



# Healthy Farm Dams - Healthy Waterways

## Guidance for the Horticulture Industry

The health and function of a dam is directly related to the health and function of your property.

The intention of this brochure is to highlight how simple improvements to your dam can add value to your farm and its produce.



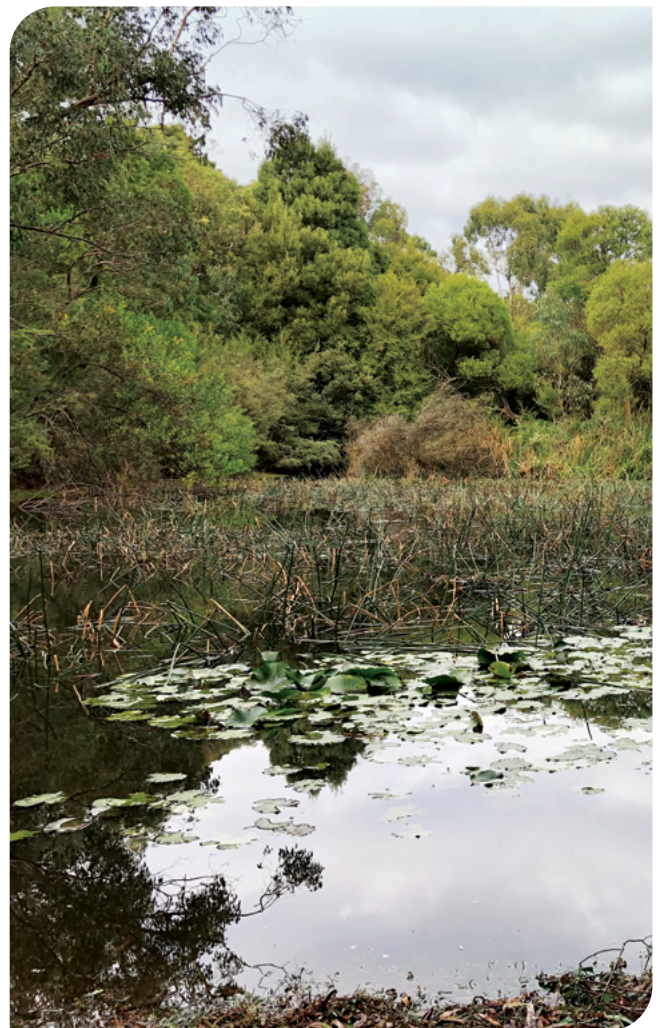
### Farm Planning

Do you have a Farm or Property Plan?

Property plans highlight the areas of intense activities (such as the shed areas, production zones, deliveries, and parking), people and vehicle movements, farm tracks, a network of infrastructure assets (like interconnected tanks, dams, irrigation and drainage pipe networks, pump sheds and power supplies).

They include natural assets such as waterways, gullies, wetlands, contour lines and remnant vegetation. They outline where water flows through a site, where vehicles can and can't go, where stockpiles can be located. They highlight fences and gates.

They can indicate proposed improvements to land management and farm infrastructure and support financial applications with Government Agencies.



### Did you know?



There are almost 2 dams for every square kilometre in Victoria? That's higher than any other state!



## Catchment Management

Nutrient and sediment runoff from production areas can lead to high concentrations of nutrient in the stored water.

Rather than continuously adding nutrients to the system, when dams are used solely for crop irrigation, nutrient recycling occurs, creating ecological and financial benefits.

High nutrient levels can also cause algal blooms in dams that can take up to 6 months to rectify. Agitation and aeration are needed to combat the potential for algal blooms in dams with nutrient rich inflows.

Vegetated buffers to dam inflows are a good primary barrier to some pollutants entering the water body.

Opportunities to capture roof runoff should be considered to divert into storage dams or tanks for reuse and away from waterways.

## Planting in and around dams

A well vegetated dam that excludes grazing and soil disturbance can improve your farm dam's water quality.

Fencing should be well designed to exclude grazing from incoming gullies, drains and overland flow paths.

Vegetation and aquatic plants are easy ways to filter out incoming pollutants like manure and sediment from upstream areas.

You can extend the waterline out or flatten batters by creating shallow benches at the edges and adding aquatic plants for additional filtration.

Adding appropriate vegetation and securing large logs in and around the dam increases biodiversity and habitat including beneficial water bugs.

Consider planting vegetation to establish corridors/ shelterbelts between dams and along drainage lines which link to larger patches of vegetation on your property, neighbours and roadsides. Shade reduces heat stress and can reduce the volume of water consumed.



### Did you know?



By improving dam health, we can reduce greenhouse emissions and increase biodiversity.

## Fencing your dam

By fencing your dam off from stock and general access by farm processes, you are improving the quality of your water supply.

### Vegetation for water quality.

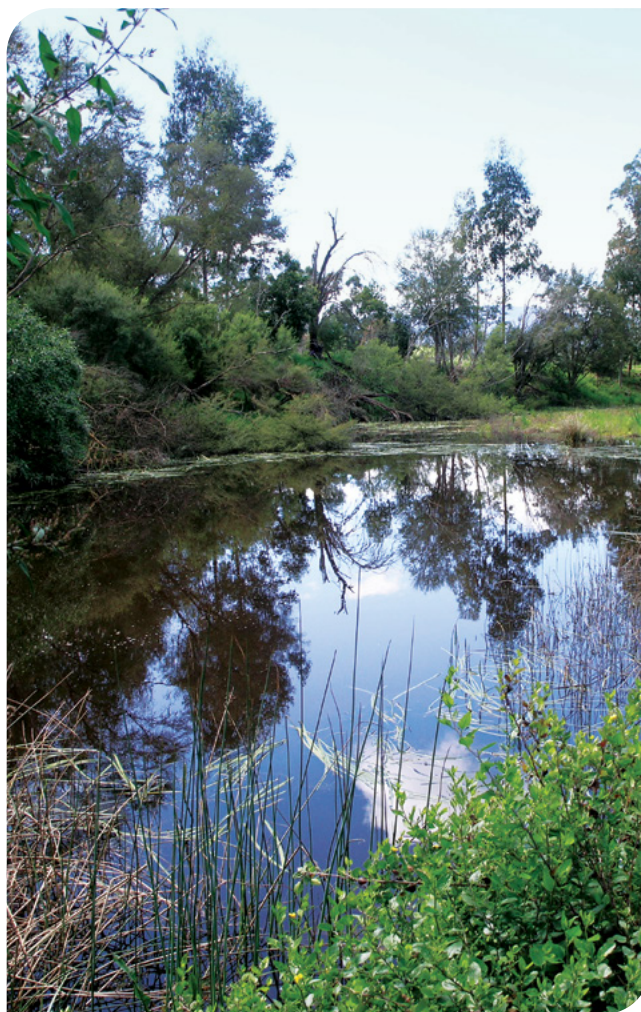
The bigger the patches, the better.

Effluent and nutrient runoff from paddocks upstream can reduce the water quality and potentially create toxic conditions in dams. Poor water quality can lead to a deterioration in stock health and potential impacts for other uses.

Vegetated buffers to dam inflow areas are a good primary barrier to some pollutants entering the dam. Increasing the fencing setbacks from dams, especially at the inflow area, allows for better retention of groundcover plants including pasture species, to perform their filtering function.

### Fencing for safety

A fence around a dam or water body, will prevent the accidental entry of children, farm personnel & stock.



## Did you know?



Legal requirements for dam owners:

### Environment Protection Act 2017

Everyone has an Environmental Duty under the EPA Act. This means that we are all responsible for the actions we take that affect the environment. We must not carry out any activity that causes or is likely to cause environmental harm unless we take all reasonable and practicable measures to prevent or minimise the harm. General Environmental Duty is the centre of the Environment Protection Act 2017. Any toxic overflow to waterways could also lead to the death of fish and other aquatic life in adjacent waterways. This may be an offence under the Environment Protection Act 2017.

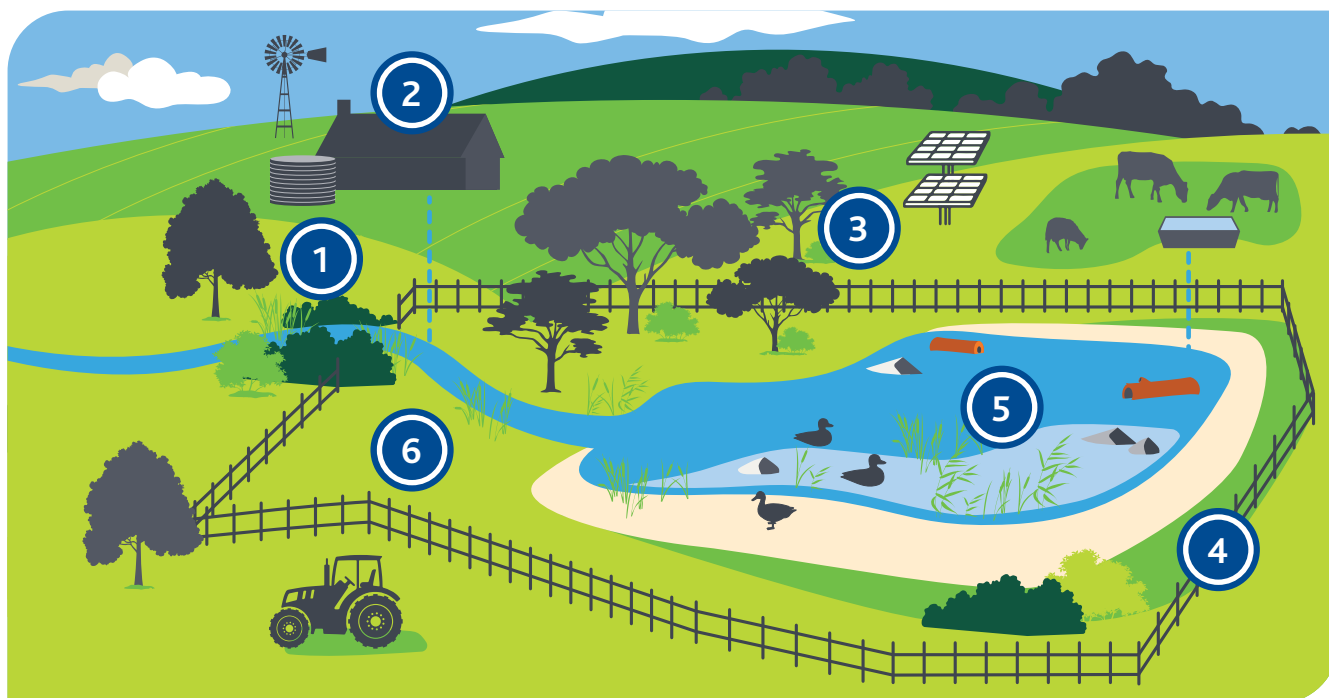
### Water Act 1989

Under the Water Act 1989, dam owners and managers are legally responsible for dam safety and may be accountable for the damage their dams cause.

### Catchment and Land Protection Act 1995

It's not just about weeds and pests! Under the general duties of landowners within this Act, it is the responsibility of landowners to avoid land degradation, conserve soils, protect water resources, eradicate weeds, and prevent the spread of pest animals.





### 1 Do you want to maximise how much water there is?

Keep water cooler with canopy trees to reduce evaporation.

Divert catchment from roof areas to tanks or dam.

Make sure trees and shrubs are not growing within the embankment.

Plant suitable local species for drainage lines around the dam and/or wetland

Ensure you work within the regulations for your catchment.

### 2 Where is your dam on your farm plan?

How much water do you need now and into the future?

Is there any alternative water supply? Roof water and tanks?

The Agriculture Vic website has a great calculator to work out how much water you need:

<https://agriculture.vic.gov.au/farm-management/water/farm-water-solutions/how-much-water-does-my-farm-need>

### 3 Can Stock access the dam edge?

Fence to prevent stock entering the dam, pugging and damaging the edges and muddying the water.

Is your pump shed clear of the top water line and fenced off from stock but with easy access?

Provide troughs for stock water rather than access to the dam.

TIP: Talk to Melbourne Water about funding your fence and trough.

### 4 Is your dam safe?

Including an edge batter with 250mm of depth over 3m will meet Royal Life Saving guidelines, and be safer.

Is your embankment wall free of trees, cracks, penetrations and leaks?

Is your embankment wall generally inaccessible to stock and people?

Do you have a spillway that diverts overflows beyond your dam wall?

Is your dam fenced to prevent children from accessing it?

The Water Act legally requires safe and efficient dams be managed by landholders.

Check out the [Your dam: Your responsibility](#) Brochure.

Royal Life Saving Australia can provide free "please close the gate signs" on application!

### 5 Does your dam have habitat value to increase local biodiversity?

Fence off and add in some rocks, trees, shrubs and logs to encourage a variety of animals like frogs, butterflies and other beneficial insects.

Creating shallow areas around the waterline of the dam for aquatic vegetation improves the quality of the water.

A good cover of indigenous plants helps to compete with weeds.

Connecting vegetation around your dam and gullies is a great way to increase canopy cover that has a cooling effect on your farm.

Established native vegetation also provides habitat for insect and pollen feeding birds and microbats. These are beneficial to your farm/property.

Shelter belts can also be biolinks providing habitat and connections, allowing native animals to move through the landscape.

TIP: Talk to Melbourne Water about funding your fence.

### 6 Is there vegetation around your dam to filter out nutrients, sediments or solids that might flow in?

Fencing and planting appropriate trees, interrow grasses, shrubs, grasses and sedges along upstream drainage lines will filter silt and nutrients before they enter the dam.

This will reduce the frequency of sediment clean out in the future.

Increase groundcover vegetation - such as pasture - around the upstream inflow area of the dam and fence it off from intensive horticulture and soil disturbance.

Cleaner water is better for livestock, better for irrigation, better for the local environment.

## For more information:

### Farm planning

[www.agriculture.vic.gov.au](http://www.agriculture.vic.gov.au)

*Farm water solutions*

[www.agriculture.vic.gov.au](http://www.agriculture.vic.gov.au)

*Managing dams*

[www.dpi.nsw.gov.au](http://www.dpi.nsw.gov.au)

*Maintaining your farm dam*

<https://www.srw.com.au>

### Water quality impacts on stock to water quality improvements

[rsfas.anu.edu.au](http://rsfas.anu.edu.au)

*Increased livestock weight gain from improved water quality in farm dams: A cost-benefit analysis*

### Reducing greenhouse gas emissions

[www.bluecarbonlab.org](http://www.bluecarbonlab.org)

Check out the *Blue Carbon Lab website* for methane emissions

### Sustainable Farms Project

[www.sustainablefarms.org.au](http://www.sustainablefarms.org.au)

### Natural Asset Farming - Book

*Creating Productive & Biodiverse Farms*, David Lindenmayer, Suzannah Macbeth, David Smith, Michelle Young (2022)

### Your dam: Your responsibility

[www.water.vic.gov.au](http://www.water.vic.gov.au)

*Your dam: Your responsibility*

### Melbourne Water Incentives Programs

Melbourne Water's incentives program can offer support for farm improvements. These can include fencing off waterways, drainage lines and dams, enhancing dams with vegetation and habitat values, decommissioning dams, formalising dam access points or even stock water systems.

The assistance extends beyond the dam, including the management and supply of native vegetation, access tracks, nutrient management, erosion stabilisation, farm plan development, education and technical advice.

### Liveable Communities, Liveable Waterways

(Previously Rural Land Program and Stream Frontage Management Program)

Focused on key rural catchments surrounding Melbourne, this program looks to partner with private landholders to improve waterway health. Contact Melbourne Water for more information on available initiatives [or visit online](#).

For more information on maintaining your farm dam please [visit online](#).

### Council Initiatives

Your local Council and Landcare Group may also provide support and or funding available for environmental improvements on your property.

### Catchment Management Authorities

Many CMA's have various initiatives to improve waterway health that may also improve the health of your dam. Port Phillip & Westernport CMA has been integrated into MW so these programs are now MW programs. Contact MW to speak with the Rural Land Officer in your region.

## Interested in funding or further information about your waterway?

Contact us on 131 722 or email at:  
[incentives@melbournewater.com.au](mailto:incentives@melbournewater.com.au)

For more information about Melbourne Water's programs, visit [www.melbournewater.com.au](http://www.melbournewater.com.au)

