Submission to

Waikato Regional Council

On the proposed Waikato Regional Council Plan Change 1-

Waipa and Waikato River Catchments

Submission prepared by Lorraine Bilby.

2911A Tahuna-Ohinewai Road
RD3
Morrinsville 3373

Phone 07 8877852
Mobile 0211417752

I wish to be heard at the hearings on this Plan Change 1.

stew-bilby@farmside.co.nz

Introduction

I am pleased that I have the opportunity to submit on Plan Change 1. Our dairy farm property lies in the "area" which has been contested by Hauraki Iwi for their lack of opportunity for consultation on Plan Change 1. I welcome the opportunity to fully submit when the two areas are realigned as I have been told that this submission will not hold the weight it would if I was currently in the affected area. To that effect I have not commented on each section, but have submitted an overview, but would like the opportunity to do so then.

Submission

In essence I support the objectives of Plan Change 1, but have considerable unease in some methodologies for achieving the objectives. In the current form, some aspects will challenge the economic, social, cultural and environmental foundation of the affected communities especially where those communities are reliant on the farming community. Investment in these communities will be compromised and many cases it will decline, in part due to the level of uncertainty around the implementation of these changes. Uncertainty shrouds the future phases of implementation and the impacts on our ability to produce enough product in a market where we are still very much price takers, to sustain ourselves and our communities. The administrative cost alone of implementing this plan on farm has not been evaluated but in light of where costs of compliance in the past have continually risen gives rise to considerable unrest amongst the farming community.

The effect of farming on the waterways should not be the only consideration in this Plan Change 1. If we are serious as a nation (and we should be), to the improvement of water quality it needs to be outcome based taking a holistic approach where all communities take ownership. In the current form it is divisive of communities (rural and urban) and it needs to be cohesive. The costs borne from implementing this Plan Change 1 should be made by the total community to achieve the desired outcome. This is not limited to the farming community but the cost of treatments of storm water, contaminants from roading, city sewage etc. I question why urban areas have long term resource consents which allow for the ability to discharge sewerage in to the Waikato River for seven days in each month, for example, when the common goal should be to start mitigating as much detrimental contaminants as reasonably possible, with immediate effect. In a scoping study by NIWA in 2010, reported in their publication "Waters of the Waikato" maps show that the contaminants N and P rising substantially (25%) immediately before it reaches the confluence of the Waikato and Waipa Rivers, with no separation of urban or industrial contamination. Towns, cities, hydro and

geothermal generation and industry may have a role to play along with their country cousins in rectifying this problem. We do not have complete information at present to confidently allocate responsibilities.

'Overseer', the tool used for measuring the amount of contaminant loss to waterways, has long been contested for its weakness in accuracy, I understand in the present form to be around 48% accurate. This weakness is of serious concern. We are told that upgrading this tool happens on a yearly basis or less, which serves to make the NRP a moving target, and as such difficult to manage. Considerable on farm economic impacts may be incurred should destocking be required to meet the targets, or alternatively restocking. In a dairy situation a "culled" cow will fetch less than half her value as a production cow.

At a recent Fertiliser and Lime Research Centre Conference (Coast and Country News, March 2017, Robin Boom CPAg, Member of the Institute of Professional Soil Scientists), research reported by Dr Ranvir Sing and David Horne (Massey University) in the Rangitikei catchment shown that Overseer predicted that the amount of N that left the root zone and what actually entered the waterways could be vastly different. They reported that on heavy silt loam and peat soils, attenuation (the unaccounted disappearance of N through natural chemical processes) could account for as much as 80-90% of N lost from the Overseer model. On silt loams there was a medium attenuation, which may account for 50% of the total N, and on stony and course textured soils the amount of N lost by attenuation could be 10-30 percent. These variations are too significant to be ignored.

In the same article Danish Professor Brian Kronvang related that farmers in Denmark, for the last 30 years, had been forced to limit their farming operations based on environmental modeling. He also observed that N leaching predicted from models and how much actual N was being measured by monitoring were often vastly different. He concluded that on farm monitoring was a much more effective tool. In New Zealand equipment used by archeologists is currently being modified to track ground water streams. We may have a very effective tool to allow for monitoring of groundwater movement. The fact that science and science tools are changing should be acknowledged and that if farmers are given tools to manage their farming operations they will adopt them readily. Farmers by and large strive for efficiency and the vast majority have a social conscience and want the waterways to be pristine. Plan Change 1 needs to be flexible to be able to change for technological advances such as this to be included as a resource and not reliant solely on a tool which is not consistent and therefore too draconian in its effect.

In the late 1900's to early 2000's clover root weevil was inadvertently bought to New Zealand. Its lavae feed off the nodules of the clover plant which stops the plant from fixing nitrogen. The relationship between the nitrogen fixing clover and rye grass underpinned pastoral farming up

to this time. The loss of natural nitrogen fixation has Farmers turned to application of fertilizer nitrogen and a considerable amount of the applied nitrogen we see today is as a direct result of the damage caused by this insect. Anecdotally affected farmers found applying small amounts of N after grazing (given best practice around weather conditions) so that there was complete uptake by grass species to be harvested again on the next grazing was effective. Risk of volatilization and leaching is substantially reduced by volume. However, 'Overseer' does not allow for inclusion of the effect of this insect (a number of years ago it did). A wasp was introduced to help reduce the numbers of clover root weevil and has been effective but it is definitely not a silver bullet as seasonal changes have population either declining or rising. CRW are not seasonal, they exist in countries that have heavy snow. Another pest insect which decimates clover in some areas is the clover flea. Heavy infestations have seen clover totally defoliated, and whilst it does not kill the plant generally, it restricts it as a necessary part of nitrogen fixing. In warmer winters this pest has a prolonged breeding season and the adverse effects are extended over a prolonged period. During peak pasture demand, (October, November and December) clover flea is very prolific and clover forage becomes decimated. I don't believe the Nitrogen Reference Point, because of the limitation within 'Overseer' as the tool for losses, will be accurate. There are other tools which need to be considered as better alternatives.

To be an effective tool riparian planting, wetlands and sediment traps should all be accommodated in Overseer (or a more appropriate measuring tool) as currently these are not being taken in to consideration for the mitigation of leaching. It would encourage more farmers to make expenditure into these activities if they can measure the value in on farm terms.

Over the 10 year period of the first stage of the Plan Change, considerable investment into science to get robust outcomes is required. To achieve this, central government must invest strongly in science if New Zealanders as a whole are going to retain a reasonable standard of living. In the past 150 years this country has relied heavily on the farming community and there is little evidence that this is set to change. The contestable funding model has patently failed when the scientist bidding for projects sees their projects binned, wasting time, money and expertise in preparing ill defined proposals. Leadership in what questions science might answer should come from the whole community driven by economic, social and environmental needs. We have limited resources in science and dollars and need to allocate these judiciously. Then there is the question of how to best disseminate this information. The advisory system which we had in the past where scientists are there to deliver science without any other agendas was far more effective and a better use of limited resources.

At a more specific level there has been considerable conjecture around how the existing science has been applied to Plan Change 1. In view of the far reaching effect on the total economy of NZ, this needs to be peer reviewed so there is confidence that this is the correct way forward.

Some examples where the science is not available or miss-used include the following:

Introduced water fowl species are causing significant pollution, especially E. coli. Lake Victoria (Hamilton) Avon and Heathcote Rivers (Christchurch), Oakley and Otara streams (Auckland) are amongst the highest contaminated waterbodies with E-coli in New Zealand, largely attributable to water fowl, not fed from water from the farming communities so not ruminant related. These are a pest species in the same vein as possums and stoats. They are destroying a habitat and therefore need to culled down to sustainable numbers. If wetlands are going to be an integral part of helping contaminant losses from farm, introduced waterfowl will add further to the problem of E.coli contaminants as they thrive in this environment. As this is the biggest health risk to making waterways swimmable this target must be met. Sediment, is attributable to koi carp, another pest species, which has been allowed to breed unchecked. The composition of koi carp is 25% P and 25%N when used as a fertilizer, therefore when they die add both elements to the waterways. If we are to believe in a pest free New Zealand we must believe eradication is possible, or at least find ways to control this pest species down to sustainable numbers if the sediment N and P reduction requirements of the Plan are going to be met.

We need to understand the economic and environmental benefits of fencing steep country to keep stock from waterways. This needs to be measureable in terms of the causal effects versus the overwhelming costs of implementation and ongoing maintenance. Our soils by their very nature are prone to erosion which means that in times of heavy rainfall this is going to occur regardless of whether there are trees or grasses, although less likely if there are trees for coverage. (Considerable work has been carried out in strategic plantings which have been shown to be very effective in reducing erosion on erosion prone farms). Many times this takes out fences over considerable areas which amounts to huge costs as those areas are often not able to be fenced again for many years meaning total realigning of fences. Some areas are simply not able to be fenced due to rock formations, steepness etc. Stock will not enter waterways from these areas anyway as they look for easy access to water. On farm assessment of each situation is required as regional policies will be ineffective and unnecessarily costly..

More scientific work needs to be done around nutrient losses from the 15% gradient when used for cropping activities. Riparian plantings and grass species which contain and utilize runoff need to be taken in to consideration. Proximity to waterways needs to be assessed, not just a blanket approach. This needs to be farm specific.

A holistic approach to water and soil management is required by councils. This could see that land suitable for vegetable production is not used for housing. For example Horotiu, is considered to be land suitable for market gardening and horticulture. Under the current Plan Change1 due to the restrictions on land use for these activities we could be importing more vegetables from China. This has social consequence in terms of people's health and affordability of safe food. NZ already has an obesity problem this will be set to become greater as people cannot afford ready access to good quality, reasonably priced food.

Many farmers are intimidated by the process of writing and speaking to submissions. In my view, the Dairy NZ submission does not necessarily realistcally reflect what the farming community are thinking. I attended some of their meetings and found that farmers were told "how they perceived the Plan Change1 would be adopted" not questioning the farmers how it could be made more workable or necessarily around farmers concerns. Whilst I agree with most of their alterations to the documents wording, the overall submission is not necessarily reflective of what I evidenced at the meetings. Many of the meetings were hostile. Farmers want sensible, workable change.

In conclusion, New Zealand provides 45 million people around the world with quality safe protein foods (Massey University Riddete Institute), which in turn gives us a robust economy on which our citizens live and thrive. I urge Waikato Regional Council to carefully evaluate this economy again Plan Change1 to achieve both the "swimmable and collection of kai" objective against a country that could slip down the OECD living index if poorly implemented. The Plan must be flexible to enable it to be modified as scientific advances are made, which may change the direction of the Plan.

The timeframe, in light of the scientific work that needs to be done and allowing for the model to become workable needs to be extended to at least 15 years and implemented in small stages over that period as science become available. It allows on farm decisions easier to manage both economically, in an already challenge physical environment, and the investment in people.