

Maintaining new erosion control structures

Active gully, stream bank or bed erosion may be managed by structural works such as diversion banks, gully control structures (dams), flumes, log weirs and grade stabilisation structures (rock ramps). These structures can stabilise erosion and reduce the amount of sediment entering waterways, especially if used in combination with good groundcover.

Erosion control earthworks often represent a large financial investment. Regular monitoring and maintenance are key in ensuring a structure's longevity and capability to operate as designed.



Fig 1: Grade stabilisation structure (rock ramp) with protective grass cover establishing around it.

Regular inspections of your structures should include:

1. Looking for soil slumping, cracking and undermining

Burrowing animals may dig around and under your erosion control structures. This can undermine the structure, allowing surface water and runoff to enter under the structure and creating voids that ultimately impact the structural integrity.

Look for early signs and deter animals from this kind of activity. If the problem is extensive, seek advice from Local Land Services.



Fig 2: Burrowing under a flume apron may cause it to fail

2. Trees and shrubs

Trees and shrubs planted in the right place may help to stabilise soil and prevent erosion. However, tree roots in the wrong place may become a conduit for water to move through. This can cause sub-surface erosion and may cause the failure of structures.

For this reason, trees should not be planted on dam walls, banks, or the edges of flumes and rock ramps, and must be removed if they establish naturally.

3. Maintain Fences

Erosion control structures are usually fenced to protect the structure from stock damage and minimise grazing pressure so that grass can grow and stabilise the soil. Regularly inspect fences and repair, if necessary, to ensure that they remain stock proof.

4. Ground cover

It is important to maintain 80% or more groundcover around structures. This should mostly consist of grasses, not woody vegetation.

Good groundcover around erosion structures provides protection for the topsoil from wind and rain. Plants will also slow surface water flow and runoff that may impact sensitive areas.



Fig 3: This unfenced flume has low surrounding groundcover which is under threat from further erosion

5. Looking for early signs of new erosion or damage to your structure

Having a regular and consistent monitoring system in place will assist to you to identify and record changes over time. Consider setting up photo monitoring points at fixed locations and taking photos from them at regular intervals.

If you are unsure if erosion is active in a flowline, install pegs either side at the top of the gully head. After significant rainfall has occurred line the pegs up to see if erosion has moved.

After heavy rain it is important to check structures for maintenance issues. This is most important between end of construction and the next heavy rain, before groundcovers have had a chance to establish.



Fig 3. Installing star pickets on each side of this headcut may help to detect any further erosion

Keep an eye out for small holes developing around the edges of structures, water bypassing or outflanking the structure, as well as fresh sediment in the stream bed which is an indicator of active erosion in the system.

Taking photos of active erosion are most effective when a person stands close to the problem, for scale.

Act on any small-scale erosion immediately to avoid bigger problems down the track, and if in doubt seek further advice.

Contact your local LLS office for further advice:

Braidwood – 4842 2594
Goulburn – 4824 1900
Moss Vale – 4877 3207

More information

[South East LLS Gully Erosion Guide](#)

[South East LLS Photopoint Monitoring Guide](#)

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