



# Manage your water source

## Environmental management case study

### Summary

- Three key areas for change – drainage, fencing the creek and upgrading the effluent system.
- Improved drainage system to increase carrying capacity and pasture production.
- Support from Landcare and Catchment Management Authorities to fence and plant out the creek area.
- Development of an effluent management plan to support business growth while also utilising nutrients around the property.

“Mostly our workplace is our home, aside from the economics of it (farm profit, resilience) it is just a much nicer place to live when you continue to chip away at making improvements to the environment of the place”.

*Andrew and Kerry Perry – Kongwak*

### FARM SNAPSHOT – ELLERSIDE

#### Andrew and Kerry Perry Kongwak, South Gippsland, Victoria

Andrew and Kerry own a 300-acre property at Kongwak, which consists of a 300 cross bred dairy cow herd. This is supported by a 345-acre out paddock at Glen Alvie.

The Perry family started dairy farming in 2015. They moved to the property after running a veterinarian practice in Northern Victoria.

#### Farm system

- Pasture based, operating a rotational grazing system.
- Calve all the herd in spring, grow all pasture and fodder requirements over the two properties buying in concentrate to feed in the dairy.
- Herd increased from 180 to approximately 300, with the ability to run more cows as the seasons permit.
- Produces about 165,000 kilograms of milk solids (kgMS) per year. Supplies to Saputo.

#### Farm features

- Located on the Powlett River flood plain, with run off from the Korumburra hills, makes the farm prone to flooding and wet conditions.
- Property is mostly flat, with a couple of small rises and the soil type is a heavy grey soil, which is prone to pugging.
- The Foster creek cuts through the property and there is approximately 2km of river frontage.
- This creek floods several times in a year. The water for the property is sourced from the creek.

#### Business purpose

As part of completing the **Our Farm, Our Plan** program, the Perry family created the following vision for their business:

‘To have an aesthetically pleasing and well set up farm, supported by reliable staff who enjoy their work and feel valued and who we can trust to operate the farm unsupervised. The environment and infrastructure will be passed on to the next owners in better condition than when we came here.’



## Practice change

### Issues identified

**1 Pugging and water logging** resulting in soil health issues and reduced pasture production and utilisation. Some of the paddocks were 0.6m lower than the main drain system, so water would take several days to drain away after a flood.

**2 Poor water quality in the creek.** At the time of the property purchase, the creek was unfenced and lined with willows. Stock had direct access to the creek. As well as being damaging for the waterway, this was also unsafe for the cows and people.

**3 The effluent system** was unsuitable for the farm's needs. Very close to the main house, too small for the growing herd and unsightly. It was prone to flooding the underpass and needed regular upkeep to ensure effluent was contained on the property, resulting in increased costs and inefficiencies.

### Changes made

**1 Invested in 'hump and hollow' drainage** for approximately 4ha of their property. Every year extended to a few more paddocks.

**2 Fencing off the creek.** In the first two years of being on the farm, willows were removed and the creek fenced. Gradual planting out the riparian zone with natives over the years to improve the health of the waterway and increase biodiversity on their farm.

**3 Effluent system upgrade.** An Effluent Management Plan developed was Landcare funding. Further support from Glen Marriot (from Ag Challenge) enabled the development of a project plan submitted to Woolworths as part of grant application. Success in receiving this grant will now enable development of effluent infrastructure in three stages:

- **Stage 1** Construction of a 'Turkey Nest' pond system to ensure the capture of effluent solids and adequate storage of liquids. In a more suitable location; away from the house, lower than the dairy and away from the creek. Solids will be 'trapped' and collected near the dairy via a weeping wall system and then stored, dried and spread across the farm.
- **Stage 2** Removal of existing effluent ponds.
- **Stage 3** Installation of a hard-hose irrigation system to allow for the irrigation of pastures with the liquids from the pond system.



## Benefits of the change

**1 Hump and hollow drainage** has resulted in increased pasture production and improved the carrying capacity of the farm. Now when the creek floods, the water moves away from paddocks within 24 hours. This has supported the increase in herd size.

**2 Fencing the creek** has meant cows no longer have direct access. The risk of stock losses in the creek has been eliminated. This has also reduced nutrient run-off from stock effluent.

The health of the banks of the creek has been enhanced, with erosion and sediment runoff reduced.

The development of a riparian zone has increased biodiversity and allowed for a 'buffer zone' to be established to help reduce nutrient run-off from the property.

**3 The development of a suitable effluent system** has resulted in the following benefits:

- Increased carrying capacity of the farm.
- Improved aesthetics.
- No effluent run-off into waterways.
- Nutrient benefit to pastures through irrigation of liquids and spreading of solids to key areas on the farm.
- Improved animal health due to removal of effluent from underpass.

## The future

- To keep improving the aesthetics of the farm.
- Plant more trees in shelter belts.
- Crickets can be an issue on the grey clays. The Perrys are looking to try some different methods (including the use of effluent irrigation) to reduce their impact.

## Learnings

- Create a clear plan and a vision for your business – share this with other key people so that you can all know what you are working towards.
- Chip away at things slowly – you will make progress over time.
- Plan for changes that enable a higher capacity than what you think you might need – you never know when opportunities might arise.
- Hump and hollow drainage – make the 'run' as long as you can – the drainage will be more effective this way.
- Look for grants to support you with environmental capital infrastructure projects. And if you don't have time, engage a consultant to do the work for you!

### FOR FURTHER INFORMATION

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