

In the matter of: **Clause of Schedule 1 – Resource Management Act -
Submission on publicly notified plan change – Proposed Waikato
Regional Plan Change 1 – Waikato and Waipa River Catchments**

And: **Hill Country Farmers Group
Submitter ID 73321**

And: **Waikato Regional Council
Local Authority**

**Hill Country Farmers Group
Concluding Statement**

1. We would first like to thank the Commission for your patience - for listening and for your thoughtful questions. These Hearings have been instrumental in partially restoring trust within our community. Trust in a process that has otherwise been appalling - to the point where hill country farmers have often felt marginalized and disenfranchised.
2. We agreed at the outset with Cnr Livingston that we all needed to “do our bit”. We have tried to “do our bit” by providing this Commission with insights to the real financial and environmental impacts behind some of the ill-conceived components of this CSG proposal. In particular, fencing hill country creeks and ‘grandparenting’ low emitters.
3. We have highlighted for this commission some crucial omissions in the modelling that guided the CSGs decision making. Including but not limited to:
 - A total absence of any cost/benefit justification for the decision to try and push waterway fencing into hill country up to a 25° threshold.
 - A lack of consideration for significant environmental collateral damage in the form of increased sedimentation due to (1) the increased mechanical benching required prior to construction and (2) increased stock tracking post construction due to the greatly expanded fencing network alongside hill country waterways.
 - A remarkable oversight, where zero cost was allocated in the economic modelling, for massive mitigation efforts required of tens of thousands of creeks above the 25° threshold. The BakerAg Report shows that this mitigation cost is in the order of \$80K -\$249K for 4 of the 5 farms surveyed.
 - A stubborn reluctance to acknowledge, much less account for, any impact whatsoever on land-prices throughout the region, despite evidence from other regions and other analysts to the contrary. Indeed the CSG’s primary economic modeller, Dr Graham Doole, has since publicly agreed (Information Forum, Nov 21 2018) that any policy impacting profitability will inevitably impact on capital

land values. So why was it never addressed as part of the economic modelling for the CSG?

- A lack of any acknowledgement of the significant opportunity costs facing low leaching hill country farms due to the restrictive NRP (\$75K-\$256K for 3 of 5 farms surveyed by Baker Ag.) Grandparenting low-leaching farmers also has significant potential environmental opportunity costs as the inflexibility in N emissions prevents farm system optimisation necessary to maintain viability while providing for indigenous biodiversity, and wider freshwater aquatic health outcomes (refer James Bailey evidence HS1 Points 21, 23 and 24).

4. We understand that models are imperfect by their very nature, but these deficiencies are serious. Whether these failures stem from innocent omissions, deliberate attempts to present data to fit a narrative, or a complete lack of understanding of hill country farming and headwater catchments by decision makers is now irrelevant. What is important, is that they are substantive errors in the modelling that underpinned CSG decision making and calls into question the reliability of some of the decisions insofar as they relate to hill country catchments.
5. We have showed this Commission, through independent and detailed survey work by BakerAg, that this CSG proposal will impose costs that are simply unbearable for most hill country farmers. We also have provided examples (including costs) of alternative solutions through CSA management that would start us on this 80 year journey to improving hill country water quality. We have related our experiences in trying to work constructively with WRC and 'other stakeholders' as part of a catchment committee. Finally, we have argued that for this Commission to find a way through this tangled web of competing interests, it will need to drop the "one rule for all approach" and adopt a more appropriate set of rules where high intensity and low intensity farms are managed with differing and appropriate regulations.
6. We would like to take this opportunity to query some points raised in WRC Response to Hearing Panel Questions (5 July 2019). The proposed method for measuring stock units in some respects actively discourages further preservation and will perversely discourage farmers from retiring marginal land. WRC point 83 "*Stock unit measures apply to the effective grazed areas of a farm (pasture and crops). Stock unit obviously does not apply to non-effective areas of a farm including riparian areas, forestry, laneways, and sheds because stock do not graze these areas.*" This method of calculation, where the average stocking rate on better land increases (potentially exceeding NRP) when the area of retired land is considered "non-effective" (1) does not acknowledge the attenuation already provided by existing set-backs and buffer zones, riparian areas, native bush blocks and forestry, (2) disadvantages farmers who have already responsibly retired marginal land, and (3) provides no incentive to retire land in future. Rain still falls on 'non-grazed' land and therefore dilutes the effect of total farm emissions. Surely a mechanism whereby existing indigenous forest and riparian

plantings are added to (rather than deducted from) any stocking rate calculations is in the interest of improving long term water quality?

7. We also read with interest Mike Scarsbrook's response to the Panel's enquiry relating to the presence of E.Coli in hill country streams and the incongruity of using monitoring points at lowland intensive areas to make decisions about headwater catchments. (Q13 - Response to Hearing Panel Questions, 5 July 2019)
8. In relation to the first part of that question, Mr Scarsbrook refers the Panel to the Whatawhata research and several studies that showed that hill country farming did indeed contribute a level of E. Coli. The last study referenced ((Collins, R., Elliott, S. & Adams, R. (2005). Overland flow delivery of faecal bacteria to a headwater pastoral stream) involved experimental rainfall simulation and the researchers arrived at two key conclusions. *"Under heavy rainfall on steep pastoral land, overland flow can transport substantial levels of faecal bacteria to streams. Under such conditions, it is unlikely that vegetated buffer strips will be particularly effective at attenuating bacteria within overland flow."* Mr Scarsbrook, in summarizing this research for the Panel, highlights the first point but omits any mention the second point. It is, in our view, a critical omission, as this second point supports evidence already presented to the Panel by B&LNZ experts (Gerry Kessels and Dr Dada, EiC HS1) such that the CSG prescribed waterway fencing in hill country is a relatively ineffectual mechanism for managing E. Coli overland flows and that hill country streams would be better protected through CSA mitigations.
9. In relation to the second part of Panel Q13 - the appropriateness of the WRC's monitoring data for hill country decision making, Mr Scarsbrook states: *"Officers acknowledge that many of Waikato Regional Council's monitoring sites are in the lower parts of catchments and that this does not necessarily reflect water quality in the hill country... Council staff have suggested to those farmers that they undertake their own sampling at what they consider to be more representative sites but believe that the results are likely to show similar patterns to those established at Whatawhata."* Mr Scarsbrook is no doubt sincere in his belief that WRC have encouraged farmer water sampling, however our experience has been quite the opposite. We question the consistency of this alleged WRC support for landowner self-sampling, in view of this prepared Q&A issued to Hills Laboratories for farmers who approached them asking for water test procedures (5 October 2016).

Q. What water testing can I do to prove that my property is not having an impact on water?

A. Council is not requesting or expecting that land owners sample the water on their property. Surface water sampling would not add any particular value to an assessment of an agricultural operation. This is because direct sampling it is not likely to give the overall picture; as land management decisions

can also impact groundwater. Historic water quality data has been used to get trends for water quality in specific catchments. It wouldn't be worthwhile to spend any money getting these tests done for no apparent benefit to you or your management decisions.

10. Furthermore, we believe it is a 'very long bow to draw' to suggest that a more representative sampling regime across many Waikato headwater catchments would closely approximate the results of that single Whatawhata catchment. Indeed, we have already provided this Panel with long term (11 years) monitoring results from Mangatia Stream, Lochiel Station (HCFG HS1 evidence) that seem to confound such an assertion. For example nitrate concentrations of 0.20-0.24ppm are substantially lower than those regularly reported from Whatawhata ICM.
11. We have been amazed by various experts who have provided this Commission with selected evidence and half-truths to support their position. Perhaps we are naive, or perhaps everyone inadvertently does this, but we hope the Panel takes the time to read the full reports in order to arrive at fully informed conclusions. Just in case you have not yet had time to do so, we would like to "set the record straight" on several such submissions where we feel extensive hill country farming has been unfairly maligned or the 'full picture' has been partially obscured.
12. A number of submitters in the discussion of sediment have directed this Commission to Waikato Regional Council Technical Report 2012/02 Diffuse sediment in Waikato waterways – Helen Ritchie. Most recently, in the Hancock Forestry/NZFO rebuttal of F&G (19 July 2019) Ms Strang, states *"Point 5.3 From a review of all of the studies Helen Ritchie concluded that 'pasture slopes generate 2-5 times more sediment than comparable forestry slopes, except during forest harvest periods. Harvest causes a rapid peak in sediment generation but with good practice in harvesting, sediment loss can return to preharvest levels within 1-2 years'."* That is a somewhat amorphous statement - a bit like saying 'rogue elephants are quite approachable most of the time, except for those few seconds when they are charging you and the brief period afterwards when they are trampling you'.
13. Ms Strang goes on to provide much detail about the Pakuratahi/Taminginingi paired catchment study carried out by Hawkes Bay Regional Council which purports to show that forestry produces less sediment than pasture. We do not doubt the veracity of this study - only the extrapolation of a study of unstable coastal Hawkes Bay soils with moderate to very severe slip erosion risk to our stable Waikato hill country such as in the Hapuakohe ranges.
14. However if the Panel is looking for other non-Waikato comparisons it could have read a

little further in Ms Ritchie's summary to find that *"in Mahurangi, Gibbs (2008) found that the major sources of sediment were pine forest (46%), pasture (19%), and native forest soil (14%). As these three main land use types in the catchment occupied 16, 64 and 18% of the area respectively, the contribution of pine forest soil in the river delta sediments was almost three times greater than its proportion as a land use in the catchment."* Or the Panel could read Ms Ritchie's summary of the more relevant Waikato study (Quinn and Stroud 2002) where she states *"Quinn and Stroud (2002) found that pine streams at Whatawhata had the lowest visual clarity, with turbidity and suspended sediment typically 2- to 4-fold higher than the pasture and native streams. This was attributed to erosion of sediment deposits built up during the pasture phase, with bank sediment previously held by grass being released as the stream channel widened under a shady forest regime. This effect was observed even 28 years after pine planting. Further studies at Whatawhata (Hughes et al. 2010) show that in the sub-catchment retired from pasture and planted in pines stream clarity has not increased..."*

15. We also disagree with much of Dairy NZ's rebuttal of B&LNZ evidence (Statement of Rebuttal Evidence, Bruce Thorrold, Dairy NZ, 16 May 2019). Dr Thorrold appears to be promoting afforestation of sheep and beef farms as a viable alternative for low emitters, presumably to justify the odious iniquities of grandparenting N. In his argument, Dr Thorrold again refers to the long term ICM trials at Whatawhata where he states *"Point 9. Longer-term water quality changes were **not linear**, as the waterways adjusted to factors such as changes in shading and water balance caused by land use change with both increasing and decreasing water quality indicators reported by Hughes and Quinn (2014)."* He might have provided more detail by directing the Panel to Figure 4 pg46, of that very same study which shows significant deterioration trends in water clarity (-6.2%/pa) and increasing levels of both Phosphorous (+8.1%/pa) and Nitrates (+7.2%/pa) for six years of measurement following the afforestation of Site PW2. He might also have concluded that because none of the afforested block was harvested during the study period, the drawing of comparisons between pastoral farming and forestry was biased to the extent that it severely understated the overall annual average long-term sediment load of the forestry land (given most of sediment load will come later during harvesting). Water quality changes were indeed non-linear as Dr Thorrold notes, but the general trends for the afforested block were negative and the worst is yet to come.
16. Dr Thorrold then considers the economic consequences of this blanket afforestation of a large part of the farm *"Point 10. The economic consequences of this change, including income from C sequestration, were reported by Dodd et al (2014). This paper shows similar per ha profitability from the livestock enterprise, similar overall profitability as a consequence of C payments (a very low \$5/t C assumed) but with a substantial capital cost of almost \$1M."* Dr Thorrold neglected to note the concluding comments of Dodd et al *"Given that the remaining Whatawhata pastoral enterprise, at 150 ha is returning a similar \$254/ha but only \$38 000 p.a. this suggests that more grazed area would need to be resourced to maintain business viability."* So... despite the injection of \$1M, (which most farmers are unable to access), and despite the huge amount of input from rural

professionals over several years, dedicated to changing the stock policies and improving profitability, the results were static profitability and a farm which was no longer financially viable (due to a substantial reduction in pasture area generating revenue). This is hardly a ringing endorsement of financial sustainability. Of course we may speculate about current carbon prices and future log prices and the likely effect on this analysis, but such speculation is flawed unless it also considers the opportunity cost (for that afforested land) of the significant improvement in beef and lamb prices since 2001 and positive outlook for pricing.

17. Dr Thurrold, understandably, did not consider the social and community impacts of replicating the Whatawhata afforestation across large areas. More recent research by BakerAg on behalf of B+LNZ (Wairoa Report) illustrates the impacts on rural communities through the large scale conversion of sheep and beef land to forestry. This research shows that conversion of sheep and beef farms to forestry impacted on the wellbeing of the rural community, and its ongoing viability. This was due to a loss of local jobs, associated reduction in local population, and reduced local expenditure. Reducing local employment on-farm flowed on to impacts on other sectors such as education, health, retail, and entertainment. Research concludes that long term planning should consider the full range of well-beings including environmental, economic, cultural, and societal. Importantly planning frameworks should consider longer-term implications of policy settings including issues around wealth transfer across societies and communities. We believe that this requirement is also an integral part of the V&S.
18. This Whatawhata experimentation referred to by Dairy NZ, Helen Ritchie, Mike Scarsbrook and many others, provides a body of robust and relevant science based around a single Waikato catchment. It is indeed valuable, but not because it offers afforestation as any “silver bullet” for water quality. Nor because it proves that the displacement of extensive farming by forestry as an “offset” to dairy related water degradation is in any way justified. We believe the Whatawhata work is invaluable because much of it supports the opposite conclusion - that blanket afforestation of our extensive hill country with pine-trees is neither environmentally nor financially sustainable, and will most likely take us further from, rather than closer to, the V&S.
19. We agree with B&LNZ and many other submitters who suggest that it is high time that each industry ‘internalized it’s externalities’. We can ‘take care of our own’ footprint through FEPs and a more regulated approach to CSA management but we should not also be expected to pay for the misplaced and unfettered dairy expansionism of recent decades. We refer this Panel to the evidence provided by Dr Tim Cox that the sustainable N leaching rate is 16kgN/ha/yr (Dr Cox, EiC, 3 May 2019 para 41) in order to achieve the instream nutrient concentrations for the Waikato river, and that grandparenting does nothing but cause a wealth transfer from extensive farmers to intensive in order that the intensive land uses can continue to discharge beyond the sustainable limit for the catchment.

20. Finally, we are somewhat bemused by Fonterra's most recent protestation (Richard Allen, Fonterra corporate evidence HS3, 5 July 2019) *"These low intensity farms generate low returns per hectare and therefore the contaminant losses are generally much higher relative to their economic contribution."* We are not sure exactly what mental contortions are required to view pollution through this prism of economic ranking, but it would seem counter-productive to the V&S. Are Fonterra suggesting that lands that are farmed with lower stocking rates, where water is generally better and biodiversity generally higher, should be viewed more harshly simply because they generate less wealth per hectare? On this basis our large areas of protected indigenous forest would have extremely high contaminant losses relative to their economic contribution...Or perhaps Fonterra is in danger of 'missing the point' with respect to the V&S?
21. For us, the V&S is not just about profit and productivity but a more existential issue of community, of livelihoods, of past and future generations of hill country farmers. Most of all it is about equity. For generations, we have been able to drink from most of the small creeks that flow down from our hills (and we still invite the Commissioners to come and do so). Over time we have watched, as dams were built, as lakes were drained for flood control, as towns expanded, as high leaching pumice soils in Upper Waikato were converted from forestry to dairy farms. Now, we are told by those who have never visited our hills, never monitored our water, that our waters are a big problem (apparently made worse because our "economic contribution" is less than others). Now, it seems, we have to reap from the seeds that others have sown. We disagree with Fonterra, and anyone else who thinks this way. Perhaps Fonterra shareholders are producing more wealth/ha than we are, but when it comes to our water - not all 'wealth' resides on a balance sheet. How do we value our biodiversity or our high MCI counts? How do we value our community-farm-waterway links: the horse treks, the MotoX fundraisers, the dog-trials, the school camps, the pony clubs? How do we value the knowledge of people who have lived with headwater creeks all of their lives, who understand exactly which actions contribute sediment, and how to fix it? How do we value a connection with land and water, our stories, our skills and toil which have been passed down through generations? These things may be difficult to value - but they are not valueless. To us they are invaluable.
22. And so...we agree with Raukawa and other River Iwi that "water is not separate from people" and policy cannot therefore be assessed without due consideration to the impact on communities. We don't agree with those who call for the conversion of our extensive farmlands into pine-trees to "offset" their environmental footprints further downstream on the basis that it is 'fiscally expedient'. We will **never ever** accept this type of cynical 'horse-trading' because it is simply not in the interests of our communities or our creeks. We happen to believe that our creeks and our communities and our neighbours are important and we will do whatever it takes to protect these things.
23. This has been a long road of argument and division since 2016 and as a community we

are yet to take even the first practical steps on our journey toward an 80 year V&S. We welcome the day when we can identify some things that we can agree on with WRC and then get on with 'doing' instead of arguing.

- We welcome the new national proposal for stock exclusion regulations (Essential Freshwater: Action for healthy waterways) which wisely target both lowlands and intensively farmed areas of hill country. We urge this Commission to pursue a similar approach and in doing so remove a key obstacle to our compliance and action (and simultaneously remove a significant collateral sediment risk to our headwater catchments). Let's all agree, at least, that 25° fencing was a huge mistake on the part of the CSG and start down a track toward fencing our waterways where fencing is necessary, practical and beneficial.
- We have accepted that we should implement Farm Environment Plans.
- We have agreed with those many experts, who in their advice to regulators at both a national and regional levels, suggest that the best way to improve water quality in extensive hill country is to focus on the management of Critical Source Areas.
- We reject 'grandparenting' of N for low N loss farm systems because it will curtail flexibility and drive down land values for many farms that are operating well within recognised ecosystem health limits. Collectively, hill country farming across the entire Waikato contributes 7% of the total N load (HR/TLG 2015-2016/1.4). We urge the Panel to recommend a modified system for N management which will allow at least some flexibility to those with the lightest N footprint.

24. We support a Waikato where all sectors, including forestry, extensive hill country farming and intensive lowland farming have a place and where that place is supported by market economics, robust science and informed regulation. A Waikato where all sectors contribute to improving water quality over time and where the burden of compliance facing individuals is in some way proportionate to their environmental footprint. This CSG proposal has burdens aplenty for all farmers but it is fundamentally flawed with respect to hill country farming, in that it was generated from modelling analysis that was deficient in numerous aspects which are critical when assessing impact on hill country environments and communities.

25. We are tired of other people making choices for us. We are tired of people telling us what we should and shouldn't do with our land - these people who never visit our valleys and yet they are called 'experts'. We have been told many times that we should "stay positive", "get ahead of the curve", "talk only of solutions" to appease this Panel. But we are tired of these platitudes and we are tired of 'biting our tongue'. We prefer to say it as we see it. There are good solutions out there, and we have showed you some. But before we can make any progress we need this Panel to be courageous enough to acknowledge some of this plan's deficiencies: that this plan is simply not "fit for purpose" for our headwater catchments, that this plan is a 'wrecking ball' for our hill country areas, no matter whether your yardstick is ecology, economics or community resilience.

26. We are not asking for special treatment, only for different treatment, because we are different. Our land, our water, our biodiversity, our environmental challenges and solutions are all very different to lowland farming. Whether you recognise that now or later, it will eventually have to be recognised. Any 80 year water plan that purports to 'take the people with it' (particularly those people who have the most and the best water flowing through their lands), must recognise, embrace and leverage this diversity. Because if not, it will be just more empty words and endless policy debate. We have talked and written enough. It is time to start making these changes.

Thankyou.

Jason Barrier
On behalf of
Hill Country Farmers Group