



Alastair and Carey Barnett are implementing Good Management Practice on their family's farm just a few kilometres from Te Waihora/Lake Ellesmere.

Alastair and his brother Robin are the third generation of their family to farm this land. Over the years they have purchased neighbouring blocks of land, and they now farm 340 hectares together with their wives Carey and Judith, growing a range of arable crops, breeding ewes and fattening lambs. Over the years, the Barnetts have added neighbouring parcels of land to the farm, which now bounds a considerable length of Harts Creek and Birdlings Brook.

**“When you want to pass on the land to the next generation, you want to look back and say: ‘We’ve made improvements.’”**  
– Alastair Barnett

# Restoring Birdlings Brook and Harts Creek



“When we purchased these blocks of land, the creek area was pretty much overgrown with willows, elderberries, blackberries and gorse, and in a lot of areas you couldn’t even see the water,” Alastair says. “We looked at it and we thought we’d like to do something here.”

“We started identifying the worst areas and clearing them and replanting and fencing. The Harts Creek Streamcare Group were able to provide support and initiate funding opportunities.”

Funding streams included Whakaora Te Waihora, Environment Canterbury’s Immediate Steps biodiversity funding and Selwyn District Council.

**“I think it’s a thing you grow to see the benefits of and want to do. We’ve now planted around 6000 trees over the last 16 years.”**

**– Alastair Barnett**



## Cultural Values

The Barnett farm is partially within the Cultural Landscape Values Management Area, which recognises the cultural significance of Te Waihora/Lake Ellesmere.

That means farmers are required to recognise the cultural and ecological sensitivities of the area and include practices to protect mahinga kai, as well as ways to manage waterways and drains, into a Farm Environment Plan (FEP).

Carey, in her role as Environmental Advisor for Ellesmere Sustainable Agriculture, worked with industry groups to come up with a FEP template, and helped organise drop-in workshops where local farmers could bring in their information and templates to work on putting together a FEP.

“Foundation for Arable Research were really proactive in our area in testing out templates and seeing where farmers would need further help,” Carey says.

They also hosted a shed talk with Mananui Ramsden, who talked to around 50 local farmers about what Māori values and mahinga kai meant and why they were important.

“What it comes down to is that if you’re doing the right farming practices and minimising your effect on the environment, then you’re already addressing issues of mahinga kai,” Carey says.

They submitted their FEP to Environment Canterbury as part of their application for resource consent, which was granted in 2017, and audited in 2018.

**“The equipment you use is far superior. Everything is calibrated so that you’re not wasting. All our irrigators are tested. That’s all part of your Farm Environment Plan. If you’re a good farmer you’d do that anyway, because if you’re not ... you’re just wasting resources.”**

**– Alastair Barnett**



**“We have a few theories about how we farm and one of those is that it costs more to be a bad farmer than it does to be a good farmer.” – Carey Barnett**

## Soil management

Sheep are not just another income source for the farm – cropping and grazing can work well together if correctly managed.

“We don’t generally plant pasture specifically for stock grazing,” Alastair says. “We use the sheep as a tool to assist the cropping and clean up crop residues and paddocks. It’s feed and organic fertilizer.”

Alastair says that keeping the soil in optimum condition is not about putting on large amounts of fertiliser to grow as much as possible. That may be profitable in the short term, but it’s not a viable long-term strategy.

“We don’t over-cultivate, whereas, many years ago, many farmers probably did.

“We’re heading down the track of soil balance, looking at calcium, magnesium and carbon levels in the soil,” Alastair says. “We burn crop residue as little as possible. We can bale straw up and sell it to a dairy farm, but most of the time we like to incorporate that residue into the ground and build up the organic matter.”



Investing in more advanced farm machinery means they can direct drill seeds, retaining soil structure.

“Instead of burning off a paddock, you’ll be direct drilling a paddock with new seed into stubble, so you’re keeping all the goodies in it rather than losing it.”

## Managing irrigation

The Barnetts say that they can irrigate pretty much all of their property, but use a combination of technology, years of farming know-how and weather forecasting to make sure they only irrigate when necessary.

“Sometimes the worst thing you can do is put too much water on,” Alastair says, adding that a bit of water stress can be beneficial. “If a plant has to go searching for water it will sink its roots deeper.”

One block of land the Barnetts took over seven years ago is an excellent case study in water management and improving soil.



“Our lease block has only got a surface take from Birdlings Brook and Harts Creek, so we don’t plant crops there that we need to water. We generally farm that as a dryland block,” Alastair says.

“Everything we do there is about water retention in the soil. When we took over the plot the soil structure was pretty average because it had been cultivated a lot. We’ve come in and have a direct drill policy on that land, and the residues on top slowly decompose and produce organic matter. We’ve been farming there for about seven years now and the soil structure has vastly improved, the crops have improved, and earthworms are much more abundant.”

## Good Management Practice

For the Barnetts, minimising environmental impact and maximising economic benefits aren’t competing interests to be balanced.

They believe that when you take a long-term view of farming, what’s good for your environment is good for your wallet too.

“Not only do we see the environmental value that iwi are also concerned with, but we also have similar values around the environment and the waterways,” Carey says.