

Protect Service Trenches & Stockpiles



What is it?

When excavated, service trenches can concentrate runoff and cause rapid soil erosion. This fact sheet discusses methods to install service trenches in a manner that does not cause soil erosion.

Temporary stockpiles are at risk of being washed or blown away. This fact sheet discusses proper on-site storage of materials such as sand, gravel, topsoil, mulch and woodchips.

Why is it important?

Sediment generated from erosion on building and construction sites can be a major source of pollution to local waterways. Follow the practices discussed in this fact sheet and you will minimise erosion from your site, meet your legal requirements and help protect our waterways.

Fact Sheet 9

WHAT DO I NEED TO DO?

Before starting site works:

Service trenches: if your site has fine soil, protection measures may be needed. Decide where the service trenches will need to go and document them on your Soil and Water Management Plan (if required) (see **Fact Sheet 3**). Ideally they should be away from areas where water flow is likely to concentrate. Where possible coordinate the various service connections so a single trench can be used and quickly backfilled. Also try scheduling the work when rainfall is low. Be aware if you have dispersive soil (see **Fact Sheet 4**).

Stockpiles: avoid stockpile loss and stormwater pollution by limiting the amount of material on-site and remove all materials when work is complete. Identify a protected storage area for building material stockpiles away from on-site drainage or stormwater flow paths. Place control measures such as diversion drains up-slope or sediment fences down-slope. Cover the stockpiles with fabric, plastic or a temporary grass cover. Drivers delivering stockpile material should always use the protected storage area as the drop-off. Document your storage area on the Soil and Water Management Plan (if required) (see **Fact Sheet 3**) and ensure staff are aware of its importance.

Note: Don't stockpile sediment or building materials (sand, gravel, mulch) on roadways or within drainage areas.

Installing the control measures:

Service trenches:

- 1) Remove and store vegetated topsoil so it can be replaced after works to provide immediate erosion protection.
- 2) Place the soil on the uphill side of trenches to divert water flow away from the trench line. Temporary bunds can be used.
- 3) The trench should be open for the shortest time practicable and avoid opening them when the risk of rainfall is high.
- 4) Once completed, backfill trench with subsoil and compact.
- 5) Replace top soil, level and top up to account for soil settling.
- 6) If trenches are on steep slopes, install earthbanks along the backfill surface at 6 metre intervals to divert flows and prevent erosion.
- 7) Excess soil should be used or disposed of in such a way that it does not create a wind or water erosion hazard.

Stockpiles:

- 1) Locate stockpiles at least 5 metres from stormwater flow paths, roads and hazard areas.
- 2) Place on gently sloping ground (not level areas which tend to be overland low paths) as a low, flat, elongated mound.

- 3) Stockpiles should preferably be less than 1.5 metres high.
- 4) Construct an earth bank on the up-slope side to divert runoff around the stockpile and install a sediment fence 1–2 metres down-slope of the stockpile. The height of the sediment fence should be equal to the stockpile height and the length equal to the stockpile length at the base.
- 5) Stockpiled materials should be covered during windy conditions, rain or unattended periods. Topsoil stockpiles left for extended periods should be revegetated.

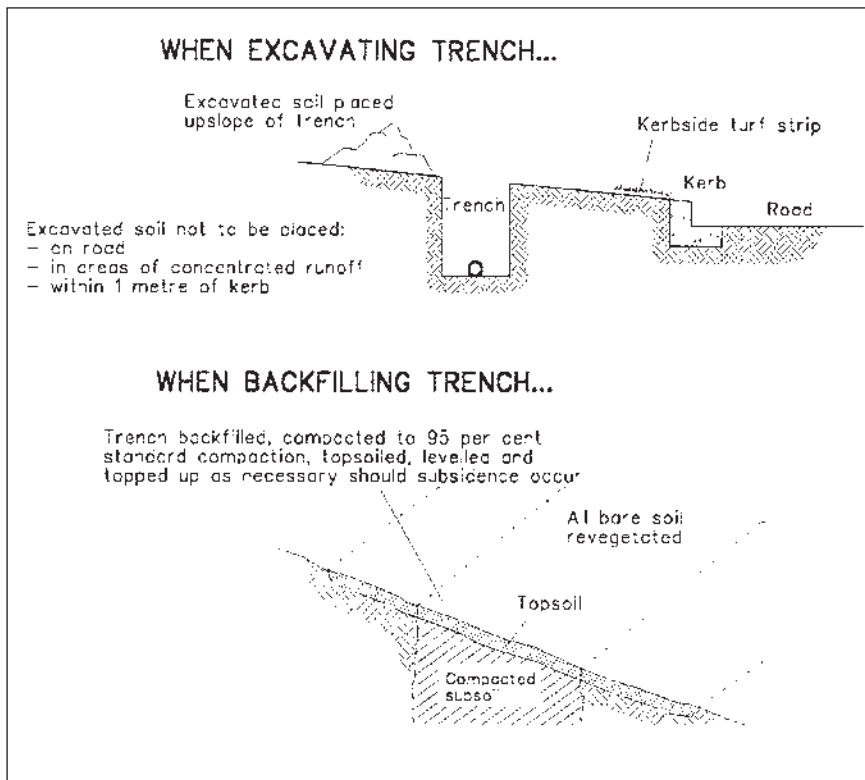


Figure 9A: Example of a service trench.

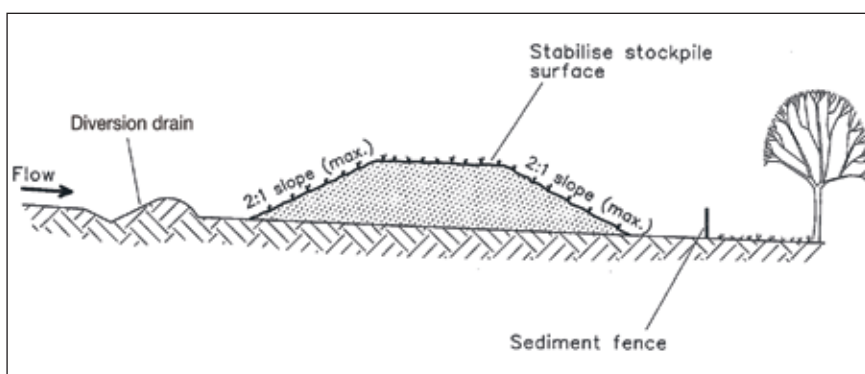


Figure 9B: Keep building materials in protected stockpiles.

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2. Soil & Water Management on Standard Building & Construction Sites
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4. Dispersive Soils – High Risk of Tunnel Erosion
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10. Early Roof Drainage Connection
11. Scour Protection – Stormwater Pipe Outfalls & Check Dams
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15. Protection of Stormwater Pits
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Remember:

Everyone working on building and construction sites has a responsibility to prevent pollution. If you do have an accident and pollution occurs you are required by law to notify the site supervisor. If the site supervisor cannot be contacted, workers should immediately notify the local council so they can work with you to minimise any harm to the environment.

Acknowledgement:

Text in this brochure has been obtained and modified from the "Do It Right On Site" brochure series, kindly provided by the Southern Sydney Regional Organisation of Councils. Figure 9A from the NSW Department of Housing as in Hobart Regional Councils 'Guidelines for Soil & Water Management 1999'. Figure 9B from Landcom 2004 "Soils & Construction Volume I Managing Urban Stormwater (4th edition)".

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Maintaining the control measures:

Service trenches: if they fill with water, pump water evenly over a stabilised vegetated area that will filter out the suspended clays. If this is not possible, add a small amount of gypsum to the water and allow the suspended clays to settle before pumping the water out.

Stockpiles: should be covered and checked regularly. Sediment and erosion controls (diversion drains and sediment fences) associated with stockpiles also need to be monitored and maintained.