

Sediment Fences & Fibre Rolls



What are these?

Sediment fences and fibre rolls are sediment control measures installed across slopes or along the perimeter of building and construction sites. Fibre rolls are a range of organic products (coconut fibre, straw, flax) that are rolled into large diameter logs. Sediment fences are vertical barriers made from woven geotextile that are held in place by star pickets and a backfilled trench.

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 control sediment run-off from your site, meet your legal requirements and help protect our waterways.

WHAT DO I NEED TO DO?

Fibre Rolls: are log-like products commonly consisting of biodegradable fibres. They vary from biodegradable rolled coir (coconut fibre) and hessian socks filled with straw or mulch, to non-biodegradable geotextile tubes filled with mulch or straw. Biodegradable fibre rolls can be left permanently onsite to assist stabilisation and will support vegetative growth if left in place.

Sediment fences: are a commonly used sediment control measure constructed from heavy-duty geotextile. Although a sediment fence looks like shade cloth it is very different (shade cloth is not appropriate because it cannot slow water flow enough to adequately pond water up-slope of the fence and allow sediment to settle under gravity).

Before starting site works:

Identify drainage flow pathways that will intercept runoff from the site. Decide whether to use fibre rolls or sediment fences. Use fibre rolls at the base of an embankment, on slopes that are exposed, or on vegetated slopes where vegetation is failing to control erosion. Sediment fences should be used on small drainage areas and placed down-slope of potential areas of erosion. Document these measures on your Soil and Water Management Plan (if required) (see Fact Sheet 3).

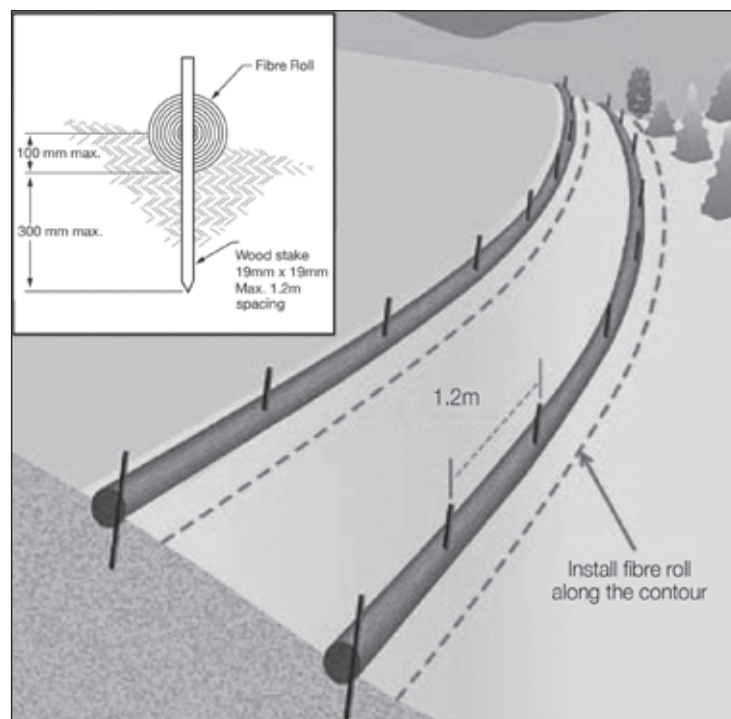


Figure 14A: Installation of fibre rolls

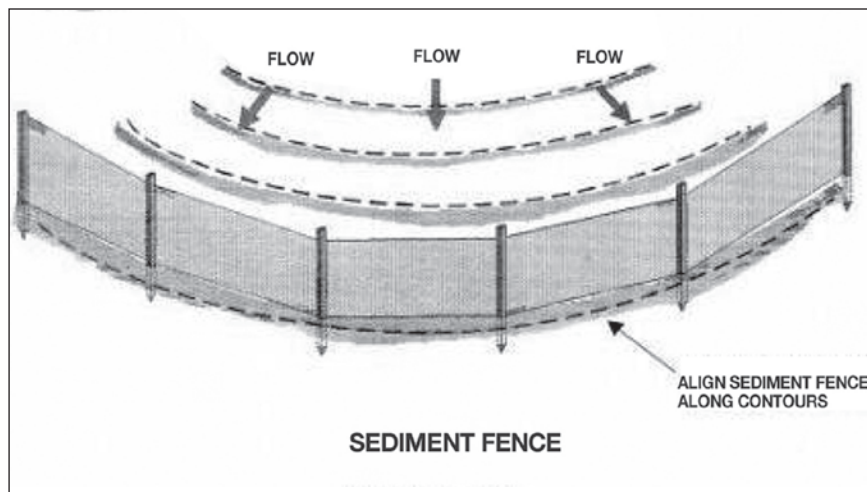
Fact Sheet 14

Installing the control measures:

Sediment control measures need to be in place prior to the start of site works. They can be altered after ground disturbance activities and if the site's drainage patterns change.

Installing fibre rolls:

- 1) Find a suitable installation site (if on a slope, place parallel to contours).
- 2) Remove large rocks and debris, and prepare a shallow concave trench (50–100 mm deep) to inset the fibre roll. (**Note:** Place excavated material on the upside of the fibre roll to prevent undercutting.)
- 3) Place the fibre roll in a shallow trench and stake through the fibre roll every 30 cm.
- 4) Place further stakes on both sides of the fibre roll to within 2 m from the end of the roll.



Installing sediment fences:

- 1) Survey and mark out location of sediment fence, ensure it is parallel to the contours of the site.
- 2) Dig a 150 mm trench immediately above the proposed fence line.
- 3) Place the bottom of the fabric to the base of the trench and run fabric up the down-slope side of the trench.
- 4) Backfill the trench and compact to secure anchorage of the fabric.
- 5) Drive 1.5 m star pickets into ground, 2 m apart to support the sediment fence fabric. Tension and fasten fabric to pickets using UV stabilised zip ties or wire ties.
- 6) Join sections of fabric at a support post with a 2 m overlap.
- 7) Angle the ends of the sediment fence upslope to reduce scouring.

Don't place sediment fences across creeks or major drainage lines.

Maintaining the control measures:

Fibre rolls and sediment fences should be checked regularly, especially after every rain event and cleaned or repaired. For sediment fences check that all the pickets and the bottom of the fence are secure and that there are no tears in the fabric.

List of fact sheets

1. Soil & Water Management on Large Building & Construction Sites
2. Soil & Water Management on Standard Building & Construction Sites
3. Soil & Water Management Plans
4. Dispersive Soils – High Risk of Tunnel Erosion
5. Minimise Soil Disturbance
6. Preserve Vegetation
7. Divert Up-slope Water
8. Erosion Control Mats & Blankets
9. Protect Service Trenches & Stockpiles
10. Early Roof Drainage Connection
11. Scour Protection – Stormwater Pipe Outfalls & Check Dams
12. Stabilised Site Access
13. Wheel Wash
- 14. Sediment Fences & Fibre Rolls**
15. Protection of Stormwater Pits
16. Manage Concrete, Brick & Tile Cutting
17. Sediment Basins
18. Dust Control
19. Site Revegetation

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:

Figures I4A and I4B after California Regional Water Quality Control Board 1999 "Erosion & Sediment Control Field Manual".

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