

REPAIRING GULLY EROSION

Before you begin repair works, consider the characteristics of each gully. What is its size (length, depth, width), soil type, the size of the catchment, and the amount of runoff. These will dictate which option you might undertake to repair the gully. The following options are suitable for small to large gullies. Refer to the Gully Erosion Assessment Kit available from DLWC to help you assess your gully.

Fencing - In most cases fencing out the gully will assist in stabilisation of the gully sides and allow vegetation to establish. It is also important to keep stock from the gully, particularly if it is eroding.

Gully diversion and shape - Water is diverted away from gully head to a safe disposal area via a diversion bank on low grade. The gully below the bank can then be shaped and revegetated. This is a good option for small to medium gullies. It allows gullies to become productive providing topsoil is stockpiled and spread back over the site after the gully is reshaped.

Rock Flume – provides a more stable base. Rock should be placed on filter fabric so that water flows over it and not around the sides. This is a cheap alternative to concrete, however, they should not be designed for large or prolonged volumes of runoff.

Concrete Flume – forms a long life stable structure for highly active gullies where there are high volumes of water. These need to be properly designed and constructed. Contact DLWC for advice.

Dam -This can be built above the gully to stop the water flowing over the gully head or can be built in the gully with top water level drowning the active head. Storm water can be diverted away from the gully, or contained in the dam and released into the gully slowly over time through a trickle pipe.

Low Cost Wire Weirs - For gullies where earthworks are impractical or uneconomic, such as large gullies, or where the gully head is off the property, other measures can be taken. Gully bed and gully wall stabilization can be undertaken with low cost wire weirs. These are built from a combination of steel posts, reinforcing mesh, wire netting, concrete blocks, etc. They catch sediment, reducing the grade on the gully floor. This slows water down decreasing its erosive force.

Revegetation - Trees, shrubs and grasses assist in gully control in several ways. They; hold soil together with roots, dry out wet areas, protect the soil surface, and act as silt and debris traps.

Future Management - The fill area and water entry points to the creek/stream should be fenced out (at least temporarily) and de-stocked for a minimum of 12 months to allow establishment of ground cover. After this time the site may be brought back into production to a limited extent. Grazing should be undertaken on a rotational or crash grazing basis with the emphasis being on maintaining at least 70% ground cover, and not grazing grasses lower than 4.5 cm in height.

Once works are complete they need to be looked after to increase their life span. Overgrazing and stock tracks can erode the works, reducing their effectiveness.

Who can help?

Department of Land and Water Conservation, Yass (02) 6226 1433

Soil Note 15/85 'Gully Control – Why Wait': Farm Trees series No. 4 'Tree Planting for Gully Erosion Control'.