

Case Study 4 – Gully erosion in Eclipse Creek, tributary of the Moorabool River

Landscape zone:	Moorabool
Priority area in CSHS?	Eclipse Creek
CAMS work project no.	Output ID no
Works dates:	May 2007 – September 2007
Site inspected by:	Ralph Cotter & Shari Wallis, DPI Geelong
<p>Type and extent of threat: (erosion type, area covered, land holders involved, risk to assets) Sever gully erosion, approximately 700m in length had formed in a direct tributary of the Eclipse Creek. The property is owned by an elderly couple who considered it of high importance to ameliorate the gully and revegetate the site. The erosion was presenting considerable risk to asset in the form of direct sedimentation into the Eclipse creek which joins the Moorabool River only 2km from the gully site. The Moorabool River contributes water to water supply reservoirs managed by Central Highlands Water and Barwon Water.</p>	
<p>Site description: (soils, climate, landscape/topography, catchment area, dominant veg/land use)</p> <ul style="list-style-type: none"> The gully has formed on the dispersive sedimentary soils which have a very thin topsoil lay to protect the poorly structured subsoil. The area receives a moderate rainfall over around 600mm annually and the topography of the area is undulating to steep in parts. The soils here are prone to extensive erosion and maintaining top soil and soil coverage is of high priority. The dominant land use is sheep grazing (as on this property), although some nearby landholders have successfully cropped the flatter areas. 	
<p>Severity of threat and impact on assets: (risk to farm assets, production, vegetation, describe impact)</p> <ul style="list-style-type: none"> The impact to the owners is loss of farming land although it was the environmental impact of sedimentation which lead them to seeking assistance with the project. If the erosion continued another 200m up the gully the neighbours dam would be threatened. The area is of low agricultural value and would naturally be covered with open grassy woodlands. 	
<p>Workspan:</p> <ul style="list-style-type: none"> Local contactors experienced with erosion works in these soils completed the project. This consisted of removing all rubbish which had been dumped in the gully, pulling back all top soil, battering and filling in the gully and then returning topsoil to the site This was done over the main gully (700m) and also on a small gully arm that was reaching up another slope. The project was completed in around a week and soon after grass seed was spread over the gully floor. The surrounding hills have been ripped and will be planted out with indigenous species. 	
<p>Comments on completed works:</p> <ul style="list-style-type: none"> 1 month after the works were completed the area received around 80 – 90mm of rain over 3 days. On inspection of the site after this down pour the works have held up well with only minor channels scouring out. The own has since put a few rocks in places in these channels to slow any further water movement. However that was most likely the last big rain for the season. 	

Before and after photos:



May 2007, main gully, note blackwood tree for positioning



September 2007: After photo showing entire gully works completed and using the blackwood tree for positioning. Note surrounding slopes have been ripped ready for planning.



Before, location 2 (May 2007)



After, location 2 (September 2007)