



SEDIMENT TASK FORCE

BEST MANAGEMENT PRACTICES FOR SEDIMENT CONTROL



Department of Biodiversity,
Conservation and Attractions



SWAN CANNING
RIVERPARK



Perth NRM

Best Management Practices for Sediment Control

Subdivision and Building Approval Advice Note

Controlling erosion and sediment runoff from subdivision and building sites (including roads) should be a priority on your site. **It's the law!**

Government Authorised Officers inspecting construction sites can issue penalties of up to \$5,000 for individuals and \$25,000 for a corporate body for non-compliance with erosion and sediment control regulations.

Sediment management prevents soil from leaving construction sites. This most often occurs by the exposure of topsoil (or fill) and when stockpiles of builders sand are not well contained, as soil and sand can be carried offsite by wind, water or improper vehicle management. This can then be blown or washed onto roads and into drains during rain and storm events, polluting our wetlands and rivers.

Sediment controls can be up to 90% effective at reducing sediment runoff during normal conditions. The effectiveness of sediment controls reduces dramatically during storm events, so make sure your site is well prepared and your sediment controls are regularly inspected and maintained.

Latest research recommends measures to stop sediment escaping from construction sites

The Sediment Task Force commissioned the University of Western Australian (UWA)/CRC for Water Sensitive Cities to quantify sediment export during subdivision and building at Heron Park estate in Armadale, Perth. The key findings of the research were:

- An estimated 17,000 kg/ha of exposed sand was discharged from the 27.5 ha Heron Park site over the course of a year of average rainfall.
- There is little difference between sediment loss during lot development and the civil works stage (including house construction).
- Across the site, the measured sediment discharge rate amounted to a total of 460,000 kg (290 m³) in 2017, and 306,000 kg (190 m³) in 2019.
- This volume of builders sand has a wholesale cost of \$5,000 – \$7,500 per annum but can cost up to \$60,000 to remove from waterways and stormwater drains.
- There is a continual low-level release of sediment in drains under baseflow conditions.
- Vegetated drains remove sediment under storm event conditions.

The research highlights the need for active management of sediment during all phases of land development, from initial earthworks, through to civil works, landscaping and finally house construction.

Management practices that prevent both air- and water-borne sediment loss should be implemented and the rapid, temporary revegetation of exposed soil, or retention of natural vegetation, is recommended at all stages of development.

Best management practices (BMPs) for effective management of soil erosion

Erosion control is the cheapest control technique and achieves the best outcomes. Refer to best practice documents including Australian Standards, policies, codes and guidelines and ensure that EVERYONE working on your site understands how important it is to prevent soil erosion and stormwater pollution and to report potential problems to site management for immediate action.

The table below outlines best management practices (BMPs) recognised as providing effective management of water-borne sediment erosion in Western Australia, and the stage at which they are generally most effective. (Modified by UWA 2020; from Essential Environmental Services, 2010; updated May 2021 as per advice from Ryan Hunter, Sediment Task Force representative for the Urban Development Institute of Australia (WA)).

Best management practice	Subdivision – site clearing and bulk earthworks	Subdivision – infrastructure and lot construction	Development – building construction
Minimise clearing of natural vegetation, taking into consideration site constraints and construction methodologies			
Use of a water cart during construction			
Construction period/earthworks programmed for periods of lower stormwater runoff ^[1]			
Monitoring of dust emissions			
Works undertaken so that a minimum amount of ground is disturbed at any one time, taking into consideration site constraints and construction methodologies			
Perimeter fencing of the works area, with windmesh attached			
Brushing on steep slopes where practicable following the completion of works; revegetation or seeding is preferred practice			
Hydro-mulching following completion of works or during periods of dormancy (if vacant land for less than 3 months only; seeding often used instead as it provides longer term soil/sand stability)			
Seeding			
Replacement of topsoil to encourage revegetation			
Temporary surface water management measures including sediment basins			
Signs and fencing restricting access			
Regular street sweeping			
Stabilised and controlled vehicle access			
Location and protection of stockpiles (e.g trenching of stockpiles subject to wind erosion)			
Verge cover			
Geotextile sausage/socks			

^[1]Essential Environmental Services (2010) recommended that land disturbance be undertaken during times with low winds, to minimize wind-borne sand erosion. This recommendation has been adapted by UWA for management of water-borne sediment erosion.

Further Information (including “how to” best practice management advice)

[CRC for Water Sensitive Cities: Heron Park case study](#)

[Perth NRM: Sediment Task Force](#)

[International Erosion Control Association \(Australasia\)](#)

[IECA \(Australasia\) - Best Practice Erosion and Sediment Control \(BPESC\) Document](#)

[Healthy Land & Water](#)

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[IECA \(Australasia\) - Environmental Excellence Awards](#)



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The Sediment Task Force is funded by the Department of Biodiversity, Conservation and Attractions (DBCA)
and supported by Perth NRM