

South Gippsland Landcare Network's Greening Gippsland's Dams Project

Case study: Enhancing your dam for biodiversity and stock health

Background

The South Gippsland Landcare Network (SGLN)'s *Greening Gippsland's Dams* project provides farmers with information and advice on how to enhance farm dams to increase water security, improve stock management and increase biodiversity.

Initially this project included a demonstration site on a farm at Cape Liptrap, monitoring and comparing the financial and environmental costs of restricted access, full exclusion and unfenced dams. The subject of this case study is a second demonstration site which was established on a farm in Arawata in 2024.

This project is supported by SGLN, through funding from the Australian Government's Future Drought Fund, the [Victoria Drought Resilience Adoption & Innovation Hub](#) (Vic Hub) and [Food & Fibre Gippsland](#) as the [South-East Node of the Vic Hub](#).

Introduction

SGLN held an expression of interest process for a new demonstration dam and a farm in Arawata was selected, with landholders who were new to farming and interested in enhancing their farm dams. Through this project \$4000 was provided to the property owner to support the dam enhancement process.

This case study details the works undertaken at the demonstration site, and has been developed to provide other landholders with ideas on how they can get started with enhancing their own dams.



Greening Gippsland's Dams: case study

Background

Landholders Patrick and Katherine currently graze beef cattle on their recently purchased land in Arawata. They are enthusiastic about the future of regenerative farming on their property, and future plans include introducing horticulture, bees and a possible change to sheep farming.

The 110ha property has 10 dams in total, all of which have a history of cattle access. Patrick and Katherine had an existing understanding of the benefits of fencing dams including improving biodiversity, water quality and mitigating risks to stock health. With a plan to ultimately fence all 10 dams on the property, the decision was made to start with the largest dam of approximately 3 ML and with a circumference of 265m. This dam is situated at the front of the property and can be seen from the road.

By working with SGLN on this project they hoped to understand the process, make local connections and to be able to apply their learnings to future dam enhancement projects on the farm.



Case study dam selected



Ecologist David Carew recording frog calls for identification

Site Visit

SGLN arranged a site visit from wetland ecologist David Carew from Carew Environmental Services. David helped to identify existing plant species, potential planting zones and observed for signs of aquatic life.

To learn more about the Greening Gippsland Dams project and view David's presentations about dam enhancement visit

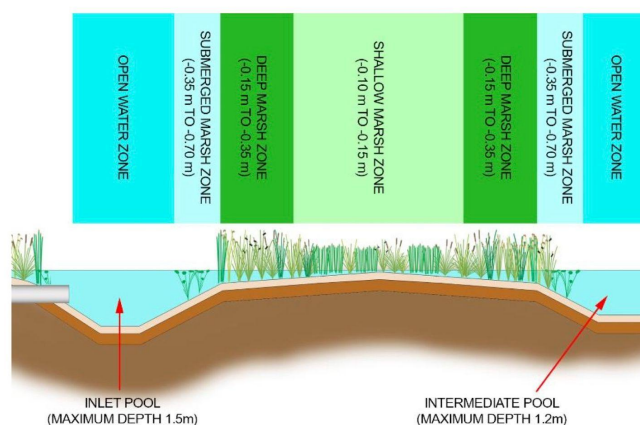
www.sgln.net.au/greening-gippslands-dams

Do you want to enhance your dam?

You can find resources to plan and implement your own project on the SGLN website

www.sgln.net.au/resources

Plant species & wetland zones



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Suggested Actions

After the site visit, David provided a detailed map and the following list of actions to help guide the enhancement process:

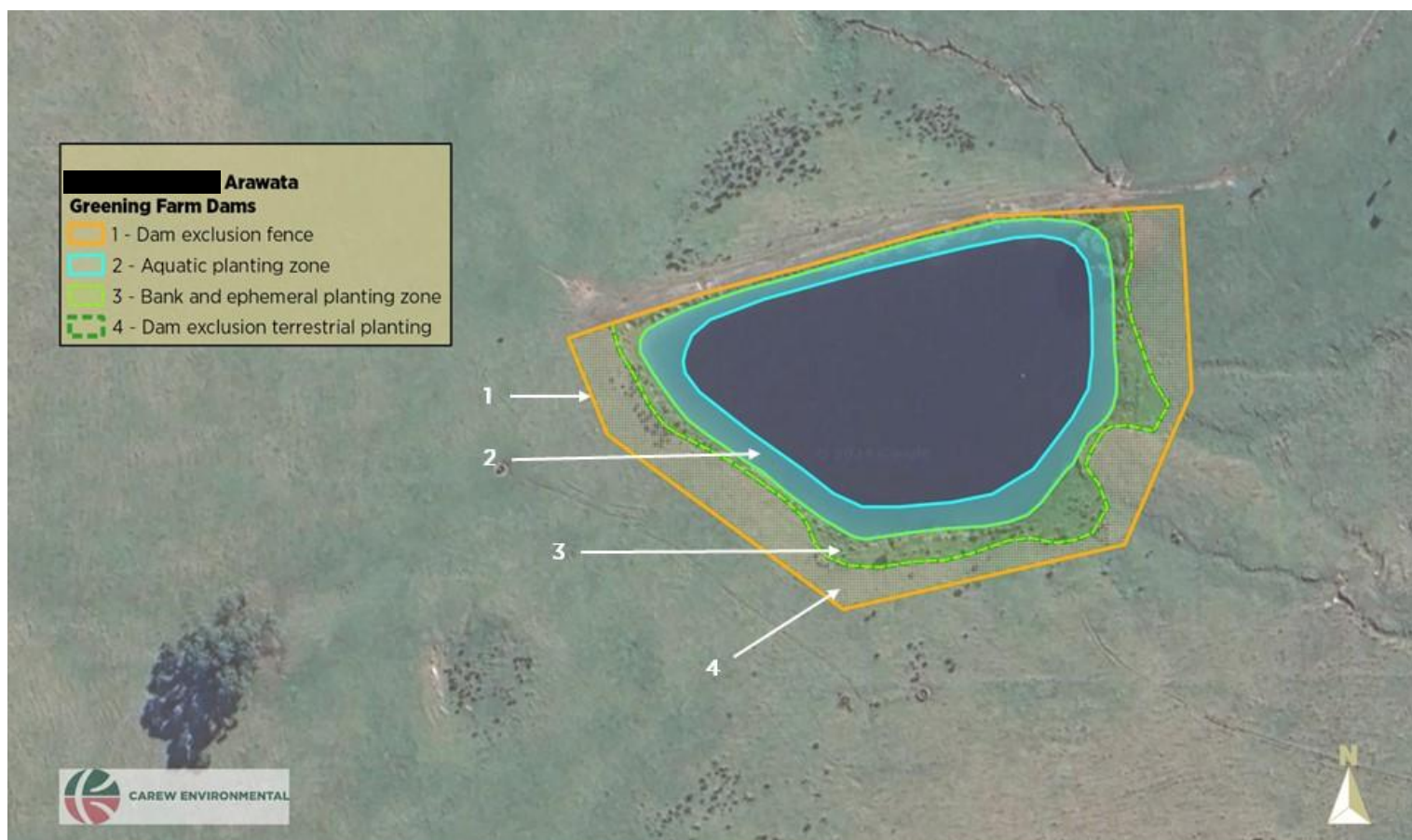
- Review the dam outlet to ensure overflow is directed to a secure outlet
- Install fencing at least 10 m back from the dam edge (except on the laneway side where this isn't possible due to lane proximity to dam)
- Place topsoil on the dam wall edge to help plant establishment (with a barrier to retain topsoil)
- Check channel above and below dam for erosion and stability
- Review gullies above and below the dam for stability and erosion, and consider fencing these as future actions
- Undertake weed control (blackberry, ragwort and water-couch)
- Undertake planting within fenced area

Fencing

Gates and 350 m of fencing was required to maintain a 10 m buffer around the edge of the dam for a total cost of \$10,660.00



New stock exclusion fencing and gates



Fencing and planting plan

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Planting

David provided a list of suitable species for planting which included species for the aquatic zone, ephemeral bank zone and the terrestrial zone beyond the dam. In total 850 plants were ordered for a cost of \$2,100. Patrick, who is an experienced gardener, propagated a range of the suggested plant species himself. This was an effective way to reduce plant costs and a chance to trial the process of raising plants to revegetate other areas of the property. The plants went into the ground after spreading some topsoil to help them establish.



Grasses strategically planted to slow down and filter runoff

Species List

You can use this aquatics and ground layer list as a guide for your own property. For shrubs and trees it's best to plant according to your Ecological Vegetation Class. A planting guide for South Gippsland can be found at <https://www.sgl.n.net.au/biodiversity-revegetation/>

Aquatics and ground layer	
<i>Baloskion tetraphyllum</i>	Tassel Cord-rush
<i>Bolboschoenus medianus</i>	Marsh Club-rush
<i>Carex appressa</i>	Tall Sedge
<i>Carex fascicularis</i>	Tassell Sedge
<i>Crassula helmsii</i>	Swamp Crassula
<i>Cycnogeton procerum</i>	Water Ribbons
<i>Eleocharis acuta</i>	Common Spike-sedge
<i>Eleocharis sphacelata</i>	Tall Spike-sedge
<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge
<i>Juncus amabilis</i>	Hollow Rush
<i>Juncus gregiflorus</i>	Rush
<i>Juncus sarophorus</i>	Broom Rush
<i>Juncus pallidus</i>	Pale Rush
<i>Juncus procerus</i>	Tall Rush
<i>Lomandra longifolia subsp. longifolia</i>	Spiny-headed Mat-rush
<i>Lythrum salicaria</i>	Purple Loosestrife
<i>Myriophyllum crispatum</i>	Coarse Milfoil
<i>Persicaria decipiens</i>	Slender Knotweed
<i>Schoenoplectus tabernaemontani</i>	River Club-Rush



Topsoil spread on dam wall edge to help plant establishment