

Charlotte Glass
and Tom Irving –
farm environment
planning.

PHOTOS: JOHNNY HOUSTON

Plan for success

The idea of creating and managing a farm environment plan might seem daunting, but as Hororata farmers Tom and Sarah Irving discovered the secret is to get expert help and make sure everything is well documented. They talked to **Anne Lee** about their experience.

Putting together a farm environment plan doesn't have to be a painful process but plenty of thought needs to go into what you commit to and how you're going to prove you're doing it.

Hororata dairy farmers Tom and Sarah Irving have worked through the process with Canterbury-based consultant Charlotte Glass from Agri Magic as part of a consent application required with the addition of 56 hectares of land to their original 121ha milking platform and a lift in cow numbers.

There are a number of farm environment plan templates approved by the regional council, Environment Canterbury, and the Irvings used DairyNZ's sustainable milk plan (SMP).

Tom says working through the process wasn't too arduous at all and all six of the objectives in the SMP that relate to various aspects of the farm's management made absolute sense in terms of not wasting inputs as well as protecting the environment.

"They're things you want to do anyway to make sure you're not throwing away money," he says.

Essentially the plan is about thinking about areas of risk to the environment and documenting the practices carried out onfarm to minimise or eliminate that risk, noting whether they were deemed to be good management practice or could be considered above or beyond good management practice.

Industry agreed good management

practices have been released so farmers can see what constitutes good management and what practices go beyond that (*Dairy Exporter*, June, page 74).

In drawing up the plan with Charlotte, the Irvings talked through the simplest and most efficient ways to provide evidence that they do what they say they do, noting that on the SMP document.

They also listed any actions where Tom could improve practices on farm noting what level of practice that action achieves.

That's where Charlotte says farmers must start armed with facts because once they've identified an action for improvement they're committed to it.

"Someone will be coming onto your farm to make sure you've done what you said you would," she says.

"So the first thing you need to know is your financial budget for the coming season. It's your responsibility to know what you can afford and what you can commit to because remember you will be held to account on what's in your plan."

Charlotte says farmers need to be thinking about the auditing process right at the outset of preparing their plan and as they go through the season, keeping evidence of activities as they're occurring.

Tom and Sarah are equity partners in the 178ha effective farm that now includes 56ha of leased land just brought into the milking platform in time for this season.

The lease is for 12 years and the land is across the road from the original milking platform area. They've essentially

converted it, putting in lanes, troughs, a centre pivot, re-fencing and putting in an underpass.

They currently draw groundwater for irrigation and while they've consented for sufficient water they've found their bores can't deliver what's needed particularly in a dry year such as last season.

The farm comes within the command area for Central Plains Water (CPW), the long awaited irrigation scheme that, all going well, will start delivering water to farmers on the plains between the Rakaia and Waimakariri Rivers next month.

Ultimately the whole farm will be irrigated using CPW water although they'll still have some irrigation support from the groundwater allocations they'll be left with once they surrender some of that water as per CPW agreements.

CPW holds a global consent for its farmer shareholders and the Irving's water related consents, that include nutrient loss restrictions, will eventually be managed for Environment Canterbury through the irrigation company.

In the meantime, they needed a consent for their expansion so they could be ready for this season and as part of that consent process they needed a farm environment plan.

The first objective in the SMP relates to irrigation and states that the aim is to operate irrigation systems efficiently and ensure that the actual use of water is monitored and efficient.

In Tom's case soil moisture levels are

monitored via soil moisture probes that telemeter the information to Hydro Services. Tom can then access soil moisture graphs and reports so he can schedule irrigation appropriately with the aim to keep soil moisture between the refill and full points.

As evidence of that it's noted on his SMP that he'll provide a download of a report from the site.

He could also go online and show an auditor the soil moisture monitoring graphs for the past season. They clearly show where irrigation or rain events occur and plot soil moisture levels relative to refill and full point.

Tom also tests his pivot application rates are correct across the length of the pivot by carrying out distribution uniformity tests using the bucket test as per instructions on the DairyNZ and Irrigation New Zealand websites.

That's then recorded as a good management practice on the SMP document.

Tom records when the test was carried out in the farm diary and keeps the results noting in the SMP document that's where the evidence can be found.

The Irving's farm also has lateral sprinklers which are moved to pre-GPSed spots in the paddock.

That not only limits any areas where the sprinklers don't reach it also means the areas of overlap are minimised too, reducing the chance that application rates cause drainage events.

Charlotte says that action was deemed to be beyond good management so that's noted on the document.

As evidence Tom actually uses the practice onfarm he's taken a photo on his smart phone and will keep that along with other information in an evidence file on his computer.

Charlotte's noted on the SMP that Tom carries out regular maintenance of the irrigation equipment and staff are trained in irrigation management as required.

To date Tom's carried out all of the irrigation work as he's only employed one other staff member but with the increase in cow numbers he's taken on an additional person.

He records maintenance checks in the farm diary and will note staff training as it occurs.

His agreed actions for improvement are all categorised as being at good management practice level and include introducing system checks more regularly and addressing nozzle variance to increase distribution uniformity.

In the agreed actions for improvement section of the SMP each action is accompanied by a note to say who will carry it out, when they'll do it and what evidence will be provided to prove they've done it.

There's also a place to record whether that action's been completed and what cost the farm has incurred.

Tom's recorded as the person responsible for the agreed actions for improvement for irrigation with the date for completion by the start of the irrigation season in October.

The second objective in the SMP is to maximise nutrient use efficiency while minimising loss to water.

Tom sees that as a "no brainer".

Nutrients in the form of bought in fertiliser are one of the big three when it comes to costs on the farm so it just makes sense that farmers don't want to waste them.

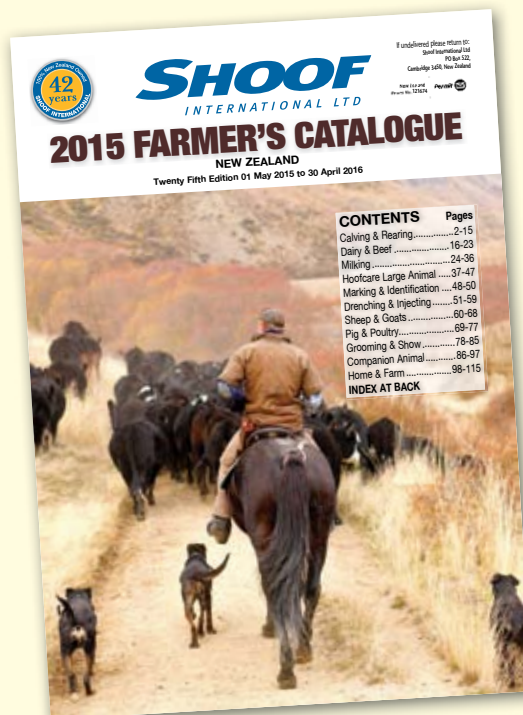
Tom soil tests every paddock every year and fertiliser recommendations are based on those test results so that's noted in the SMP and categorised as good management practice.

Olsen P phosphorous levels range from 17 to 40 across the farm so there are big savings to be made by applying the amount of fertiliser that's needed in each paddock rather than a blanket application.

He uses TracMap to provide proof of placement and record fertiliser applications which is categorised as above good management practice.

Soil test results, fertiliser plans and GPS results from the TracMap information are all kept as evidence along with nutrient budgets that are done annually as required by Fonterra and

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Tom Irving captures a photograph of the plantings on his smartphone as evidence for an audit of his sustainable milk plan – DairyNZ's farm environment planning template.

KEY POINTS

Location: Hororata

Area: 176ha

Cows: 600 Friesian-cross

Production: 506kg MS/cow

Supplement: 900kg DM/cow including grain, silage, palm kernel

Farm working expenses: \$4.34/kg MS

Farm dairy: 50-bail rotary, Protrack, automatic cup removers.

Notice of Election



- 2015 DairyNZ Board of Directors
- Directors Remuneration Committee members

Invitation for candidate nominations – six positions available

In October, two elections will take place for DairyNZ Incorporated – an election for three farmer-elected Directors for the Board of DairyNZ Inc. and a second election for three positions on the Directors Remuneration Committee.

The Board invites registered levy-paying farmers to nominate candidates to fill these six vacancies.

All farmers paying a levy on milksolids to DairyNZ are eligible to stand for election. An information pack outlining desired criteria and nomination requirements for the positions can be obtained from the Returning Officer.

Nominations must be received by the Returning Officer by 12 noon on Friday, 28 August, 2015.

Elections

If more than the required nominations are received, elections will be carried out by postal, fax and internet voting using the STV (single transferable vote) voting method. Votes will be weighted by annual milksolids production. Voter packs will be posted on 14 September 2015 to all registered DairyNZ levy payers, with voting closing at 12 noon on Monday, 12 October, 2015.

The DairyNZ Annual General Meeting will be held in the Waikato on Tuesday, 13 October, 2015. Election results will be announced at the meeting.

For further details contact the Returning Officer as below.

Anthony Morton
Returning Officer – DairyNZ Inc
0800 666 030
elections@electionz.com



considered to be at a good management standard.

Tom's working with his Ravensdown agri-manager so nutrient budgets can be done with increasing precision on the various management blocks on the farm so that's listed as an agreed action for improvement.

Nutrient budgets are an example of documentation farmers have to supply to multiple parties.

Charlotte says there's a lot of work going on at the moment to simplify and streamline the reporting systems for farmers to ensure what's required by one authority – whether it be an irrigation company, regional council or processor – has the same standard requirements as the others.

"It's a matter of making sure farmers only have to do these things once and they can then either be accessed by the parties that need them or at least provided to them as copies without having to make changes because everyone wants slightly different information," Charlotte says.

Various portal and on-line based mapping and record keeping services are already provided by companies to record activities such as irrigation scheduling and fertiliser and effluent applications.

Ravensdown for instance holds information for farmers through the My Ravensdown portal that can readily be used as evidence when it comes time for the farm environment plan to be audited.


Managing the risks associated with the operation of the effluent system so it's compliant 365 days a year is also an objective on the SMP.

The Irvings have two large effluent ponds that include a solids settling pond and a 2000 cubic metre second pond to store what's effectively green water.

The liquid effluent is then pumped out through the centre pivot over 56ha and Tom's found no major problems with nozzle blockages.

He's put up a whiteboard in the pump shed where the valves are that send the effluent into the pivot.

The date, start and stop times of effluent application are



Keep the system simple

It's all in your attitude – you can either see farm environment plans as a costly, time-consuming exercise or embrace them as a way to improve business performance and get the most out of the inputs you're using.

Ultimately they could even be the catalyst to reassess your farming strategy altogether.

So don't be afraid of them and the industry-agreed, good management practice objectives, Canterbury consultant contracted to Ravensdown Charlotte Glass implored farmers at the South Island Dairy Event (SIDE) where she and Ravensdown farm environmental consultant Anna McLachlan presented a paper on farm environment planning.

Charlotte recounted hearing seasoned farmers talking about the plans recently and remembering when GST was first introduced.

While many had decried GST as simply adding cost to their business the net effect had been a sharpening in the focus on financials.

But she warned that the auditing process could be a nightmare if farmers had to spend days in the office trying to find supporting information to prove they'd done what they said they would.

"If that's what you end up doing the whole process becomes stressful and you end up costing yourself time and money and that risks you losing some of the value you got from carrying out the plan in the first place," she said.

Keep the recording of evidence simple and use existing systems such as irrigation scheduling reports from soil moisture monitoring systems or reports and maps in portals such as My Ravensdown.

Take photos, screen shots and keep electronic documents in an evidence folder on the computer but remember to back it up.

Notes in the farm diary are also evidence so make sure you record activities as and when they happen.

recorded there to make it simple and information is recorded accurately.

A photo taken with the smartphone can then be used as evidence for the SMP audit.

Tom uses soil moisture monitoring to determine when to apply the effluent which goes beyond good management practice.

The records from the soil moisture monitoring reports and effluent irrigation dates can be married up as evidence of the practice.

Maintenance of the effluent system is categorised as good management practice and is recorded in the farm diary which can then be used to prove what he's done when.

A quick photo of receipts and there's evidence of any outside repairs or new parts.

Adequate staff training is also good management, with the farm diary another good place to record that along with any minutes from staff meetings.

The volume of storage and reliability of the centre pivot means the system overall is reliable but an agreed action for improvement has been additional risk management options being put in place along with formal procedures so staff know what to do if there is a breakdown reducing the dependence on Tom being there at the time.

Although the farm is flat and has no streams or rivers running through it many of the management actions are considered good management practices when it comes to the objectives relating to soils and should be noted in the SMP, Charlotte says.

That objective is to maintain or improve the physical and biological condition of the soils in order to minimise the movement of sediment, phosphorous and other contaminants to water ways.

Tom uses on-off grazing when soil conditions require it and records that in the farm diary or with a photo although an agreed action for improvement is to better define the policy and keep that in

the farm diary so staff understand it too.

The shortage of irrigation water over past seasons has meant Tom's included summer turnips on the milking platform with the crop typically yielding 4.5-5 tonnes drymatter/ha.

It's been a good option in terms of optimising the use of available irrigation and protecting soils from the effects of dry conditions in typical years.

Summer drought last season meant about 21ha of pasture wasn't able to be watered well either and that area's being regressed this spring.

Tom's direct drilling an Italian ryegrass into those paddocks to help protect the soil structure but will turn it over when he establishes permanent pastures into those paddocks.

Again photos can be taken when re-grassing is being carried out to show the practices used.

Tom's SMP documents the maintenance of tracks and infrastructure as good management practices being carried out to protect soils and minimise movement of sediment, with photos and notes kept in the farm diary when any maintenance work is carried out.

Because there are no waterways or wetlands on the property the only good management practice noted under the objective relating to those areas is the ongoing maintenance of fenceline plantings, which are extensive on the property.

The last objective in the SMP is to manage offal and rubbish pits to minimise risks to health and water quality.

Rubbish and dead animals are taken off-farm and that's recorded in the farm diary.

"Tom and Sarah don't really have many actions they need to take to get them to good management at all so that part of the process is pretty simply.

"And the thought they've put into collecting and recording evidence for the audit should make that a pretty pain-free exercise too," Charlotte says.

If it's not all at your fingertips though, that process could be time consuming and stressful.

The 12-year lease land brought into the milking platform this season.