

# F4F News

## Flows for the Future Program – Summer Edition

The Flows for the Future team welcomes you to share the celebrations and achievements of our community. We thank you for your interest and commitment to restoring catchment health. In this edition we bring you stories of community people who have recently joined our program.



### An inspirational life – Isabel Martin from Harrogate

Meeting landholders and sharing stories is a privilege for our Flows for the Future field officers, one that often reveals heart-warming, inspiring and encouraging stories of resilience and passion for the land.



*Isabel pursuing one of her lifelong passions*

Harrogate landowner Isabel Martin recently partnered with the Department for Environment and Water's Flows for the Future Program. Chatting with Isabel we learnt about her life on the land and that she too recognises the importance of healthy catchments. To support the local biodiversity and restore conditions for native fish, plants and animals to 'be able to do their thing' Isabel has chosen to have a low flow device installed on her dam.

Now 84 years of age, Isabel's early recollections of growing up in the state's north east Mallee country are all about hard work.

As a young teenager she worked with her father on the family sheep property driving the tractor and working alongside their draught horses, ploughing and seeding the paddocks. It was during this time Isabel developed a lifelong passion for horses.

In 1978, at the age of 41, Isabel moved to Harrogate with her four young children and took on managing her property and breeding horses while raising her family. "I was brought up to work, there were jobs to do and you just did it" Isabel said. "That was your interest and it kept you going ... I still live like that."

Not one to let age get in the way of life, Isabel still spends her days in the paddock, fencing, controlling weeds, caring for livestock and keeping the farm running. She is as fit as a fiddle and puts the rest of us to shame strolling the local hills with ease. Recently, she walked the 16km Amy Gillett bike path that she likes to conquer every five years.

Isabel recalls that when she moved to Harrogate the landscape had been significantly cleared of native vegetation. Over the years she witnessed the natural regeneration of Mount Beaver and has been impressed with nature's ability to recover. She also recalls the creeks and streams running more frequently and noticed significant changes in flows as the number of dams increased.

In 2019, fires again devastated the landscape, Isabel was thankful to have her sons Stephen and Wayne on board to help. As time passes she is happy to see recovery efforts underway, both natural and those led by landholders revegetating their land. Understandably, the fires caused Isabel some concern around water security for future fire control. Isabel's dam was a critical water source used for fighting recent fires.

Flows for the Future field officers worked with Isabel to alter plans for her dam, settling on a gravity low flow device. This device will allow a small proportion of water, called 'low flows', to pass around the dam during flow events and continue along its natural path in the watercourse.

Providing small flows to water-dependent ecosystems early in the season allows regeneration, growth and breeding cycles to continue, as nature intended, while maintaining water security for fires. Passing low flows is about changing the timing of water movement and allowing low flows to pass early in the season rather than waiting for dams to fill and spill late in the season.

Isabel had a positive message when asked what she loves about living on the land.

“Every day there is something that brightens that day, there is always new life,” she said. “The plants and birds are getting on with it, doing their thing, and it’s inspiring.”

Isabel was also delighted to host her granddaughter's wedding this spring, making the most of the stunning landscape and family connections to the land.



*Isabel's granddaughter and her husband*

Isabel had a parting message as she headed off to fix the fences. “You’ve just got to keep going, if you don’t that’s when the problems start,” she said. Experiencing Isabel’s love for the land and hard work leaves a lasting impression.

## Tinline Park landowners help restore their local catchment

Tinline Park is a magnificent 3000 acre property set amongst the picturesque rolling hills of Tungkillo (or 'Tainkila' - a Peramangk Aboriginal word meaning ghost moth grubs). It has a long history of sheep production, dating back to the late 1850's, when the property was owned by Alexander Borthwick Murray and his brother John, who founded the Murray Merino Flocks.

The current owners Bill and Annette have carried on the tradition of Merino breeding, and pride themselves on the excellent quality of their fine to medium Merino wool. They have also diversified the property to include Angus beef and prime lamb. Annette also runs Rabbits Hut bed and breakfast. The cottage originally housed the man employed to control vermin on the property and has now been beautifully restored to offer a relaxing escape to the country.



Bill, Annette and their four sons are keen land managers and their extensive revegetation efforts are evidence of their passion for sustainability. They share their land management principle of “We are caretakers of the land, it is imperative that we minimise our footprint and create opportunities for the next generation by leaving the land in better condition’.”

To further this work, they recently partnered with the Flows for the Future Program. This was an exciting opportunity to improve the health of their catchment, and in autumn 2021 a low flow gravity device was built on their dam.

To improve the life of their dam Bill also repaired extensive damage to the spillway caused by a flood event in 2016. Bill has been able to use the low flow device as a tool to reduce pressure on the newly repaired spillway and prevent erosion while it stabilises.

Bill explains “The low flow device has an orifice plate that controls the amount of flow that bypasses around the dam, in this case up to 2.5 litres per second.”

“This plate can be removed which allows inflows to bypass via the 100 mm bypass pipe.”

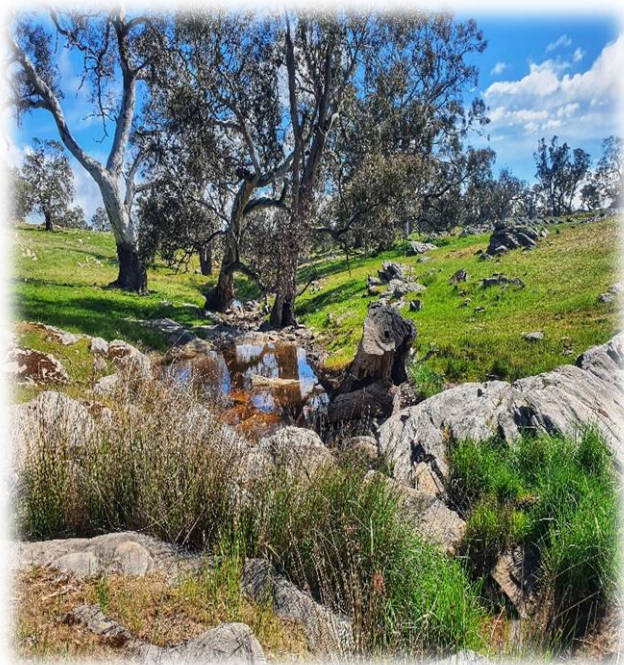
“When the dam was almost full, I removed the orifice plate to allow as much water to bypass the dam as possible. This, combined with some siphoning at critical times over winter, meant that I could protect the dam spillway while repair works settled.”

Bill also uses the device to manage and improve his dam water quality. “In this area the scalded clays have a high salt content.” Bill said.

“In spring we take the plate off the device so that early season flows, which have salinity readings of up to 8000 PPM, can bypass the dam. Once the salinity drops to around 1500 PPM we put the plate back on, only allowing low flows up to the 2.5 L/s to bypass the dam.”



*Property owner, Bill Cameron and field officer Murray Graetz at the low flow device*



*Dairy Creek, a waterway in Tungillo*

Tinline Park is an example of how sustainable production and biodiversity can work together towards long term sustainability. The Flows for the Future Program contributes to these efforts by working with landholders to reduce the impact of dams which act as barriers to flows in local catchments, impeding natural cycles.

It's also great to see connections with Peramangk country being restored. Some people still report seeing ghost moths, usually late in the summer on dark and rainy nights. The spectacular ghost moths are drawn to lights offering a display of their highly patterned wings.

# GWLAP and the Flows for the Future Program

Goolwa to Wellington Local Action Planning Association (GWLAP) has been working to improve the natural environment in the SA Murray-Darling Basin (SAMDB) since 1998.

They are a community based not-for-profit organisation, managed by a board of volunteers and supported by a range of funding partners and fee-for-service activities. They work on small and large scale bushcare and revegetation projects on private and public land.



## Why Goolwa to Wellington?

The GWLAP area encompasses all the plains and catchments flowing directly into Lake Alexandrina between Goolwa and Wellington. Today, GWLAP is not as geographically confined as in 1998, and able to take on projects well outside the original project area.



*GWLAP working with the community*

## Why Local Action Planning?

Local Action Planning groups were set up in the SAMDB to develop and implement plans to accelerate action to address important issues in local areas. GWLAP is directed by the community and continues to achieve important, significant, beneficial environmental actions

**Their vision:** To create an environment where human activity and natural ecosystems can sustainably co-exist

**Their mission:** To work with local communities to protect and restore biodiversity and sustainably manage our natural resources.

## GWLAP's partnership with the Flows for the Future Program

The GWLAP has been working with the Flows for the Future Program since 2017. They support on-ground engagement with landholders, sharing program information and obtaining important data about dams and watercourse extractions. This information is used by technical experts to design low flow devices being installed across the Angas, Bremer, Currency Creek, Tookayerta and Finniss catchments. Where possible, the GWLAP also incorporates plantings of native species into its work with low flow devices, further improving environmental outcomes. The GWLAP partnership with the Flows for the Future Program has been a very successful collaboration in which they have helped to establish the passing of low flows at over 400 sites across the Eastern Mount Lofty Ranges. This is an exciting achievement for our local community and environment.

# What's involved in participating in Flows for the Future?

**Are you considering joining local community efforts to restore healthy catchments but wondering how it all works? Flows for the Future Program staff would like to help!**

While there are several options for returning low flows, we've outlined the process for the most common treatment option used for dams, the gravity low flow device.

The first step involves field officers visiting you and your property to discuss the program and learn about your water requirements and the characteristics of your dam. A plan is then developed which considers these requirements and outlines suitable locations for:

- the inlet structure of gravity low flow device
- the bypass pipe and trench
- the outlet of the low flow device.

After we've discussed any issues or concerns you might have, we're hoping you come on board and agree to sign a landholder agreement. This is the second step to participating in this award-winning, community-led program.

The design of the low flow device will be adapted and customised for your property. Each device passes low flows at a threshold flow rate (TFR) unique to the dam. The design and layout will be provided in the landholder agreement, and generally this won't change unless requested by the landholder.

Program staff will then meet with you and/or your property manager to inspect the site where the device will be installed. This is an excellent opportunity to discuss property access, restrictions and any concerns.



*A typical gravity device inlet*



*A fenced gravity device*

A program contractor will then be assigned to your build. Contractors for large jobs are often assigned via a competitive quote process, or the job may be assigned to a contractor who is already working in your area on another device.

Construction of a gravity device usually takes up to a week, and we will work with you to find a suitable time for construction to begin.

The program aims to have minimal impact on your activities during construction. We will discuss contractor access and what suits you best. If possible, it is best to move any stock from the construction paddock to keep them safe from equipment, machinery and trenching.

Program staff will induct the contractor and their staff to the site, ensuring everyone is aware of any site risks such as water hazards, electrical cables, or bushfire risks.

Construction materials are then brought to the site and preferably stored near the device location. Small to medium earthmoving equipment will also be brought to site to help with concrete and trenching work.

The contractor will confirm the device's location, ensuring there is sufficient drop in elevation from the device to the outlet below the dam. To ensure gravity works to carry lows around the dam, the entire length of the trench requires a consistent minimum drop of 0.5%.

If you have chosen to have the device fenced as part of the landholder agreement, fencing will be built around the inlet of the device, this helps to protect it against stock damage.

The contractor will ensure the site is left neat and tidy before removing equipment.

Before construction sign off, program staff will undertake a site visit and audit the device. During this visit, measurements are collected to ensure that the device has been built to specification, and that the amount of low flows being passed by the device matches the landholder agreement.



*An unfenced low flow gravity device*

Flows for the Future field officers are always ready to talk to you if you have any concerns during or after construction. We are keen to work with you and your community to restore healthy catchments and ensure long term water sustainability in the Eastern Mount Lofty Ranges.

*“Wishing you and your family a wonderful summer season!”*

*From the Flows for the Future Team*



The Flows for the Future Program is delivered under the Murray–Darling Basin Plan, and jointly funded through the Australian Government Department of Agriculture, Water and the Environment and South Australian Department for Environment and Water.