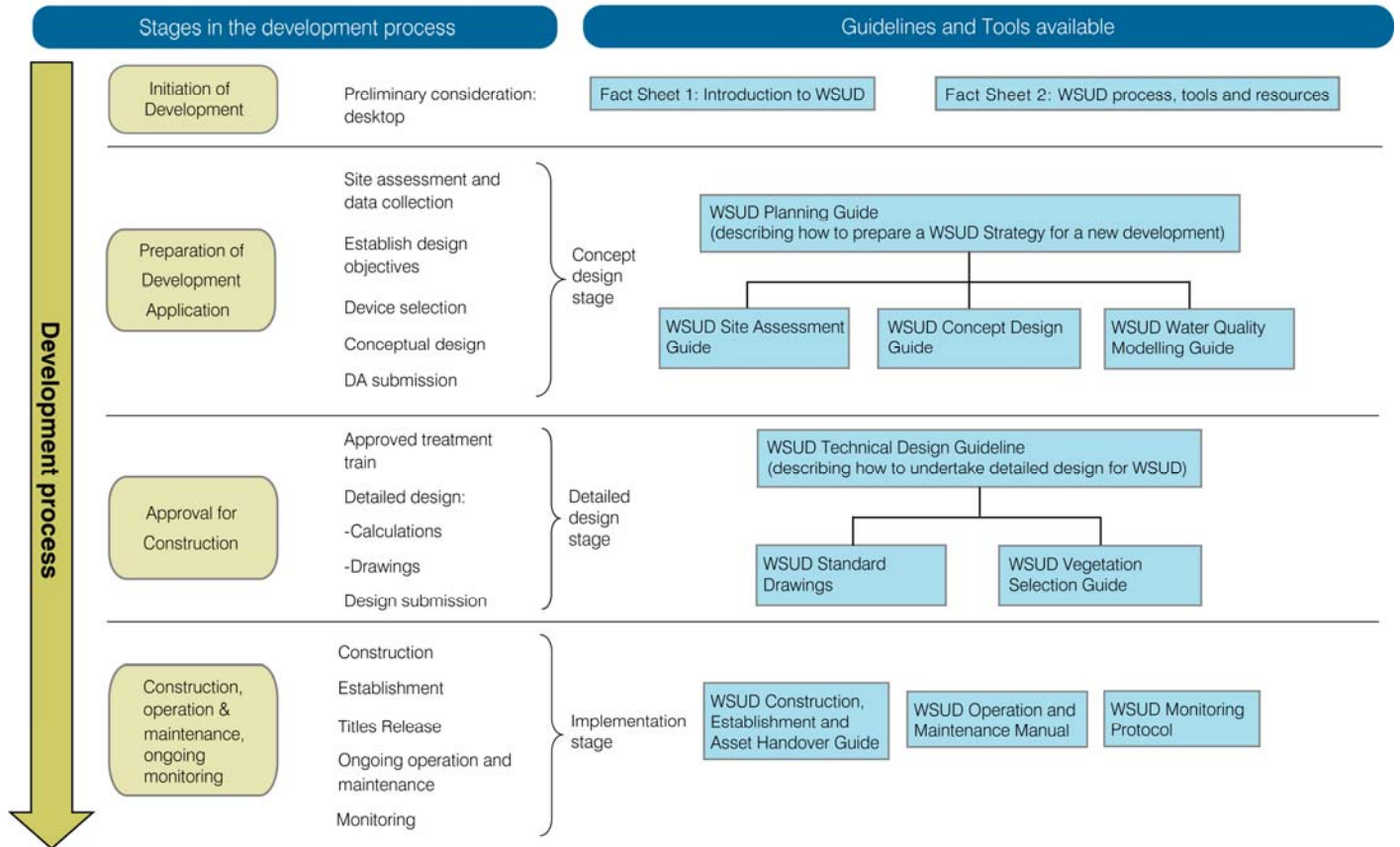
Water Sensitive Urban Design Tools and Resources

A set of guidelines and tools are being prepared to assist with the application of WSUD in new subdivisions. The guidelines and tools are intended to assist:

- Developers to understand what is involved in implementing WSUD in a new development
- Consultants to develop WSUD Strategies for new developments, then progress through concept and detailed design stages
- The Development Consent Authority/local council staff to assess development applications which include a WSUD component
- Local councils with ongoing operation and maintenance of WSUD elements such as wetlands and bioretention systems

The guidelines and tools are shown in the Road Map below.

Darwin Harbour WSUD Guidelines and Tools



Enquiries

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