

**IN THE MATTER of the Resource Management Act 1991**

**AND**

**IN THE MATTER of the hearing of submissions on Proposed Plan Change  
1 (and Variation 1) to the Waikato Regional Plan**

**TOPIC 3**

**BY FEDERATED FARMERS OF NEW ZEALAND INC,  
FEDERATED FARMERS OF NEW ZEALAND (WAIKATO  
REGION) 1999 INCORPORATED, FEDERATED FARMERS  
OF NEW ZEALAND – ROTORUA TAUPO PROVINCE  
INCORPORATED, FEDERATED FARMERS OF NEW  
ZEALAND (AUCKLAND PROVINCE) INCORPORATED**

**(“FEDERATED FARMERS”)**

Submitter with ID: 74191

**To WAIKATO REGIONAL COUNCIL**

**(“WRC”)**

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**STATEMENT OF REBUTTAL EVIDENCE OF PAUL FREDERICK LE  
MIERE FOR FEDERATED FARMERS ON HEARING TOPIC 3**

**19 July 2019**

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## **STATEMENT OF REBUTTAL EVIDENCE OF PAUL FREDERICK LE MIERE**

### **Introduction**

1. My full name is Paul Frederick le Miere. I am the North Island Regional Policy Manager at Federated Farmers.
2. My qualifications and experience are set out in paragraphs 19 to 28 of my Statement of Evidence for Topic 1 dated 15 February 2019. At paragraphs 29 to 33 of that statement I also provide an explanation of what Federated Farmers does.
3. This statement of rebuttal evidence focuses on the following matters arising from the memorandum for WRC dated 5 July 2019 and the Block 3 evidence:
  - a. The reporting officers' analysis of underdeveloped Maori land in the WRC memorandum dated 5 July 2019.
  - b. Variation 6 and implementation of PC1, in response to the Block 3 evidence of Mr Richard Allen (for Fonterra), Mr Sinclair (for WRC as submitter) and Mr Parkes (for Beef + Lamb).
  - c. Minimum standards in response to the Block 3 evidence of Mr Edlin and Mr Lynch (for WRC as submitter).

### **Underdeveloped Maori land**

4. At paragraphs 114 and 115 of the WRC memorandum dated 15 July 2019, the reporting officers have set out their responses to questions about underdeveloped Maori land. In summary, they conclude that 78% of Maori land is underdeveloped and 45% of non-Maori land is underdeveloped.
5. Due to time constraints, I have not had the opportunity to discuss these paragraphs and the analysis with the reporting officers (except for a brief telephone conversation with Mr McCallum-Clark). I think there would be merit in further discussion and I intend to do this prior to the Block 3 hearing.
6. Federated Farmers is concerned to ensure that the policy and rule framework for PC1 is robust, effects based, efficient, effective and gives effect to the relevant higher order documents. Our concern is to ensure that analysis relied upon by the Hearing Panel is as robust as it is able to be (recognising that there are many variables that are not well understood or for which no data exists).

7. Federated Farmers' concern with the reporting officers' analysis at paragraphs 114 and 115 of the WRC memorandum is that it is very brief and no context is provided for it. I appreciate that this analysis is not straightforward and that we are all operating under time constraints (and information limitations).
8. I set out at **Annexure PLMR1** my analysis of some of the issues involved in assessing whether land is "underdeveloped" by reference to work done by CSG, the Bay of Plenty Regional Council and the Ministry for Primary Industries. This is from Federated Farmers' perspective and is based on our understanding of the issues.
9. The purpose of responding to paragraphs 114 and 115 is to simply highlight that the figures provided by the reporting officers may be too coarse or high level to draw specific conclusions from. In my view, further investigation is needed to properly understand what land is underdeveloped if this data is to be relied upon for specific policy decisions.

#### **Variation 6**

10. At paragraphs 2.4 to 2.6 of his evidence, Mr Richard Allen raises concerns about evidence given by Mr Sinclair for WRC as submitter during the Block 2 hearings, about the implementation of Variation 6. Variation 6 was the water allocation plan change and as part of that WRC had to process 2,600 consents for water takes for dairy shed wash down as controlled activities. Mr Allen raises concerns about it taking six and a half years to implement the plan, 300 (more complex) consents are yet to be issued and the lack of contact between Council and farmers since consents were issued. At paragraph 2.6 he states that Fonterra would not consider Variation 6 to be an implementation success.
11. Federated Farmers sees Variation 6 slightly differently from Fonterra.
12. On behalf of Federated Farmers, I was involved in both the Environment Court appeal process (in support of a controlled activity status for existing takes for dairy shed wash down) and the implementation of Variation 6 (Federated Farmers and Dairy NZ worked with WRC to promote awareness of Variation 6 and to ensure that dairy farmers applied for their consents by 2013). There is no doubt that Variation 6 has presented a challenge to WRC in terms of the volume of consents and difficulties in how to deal with catchments that are over allocated. It is also clear from Mr Sinclair's evidence that there are some key lessons that WRC has learnt from that process that are applicable to PC1. Those are that the key ingredients for success

are controlled activity consents, non notification of applications, phasing and support from industry.

13. Federated Farmers agrees with WRC that it is likely to be very difficult to implement PC1 if a large number of restricted discretionary activity consents are required (and even more difficult if they are notified). We also foresee difficulty if 5,700 controlled activity consents are required. Federated Farmers sees the CIS and a permitted activity regime as a key way of assisting with implementation.
14. We agree with WRC that phasing is important. I have reviewed Mr Sinclair's Block 3 evidence and I am pleased to see that WRC is proactively thinking about phasing and he has developed an approach in Appendix One to his evidence that he considers is realistic and achievable. On this basis, Federated Farmers supports his proposal but subject to Mr Eccles' comments about ensuring appropriate time is provided to calculate the 75<sup>th</sup> percentile and communicate that with affected farmers.
15. We agree with WRC that support from industry is critical. My observation is consistent with Mr Allen's, in that I doubt that WRC could have implemented Variation 6 (i.e. all dairy farmers apply for consents by 2013) without the support of industry. I envisage that industry support under PC1 will be in the form of the CIS (and permitted activity regime), and the various industry groups (Dairy NZ, Beef + Lamb, Federated Farmers) raising awareness of farmers and acting as a conduit for engagement with WRC.
16. While it is a matter for Fonterra, I consider that the investment (and benefit from this) by Fonterra in the CIS would be significant (in terms of programmes, processes, templates, staff and advisors) and this will significantly assist the Council with the implementation of PC1 (by effectively removing 2,100 resource consents). The benefit to farmers is that Fonterra will assist them with obtaining FEPs. Fonterra suppliers would essentially be paying for this through their milk payout or share price, but the benefit is that they do not pay anything in consent fees (and presumably Fonterra can achieve economies of scale so the cost to an individual farmer is significantly lower than if they were to obtain their own FEP).
17. Without a permitted activity regime, it is difficult to see why Fonterra would undertake the same level of investment if farmers would still need to incur cost through applying for consent (both consenting fees and expert fees for things like assessments of environmental effects). Fonterra might assist with the process, like it did with Variation 6 (where during normal visits to farms, Fonterra's regional staff made farmers aware of the deadlines for consent applications, but this did not involve hiring

staff or specific investment). However, I would expect the level of assistance to be significantly less compared with if Fonterra established a CIS (and would not expect any real investment by Fonterra in the process).

18. Beef + Lamb raise the issues of the role of sub-catchment planning, work and groups (for example, Mr Parkes discusses at paragraph 44 of his Block 3 evidence, the low trust farmers have in the environmental information coming out of regional councils and therefore the opportunity for councils to leverage off industry organisations that have farmer trust and networks). Federated Farmers considers that in addition to industry, these sub-catchment groups would also provide assistance to WRC in implementing PC1.
19. I also agree with Mr Allen's comments at paragraph 2.9 of his evidence, that WRC's focus ought to be on monitoring and improving the science and understanding of the Catchment, as opposed to building a large team of consenting staff.

#### **Minimum standards**

20. WRC as submitter (particularly Mr Edlin) proposes that clear minimum standards are adopted. For example, Mr Edlin states at paragraph 78 of his Block 3 evidence, that minimum standards should be defined for key high risk activities. At paragraph 74 he raises concerns that CFEPs will be reluctant to commit farmers to what WRC would consider "minimums" unless there are minimum standards.
21. Federated Farmers two primary concerns with minimum standards:
  - a. By their nature, minimum standards are non tailored (and in diverse catchment like the PC1 catchment, there is unlikely to be a minimum standard that would be appropriate in the majority of cases). The implication is that if stringent minimum standards are adopted, existing farmers will need incur cost to justify departure from them (through a consenting process), which does not appear to be an efficient use of Council or farmer resources (particularly when the real benefit from FEPs will likely be from farmers obtaining them as quickly as possible and getting on with implementing them).
  - b. In attempting to create certainty, through precise or defined minimum standards, it is likely that greater uncertainty will be created. This is just as much an issue for WRC (with uncertainty affecting its ability to enforce compliance with minimum standards) as it is for farmers (who may not be able to sell or invest in their land due to uncertainty about whether or not they comply with minimum standards).

22. In his Block 3 rebuttal evidence, Mr Millner explains some of the uncertainties that arise from minimum standards based on slope. These are consistent with our experience in both regional and national policy contexts. For example, an issue that arose when we were engaging with the previous Government on the draft national stock exclusion regulations was how a slope criterion would be applied to stock exclusion.
23. The proposal was that the stock exclusion regulations would not apply to land above 15 degrees. The issue with this was in defining slope and, in particular, where and how much of the land near or around a stream had to meet the slope threshold.
24. One proposal considered was that if 20% or more of a paddock was below the slope threshold then stock had to be excluded from the stream. This raised various practical issues such as areas where paddocks were very large and naturally had a comparatively small area that was flat. This would have created significant uncertainty for farmers and councils in applying the slope exclusion.
25. While this is not the proposal in this case, an issue that would need to be considered is where and how slope is measured, and Mr Millner discusses the issues with WRC's proposal in its 15 July 2019 Memorandum in his Block 3 rebuttal evidence.
26. In PC1, Federated Farmers proposes a stock unit threshold to avoid the issues associated with slope. We also consider that stock units per hectare per paddock is a better proxy for intensity because it is effects based whereas slope has no consideration of intensity of land use (other than the presumption that the steeper the land the less number of stock but that is not necessarily the case).
27. Federated Farmers also supports a tailored approach that develops appropriate actions to address the particular critical source area as opposed to relying on applying non tailored minimum standards everywhere. This would allow for an effects based approach that considers activities that are higher risk and the appropriate GFP practice. This would also provide for consideration of things like flow paths (as Mr Millner explained in the presentation of his Block 2 evidence, the flow path might be away from the stream) and is more appropriate than a standardised approach like the adoption of 5m setbacks everywhere, suggested by Mr Edlin.
28. I consider that similar definition and uncertainty issues would arise if intermittent and ephemeral waterways were included in the stock exclusion minimum standards. I can foresee issues in that the assessment of areas that are intermittently wet or

depressions in land will depend on the time of year, type of season or type of weather events, for example. There is also likely to be a high level of subjectivity with no one expert having the same view. Addressing these issues through tailored actions in FEPs would provide greater certainty than relying on the application of minimum standards that required 5m setbacks from these areas, for example.

29. In his Block 3 evidence, Mr Lynch for WRC as submitter, expresses his preference for clear minimum standards or consent conditions, from a compliance and enforcement perspective. Federated Farmers is concerned about the potential issues with enforcing compliance with FEPs and minimum standards in a strict liability regime, particularly given the likely difficulties in creating clear and certain minimum standards.
30. We have members who from time to time find themselves being prosecuted for breaches of effluent or earthworks rules or standards, for example. One issue is that because compliance with rules and consent conditions is a strict liability offence, the reasons for the breach are not taken into account when assessing liability (and there can be a variety of reasons such as rogue staff, adverse weather events, equipment failure etc). The difference between breaches of these types of rules or consent conditions is that the discharge or effects can be directly observed and measured e.g. you can observe an overflow of effluent, measure the E coli concentration in the stream or calculate the volume of earthworks. However, the same is not possible for diffuse discharges of the four contaminants, and the closest we can get to measuring any of the contaminants is to rely on Overseer to model nitrogen.
31. In our submission on Variation 1, Federated Farmers expressed concerns about how compliance with FEPs would be enforced and concerns about detailed actions in FEPs becoming consent conditions. Part of our concern is that there can be a wide range of factors that affect the implementation of actions in a FEP (e.g. flood, drought, animal welfare, health and safety etc) and there needs to be appropriate flexibility to respond to these.
32. Federated Farmers supported the approach developed by Mr Dragten (i.e. level of confidence assessment, grading, FEP review and section 127 consent condition review) as a pragmatic response that strikes a balance between flexibility and compliance. We do not support Mr Lynch's suggestion at paragraphs 12 to 15 of his Block 3 evidence for regulation of Overseer inputs or regulation of the exact wording of GFP practices.

33. Mr Millner explains in his evidence the issues associated with relying on Overseer inputs (which are still based on a modelling number for N leaching) for regulation. Our concern with GFP practices becoming a condition of consent is that that would not provide sufficient flexibility (and could involve uncertainty unless they were very precise, which for many actions may not be possible).



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## Annexure PLMR1

1. At paragraphs 114 and 115 of the WRC memorandum dated 15 July 2019, the reporting officers have set out their responses to questions about underdeveloped Maori land. In summary, they conclude that 78% of Maori land is underdeveloped and 45% of non-Maori land is underdeveloped.
2. At paragraph 114, they state that Maori owned land comprises 9% of the PC1 Catchment, or 105,176ha. They say that this is all of the land that is identified as being Maori owned. I assume that this means it is Maori freehold land under Te Ture Whenua Maori Act, Treaty settlement land and Maori owned general land (but this is not clear).
3. The officers also state that this is a higher percentage than the land to which Policy 16 would apply. I assume that this is because Policy 16 (as notified) applies to tangata whenua ancestral lands (which is defined as Maori freehold land and Treaty settlement land) (but again, this is not clear).
4. At paragraph 115, the officers state that 78% (39,000ha<sup>1</sup>) of Maori owned farmland in LUC1 to 4 is underdeveloped compared with 45% (215,000ha) of underdeveloped non Maori owned farmland. They assess “underdeveloped” land as being land on LUC1 to 4 that is drystock, forestry or other (meaning that “developed” land is horticulture, dairy and lifestyle blocks).

### Preliminary comments

5. Before setting out the background or context I consider relevant for paragraphs 114 and 115, I wish to make some preliminary comments to provide context for my analysis. My analysis has ended up being much longer than I intended but as I started to write it I considered it important to provide as much context as I could (because a lot of this information does not appear to be before the Hearing Panel and because it was difficult to respond to paragraphs 114 and 115 without the context). I apologise if in doing this I repeat matters that the Hearing Panel already has an understanding of or which are already in evidence.
6. The context for the Hearing Panel’s questions about underdeveloped Maori and non-Maori land is not entirely clear to me. I have assumed that it may be that the Panel wants to further understand of the nature of the catchment (understanding developed

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<sup>1</sup> I note that the figures in Table 1 on page 30 of WRC’s memorandum are 35,847ha and 78% so it is not clear whether 39,000ha is correct. I also have not been able to access the spreadsheet #3751348 referred to at paragraph 114 and have assumed that the calculations are correct.

or underdeveloped land helps to provide context for or background to PC1 just as statistics around percentage of the Catchment in the different land uses e.g. drystock, dairy, forestry etc). I have also assumed that it may be that the Panel wants to understand how much Maori land might want to change land use or be suitable for development. But I appreciate that there could be other reasons for the Panel's questions.

7. The purpose of my analysis is not to define what areas of Maori and non-Maori land are developed or underdeveloped. I simply wanted to explain why I consider that such an assessment is not straightforward.
8. Federated Farmers' concern with the land use change rule is to ensure that it is effects based and a reasonable planning framework is provided for assessing land use change. Federated Farmers has empathy for Maori landowners who have not been able to develop their land due to historical impediments and may now find themselves in the position of not being able to intensify or change land use due to PC1. As explained in Mr Eccles' Block 2 evidence, Federated Farmers considers that the appropriate mechanism for addressing this concern is through a discretionary activity pathway that provides for an effects based consideration of land use change.
9. In saying this, I take on board Mr Hill's comments at the Block 2 hearing that the RMA is more than just effects based and that PC1 needs to give effect to Part 2 (and the relevant higher order documents). These are properly matters for the Panel to consider after hearing all of the evidence. My intention is to simply provide some context for the issues raised by paragraphs 114 and 115 of WRC's memorandum.

#### CSG analysis

10. I have reviewed the analysis of Maori land undertaken by CSG in terms of how "Maori land" and "underdeveloped" were defined and modelled, to see if that provides any further background to the explain the reporting officers' analysis:
  - a. CSG considered the extent of Maori owned land in the catchment by FMU and by land use type.<sup>2</sup>
  - b. Issues were raised about how Maori land ought to be defined (e.g. whether it should include general land and Treaty settlement land) and how underdeveloped should be assessed (e.g. whether it should include commercial

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<sup>2</sup> <https://www.waikatoregion.govt.nz/assets/PageFiles/28959/19/352-3609413.pdf>

forestry or only native forestry).<sup>3</sup> However, I have not been able to find a report recording how these issues were resolved.

- c. Barriers to development and utilisation of Maori land were considered, such as the Emissions Trading Scheme, ownership and management structure etc (but it is not clear how these were treated or whether they were included in the scenarios Dr Doole modelled).<sup>4</sup>
- d. In developing Policy 16, CSG considered a range of policy guidance and input from stakeholders.<sup>5</sup> It does not appear to have landed on a definition of “underdeveloped” (but Dr Doole’s scenarios made assumptions about this as I explain at paragraph f below).
- e. Dr Doole modelled the potential development of iwi land and the impact on short term targets and economic costs.<sup>6</sup> He assumed that the areas of Treaty settlement land (owned by CNI) that would be developed under low, medium and high scenarios would be 2,167ha (low), 4,333ha (medium) or 6,500ha (high). He assumed that the areas of multiple owned Maori land that would be developed would be 900ha (low), 1,800ha (medium) or 2,700ha (high).
- f. Dr Doole assumed that areas of Maori land in LUC1 to 4 would convert from forestry to dairy, areas of Maori land in LUC5 to 7 would convert from forestry to drystock and areas of LUC8 would remain in plantation forestry.<sup>7</sup>
- g. Dr Doole considered the number of sites that meet the Table 3.11-1 targets under no, low, medium and high development of Maori land. He concluded that there was no change in the number of sites that meet their targets under any of those scenarios (but the concentration of some of the contaminants increased as the area of Maori land use change increased).<sup>8</sup>
- h. Dr Doole compared the current catchment level profits under PC1 with no development of Maori land and with his three scenarios of Maori land use change. He concluded that catchment profit would reduce by \$38m under the

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<sup>3</sup> <https://www.waikatoregion.govt.nz/assets/PageFiles/28959/22/428-3652739.pdf>

<sup>4</sup> <https://www.waikatoregion.govt.nz/assets/WRC/Council/Policy-and-Plans/HR/S32/E7/3751561.pdf>

<sup>5</sup> <https://www.waikatoregion.govt.nz/assets/WRC/Council/Policy-and-Plans/HR/S32/E7/6224488.pdf>

<sup>6</sup> Page 21 of Dr Doole’s report - <https://www.waikatoregion.govt.nz/assets/WRC/Council/Policy-and-Plans/HR/S32/E7/6551310.pdf>

<sup>7</sup> Page 21 of Dr Doole’s report - <https://www.waikatoregion.govt.nz/assets/WRC/Council/Policy-and-Plans/HR/S32/E7/6551310.pdf>

<sup>8</sup> Tables 6 and 7, pages 33 and 34 of Dr Doole’s report.

scenario of no and low Maori land use change, \$39m under medium Maori land use change and \$41m under high Maori land use change.<sup>9</sup>

#### Definition of “underdeveloped”

11. The definition of “underdeveloped” land may be an important consideration. The reporting officers have assessed this at a catchment scale based on a simple assessment of the LUC class and current land use i.e. LUC 1 to 4 in horticulture, dairy and lifestyle blocks is developed; all other LUC 1 to 4 land is underdeveloped.
12. Whether land is developed or not is reasonably subjective. At one end of the spectrum, development could be any improvement of land, including clearing bush and scrub, planting forestry and the associated tracks and infrastructure (and in recent years, the associated carbon credits have become an important driver of such development). At the other end of the spectrum, development could be to the highest and best use of the land. If the highest and best use was assessed in a land valuation context this would take into account limitations on that land that impact on the ability to develop it.
13. The limitations on development that I am aware of are:
  - a. A large proportion of Maori freehold land is leased and the majority of those are leases of rural land. There is no analysis of what area of land is leased and for the term of the lease (and any rights of renewal) this would place restrictions on what it could be developed for.
  - b. There are portions of Maori freehold land that are administered by Te Tumu Paeroa (the Maori Trustee) where landowners have not been identified. There are also portions of Maori freehold land that has no formal governance structures. This limits or prevents that land from being developed.
  - c. Maori freehold land typically has difficulty accessing funding for investment due to restrictions on the alienation of this land (including mortgaging the land).
  - d. A large proportion of Treaty settlement land in the Waikato catchment is currently in forestry (it was returned subject to forestry licences). This restricts the ability to cut down the trees, for the duration of the forestry licences.
  - e. Areas of forestry will need to acquire carbon credits in order to cut down the trees and convert to a different land use. The price of carbon credits is increasing with

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<sup>9</sup> Table 2, page 25 of Dr Doole’s report.

the current price of carbon around \$25/t.<sup>10</sup> Based on analysis undertaken by TLG, the cost of obtaining sufficient carbon credits at \$25/t to convert 241ha of forestry to dairy would be \$52,747 per hectare.<sup>11</sup>

- f. Conversion to dairy or horticulture generally requires sufficient water allocation (unless reservoirs and water harvesting schemes are provided). The Upper Waikato catchment, for example, is currently over allocated and this will likely prevent the development of Maori land in this FMU for horticulture or dairy.
  - g. There are various areas throughout the Catchment that are subject to restrictions on development due to protections such as areas designated as Significant Natural Areas (“SNAs”) in district plans (typically this is bush and scrub), Nga Whenua Rahui, QEII covenants, and other protections through things like biodiversity and environment management plans
14. An assessment of whether land is underdeveloped at a catchment scale does not take into account limitations at an individual property level that restrict further development. This will include things like the size of land parcels (I understand that Maori freehold land generally comprises small land areas) and contiguity of LUC land (when I have reviewed LUC mapping in the Waikato, it has shown that areas of LUC1 to 4 are not typically contiguous and there tend to be areas of LUC6 to 8 interspersed). It also does not take into account infrastructure and supply considerations such as ability to obtain Fonterra shares or proximity to a dairy factory or suitability of land (particularly if LUC6 to 8 is interspersed) for irrigation infrastructure.
15. To gain an informed understanding of the level of development would require a more detailed analysis

#### Rotorua analysis of underutilised land

16. In Rotorua, Bay of Plenty Regional Council engaged Perrin Ag in 2016 to provide an assessment of underutilised Maori freehold land.<sup>12</sup> This was in the context of Plan Change 10 (which requires nitrogen reductions from benchmarked levels to achieve a RPS target in Lake N load of 435tN/yr). It was also in the context of RPS Policy IW1B, which relates to enabling development of multiple owned Maori land (defined

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<sup>10</sup> It is currently around \$25/t and forecast to increase - <https://www.comtrade.co.nz/>

<sup>11</sup> This is based on assumptions by TLG that 800t CO<sub>2</sub>/ha would be required to convert 241ha of forestry to dairy - <https://www.waikatoregion.govt.nz/assets/WRC/Services/publications/technical-reports/HRWO-trs/TR201851.pdf>

<sup>12</sup> <https://cdn.boprc.govt.nz/media/612171/underutilised-maori-land-analysis-perrin-ag-draft-may-2016.pdf>

as land held under Te Ture Whenua Maori Act 1993) (there is no directly comparable policy in the Waikato RPS).

17. The Perrin Ag approach was to consider whether Maori land at a catchment level was underutilised by:
  - a. Removing any land that was deemed fully utilised given its existing use. This included removing areas of land identified as urban, waterways, wetlands, roading, housing etc.
  - b. Removing any land that was protected through environmental programmes.
  - c. Considering the remaining land uses against LUC to remove any land that was assessed by Perrin Ag as utilised based of its LUC.
18. Perrin Ag identified land for further discussions as to whether land with a formal governance structure or subject to SNAs ought to be filtered out as utilised. Perrin Ag's analysis then considered the financial implications of restrictions on land use change of underutilised Maori land (this analysis involved consideration of conversion costs and the emissions trading scheme). They then undertook scenario modelling.
19. Perrin Ag identified the subjectivity in quantifying underutilised land at a catchment scale and stated that "the drivers behind the assessment of utilisation can be very broad and often differ depending on who is assessing the utilisation and the local circumstances of the land parcel."<sup>13</sup> They concluded that "it is infeasible to accurately quantify the exact area of underutilised land in the Lake Rotorua catchment without analysing each parcel of land individually."<sup>14</sup>

#### Productive potential of Maori freehold land

20. In 2014, PWC prepared a report for the Ministry for Primary Industries that contained analysis about the productive potential of Maori freehold land.<sup>15</sup> That report assessed these improvements on the basis of the potential for improving the productivity of existing land uses and for land use change. One of the key findings was that while there were immediate opportunities in dairy farming, forestry offered

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<sup>13</sup> Perrin Ag report, paragraph 8.1.

<sup>14</sup> Perrin Ag report, paragraph 8.2.

<sup>15</sup> <https://www.mpi.govt.nz/dmsdocument/4957/direct>

long term value in some regions.<sup>16</sup> Since that report was prepared, the price of carbon credits has significantly increased.

21. Through our regional and national policy work (including the Government's greenhouse gas emissions policy and billion trees programme), I am aware of the increasing value of land for forestry. For example, in the Wairarapa our members are experiencing issues where typically LUC 4 or 6 drystock land is being purchased for conversion to forestry. The attraction of this land is that it is easier for the forestry companies to access and this is preferred to LUC7 or 8 land, which tends to be more difficult to access for planting, maintenance and harvesting. I am not aware of the same issues in the Waikato (as yet) but it does illustrate that, at an individual property level, it cannot be assumed that forestry is not the highest value land use or that land planted in forestry is "underdeveloped."
22. The PWC report contains an assessment of the areas of Maori land in the Waikato that could potentially change land use in order to increase productivity and concluded that this could apply to 30,041ha (I note that this is in the entire Waikato region (around 2.5 million hectares), not just the PC1 catchment (1.1 million hectares) so it is not directly comparable with the reporting officers' assessment of 39,000ha).<sup>17</sup>
23. In making this assessment, PWC noted that there were a variety of costs associated with land use change at an individual property level (and associated productivity improvements) that had not been considered. This included that the need to purchase Fonterra shares was not treated as an economic cost (rather it was a transfer with zero economic cost), nor were any carbon credits needed to convert forestry land to another land use treated as an economic cost, and there was no consideration of any environmental costs of new farming activities.<sup>18</sup>
24. PWC also identified four key caveats associated with their analysis:<sup>19</sup>
  - a. The ability to coordinate action on Maori freehold land is limited by many blocks comprising small land parcels (16% of Maori freehold land is contained in over 150,000 blocks of less than 10ha each).
  - b. Limits to water allocation and capacity to store water for irrigation.

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<sup>16</sup> Page 4 of PWC report.

<sup>17</sup> Page 28 of PWC report.

<sup>18</sup> Page 15 of PWC report.

<sup>19</sup> Pages 16 and 17 of PWC report.

- c. Regulatory restrictions such as nutrient limits or limits on conversion of regenerating Manuka/kanuka scrubland to farming areas.
- d. Constraints in labour and product markets that may limit growth in some areas e.g. shortages in dairy farm labourers.

### Agribase

- 25. A further potential issue is the source of the data for assessing the current land use. This is potentially more of an issue for Maori land because it is largely not represented in Agribase. It is not clear what databases WRC relied on but from my brief conversation with Mr McCallum-Clark, I understand that WRC used a combination of its rates database, Agribase and the Land Resource Inventory.
- 26. We have access to Agribase and it is a database we use often. I asked our GIS analyst to compare Maori land<sup>20</sup> with the land uses in Agribase. She identified that there was a total of 1,407 parcels of Maori land in the PC1 catchment, but there were only 464 (comprising 64,851ha) of those land parcels registered with Agribase. This means that on the basis of Agribase, it is not possible to assess the current land use for around 1,000 parcels of Maori land (comprising 88,694ha).<sup>21</sup>
- 27. There are additional issues with Agribase, such as farm types being incorrectly recorded, as I explain at paragraphs 27 to 36 of my Block 2 rebuttal evidence dated 17 May 2019. I am not saying that it is not appropriate to use Agribase (in most cases it is the best database available) but I do think that it needs to be treated with caution when making conclusions (and if Agribase data was to be relied upon at a property or sub-catchment scale, further ground truthing or investigation would be required).
- 28. My conclusion from my analysis is that just because land in LUC1 to 4 is not used for horticulture, dairy or lifestyle, does not necessarily mean that it is underdeveloped. While it may be appropriate to consider historical impediments to the development of land, this analysis does raise the issue of whether land that is not able to be developed should be treated as underdeveloped or underutilised. It also raises the issue of whether restrictions in PC1 on land use change would

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<sup>20</sup> Our GIS analyst used the Maori Landonline shape file for Maori land which included Crown land reserved for Maori, general land owned by Maori, Maori customary land and Maori freehold land.

<sup>21</sup> I note that our GIS analyst's figures for the total area of Maori land differ from the reporting officers and this is most likely because the shape file used does not include Treaty settlement land.

change the status quo if this land is not able to be developed under the status quo (or not able to be developed in the 10 year lifetime of this plan change).