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Cc: bpmcmenamin@xtra.co.nz
Subject: Attn: Hearing Officer - PC7 Hearing Evidence for Tim Stokes
Date: Friday, 17 July 2020 11:46:33 am
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[TStokes Hearing Evidence Submitter 369.docx](#)

Hi,

Please find attached Tim Stokes (Submitter Number: PC7- 369) Hearing Evidence, submitted on behalf of Tim Stokes.

Please direct any replies or queries to both parties in the email.

Thanks
Laura Bunning

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under: the Resource Management Act 1991

in the matter of: Proposed Plan Change 7 ('PC7') to the Canterbury Land and Water Regional Plan ('CLWRP')

Statement of evidence of Tim Peter Stokes in support of submission

Dated: 13 July 2020

STATEMENT OF EVIDENCE OF TIM STOKES

INTRODUCTION

- 1 My full name is Timothy Peter Stokes.
- 2 I provided a submission (Number 369) on proposed plan change 7 to the Canterbury Land and Water Regional Plan.
- 3 With my *family* I am the third generation on our 770-hectare mixed farming property in the Oxford area. My operation includes deer, ewes, winter grazing, dairy support, crops, and trading lambs. The farm is multi-generational, and I have lived in the region all of my life. We employ one full time staff member, and another part-time as required.
- 4 My family has a close connection with the local community, including through the local schools, rugby team, and the Oxford Agricultural and Pastoral Association. I am the current Chairman of the Water Race Advisory Committee, and the Vice Chairman of the Sheep Breeders Association. It is my wish to assist this area to thrive into the future.
- 5 I am a shareholder of Waimakariri Irrigation Limited ('WIL').
- 6 I am a director of Te Pirita Enterprises, a specialised contracting company that services both North and Mid Canterbury.

SCOPE OF EVIDENCE

- 7 My evidence provides:
 - 7.1 an overview of our farming operation and environmental compliance requirements.
 - 7.2 the implications and effects of the proposed rule framework.
 - 7.3 An overview of how PC7 will affect the whole community

OUR FARMING OPERATION

- 8 As noted previously, with my [*family*] I am the third generation on farm, and we operate a 770 hectare mixed farm that includes deer, ewes, winter grazing, dairy support, crops and trading lambs on Poyntzs Road, Waimakariri District, Canterbury.
- 9 We have 270ha under pivot irrigation, with the remaining area of the farm dryland. Of the farm enterprises we have 220ha deer fenced (26ha irrigated) on which we run 900 velveted stags and 120 weaners, with the velveted stags wintered on fodder beet. Under pivot irrigation we winter 1800 mixed age dairy cows on a combination of primarily fodder beet and some kale, with all supplementary feed to balance the cow's diet also grown on farm (silage

and straw). We also trade and fatten between 100-500 cattle on farm, with numbers dependent on both the feed available on farm and market/schedule price throughout the season. The final enterprise on farm is the sheep breeding and trading that primarily grazes on the dryland block, with fodder beet lifted and fed during winter, and forage oats or rape grown to provide feed during summer. We typical have between 2000-4000 breeding ewes and often as many hogget's on farm. Lambs are weaned and sold as fat when weights are achieved and depending on the season (feed and market) lambs are purchased and traded (2000-12000) or in lamb ewes are purchased to compliment the farm system.

- 10 In 2016 invested in a 9-hectare irrigation pond to help use water effectively as this provides us with approximately 25 days additional water storage. This allows us to manage our irrigation season demands more accurately as we can continue to make as and when required scheduling decisions in the lead up to, when the scheme goes on restrictions, or is fully restricted due to river flows
- 11 *We utilise two types of irrigation scheduling on farm, both are based on soil moisture probes. The REGEN system has a probe located under one of our pivots, and this provides real time scheduling to my smart phone based on a measure of current soil moisture conditions, the short and long range weather forecast and capacity of the soil for holding water. We also utilise Hydro services a company which measures the soil moisture in specific paddocks where we plant our high value crop paddocks once a week. This service gives us a crop and paddock specific recommendation, based on the stage of the crop life cycle, forecast and soil capabilities. Both of these technologies allow us to maximise our use of irrigation water and give records for compliance requirements such as when we are audited on farm.*
- 12 Other tools and practices we use on farm for environmental management:
- 12.1 *We utilise good management practices (GMPs) with our winter feed and crop on farm. We utilise a set cropping cycle that considers the nutrients available in the soil from the previous crop and minimises the fallow period (when soil is exposed) to minimise the risk of nutrients leaching. Our crops are planted with minimal disturbance to the soil using direct drilling or minimum tillage cultivation to ensure the soil is not at risk of windblow and soil nutrients are available for the next crop.*
- 12.2 *We ensure that our winter grazing on farm is managed to reduce the risk of compaction, nutrient run-off, and nutrient leaching. Good management practices used are dividing paddocks for stock on winter forage crops with hotwires to both back-fence and break feed so the animals grazing can be contained where the feed is and not linger on already grazed bare soil areas. We have plans in place for paddocks to run-off stock in poor weather conditions or if the soil is too wet to minimise the risk of soil compaction. Fodder beet is primarily grown for this purpose as we have found that it has reliable productivity, and*

minimal wastage and fits in well with the system that our dairy farm graziers have on farm.

- 12.3 *We ensure that the stock water race that runs through and ends on our farm is fenced from any cattle when paddocks are grazed. We have invested in troughs throughout all of our paddocks to have a reticulated water supply to remove any risk for the need for cattle to drink from this race.*
- 12.4 *We have invested in re-nozzling our pivots on farm so they can apply 4mm/day, this investment allows us to manage our irrigation more efficiently especially on the shoulder months in spring-autumn when we want to apply smaller levels of water more frequently to ensure that the soil does not receive too much water that would lead to drainage.*
- 12.5 *We utilise industry professionals in all aspects of our nutrient management and planning to ensure good management practices are followed. Local agronomists ensure that we are planting the correct type of crop for the stock and soil on our farm. Local fertiliser experts' soil and herbage test on farm to ensure that we are only applying what nutrients are required for plant growth. Local cultivation contractors that we also have invested in use the latest technology on farm to ensure that soil bed preparation is accurate and with the lowest level of risk to both soil wind blow and nutrient leaching. Local fertiliser spreading contractors use proof of placement (Trac Map), and calibrated machinery (Spreadmark Certified) to spread all fertilisers on farm which gives us comprehensive records for compliance and ensures that plans are followed.*
- 12.6 *We plant crops and grass types on farm that minimise the wastage, ensure long term productivity and maximum production for all of the animal types and conditions found on farm. We plant dryland specific species such as fescues and cocksfoot in our dryland, alongside direct drilling into existing Lucerne stands to extend the life of the plants. We embrace the latest science and specialist advice and re-grass our irrigated land with tetraploids, clover, and plantain mixes to maximise production, so this allows for better feed management and utilisation on farm. We plant summer safe crops such as Rape and Raphno to ensure we have flexibility the feed available and can regrass areas of the farm to minimise weeds and refresh older pastures.*
- 12.7 *Our Farm Environment Plan (FEP) provides us guidance for good management practices that are specific to our property and identifies any risks on farm across a number of categories (Nutrients, irrigation, soils etc). It gives us a point of reference and recognition for the practices we are already doing on farm that meet or exceed GMP, and also highlights anything that we can improve on to meet or exceed GMP on farm.*

- 12.8 *The WIL audit program gives us confidence that as irrigation scheme shareholders we are all being held accountable for the impacts our farming practices have on the environment. The audit process gives us a chance to sit down and showcase the practice we are using on farm with an independent auditor, and in return have a trained set of eyes give us advice and actions specific to our farm. For example an outcome from one of our audits was a discussion about the placement of our silage pits, and as a result we have hard filled a designated area to store silage on farm to remove the risk of any silage leachate entering waterways. The audit process has also demonstrated the importance of keeping records, and having proof of the actions we are doing on farm such as using Trac Map for proof of placement for fertiliser and Farm IQ which allows us to track stock movements on farm.*
- 12.9 *WIL also provide specialised training opportunities with workshops on irrigation management and technology options on farm. They also provide support for any decisions on farm and can direct us to a large network of industry professionals if we require specialist advice.*
- 13 Other environmental initiatives we have undertaken on farm is the planting and enhancement of manuka stands, which also support a local honey producing business by giving them a location to have hives.
- 14 We are also consented to spread piggery effluent and utilise this to maintain our soil fertility by providing nutrients and organic matter to the light soils we have on farm. These assists both our farming operation, and the pork farm by giving the product that would usually be deemed a waste product a purpose. The nutrients in the piggery effluent are measured, and the paddocks which it is spread are recorded so we can take this into account when using synthetic fertiliser. As a result, we have found that we use less synthetic fertiliser, and the soil structure has improved over time.
- 15 Our entire family and farm contribute to the local community. Our children went to the local schools, and we have noticed a growth in the school role since irrigation and farming expanded in the district. We also support the local Agriculture ITO courses, and have students on farm for teaching and practical experience as the large variety of stock and conditions we have on farm give them a solid introduction to the industry. We have employed local staff in both our full-time and part-time role over the years, and have found that the variety and exposure we can provide is a solid stepping stone for them to move on to roles on larger properties or more experienced positions.

EFFECT OF PC7

- 16 Under PC7, we would have to change the stock and crops that we plant on farm. The greatest impact would be if we are required to reduce the level of winter crop that we plant, and as a result the level of stock that we can carry on farm. As a proportion of our income is derived from dairy grazing and also

supplying barley as in shed feed, we are also dependent on the local dairy farms being able to continue farming under PC7 changes.

- 17 Aside from the income we generate from grazing winter crops, they play an important role in the productivity and carrying capacity of the entire farming unit. They are part of re-grassing cycle on farm. We utilise re-grassing to both control weeds in our pastures and continue to improve productivity on farm through removing older pastures.
- 18 We feel the combination of our FEP, WIL's audit program, the practices and management we have in place on our farm allow for winter grazing to occur with minimal impact on the environment. If we were unable to grow the same area of crop that we currently do, these dairy animals would still need to be wintered within the catchment and there may be no guarantee that the management would be to the same level especially if they were on smaller condensed areas with a higher level of risk.
- 19 We do not have storage for our grain crops on farm, so are dependent on the local dairy farms purchasing it for use in their dairy sheds – which is more sustainable than imported products such as PKE. . The contract market for arable crops that we would otherwise need to sell through has a higher level of risk in terms of price and quantity sold and requires considerable investment in storage on farm [cost here].
- 20 A key part of our farming system is having the flexibility and capacity of feed on farm to get us through some of the seasonal challenges we face. We need to be able to plant both winter feed and summer feed for all the classes of stock we have on farm to enable us to meet the requirements of our stock within the varying season conditions. If we are unable to support our own stock, we would be faced with animal health issues, needing to either sell or send animals to the works, or import feed from elsewhere. All of these scenarios have an impact on either our income or the nutrient cycling on farm. If we need to import supplement to feed our stock we add an element of risk to both our farm and the wider catchment, as we cannot control if that feed has been grown under good management conditions and by bringing in feed or crop that has been grown off farm we introduce more nutrients so a greater level of risk.
- 21 We feel that the 5% and 15% level of reduction are acceptable goals. We recognise that there is an issue with nitrogen leaching from some farming systems and that there is a need to reduce the impacts and continue improving on farm. However, we feel that there is a need to embrace the change and developments in the wider industry so utilising science and technology is also an important factor that will assist us on farm to meet these goals.
- 22 We feel that the imposing a limit on the area of land that can be under winter grazing does not allow for flexibility within farming businesses. Decisions are made to maximise the advantage of spring grass flush, that occurs when stock are not grazing all of the pasture on farm over winter. We feel that winter

grazing that follows good management practices, on a farm that has an FEP in place should be allowed a level of flexibility.

- 23 The PC7 requirements will add a higher level of uncertainty to our current farm system, that we have already invested in ensuring meets and in some respects exceeds GMP. This will mean that are unable to continue investing towards environmental initiatives such as embracing the latest science and technology available and planting areas on farm, especially if these initiatives are not directly related to lowering our nitrogen leaching number in the Overseer Tool.

CONCLUSIONS

- 24 Whilst we support the need for a new resource management plan in our district, it is essential that scientific evidence is collected over the next ten years, under a robust and agreed monitoring plan, to ensure that appropriate methods are well targeted to achieve improvements in water quality, including Nitrogen...
- 25 There needs to be recognition of and incentives for environmental initiatives that are not recognised by the Overseer tool, which is used to determine nitrogen-loss at a farm scale. Farmers want to continue to invest in activities such as native or riparian planting and exploring new technologies and practices.
- 26 The plan change needs to support the farms that are either already at or working towards good management practices on farm. Farms within the catchment, like ours either supply or support other farms within the local area, so ensuring the overall farming community can remain viable is essential to the long-term resilience at a farm and community level.
- 27 I understand that WIL has proposed an alternative rule framework and I support their submission and the outcomes sought.
- 28 For success with improving water quality it is important that the issues and the solutions are accepted and owned by the farmer. Farmers are engaged and aware that changes need to be made, but these must allow for flexibility so that they can remain resilient and capable of adapting to seasonal conditions and feed demand.