

ENHANCING FARM DAMS



Part Three

LONG-TERM MANAGEMENT AND MAINTENANCE

AN ENHANCED FARM DAM IS ONE THAT HAS BEEN FENCED TO EXCLUDE LIVESTOCK AND REVEGETATED TO IMPROVE WATER QUALITY AND SUPPORT BIODIVERSITY.

This brochure is Part 3 of a three-part series on enhancing farm dams. It focuses on the long-term management and maintenance of enhanced dams. Part 1 explores the benefits and costs of dam enhancement, while Part 2 covers planning and implementation.



South
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PROTECTING YOUR INVESTMENT

LONG-TERM MANAGEMENT OF DAM REVEGETATION SITES IS ESSENTIAL TO ENSURE THE BENEFITS OF DAM ENHANCEMENT CONTINUE TO BE REALISED BY BOTH THE LANDHOLDER AND THE ENVIRONMENT.

Ongoing maintenance should include seedling care, weed and pest control, fence and access upkeep, water quality monitoring, stock water point maintenance, catchment management, habitat creation, and wildlife monitoring.

SEEDLING CARE

Seedling Watering: Seedlings may need extra water during the first six months after planting while roots establish. Water after dry spells rather than too often, as this helps plants become more self-sufficient. Seedlings in water inflow areas may not need extra watering if the soil stays moist through warmer months.



Tree Guard Removal: Remove tree guards once seedlings have grown above them and are able to withstand competition from grasses and weeds, as well as browsing or disturbance from waterbirds and pests such as rabbits. Spreading or climbing species often need guards removed earlier than upright species so they can grow naturally. Taller seedlings may also need staking to protect them from strong winds and uneven growth.

WEED AND PEST CONTROL

Weeds are a common problem in new revegetation sites because they compete with seedlings for water, nutrients, and light. Tree guards help protect seedlings from grasses, but they do not stop taller, fast-growing herbaceous or woody weeds.

Grasses: Control grasses twice a year for the first few years after planting. Once seedlings are established and no longer need guards, control can often be reduced to once a year. Options include low-dose or grass-selective herbicide, or brush cutting where chemical control is unsuitable or grasses have grown taller than the seedlings.



Herbaceous and Woody Weeds: Control these as soon as they appear, as they can seriously affect a revegetation site. Their seeds can remain in the soil for years and germinate when conditions are favourable. Where practical, remove isolated weeds by hand. Larger infestations may require herbicide treatment.

Identify the weeds on your site and seek advice from your Landcare Officer or Department of Agriculture on the best control methods. If using herbicide near a dam or waterway, make sure the product is safe for use around water.

CRASH GRAZING CAN HELP MANAGE WEEDS AND FIRE RISK, BUT IT MUST BE CAREFULLY MONITORED.

- Crash grazing uses a high number of stock for a short time—hours or days, not weeks.
- Use crash grazing in spring to reduce weed seed set.
- Do not crash graze in summer, so native plants can set seed.
- Do not graze wet clay soils, as this can cause pugging damage.
- Allow more than 12 months between crash grazing events where possible.
- Always maintain at least 70% groundcover, such as grass or litter.
- Remove stock as soon as shrubs show signs of damage.
- Choose stock carefully: cattle can cause heavy physical damage, especially to plants under five years old, while sheep prefer herbaceous plants and can be harder on groundcover.

Pests: Monitor the revegetation site for pests such as rabbits and maintain an ongoing pest management plan to protect young seedlings after tree guards are removed. Although kangaroos are native, they can also damage revegetation sites. Installing kangaroo fencing with the correct height and mesh spacing at the start of the project helps exclude stock and kangaroos, reduce fence damage, and prevent entanglement.

Foxes, feral cats and pigs can seriously damage revegetation areas by preying on native wildlife and disturbing habitat. Monitor foxes and feral cats regularly and control them through baiting, trapping or shooting to reduce predation risk. Seek advice on pig control.



Note: If you are unsure which control methods to use, or plan to use baiting, seek advice from your local Regional Biosecurity Group or the Department of Primary Industries and Regional Development.

STOCK WATERING POINT MAINTENANCE

Check equipment such as solar panels, troughs, pumps, pipes and tanks regularly, and ensure stock always has access to fresh, clean water.

Where dams have restricted, hard access points for stock, inspect them regularly to ensure the area is safe for stock and not eroding. Check that fences and gates are intact. Monitor dam water levels and ensure exclusion fencing continues to prevent stock access to protected areas of the dam.

FENCE AND ACCESS UPKEEP

Check fences regularly to identify and repair damage early, including damage caused by stock or native fauna such as kangaroos. Maintain vehicle access to the dam and along fence lines to support fence and water point maintenance, and to allow access for firefighting if needed.



WATER QUALITY

Dam water quality affects livestock health and aquatic biodiversity. High nutrient levels, particularly nitrogen and phosphorus, can trigger algal blooms and risk stock poisoning or reduced water intake. Poor water clarity affects submerged plants and the organisms that depend on them, including frogs and macroinvertebrates.

Salinity in dams reduces water quality and can harm both ecosystems and farm operations. Native fish and freshwater plants often struggle to survive in saline conditions, leading to reduced biodiversity and an increase in salt-tolerant species.

Changes in dam pH can indicate underlying water quality problems. Low pH (acidic conditions) can stress or kill aquatic life, damage equipment, and affect livestock health. High pH (alkaline conditions) can encourage aquatic weed growth and algal blooms, cause scale build-up that blocks pipes, and reduce water palatability for stock.



Regular water quality monitoring helps track dam health and maintain safe stock water. Key water quality metrics to test include:

- **Salinity (electrical conductivity):** Use a DIY multimeter to measure soluble salts. As evaporation concentrates salts, frequent testing in dry months is important.
- **pH levels:** The ideal pH range for a farm dam is 6.5 to 8.5. Test pH using strips or a DIY multimeter.



MONITORING FOR WILDLIFE

As revegetation establishes, you may notice increasing signs of wildlife using the site. By undertaking non-invasive fauna monitoring you will be able to determine which species are utilising the revegetation site. Checking for scats, burrows and feeding signs can provide a good indication of which species are present. Remote sensor cameras can provide a clearer picture of wildlife activity and help identify pest species. If you would like information on best monitoring practices and species identification, contact your local Landcare Officer.

FURTHER READING

Sustainable Farms (2022). Enhance farm Dams. <https://www.sustainablefarms.org.au/on-the-farm/farm-dams/>

This project is supported by the Australian Government through funding from the Natural Heritage Trust under the Climate Smart Agriculture Program. This document was developed by Blackwood Environment Society.

