From:	Sue Ruston
To:	Plan Hearings
Cc:	samsb@xtra.co.nz; Platinumfarming; Merv Todd; David Winter; Mark Christensen; Grant Edmundson
Subject:	PC7 - Evidence for Next Generation Farmers Trust
Date:	Friday, 17 July 2020 5:48:12 pm
Attachments:	PC7 - NGFT - Evidence of Dan Encell.pdf PC7 - NGFT - Evidence of J Austin.pdf PC7 - NGFT - Evidence of R Nortje.pdf PC7 - NGFT - Expert Evidence Planning Susan Ruston.pdf PC7 - NGFT - Evidence of D and R Clark.pdf PC7 - NGFT - Evidence of Victoria Traynor.pdf PC7 - NGFT - Evidence of Sam Spencer-Bower for NGFT.pdf

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Good afternoon

I have been instructed by the Next Generation Farmers Trust to lodge, on their behalf, the attached evidence in accordance with Minute 1 to Proposed Plan Change 7 to the Canterbury Land and Water Regional Plan.

Your sincerely

Sue Ruston

IN THE MATTER OF	The Resource Management Act 1991
AND	
IN THE MATTER OF	Proposed Plan Change 7 to the Canterbury Land and Water Regional Plan

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STATEMENT OF EVIDENCE OF DAVE & ROSEMARY CLARK

DR & RE CLARK, WANI GRANGE LIMITED AND SWANLEA FIELDS LTD

17 JULY 2020

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1. INTRODUCTION AND OUTCOME REQUESTED

1.1. Our names are David & Rosemary Clark.

1.2. We made a personal submission numbered GKE-136318-33-56-V6.

1.3. We brought our core farm (153hectares) 39 years ago. A dryland sheep and grain cropping farm initially and with us adding beef fattening and finishing along the way.

1.4. We are predominately sheep and beef breeding and finishing with 30ha crop/grain. Our farming operation now has part (100hectares) of the property irrigated with Waimakariri irrigation limited scheme water. We also lease dryland properties which we are at the mercy of droughts and failed pasture crops.

1.5. Our property is located in the sub-area E (purple zone).

1.6. We support Waimakariri irrigation Limited changes to PC 7 and support its objectives in regards to the plan. We support WIL in their proposed systems of;

a) Addressing immediate issues of high N in surface waterways with a Managed Aquifer Recharge and Targeted Stream Augmentation

b) Instigate a farm more comprehensive monitoring program to check any changes in N concentrations in the waterways

1.7. We are members of the Next Generation Farmers Trust, and we support the changes to PC 7 sought by the Trust. We also support the objectives and work of the Trust generally because it collective of farmers and rural contractors which are trying to develop scientific testing and monitoring within our district in our unique environment with modelling of best practice from leadership at national levels to ensure our future generation of farmers are able to operate in the best possible manner. 'Measured' science not 'methodology' allowing for review cycles as data is correlated from testing.

1.8. Our statement of evidence is about the likely effects on my farming operation and on my family if the Waimakariri Sub-region components of PC 7 is

confirmed without change. We are committed to running our farm in an environmentally responsible manner, and we understand the need to change practices over time to further reduce potential nutrient losses. However, we are concerned that PC 7 as notified will result in the need for changes which put my farming operation at risk of being financially unsustainable. We want to remain a profitable operation so we can afford to make the changes which are necessary to achieve the outcomes sought.

1.9. We wish to be part of the solution to water quality issues in the Waimakariri and we believe that working in partnership with the Next Generation Farmers Trust, Environment Canterbury, Waimakiriri irrigation limited, and others, will be the best way to achieve the environmental gains sought while continuing to run a profitable farm.

1.10. The two main changes to the Waimakariri Sub-region components of PC 7 as notified that we seek are:

a. Removing the percentage reductions after 2040 in Table 8-9; and

b. Deleting the nutrient management sub-zones.

2. MY EXISTING FARMING OPERATION

2.1. Rosemary's story starts back in 1853 in this Waimakariri district, a generational story back to flax and flour mills and farming, 5 generations.

2.2. Dave's story doesn't start in this district but also go back generations working on the land so farming runs deep in our veins.

2.3. Dave was a shearer in his past life and Rosemary used her math and science skills in hers.

2.4. We bought our core farm 39 years ago still holding down full-time jobs. A dry land sheep and grain cropping farm initially with us adding beef cattle along the way. We gave up our day jobs when our 2 children came along and the opportunity to farm 2 other sheep properties in the area in conjunction with our own.

2.5. When WIL scheme was developed in this area we lost our leasehold properties to dairying but we then could afford to put irrigation on our own farm. Prior to irrigation we were at the mercy of droughts and failed pastures and crops. Irrigation gave us certainty and security of a livelihood off the land for the future.

2.6. We again lease another 2 dry land properties in the district in conjunction with our own but it is difficult to establish good grasses there without reliable rain or irrigation water. They are very stony and date back to old riverbeds before stop banks. We find we can't farm it as well as we would like to because we are at the mercy of the weather. It costs a lot to plant pastures and crops and it is heart breaking and depressing to watch them fail. Just this last season we lost a crop of barley on this dry land, 14 ha which should have returned 5 Tonne/ha of good feed barley only returned 2 Tonne/ha of poor-quality sheep feed barley, the crop had died. What should have been a profit of $17,750 resulted in a loss of $2800.

2.7. School was the centre of our community. Our children took us into the community. Both started and completed their school days at our local Cust School and then went on to Rangiora High School for their secondary education.

2.8. When school needed parent help we were there, school pet days, school trips, camps, fund raisers and the school BOT we were there. On one of these school trips, taking a car, a child said to me "my mother can't come and help because she works". I thought "I work too" but I could arrange my jobs to fit around these other activities. Having our own farm gave us the flexibility to work around events that we didn't want to miss.

2.9. The community swimming pool was a great gathering place. One particular hot dry drought year we would go to the pool knowing we would meet up with other farming families and talk about our problems. It helped us through tough times.

2.10. Rugby, tennis, gymnastics, local fund-raising events, working bees and more, we were there to help as part of a community. Now that school days are well behind us we are still involved supporting local agriculture shows and rugby events.

2.11. If regulations get too tough for us lay farmers then small owner operators will be lost and farming will become corporate affairs. Natural farming skills will be bred out of future generations. Our children learned many skills growing up alongside animals, it would be sad to see this side of life skills lost.

2.12. We fear our grandchildren and their children won't experience the same opportunities and quality of life we have had. Owning our own farm was a huge achievement. We were told we couldn't do it we said "we can do it". We sacrificed a lot but we wanted it and we did it. We worked hard day and night and when necessary we paid local contractors to help make baleage, do heavy cultivation, spray crops, shear sheep, clean water races, engineering maintenance and trim hedges. We had our children beside us and they learned to work hard too. It's been our livelihood; it's treated us well and we have had a good time. The science, infrastructure and implementation of new methods all come at a cost, we hope the cost on individual farmers doesn't have detrimental effects on our community with loss of jobs or time individuals have to put in our clubs or schools.

2.13. We will eventually hand over a farm in good heart and improved from when we first bought it near 40 years ago.

3. REDUCING THE NUTRIENT LOSSES FROM OUR FARM

Stock Exclusion from waterways.

3.1. Our practice was to electric fence our beef cattle out of the water race and only provide a drinking station for them to access their drinking water. We have this last summer put in a trough system providing 6 water troughs to supply 11 paddocks with drinking water for the cattle. We still use an electric fence to fence off the water race which allows the sheep to graze to the water's edge.

The 6-trough scheme came at a cost of $19,660. The power bill for our water pump for these additional troughs has doubled from $70 to $140 per month. We are left wondering at the sense of pumping from underground aquifers when stock water is flowing past, a system dug in by our ancestors using sweat and grit.

Precision Irrigation.

3.2. Originally, we irrigated with an intensive Briggs Rota-rainer, K-line and lateral system but we have now replaced some of the K-line with a pivot irrigator which allows us to monitor and adjust applications more closely over that 28 ha. At the time the pivot cost us $150,000, we had to re fence paddocks with 4 wires for the sheep and unlike with the Briggs Rota-rainer irrigator we have lambs run over by the wheels of the pivot and killed. Deaths are still a problem for us.

Surface water management.

3.3. It takes a really big rain for us to experience surface water running through our farm, a rain of 100mls or more in one event. The water comes from runoff from the road and also from overflows from the stock water race system. Water flows through the farm and on out through the east boundary. Once the rain has stopped it takes 2 to 3 days for the surface water to disappear. Our leasehold properties have porous soils being old river beds historically we therefore don't experience surface water flooding.

Nitrate management.

3.4. We have done nutrient budgets and farm environmental plans and practice best farming practices over several years now. We get advice for fertilizer applications, use N-Protect which is recommended for better nitrate up take and less leaching and soil tests to keep a check on the health of our soils and we make applications where required. Our practices are changing as new

developments are occurring as science allows us to be more precise in our methods to optimise best potential outcomes.

3.5. Grass mixes contain plantain and chicory which help in the uptake of nitrogen and feed crops of oats are used to help reduce nitrate leaching.

Going forward.

3.6. Stock exclusion; we can see we will have to work toward extending our water trough scheme to cover the whole property eventually and predict it would on today's prices to cost about $60,000.

3.7. Irrigation; would mean more capital for more precision irrigation system, fencing to accommodate sheep with 4 wires and coming up with a way to address stock deaths. The cost of this would be upward of $400,000.

3.8. Nitrates; we will rely on science to help guide us through this issue. We are going to have large capital expense for us to reduce our nitrate number so reducing stock numbers and yields will make it an uphill road ahead. Science has developed a lot over the past 50 years and our research in our nitrate monitoring has only really been tested from the late 1980's. Until existing water quality is better understood and theories are more evidently supported it would be concerning for our community if longer term reductions were put in place therefore, we are opposed to Nitrate reductions being increased or brought forward.

3.9. 'Sub-areas' from planning maps suggested are a huge risk to our farming operation because not only does it affect the proposed way we farm (purple zone) but has huge potential to push our land value down (as we may not be able to produce as much as some of our other neighbouring farmers in the district).

3.10. Our baseline numbers have fluctuated over the year from different models. Time and place. E.g. Table 1

Table 1:

Year	Overseer version	Baseline N/kg/ha
2013/2014	6.0.3	8
2015/2016	6.2.2	39
2017/2018	6.3.0	53
2019/2020	Current	42

3.11. Current version is currently being processed. Our farming operation of numbers of stock haven't change but our systems have with the development of science to which we understand we should be making our baseline reduce for example pivot irrigation instead of Rota-rainer or k-lines. Use of products like N-protect for plant utilisation. Through our Farm Environment Plan (FEP) we would like to have the evidence going forward that we along side other farmers are doing our best for the environment. We want to be able to adapt new scientific strategies to minimise our N loss.

3.12. To achieve a 15% reduction from baseline by 2030 will involve more capital in infrastructure for better water utilisation at the cost of lending, stock (deaths due to pivot system) and trees. Our property has beautiful shelter belts which our ewes lamb under and will need to be taken down for this water development. We currently have been changing some our cultivation systems. We want to adapt our farming practice for the environmental improvements our only concern is that methodology and actual physical outcomes on land can be very different at the cost to our production. For example, direct drilling our Kale yielding 9tonne/ha verses 12tonne/ha plough method. Whilst we want less area of crop and less turnover of soil the outcome is less crop less feed grown, less stock.

3.13. Reducing our baseline beyond 2030 is difficult without different methods of science which is being developed. It also is a question can we still make a profit and cover our debt servicing with production drops. Reductions need to be relevant to which farmers whom aren't high N leaches shouldn't be penalised because they have been farming in a manner which hasn't been contributing in the same levels as others.

4. THE PARNERSHIP APPROACH PROPOSED BY THE NEXT GENERATION FARMERS TRUST and WAIMAKAKRIRI IRRIGATION SCHEME.

4.1. We support the ideas by NGFT and WIL of working collaboratively to improve water quality. We would participate is such a collaboration as it allows people to work together financially and innovatively to find solutions for our communities. It is better than individual farmers trying to meet regulatory requirements as farming can be mentally tough through seasonal pressures and allows opportunities to develop key monitoring facilities for everyone to be ensured that we are working together for the benefits of our environment and community.

5. CONCLUSION

5.1. Moving forward we would like to think that there is some form of flexibility with councils to work with farmers and primary industry groups to help gather the information to provide more certainty in the proposed plan. The more science develops the more our futures and the future generation of farmers can have pride in their business operations and knowledge that the future water users have the premium quality they deserve.

David and Rosemary Clark

17 July 2020