

Weirs (or spillways)

Weirs (also known as letterboxes and/or windows) provide a controlled and safe outlet for water ponded behind the fence so it is not pushed over during large rainfall events.

The weir should be located so the crest (where the water flows over) is lower than the ground level at each end of the fence. Ensure the crest is at least 300mm above ground and 300mm wide. Securely tie a horizontal cross member (weir) to the support posts each side of the weir. Cut the fabric down the side of each post and fold the fabric over the cross member (in the direction of flow) and secure the fabric.

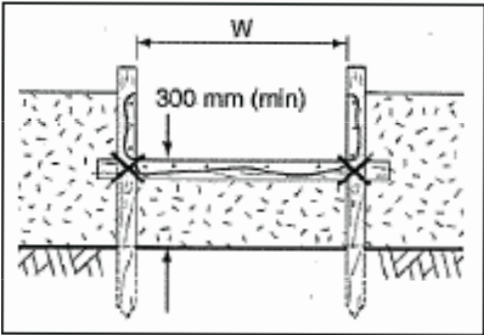


Diagram from Best Practice Erosion and Sediment Control, IECA, November 2008.



Environmental legislation and Council Development Consents

Under the *Protection of the Environment Operations Act 1997* (POEO), allowing sediment or sediment laden water to enter any waterway including street gutters, stormwater drains, swales or creek lines (flowing or not) is considered to be water pollution. Penalties and notices can apply with fines of up to \$5 million.

Council will enforce the POEO where necessary, however we endeavour to provide information about erosion and sediment control and encourage you to help us protect the Lake by reducing water pollution.

Non-compliance with the conditions of a Development Consent is a breach of the *Environmental Planning and Assessment Act 1979* and may also attract fines.

Further information

- Council’s website;
- the “Blue Book” - *Managing Urban Stormwater: Soils and Construction*, Landcom (2004) 4th Ed.;
- International Erosion Control Association (Australasia) (IECA) (free downloads) www.austieca.com.au;
- Call Council’s Erosion and Sediment Control Officer on 02 4921 0333; or
- Builders Pocket Guide www.bpg.co.nz (be aware that some practices outlined are not permitted in Lake Macquarie City Council area)

Acknowledgements and disclaimer:

This fact sheet contains information from Fact sheet 14 – *Sediment Fences and Fibre Rolls*, Derwent Estuary Program, December 2008, and Best Practice Erosion and Sediment Control, IECA, November 2008.

This fact sheet is for general information only and is not intended to cover every situation. It is not a regulatory document. Obtain your own independent professional advice.

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FACT SHEET 8H
SEDIMENT FENCES FOR SMALL SITES (<2500M2)

How do they work?

Sediment generated from erosion on construction sites is a major source of pollution to local waterways.



Sediment fences are vertical barriers used to catch sediment in water flowing through a site. This prevents sediment leaving the site and polluting Lake Macquarie’s waterways.

Sediment fences are made from woven geotextile fabric that is held in place by posts and a backfilled trench at their base.

Sediment fences work by:

- ponding water behind the fence;
- allowing sediments (sands and some silts) in the water to settle under gravity; and
- filtering sediment from water as water flows through the fabric.

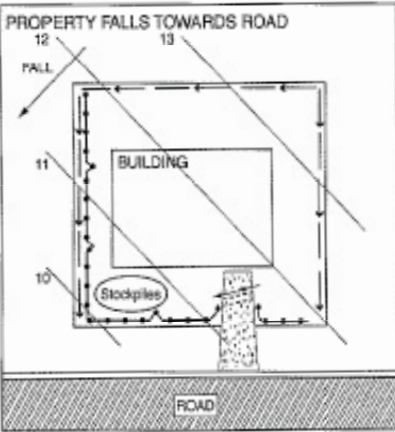
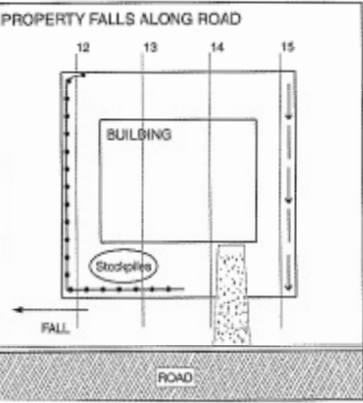
Sediment fences must not be used across creeks or major drainage lines.

It is important to note that clay particles are smaller than the openings in the fence and are not filtered out.

Follow this fact sheet to learn how to use them for sediment run-off on your site and to protect our waterways.

Location of sediment fences

The best location of a sediment fence depends on your site. All water from a site must go through at least one sediment fence before flowing offsite. Use the following option that best represents your site.





Suitable materials

Sediment fence material is usually a specially manufactured woven geotextile material designed to filter out sediment and allow water through at a designated flow rate. Filter cloth or shade cloth are not suitable.

Maintenance

Sediment fences need to be checked regularly and maintained to ensure they are in good working order.

Maintenance includes:

- replacing the fence if the fabric is ripped or otherwise damaged;
- standing the fence back up if a post falls down;
- removing accumulated sediment; and
- where necessary, re-trenching the fabric and ensuring posts are firmly secured in the ground.

It is a good idea to have extra sediment fence material onsite. Sediment fences are a temporary measure, and may need to be replaced during construction.

Installation

Step 1. Mark out location of fence according to the fall of your site, as per diagrams above, and usually, almost parallel to the contour. See video at www.bpg.co.nz for assistance.

(If a fence is longer than 20m, “returns” will need to be installed to slow flowing water).



Step 2. Dig a 150mm-deep and 100mm-wide trench along the proposed fence line.

Step 3. Lay fabric along the trench and overlap 150mm where needed. Bury the bottom 150mm of fence in the trench and backfill with soil and compact to secure the fabric (not like in the photo below). The trench should be on the side of the fence where construction work is being undertaken.



Step 4. Drive posts on the lower side of the fence (1.5m steel star pickets or 25mm-wide wooden posts) at least 600mm into ground every 2m. Put safety caps on star pickets.

Step 5. Pull fabric tight between the posts and secure at least three places per post.

Step 6. At either end of the sediment fence, turn the end up-slope to prevent or limit water bypassing the fence.



Good examples

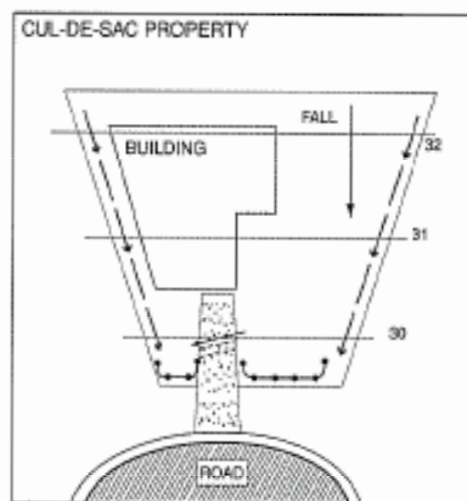
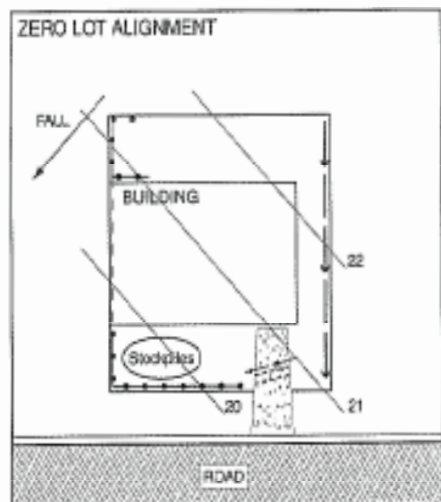


Diagram from Best Practice Erosion and Sediment Control, IECA, November 2008.