BEFORE COMMISSIONERS APPOINTED
BY THE WAIKATO REGIONAL COUNCIL

IN THE MATTER	of the Resource Management Act 1991
AND	
IN THE MATTER	of the First Schedule to the Act
AND	
IN THE MATTER	of Waikato Regional Plan Change 1- Waikato and Waipā River Catchments and Variation 1 to Plan Change 1
AND	
IN THE MATTER	of submissions under clause 6 First Schedule
BY	**FARMERS 4 POSITIVE CHANGE** **Submitter**

HEARING STATEMENT OF GRAEME BERNARD GLEESON

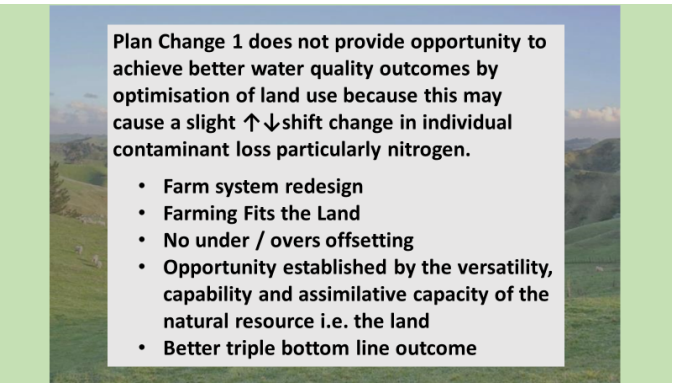
Block 2 - May 2019

Farmers for Positive Change (F4PC)

F4PC Vision of Success - A sustainable environment that supports ecosystem and human health with profitable and purposeful agricultural land usage in a common landscape contributing to everyone's wellness.

The common landscape being a mosaic of diverse and different use optimised according to the versatility, capability and assimilative capacity of the natural resource i.e. the land, with an environmental footprint having minimal degraded impact - Farming Fits the Land

1. **Plan Change 1 creates a state of unpreparedness** Plan Change 1 in its current format is essentially unprepared to create a leverageable platform of transformative change to give effect to the Vision and Strategy. This lack of leadership will be troublesome because there is no certainty with a pathway of known direction beyond Plan Change 1 including a visible end point. Without a vision of success including perhaps an interim target that provides clear, unambiguous, tangible and reasonable direction, any real progress to improve the state of water quality will be delayed, fraught and contested.



2. **F4PC Vision of Success Farming Fits the Land** F4PC believe that land use must consider the versatility and capability of the land as a natural resource including how usage and associated contaminant loss may impact nearby receiving environments whilst respecting the four well-beings (environment, cultural, social and economic) in an integrated and balanced manner. Where this is undertaken the landscape vista will be a mosaic of different and diverse use having recognised all the different types of land and its limitations for productive usage – this is reflected in the phrase “Farming Fits the Land”. A successful outcome would be witnessed by an environment that supports ecosystem and human health with profitable and purposeful agricultural land usage in a common landscape contributing to everyone’s wellness.

3. **Leadership** If the end outcome of this process is only a fudge, a bit of this and that, a reluctance to be bold, a desire to avoid dispute and feuds, or alternatively an endeavour to bite off much more than we can chew, then we will all have failed miserably in our duty and responsibility.

4. Leadership is therefore required to be promulgated via Plan Change 1 establishing a framework of actions to enable, leverage and shape transformative change and to a degree accelerate change.

Framework of actions

Leadership by Establishing a Framework of Actions It is F4PC belief that the Vision of Success with enduring outcomes can only be created by having certainty with the establishment of a framework of actions to leverage. Certainty begins by establishing an interim target state of water quality year – 2050 to be followed by other embedded frameworks that will give direction with transitional time to adapt and seek out alternative workarounds. Importantly it also gives comfort that there is a plan, there is an outcome that allow progress to be measured against.

- **Interim target state of water quality year – 2050**
  - **Provides a clear signal of intent as a bottom line, creates certainty, It indicates direction and pace of travel**
  - **Provides opportunity for transitional time that is staged and measures affording opportunity to adapt, to seek out alternative workarounds and innovation with practice change.**

- **Subcatchment focus – Integrated Catchment Management**
  - **A key component of success by integrating communities to resolve local issues with combined effort and collaboration**
  - **Targeting contaminant loss of concern relevant to each subcatchment**

- **Nitrogen – Total Nitrogen (TN) attribute**
  - **Total Nitrogen (TN) and Total Phosphorus (TP) attribute for all tributaries**
    - **The Total Nitrogen is an essential reporting metric for ecosystem and human health which differs for toxicity**

- **Nitrogen (and other attributes) – Sampling and Measurement**
    - **The collection of water samples must be undertaken following best practice such that the data is above repute. The sampling stations must be established where any bias and irregularity are manageable, the sampling is consistent and well correlated with stream flow characteristics to ensure good concentration-discharge relationships, and yield and load estimates can be derived**
        - **Stream gauging and sampling at the same site location**
    - **Any upgrade in the number of sampling sites and sampling procedure is prioritised according to subcatchment risk of over allocation and breach**
        - **There needs to be more fullness in sample records to provide understanding about concentration and load, and how this may vary in different flow conditions noting stream hydrographs will perhaps be undergoing change due to future events e.g. land cover change, climate change etc.**
        - **Frequency of sampling may also need review**
- **Nitrogen – Deletion of one-size-fits-all rules**
    - **No 75th percentile; No grandparenting; No 5-year rolling average**
- **Nitrogen – Flexibility for low N loss**
    - **Flexibility stocking rate ≤ 18 su / ha ~ 1000 kgLW/ha (with Sunset Clause)**
    - **Land Use Capability (LUC) Class allocation**
        - **See Natural Capital - Nitrogen Allocation Framework below**
- **Nitrogen - Flexibility for low N loss is not a 'free pass'**
- **Nitrogen – Reduction where N loss is medium – high**
    - **The degree of N reduction required dependent upon individual subcatchment allocation status**
    - **Farm Environment Plan GMP may provide insufficient reduction relative to the degree of travel required – transitional and staged**
- **Nitrogen – Horticulture**
    - **Horticulture industry managed N allocation**
- **Natural Capital as the Nitrogen Allocation Framework**
    - **Allocation according to versatility, capability and assimilative capacity**
    - **Land Use Capability (LUC) as a proxy**

- **Sediment + Phosphorus**
    - **Farm Environment Plan critical source areas**
- **Microbial pathogens**
    - **Farm Environment Plan critical source areas**
- **Livestock exclusion**
    - **All waterways ≤ 15-degree slope,**
    - **All 'Accord' waterways intensive stocking rate ≥18 su / ha ~ 1000 kgLW/ha**
        - **No slope limitation – high risk**
    - **Buffer widths that are determined according to expected overland flow therefore having variability, a greater width required where flow accumulates and is more channelised**
        - **Risk matrix – soil, rainfall, upstream catchment area, flow length**
- **Cultivation**
    - **Slope ≤ 20-degree**
- **Forage Cropping Direct-Grazed**
- **Misplaced Land Use – it does not fit!**
- **Farm Environment Plans plus Certified Advisor**
    - **Industry designed and supported plans linked to market**
    - **Regulatory and Compliance plans**
    - **Report, monitor and audit / review 5-yearly return**
- **Good Management Practice Thresholds**
    - **Certainty, repeatability and consistency**
- **Certified Industry Schemes (CIS)**
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Farmers 4 Positive Change (F4PC) Gleeson Block 2

5. F4PC wish to confirm and reinforce our previous submission conveyed in Block 1 and now will provide greater insight into the Block 2 topics. This submission recognises the topics to be discussed for Block 2 and so this submission has been structured to accommodate this request.
6. **F4PC Introduction** F4PC is a group of pastoral livestock farmers who became organised together when Plan Change 1 was notified in response to concerns about the fairness and equity of the policy and rules. It is the intent of F4PC to highlight what we do not like and provide alternative solutions as a way forward. F4PC are farmers and are submitting as farmers and so all advice, opinions and recommendations herein are delivered with this caveat.

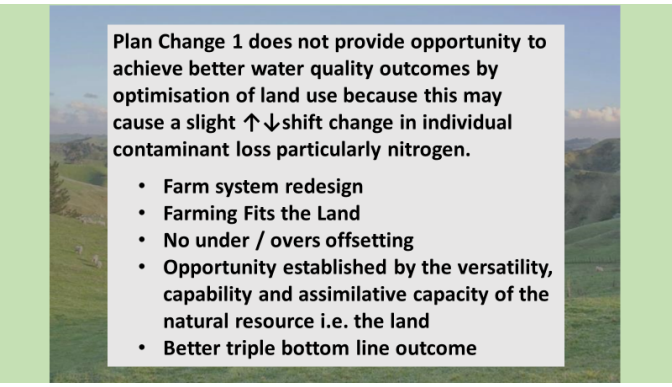
An introduction to key topics, some will be discussed in more depth to follow

7. **An overview** F4PC wish to promote the management and stewardship of land regardless of scale i.e. Waikato – Waipa River catchment, Freshwater Management Unit, Subcatchment, to an individual farm property in a fair and equitable manner that ultimately has an acceptable environmental footprint which is measured by a substantial improvement in the state of water quality relative to existing for better ecosystem and human health and importantly restores the mauri of the awa so giving effect to Te Ture Whaimana - Vision and Strategy.
8. **F4PC Opening Statement** F4PC want to share the goal, a vision of success, which is a sustainable environment that supports ecosystem and human health with profitable and purposeful agricultural land usage in a common landscape contributing to everyone's wellness.

   The common landscape being a mosaic of diverse and different use optimised according to the versatility, capability and assimilative capacity of the natural resource i.e. the land with an environmental footprint having minimal degraded impact **Farming Fits the Land**
9. Successful achievement of outcome will require having a clearer understanding about the natural resources i.e. the land which we farm and live upon; having good comprehension of the land's versatility, capability and assimilative capacity; understanding how contaminant loss may have impact upon downstream receiving environments and how mitigation actions may limit loss and reverse degradation.

10. A successful outcome to improve the state of water quality should not however be satisfied by demanding the universal reduction of contaminant loss everywhere when in some locations, and on some farms, it is not justified. Where contaminant loss is high above acceptable thresholds then certainly with no reservation reduction must occur. However, when contaminant loss is relatively low it then becomes more pragmatic and reasonable to allow farmers as land users to have flexibility for some small upward increase whilst working on improvements elsewhere to get an overall downward decrease that provides comprehensively a better outcome rather than be constrained with strictness by grandparented loss rates which can limit opportunity to optimise.

Refer to James Bailey Grandparented strictness will obstruct and hinder



11. There is scope on most farms regardless of type e.g. Sheep, Beef-cattle and Deer, or Dairy or Horticulture to consider their environmental footprint encouraged by using Farm Environment Plans and from this analysis look for opportunities to reduce contaminant loss namely phosphorus, sediment and microbial pathogens where they occur or there is likely risk to occur above acceptable thresholds. This is good practice and needs encouragement and incentive to facilitate practice change. However, it is most unfortunate Plan Change 1 has established that nitrogen is a priority contaminant by adopting a grandparented allocation regime forcing undue focus and constraint when it is not applicable particularly for land use with existing low N loss and land use in subcatchments where cumulative N loss also is not problematic.

12. To facilitate practice change there must be a requirement for deep engaged conversation and dialogue beyond regulation and rules to ensure land users as individuals, sectors and communities take up ownership of any externalities associated with our environmental footprint and the effects this may create.

13. *“One good conversation can shift the direction of change forever” Linda Lambert*

14. New opportunities must be presented that are better, more enduring and sustainable, provide resilience and are profitable. F4PC believe that strong leadership is required that is assertive and commanding yet respectful allowing transition so land users and communities will embrace, support and willingly follow. There must be progress so we can forge ahead in a manner that breaks away from undesirable influence and a culture of business-as-usual.

    a. Noting there is an environmental footprint associated with human activity
    b. Noting that communities must be inclusive together, rural and urban
    c. Noting the natural resource has finite assimilative capacity which cannot be surpassed if we are to maintain enduring and sustainable ecosystem and human health – no unders and overs offsetting.

15. Putting aside the originating driver behind Plan Change 1, the Vision and Strategy, we must always consider how our natural resource i.e. the land, upon which all growth - natural, human and economic - ultimately depends upon, must be cared for and be at the heart of any plan.

16. F4PC recognises that most agricultural and in particular pastoral land use is for the purpose to produce food and fibre for human consumption.

17. F4PC are relatively agnostic about land use per se however we want to ensure that land user obligatory responsibility for high contaminant loss stays with those culpable and there is no desire or endeavour to offload their obligation to remediate with a hospital pass onto other third-party land users who have lower contaminant loss.

18. F4PC believe there is an immediate need to cease externalising costs associated with high contaminant loss as it unnecessarily causes imbalance to endeavours to integrate the four well-beings (environment, social, cultural and economy) and is not respectful of Te Mana o te Wai.

19. F4PC believe the process of ascertaining obligation to avoid, remedy, or mitigate any adverse effect on the environment must be transparently fair and equitable. Where change is required there must be enough time for practice change allowing transition, adjustment and affordability with respect to capability to deliver and financial wherewithal.

20. F4PC have an expectation that all and any contaminant loss (nitrogen, phosphorus, sediment and microbial pathogens) where high must be reduced and preferably at source so the environmental footprint does not impact ecosystem and human health.

21. F4PC believe reductions in contaminant loss should be undertaken in a transitional staged manner to minimise undue hardship and disruption, except where contaminant loss is very high above acceptable thresholds whereby mitigation action to reduce must be undertaken immediately (this applies to all types of contaminants).
    - Mitigations occur preferably at originating source
    - Mitigations undertaken in a transitional and progressive manner
    - Mitigations are prioritised according to scale and risk
    - Mitigations tagged high risk should commence immediately
    - Mitigations need to be managed and reviewed (5-year reporting timetable)

22. F4PC are disappointed that with the expectation the state of water quality must be significantly improved to give effect to the Vision and Strategy, referring to Table 3.11.1, there is not more advice and directions to what constitutes how land and usage of should be managed beyond Plan Change 1. This uncertainty could be avoided.

23. F4PC are suggesting an interim target state of water quality be established year – 2050

24. Nitrogen, and nitrogen allocation is betwixted and needs to be resolved

    Further details to follow below

25. F4PC suggest some land use today is already 'compliant' relative to one or more of the contaminants. This should be acknowledged, applauded, praised and leveraged because there needs to be some encouragement and positivity associated with Plan Change 1.

26. **Integrated Catchment Management** F4PC in review of Plan Change 1 became disappointed that the opportunity of industry insight and knowledge has in part been overlooked particularly work undertaken 10 + years ago thereabouts including but not limited to:

    - Sheep & Beef-cattle **Whatawhata Hill Country Integrated Catchment Management Project**
    - Dairy **Best Practice Dairy Catchments Study**

Integrated Catchment Project – Little Waipa and Waipapa Catchments, Upper Waikato

27. Note some members of F4PC were closely involved in the Whatawhata Hill Country ICM project

28. The name Integrated Catchment Management is indicative of a management process beyond farm property boundaries by considering the subcatchment as whole, it involved communities to share common problems, there was observation and measurement of cumulative impacts and mitigation actions, singularly and together as bundles were designed to avoid, reduce and remedy.

29. The Integrated Catchment Management project identified that it was imperative to have clear understanding about the natural resources i.e. the land which we farm and live upon, and the same for the subcatchment as a whole; having good comprehension of the land's versatility, capability and assimilative capacity; understanding how contaminant loss may have impact upon downstream receiving environments and how mitigation actions may limit loss and reverse degradation.

30. In the opinion of F4PC the knowledge learnt from the Integrated Catchment Management could have been made more universally available as a framework that could be replicated and allow adaptation in all other subcatchments to provide clearer learning and understanding:

    - The different types of contaminant loss
    - The magnitude of contaminant loss arising from different sources
    - The pathways of loss and how they cumulate
    - Mitigation actions that may be useful to reduce

31. The process of relearning and imparting new but essentially the same knowledge rather than leveraging insights in not efficient nor good use of limited resources. The Integrated Catchment Management projects provided insight, they were inspiring and initiated conversation, dialogue and stimulated learning actions that could be immediately taken forward.

32. When transformative change is required the collective experience of F4PC is that there is firstly a need for repeatable conversation and dialogue to establish engagement and recognition of what is and could be required. For example, the magnitude of land use change that was undertaken for Whatawhata Integrated Catchment Management project was not the norm and the change period occurred in a very short space of time albeit assisted by being front-end loaded with a lot of professional advice, availability of external monies and other funding to make the said change. This change would not normally be undertaken on a family farm at the same speed. This slowness in uptake is not simple reluctance or being obdurate but caution and desire to be more fully informed before any commitment to go forward not forgetting the substantial costs involved and need to upskill.

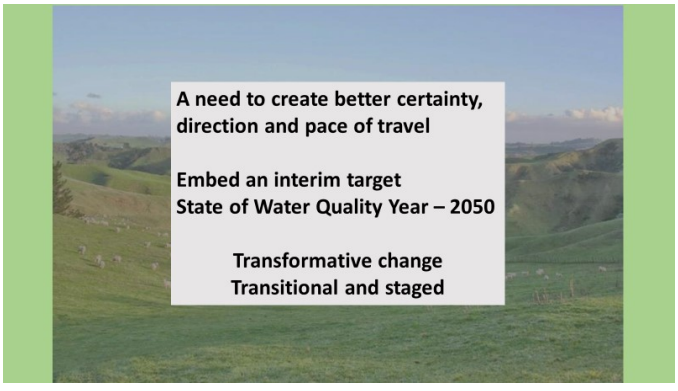
Refer to Bill Garland)

Refer to Rick Burke)

A commitment of 20 – 30 years of farm business land use and system redesign that now has a better fit with a low environmental footprint

33. The opportunity now exists to replicate the Integrated Catchment Management projects across the Waikato – Waipa by establishing subcatchment groups to inspire local communities to collaborate and participate together on this new journey forward.

34. **Transformative Change** The process of transformative change to improve the state of water quality for better ecosystem and human health and restore the mauri of the awa will require a considerable mindset shift beyond vested self-interest, the status quo and business-as-usual. However, the process must not initially go beyond the goodwill and reach of most farm businesses so they can embrace and take ownership albeit at a stretch of the upcoming transformative change, noting some change is being accelerated forward.



35. The acceptance of why transformative change must be introduced requires good clear unambiguous articulation of the need for change and what the new end outcome will be i.e. the vision of success, so everyone has better certainty, direction and pace of travel. Unfortunately Plan Change 1 or the supportive narrative does not provide purpose.

36. Change will come about by having to manage the contaminant loss of nitrogen, phosphorus, sediment and microbial pathogens. The loss of each contaminant either singularly and together is highly variable and can be complex. Reduction processes can be difficult to implement immediately requiring prioritisation typically considering cost – benefit and affordability.

37. There is also a need for caution, the creation of upfront compliance costs which could be significant and may not be recoverable is of concern. To ignore how farm businesses and how the agricultural sector is integrated together could negatively ripple across rural communities when disruption occurs at scale.

38. Conversely any endeavour to avoid change will ultimately cause us all more anguish, stress, anxiety and heartache and make us less well equipped. Any desire to protect and insulate whilst often with good intention would be only temporary and will undoubtedly delay preparedness and acceptance of end outcomes with more foot-dragging and gnashing of teeth because the step change will be greater.

39. **Kaitiakitanga Stewardship Farming Fits the Land** As an overriding expectation F4PC believe that land use must ultimately have good fit with the versatility, capability and assimilative capacity of the natural resource i.e. the land, without causing harm or nuisance in the nearby receiving environments.

    - The greater the versatility and capability a parcel of land has the more land use options there are which can be undertaken – surely this makes rational sense?
    - Note contaminant loss impact upon receiving environments and the risk of this occurring must be taken into account.
    - The parcel of land with greater versatility and capability will be highly prized.
    - This highly prized land should by default have a higher allocation of allowable contaminate loss rates than land that is less versatile and capable

40. **One-size-fits-all rules** F4PC have immense dislike for one-size-fits-all and the generalisation that all contaminants must be managed equally everywhere when it is known that contaminant loss differs widely across the subcatchments. This demands a more focused, strategic and tailored approach using the Farm Environment Plan, knowledge of contaminant loss profiles of each subcatchment so allowing mitigation action to be specific and targeted giving better costs benefit with real and enduring reduction.

41. **A Future Vision** Looking forward in time envisaging the future, F4PC consider that with good leadership and direction there will be and remain a thriving and prosperous agriculture sector, that rural communities are healthy and resilient, there is an abundance of biodiversity to enrich landscapes, the state of water quality is good for swimming and Mahinga Kai, amongst many other positive features.

42. The phrase F4PC have adopted **'Farming Fits the Lands'** should become a work-in-progress living philosophy creating a landscape that is a mosaic of diverse use recognising the versatility, capability and assimilative capacity of the land, an acceptable environmental footprint with minimal undesirable effect upon waterways being the receiving environment.

43. Therefore, with the right signals of encouragement and a push forward whilst giving allowance for practice change and need to be given transitional time, and the tools to adjust so become more adaptable a successful outcome should eventuate.

44. **F4PC propose an interim target state of water quality**

to be inserted for the year – 2050

An interim year – 2050 target state of water quality is proposed because:

The 80 -year target is too distant, it is too hard to identify with

45. F4PC have seen the modelling work by the Technical Leaders Group G. Doole, and more recently in Block 1 by Cox and Ausseil indicates the real possibility of significant afforestation of pastoral land is required to deliver the targeted 80 -year state of water quality. This need for land use change F4PC consider should be broken down to ascertain what amount of afforestation is needed in a shorter time period and when would this be expected to occur.

46. Thinking about alternatives - What if an intermediate and interim target state of water quality was established, still challenging but more reasonable and pragmatic. Would this convey easier understanding of any major looming change that would be required.

47. What if the instream concentrations put forward by B+LNZ, Block 2, Dr Tim Cox were used as an interim target for the year – 2050?

Table 2: Alternative Instream Nitrogen Targets

Narrative State	Max TN Concentration (mg/L)[3]	Waikato FMU
Minimal N enrichment	0.25	Upper Waikato
Moderate N enrichment	0.51	Middle Waikato
Substantial N enrichment	0.81	Lower Waikato

[3] = annual median based on monthly monitoring

48. By having an interim target state of water quality year - 2050 this presents a clear target line of sight therefore certainty of what has to a complied with allowing businesses to restrategise what it means for them

49. An interim target year – 2050, provides certainty, a known destination with pace of travel.

50. By establishing an interim target state of water quality year – 2050 this provides further confidence to embed other frameworks of action as there is now certainty of expectation and this provides a known direction and pace of travel with transitional time to accomplish.

51. The certainty created by establishing an interim target allows so much more opportunity to plan, organise work programs, commit to investment, undertake science R&D to plug knowledge gaps and look for new innovations, enable intergeneration and succession and so much more.

52. **Subcatchment focus – Integrated Catchment Management** F4PC are recommending there must be a reorganisation of intent promulgated by Plan Change 1 with greater focus upon subcatchments as a key component because it is the water quality of every subcatchment and tributary that has impact on the main river stem water quality (ignoring the dilutant effect of Lake Taupo water).

53. To assist knowledge and understanding about the current subcatchment state of water quality to direct focus there needs to be prepared a profile of contaminant loss and priority order of contaminant loss reduction to direct application of mitigation actions on farms.

54. F4PC want the emphasis upon improving the state of water quality in every subcatchment to be undertaken in a targeted and strategic manner and so this will require the avoidance of one-size-fits-all policy and rules. It is important that all contaminant loss to waterways is assessed on a subcatchment basis and reductions if required where improvements in the levels of specific contaminants will contribute to the

10-year targets as set out in Table 3.11.1. and more importantly to the longer-term targets.

55. There is also an acute need to be informed about what comes next after 10-years to ensure there are more enduring outcomes. There is a huge lack of direction here and this void and vacuum will hinder getting needed buy-in so knowing the longer-term direction and pace of travel is imperative.

56. F4PC are suggesting an interim target state of water quality be established year – 2050

    Further details to follow below

57. There is an acute need for management practices and approaches correspond with the specific issues of each sub-catchment and so that the responsibility of addressing the effects on water quality is apportioned to those land uses (including point source and diffuse discharges) that cause or contribute to over allocation.

58. It is well known when comparing the subcatchments there is different gap in current to target state of water quality which pragmatically requires mitigation actions need to occur at different speed over time and this allows prioritisation of actions rather than a more forced one-size-fits-all approach

59. **Nitrogen General comments** F4PC acknowledge that nitrogen management is fraught and niggly, it is the contaminant that pits one land user directly against another particularly land use farm systems with low N loss vs. medium - high N loss, however this needs to be resolved to ensure reduction is made where required with fairness and in an equitable manner. We are fundamentally and ruthlessly opposed to grandparenting nitrogen loss. Grandparented allocation is gross injustice and a form of theft to subsidise high N loss land use.

60. F4PC are supportive of all intentions to reduce contaminant loss where it is of medium – high risk. F4PC have a deep-seated belief that with respect to nitrogen loss from observation of farm systems that low N loss farms whether they are Sheep &Beef-cattle and Deer, and Dairy should not be subjugated to bear any of the cost or provide headroom to accommodate other land use and farms with medium – high N loss

61. F4PC also believe that a workable nitrogen allocation framework must be established within Plan Change 1 that will be operable in a seamless manner as a lead in to Plan Change 2 so providing some and needed certainty going forward.

62. **Nitrogen Total Nitrogen (TN) attribute** It is F4PC opinion that to better manage nitrogen with respect to ecosystem and human health rather than simply toxicity that Total Nitrogen as an attribute should apply to all subcatchments and tributaries

63. **Nitrogen (and other attributes) – sampling and measurement**

- F4PC appreciate that decisions about water quality require access to data that is the best available. The collection of water samples must be undertaken following best practice such that the data is above repute. The sampling stations must be established where any bias and irregularity are manageable, the sampling is consistent and well correlated with stream flow characteristics to ensure good concentration-discharge relationships, and yield and load estimates can be derived
    - Stream gauging and sampling at the same site location
    - Frequency of sampling

- Any upgrade in the number of sampling sites and sampling procedure is prioritised according to subcatchment risk of over allocation and breach
    - There needs to be more fullness in understanding about concentration and load, and how this may vary in different flow conditions noting stream hydrographs will probably be undergoing change due to future events e.g. land cover change, climate change etc.
    - Frequency of sampling may need review

64. **Nitrogen Delete the 75th percentile (one-size-fits-all)** It is F4PC recommendation that the 75th percentile reduction applied to all subcatchments be deleted and prioritise N reductions with more rigour to those subcatchments that are known to be n N over-allocated. The over allocated subcatchments can be identified with reference to Table 11.3.1 to then establish prioritised order where greater reduction effort is required. The 75th itself is arbitrary, a line-in-the-sand, and was proposed as a start to remedy loss. This we believe is not satisfactory as it is a short-term measure and requires continuation of a grandparented allocation framework to remain in place.

65. A more targeted reduction strategy is required because there must be priority focusing upon over-allocated N subcatchments which may necessitate reduction considerably greater than the 75th percentile. However, there will always remain an expectation of every land user to manage N loss in a reductive manner relative to their loss rate in a

proportional manner whilst accepting there is an acceptable low N loss environmental footprint. This low N loss typically occurs where farm systems are low intensity i.e. < 18 su / ha ~ 1000 kgLW / ha. There must be provision to allow having flexibility within the farm system and that N loss rate is not grandparented.

66. Land users with low N loss farm systems need to not have undue expectation to tie up limited resource managing N loss that will amount to little overall reduction if any (when factoring in load-to-come time lags) when they will have greater expectation to manage other contaminant loss (sediment and microbial pathogens), undertake livestock exclusion and other good practice in order to improve the overall state of water quality.

67. F4PC are therefore suggesting that reduction must occur where it is most needed and firstly by those who incur the greatest N loss. This places the onus to focus primarily at source by those most culpable, and importantly it would begin to identify land use that may be misplaced as mitigation action possibly will not provide enough reduction – this greater certainty is ultimately of value to all concerned.

68. A nitrogen allocation framework / system must therefore begin to involve property level limits

69. It is F4PC recommendation that a 'natural capital' framework be adopted using LUC as a proxy to establish property limits giving better fairness and equity to all land users

70. Economic implication and other disruption associated with reducing high N loss are real however it is considered manageable and timeframes to adopt reduction appear realistic. Modelling work shows the impact is not severe nor unachievable

71. **Nitrogen Delete Grandparenting** F4PC are concerned that the grandparenting allocation regime to manage nitrogen loss as a contaminant put forward in Plan Change 1 has immediately created winners and losers amongst land users because it is simply associated with existing land use loss rates which has no connection with the versatility, capability or assimilative functions of land as a natural resource for productivism and potential adverse impacts upon the downstream receiving environments.

72. Consequently, some intensive land use with grandparented high N loss is granted the right to continue polluting despite well-known knowledge indicating some of that type of land use is potentially misplaced because any significant and required reduction in loss

will be difficult due to the natural resource i.e. the land having poor assimilative capacity and so attempts to reduce by adopting good practice will be futile.

73. Conversely there may be some very versatile land where existing use has low N loss due to its current limited state of development not forgetting the land users' prerogative about land use choice. Consequently, now the opportunity to develop in the future is tightly constrained.

74. Grandparenting and the strictness of been locked into a loss rate determined in the reference years does not allow flexibility and the opportunity to accommodate market and climate change which is for many low N loss farm systems vital to ensure pursuit of profitability.

75. To lock in grandparented land use going forward unfortunately provides a pathway rooted in favour of under and overs offsets that can cause landscape imbalance of variable and disparate quality.

76. It is F4PC opinion that grandparenting is untenable and another fairer and more equitable alternative allocation framework should be embedded which could also then be more seamlessly adopted into Plan Change 2 and other future plans that better reflects the versatility, capability and assimilative capacity of the natural resource i.e. the land whilst ensuring the environmental footprint is supportive of the target state of water quality.

77. Many of the progressive S&B + Deer and Dairy farmers, who are highly efficient producers have on their own volition embraced environmental stewardship, particularly regarding nitrogen loss, which has become centric to the heart of their businesses should not be penalised because of the reductions they have made in advance of Plan Change 1 becoming operative.

78. **Nitrogen - Delete 5-year rolling average** F4PC believe the 5-year rolling average should be dispensed with:
    - Overseer version change may occur repeatedly within 5 years
    - It would be hideously expensive to expect farmers to update Overseer files after release of every Overseer version change
    - The farm system change undertaken in response to farm system redesign, market and climate change are often more enduring than a 5-year rolling average
    - A 5-year rolling average is meaningless if the strictness of grandparented N loss for low N loss extensive farm systems is deleted to provide for flexibility

79. **Nitrogen Flexibility for low N loss farm systems** F4PC believe that Plan Change 1 has an unnecessary emphasis upon nitrogen loss which is impacting heavily upon land users who are not overly contributing to the problem of degradation caused by excess nitrogen loss. Many farmers who have proactively established farm systems that have avoided and / or reduced loss to what many consider as a sustainable level should not be penalised by losing flexibility and opportunity having to subsidise loss from high N loss land use.

80. Allocation using grandparenting is a fundamentally flawed process providing windfall gain to land use with high loss, which is unjust, inefficient and drives perverse outcomes

81. **Nitrogen Creating an N loss flexibility cap**

    Applicable for Plan Change 1 only (sunset clause)

82. It is the understanding of F4PC that most Waikato – Waipa PC1 subcatchments are <u>not</u> N over allocated having referred to Table 3.11.1. Consequently, there should not be any onus to over-deliver nor unduly apply restrictive control particularly upon land use with low N loss that is not contributing to degradative loads

83. F4PC are supportive of all intentions to reduce contaminant loss where it is of medium – high risk. F4PC have a deep-seated belief that with respect to nitrogen that low N loss farms should not have to bear any of the cost or provide headroom to accommodate farms with medium – high N loss. This same rationale will apply equally for phosphorus, sediment and microbial pathogens so should have similar weighting.

84. F4PC have the belief that there is an acceptable land use environmental footprint that includes N loss for all farms (the sweet spot) and ultimately all farms would need to have

N loss no greater. The N loss will differ for each farm depending upon location due to the natural parameters e.g. soil and rainfall and class of land. For low N loss farms, it could be said they are already at or close to the sweet spot – they therefore need flexibility not penalisation.

- Most low N loss farm systems also have low stocking rate (low intensity) that are relatively stable and fixed during the **winter period 1st May to 30th September** because the farm system is wedded to the 'natural' pasture growth curve to balance feed demand vs supply
- Remove the strictness of grandparented N loss for low N loss extensive farm systems i.e. provide for flexibility
- Grandparented nitrogen should only be strictly managed where the Nitrogen Reference Point infers land users have medium – high nitrogen loss and therefore need to reduce relative to the subcatchment overallocation status and ensure measurable improvement
- The threshold for medium – highly intensive farm systems
  ≥ 18 su / ha ~ 1000 kgLW / ha

85. **Livestock intensity threshold ≤ 18 su/ha ~ 1000 kgLW/ha** Where livestock stocking rate intensity is ≤ 18 su/ha ~ 1000 kgLW/ha then F4PC are recommending that nitrogen loss is not grandparented with strictness to the reference years to allow flexibility of loss with the proviso the stocking rate does not increase beyond 18 su/ha. It is noted the No Land Use Change rule would still apply and this constraint should be adequate to limit intensification.

86. Low N loss farm systems flexibility should have been originally factored in to subcatchment load calculations in the same manner as 'load-to-come' with time lag. The failure to add in flexibility highlights poor comprehension about low N loss farm systems and how they are managed.

87. F4PC however remain committed to the need for reference year information
    - Availability of data to calculate stocking rate, and
    - Information required for Overseer – Nitrogen Reference Point

88. The purpose for Flexibility for low N loss farm systems is to:
    - Allow redirection of resources so other contaminant(s) loss can be better managed for overall environmental improvement

- Flexibility of livestock policies to adapt market and climate change

89. Livestock stocking rate definition as a threshold

    ≤ 18 su / ha ~ 1000 kgLW / ha (18 * 55 kgLW/su)

90. The stocking rate is calculated for the winter period
    - 1st May – 30th September
    - This is the most at-risk time period likely to incur high contaminant loss in an overall manner i.e. restricted pasture growth, tight more confined livestock management, higher rainfall, saturated and soft soils, greater overland flow, (excluding outlier climatic events e.g. weather bomb)

91. The stocking rate is calculated for the whole of farm effective grazing area and includes all domestic livestock types
    - Sheep, beef-cattle, dairy-cattle, pigs
    - total stocking rate / effective grazing area
    - stocking rate using standard 1 ewe = 55 kgLW

92. The extensive vs intensive farm system threshold is considered here as 18 su / ha ~ 1000 kgLW / ha

93. Other notes of importance / interest
    - It is important to lessen cost and avoid unnecessary time to gain approvals
    - Avoid need for resource consent →permitted activity
    - Reduce pressure upon WRC capacity to undertake resource consent oversight
    - WRC and industry capacity restraints. This also recognises limited numbers of certified and competent Overseer users
    - It is important for WRC to capture N loss data to assist future management
    - These farms will still undertake preparation of a farm plan that is supervised by a certified advisor and prepare a Nitrogen Reference Point and a nutrient budget using Overseer.
    - There is good recognition that Overseer provides valuable insight into nutrient management and recommended application of fertiliser
    - The original Overseer file must be preserved to allow future cross referencing
    - The Overseer reporting is maintained because it provides rigour in data collection about the farm property biophysical state and livestock policies

- The use of Overseer now is used less as a non-regulatory decision tool
- It would be recommended that the Overseer file be updated every 5 years understanding version change, better farm system and mitigation knowledge
- Records of information required for Overseer must be kept full and complete for no less than seven years (as per IRD taxation and other similar account management)
- An auditable process if to be established must be designed so it does not require duplication or wholesale change to get a good fit with other quality assurance schemes already in place

94. **Stocking rate as a N loss proxy** A WRC project by Jon Palmer has determined that there is a close parallel match for low stocking rate and low N loss of reasonable reliability suggesting stocking rate could be a proxy to devolve nitrogen loss when all things are equal

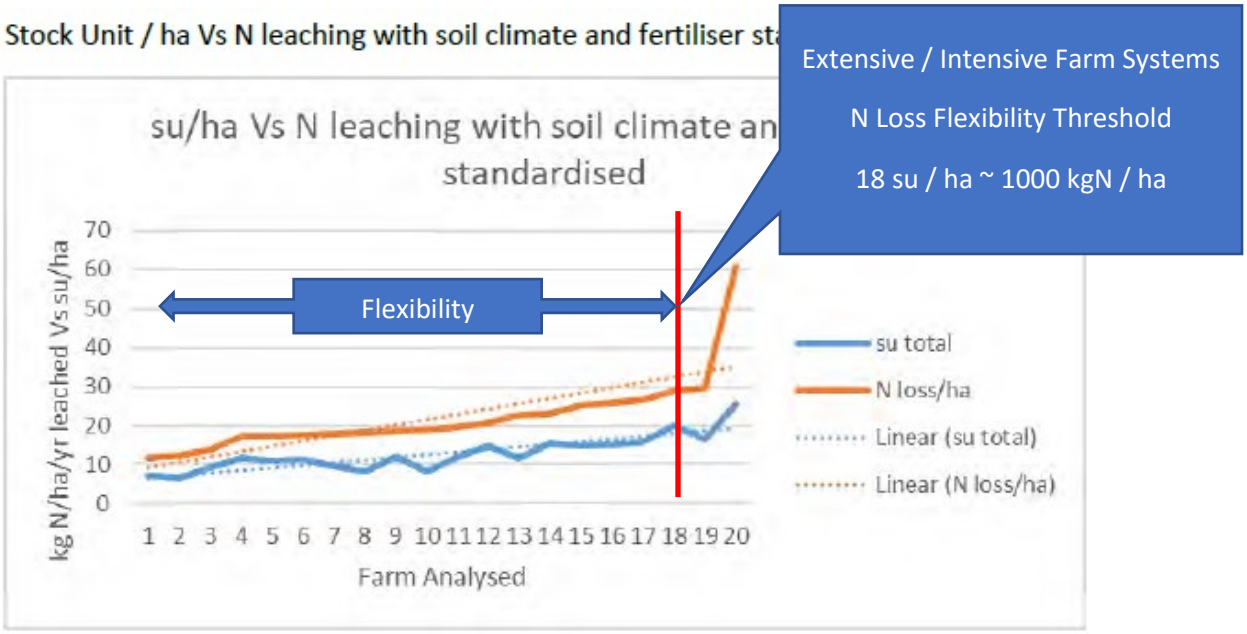
    - Any recorded change in stocking rate would also allude to a change in N loss of the same magnitude. This relatedness does away with the need for repeated Overseer analysis

95. The same project also showed clearly that the N loss trend for low stocking rate was relatively linear however when the stocking rate increased over 18 su / ha then the N loss kicked away abruptly. This change reflects by and large the change expected for low stocking rate farms being often mixed livestock i.e. sheep and cattle whereas higher stocking rate policies are very much cattle dominated and more so by dairy cattle.

    This is clearly shown in the graph below

Reference “Analysis of the relationship between nitrogen leaching and stocking rate for dry-stock farms”, Jon Palmer WRC

96. The intent is to allow flexible increase (and downward) change of stocking rate and / or



livestock policy (noting the No Land Use Change Rule) with accompanying change in N loss with freedom to do so therefore accommodating farm system redesign, response to market and climate change when the total stocking rate does not increase i.e. ≤ 18 su / ha ~ 1000 kgLW / ha

97. The possible increase in nitrogen loss provided by livestock policy flexibility is considered relatively negligible (it should have been accommodated in any subcatchment load calculation) and has a close association with stocking rate, any change in stocking rate is recorded in the FEP so is monitorable. The environmental effects that will be associated with flexible N loss is considered as being no more than minor.

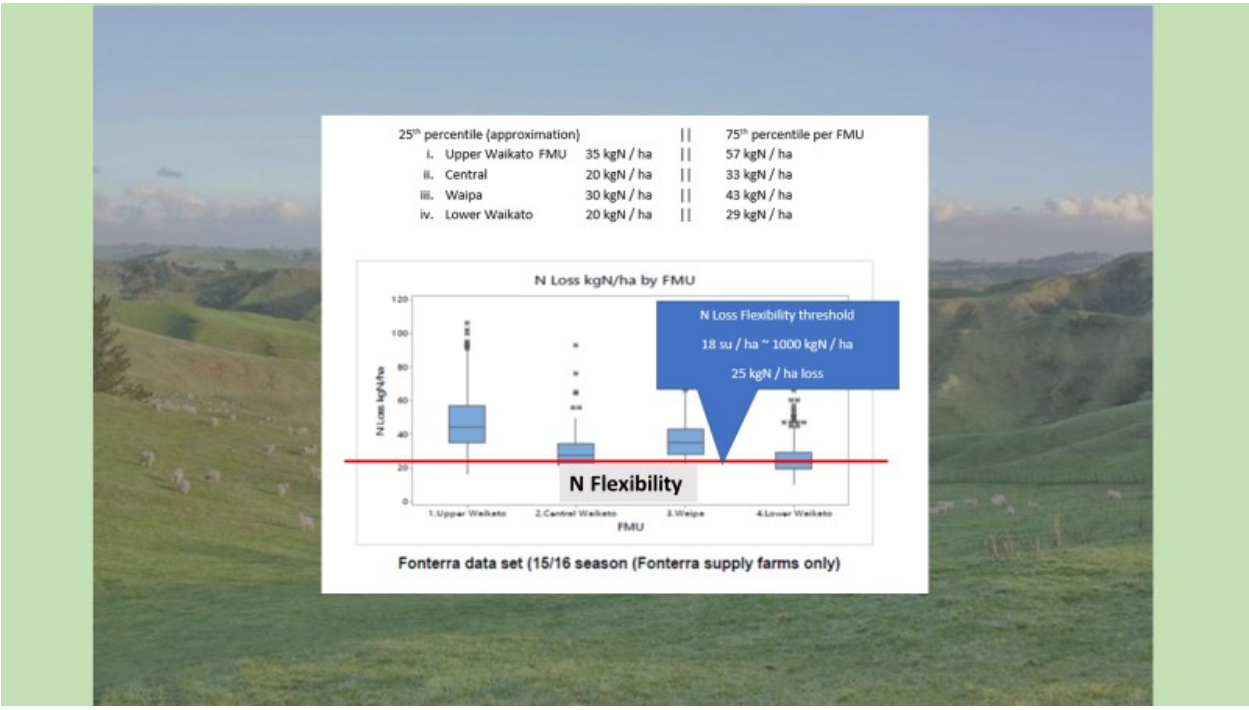
98. It is known that intensive farm systems above the 18 su / ha ~ 1000 kgLW / ha threshold generally have no sheep and these systems are dominated by female cattle i.e. dairy cows and replacement heifers. This changes the urination pattern and overlap of urination events which causes the very noticeable upward shift in N loss that no longer has a relatively direct association with stocking rate

99. The 18 su / ha threshold also appears to have a close yet indirect association with the least most intensive dairy farm systems i.e. System 1 including organic after examining

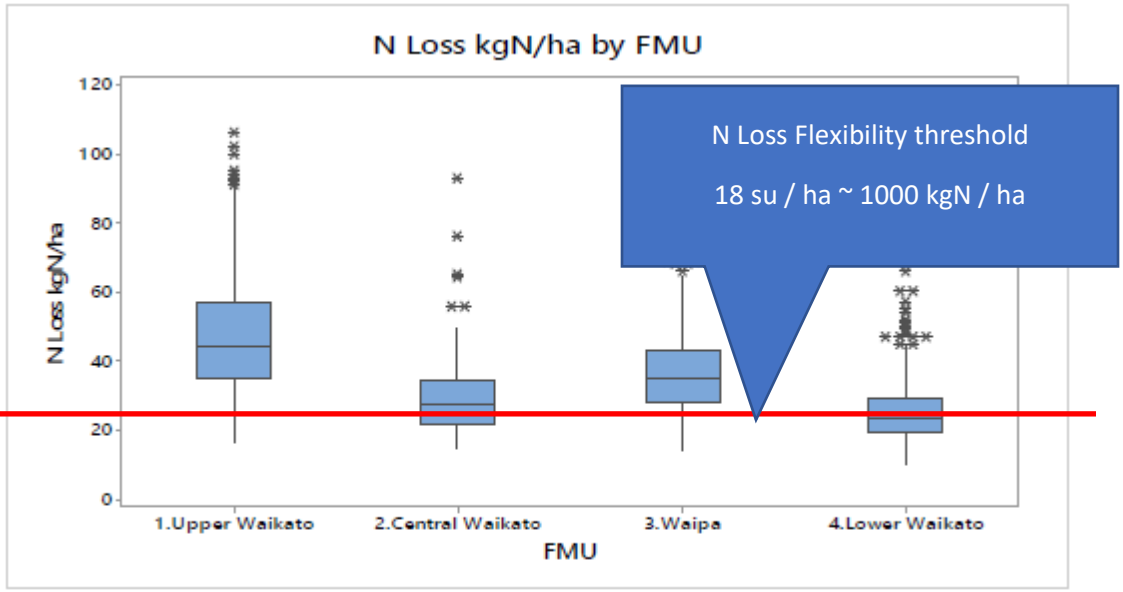
their fit under the 25th percentile per FMU, see table and graph below from Fonterra James Allen Block 2 evidence. This provides a good test of fit for the extensive – intensive threshold

100. **F4PC propose N loss Flexibility threshold**

≤ 18 su / ha ~ 1000 kgLW / ha



25th percentile (approximation)				||	75th percentile per FMU
i.	Upper Waikato	FMU	35 kgN / ha	||	57 kgN / ha
ii.	Central		20 kgN / ha	||	33 kgN / ha
iii.	Waipa		30 kgN / ha	||	43 kgN / ha
iv.	Lower Waikato		20 kgN / ha	||	29 kgN / ha



Fonterra data set (15/16 season (Fonterra supply farms only)

101. **Nitrogen Flexibility for low N loss is not a 'free pass'** F4PC are aware there may be detractors / opposition against flexibility for low N loss farm systems who think it simply provides an easy route with no responsibility. For many farms with low N loss there is and will remain significant responsibility to reduce their environmental footprint arising from land use because phosphorus, sediment and microbial pathogens will be problematic. Consequently, any flexibility provided is not a free pass as it will reposition focus rather than divert attention upon actions that must be undertaken without been distracted. The mitigative actions to manage this will be burdensome and for some very difficult. Also, via the Farm Environment Plan there will be mitigative actions undertaken that have multiple purpose and so be assistive in lowering the N loss rate.

102. N flexibility for low N loss also does not remove the onus of the 'no land use change' rule which will continue to remain effective nor the need to register the Farm Environment Plan and the Overseer generated Nitrogen Reference Point

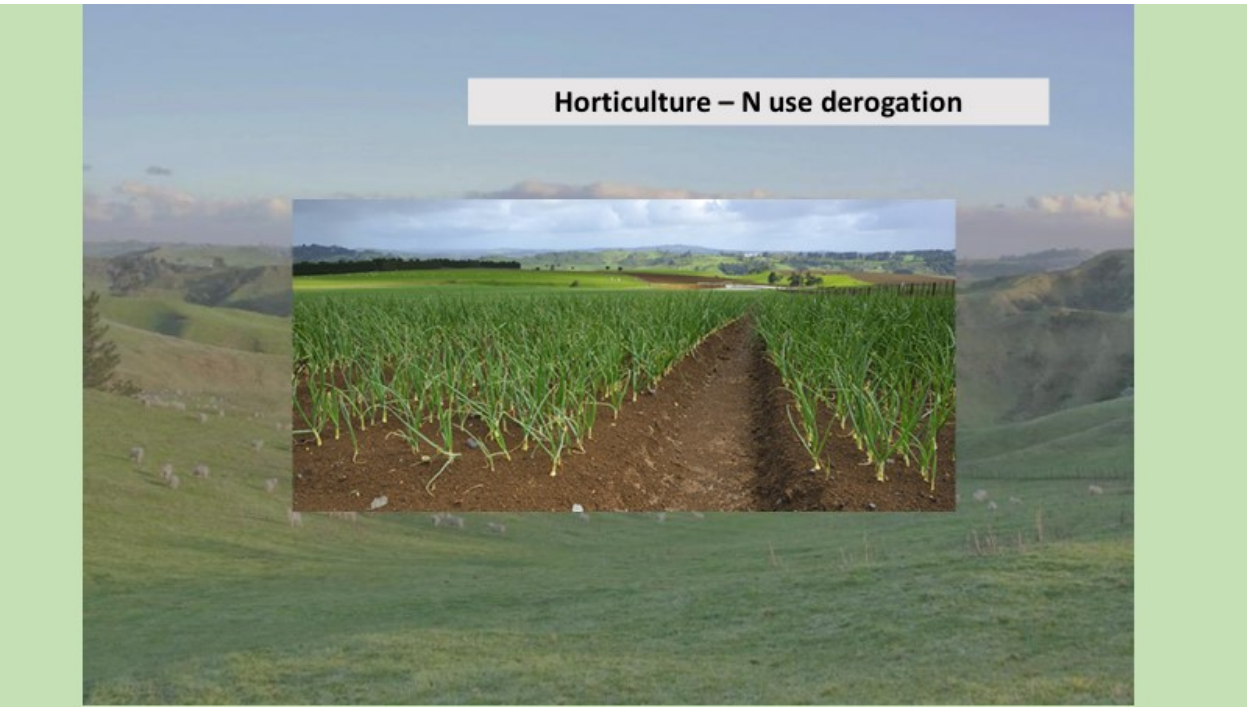
103. **Nitrogen – Reduction where N loss is medium – high** Farm systems that have a medium – high N loss will have an expectation to reduce that loss, the degree of N reduction required dependent upon individual subcatchment allocation status. Consequently, some farms will need to reduce more so than others and the implication

of this is that Farm Environment Plan GMP and associated practice change may provide insufficient reduction relative to the degree of travel required. It is therefore important to set out the expected reduction process in a transitional and staged manner so there is certainty about when and how much. By having embedded an interim target State of Water Quality year – 2050 along with a Nitrogen Allocation framework using Natural Capital this provides confidence about how this can be managed and planned.

104. The reduction required from medium – high N loss farms would be proportional and acknowledge the existing subcatchment allocation status. Reductions should be transitional and staged in an incremental manner with clear reporting and audit to observe with a suggestion this be undertaken with 5 yearly reviews. Land use with the highest N loss would be expected to reduce significantly more in the first 5 and 10 year periods than land use incurring medium N loss

105. **Nitrogen Horticulture** It is F4PC recommendation that horticultural land use be managed separately with a different suite of regulatory tools

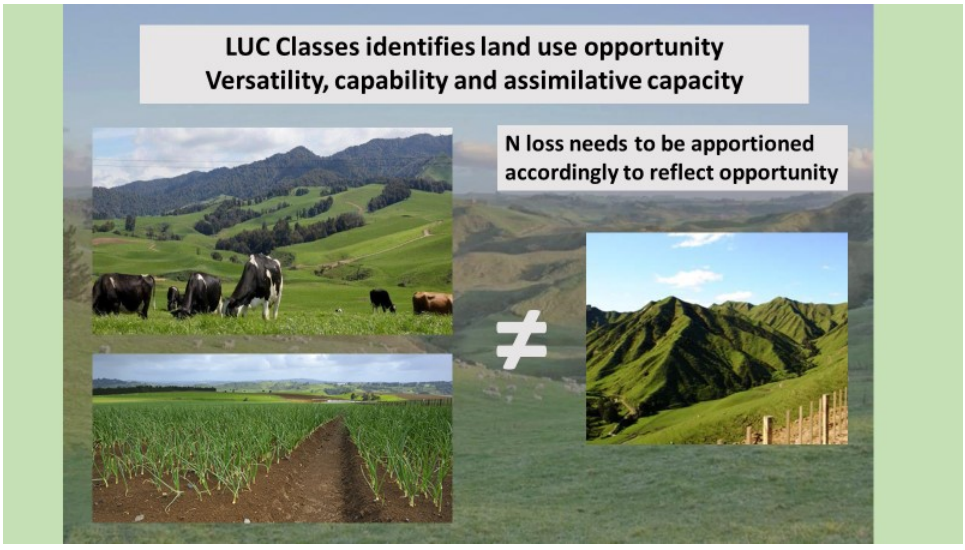
a. A specified block of N managed by the horticulture industry
b. An arbitrary proportional estimate of load in the reference years
c. This block of N is shiftable across horticultural land use allowing crop rotation and other management practices typical of the horticultural sector



106. **Nitrogen Natural Capital as the nitrogen allocation framework** F4PC have a strong and well supported mandated preference for Natural Capital to be adopted as the framework for nitrogen allocation. The approach taken for nitrogen allocation using Natural Capital is an endeavour to place value

> (Land with a property title has monetised capital value and this value will be impacted by the type of allocation framework i.e. grandparenting, equal, natural capital or other because an allocation of nitrogen itself becomes a property right with monetary value. Already today property values are impacted by grandparented nitrogen allocation)

on the different classes of land as a natural resource that reflects the lands versatility, capability and assimilative capacity for primary agriculture productive usage in the knowledge other biophysical parameters also contribute to contaminant loss and its potential interception before contaminant loss may cause harm and / or nuisance in nearby receiving environments notably waterways. It is accepted this approach is a proxy however in comparison to any other allocation framework it has the closest connection to the biophysical parameters of the land and the underlying makeup of every farm property which constitutes the value of every farm property.



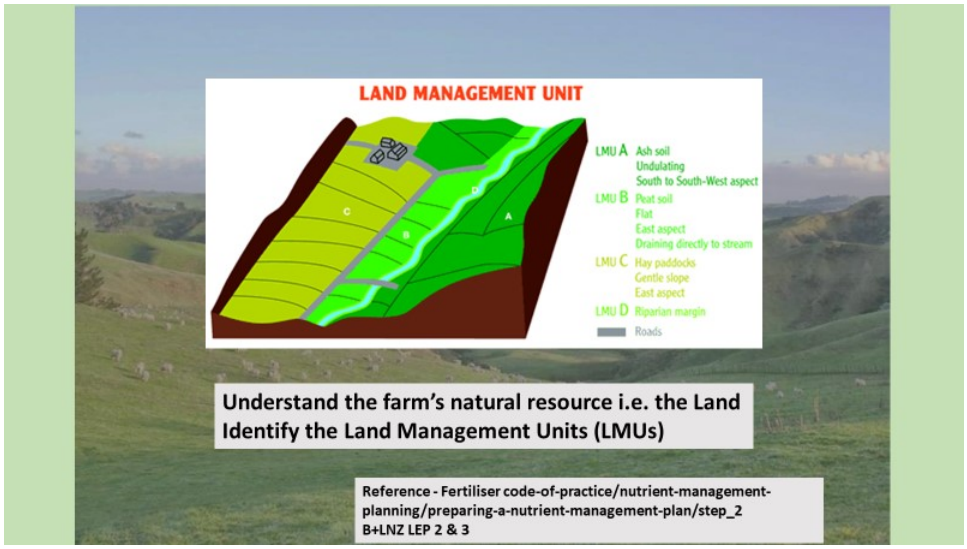
107. It is F4PC opinion that Natural Capital nitrogen allocation will encourage with time a more optimised fit of land use where there is better balance and less obvious misplaced and / marginal land use for good environmental outcomes with land use for

productivism having greater acceptance and purposeful in a more justifiable manner so has enhanced legitimacy with superior value that will not be surpassed.

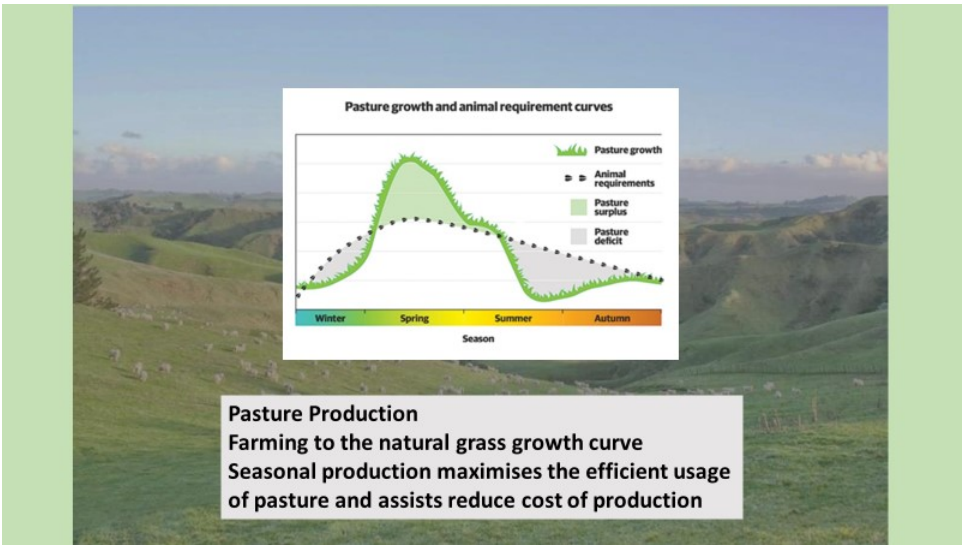
108. Most farmers recognise, at least intuitively, Land Use Capability (LUC). They recognise potential of the different classes of land considering soil, climate, altitude, aspect, slope, topography, wetness and other factors with respect to land use options and its limitations upon productivity and return of profit and investment.

109. When a farmer assesses a farm, it is initially from the 'big picture' view of the landscape that sets up identifying how it could be subdivided into 'land management units' (contiguous parcels of land having similar natural resources and characteristics, similar landform or topography, pasture growth and responsive to applied management practices) rather than viewing the classes of land discretely in isolation of each other. It is the aggregation of land classes into different 'land management units' because paddock subdivision often requires fencelines positioned for management purposes i.e. fencelines placed on ridgelines, the availability of natural water for livestock, the natural flow of livestock when mustering, aspect – sunny vs shaded, high risk erosion and other factors etcetera. The land management unit would however more likely than not have a predominance of one land class and it is this class that establishes the most suitable livestock policy option(s). The farmers can gauge with good accuracy potential pasture production growth for the land management unit and how this could be influenced by management practice for example fertiliser inputs, grazing management etcetera. The potential pasture production would determine appropriate livestock stocking rates to balance feed supply and demand during the production year.

110. It is important to note that 'land management units' are an integral part of Overseer and are also utilised within many farm decision support tools e.g. Farmax, AG-INFORM, NZ-Farm etc.


LAND MANAGEMENT UNIT
LMU A Ash soil
Undulating
South to South-West aspect
LMU B Peat soil
Flat
East aspect
Draining directly to stream
LMU C Hay paddocks
Gentle slope
East aspect
LMU D Riparian margin
Roads
Understand the farm's natural resource i.e. the Land
Identify the Land Management Units (LMUs)
Reference - Fertiliser code-of-practice/nutrient-management-planning/preparing-a-nutrient-management-plan/step_2
B+LNZ LEP 2 & 3


Land Use Capability (LUC) – Land Classes



111. Whilst it is known that pasture production is variable even on the same land class due to many factors including availability of nutrients; physical properties as well as factors of aspect and slope plus grazing management are likely to be important determinants of pasture production. The assessment of pasture production assumes an average acknowledging likely variance within and between years. Most farmers however will adopt the average pasture production growth upon which the livestock stocking rate is determined. The farmer often uses seat-of-the-pants intuition to make needed adjustments and correction, with more progressive farmers nowadays also using decision support tools and other techniques to have a better grasp of their feed demand and supply equation.

112. For the purpose of ascertaining a level of pasture production to derive an allocation of nitrogen loss a degree of uniformity is required for a given class of land the following assumptions are used

113. From this ‘picture’ of opportunity the farmer can conceptualise farm systems, potential for pasture production, suitability for forage cropping, likely livestock policies and stocking rates, timing of key start dates of the production cycle e.g. start of calving / lambing etcetera.

114. **Natural Capital Allocation Framework**

Natural capital (biophysical stocktake of the land resource)

geology, soil, climate, aspect, slope, topography, erosion, wetness, flood risk

→Land Management Unit (LMU) Landform / Topography

→Land Use Capability (LUC) 1:10,000 mapping

→Pasture Production

→Livestock policy / stocking rate

→Nitrogen loss at rootzone

→Assimilation / Attenuation

→Effect upon receiving environment.

→Interim target
state of water quality

→Allocation

115. The mapping requirement to enable nitrogen allocation using the Natural Capital approach does demand more rigour to ensure better exactness not yet provided in available mapping formats. Current mapping is generally at a scale of 1:50,000 so is relatively coarse and grainy and the fit often only an approximation.

116. To overcome this deficit F4PC are suggesting for expediency that new mapping be undertaken at a scale 1:10,000 for fineness and that this be supported by LiDAR or other well-regarded GIS type systems to ensure better accuracy, repeatability and consistency of slope measurement and spatial location.

LiDAR Light Detection and Ranging

117. Pasture production is ascertained for each land class in a Freshwater Management Unit and from this the livestock stocking rate in superimposed

118. A legume-based pasture fixing N biologically under optimum management under the pressure of the grazing animal

Reference Alec McKay and Alison Dewes B+LNZ Block 2 evidence

119. Despite the initial lack of additional supportive detail and information behind Natural Capital it is however in F4PC opinion critically important to ensure certainty, and a more seamless progression into Plan Change 2 and 3 it becomes important that Natural Capital as the nitrogen allocation framework is embedded into Plan Change 1. This is to ensure there is good acknowledgement property level allocation is immediately applicable and to ensure direction and allow information gaps to be identified and then rectified.

120. **Provisional N loss per land class for each FMU year – 2050** From B+LNZ Block 2 evidence by Corina Jordan, F4PC are superimposing the Natural Capital allocation with provisional N loss per land class for each FMU to give a land use fit with the Interim State of Water Quality Year – 2050. The combination of an interim state of water quality year – 2050 and the Nitrogen allocation is the certainty created about what land use options will have a fit.

Table X: Land Use Capability Natural Capital Based: Nitrogen Leaching Limits /Targets

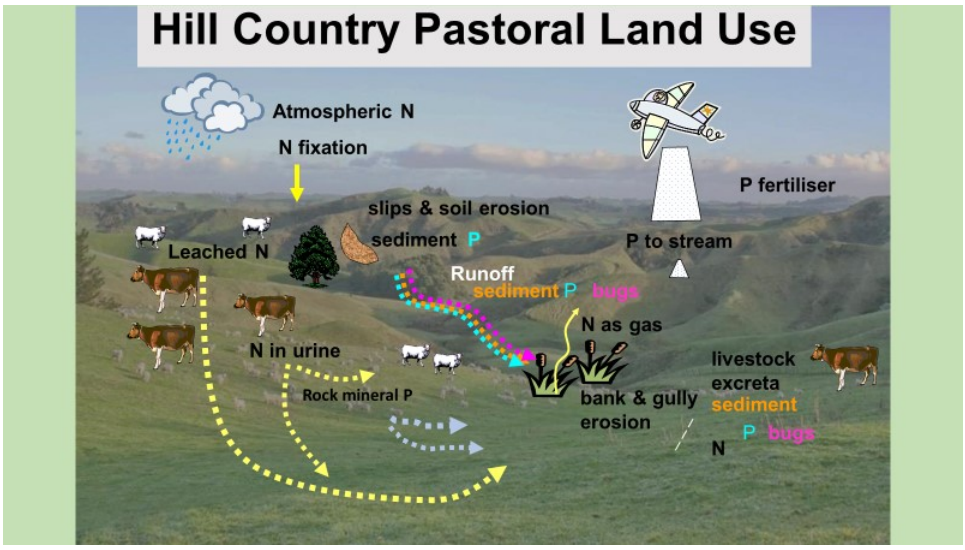
LUC Class	Upper Waikato (kg-N/ha/yr)	Middle Waikato (kg-N/ha/yr)	Lower Waikato (kg-N/ha/yr)	Waipā (kg-N/ha/yr)
1	30	30	27	30
2	26	25	22	26
3	18	19	20	20
4	18	19	18	20
5	16	16	16	16
6	14	16	14	16
7	9	10	9	11
8	4	4	4	4

121. The key point in applying the allocation per land class per FMU is it signals strongly the intent of direction and pace of travel thereby providing certainty. It is the allocation framework that is purposeful knowing that the N loss numbers are indicative and perhaps need further review as more information becomes available.

122. The embedment of the Natural Capital framework into Plan Change 1 also provides a more seamless transition into Plan Change 2 allowing quicker uptake.

123. **Apportioning Responsibility and Culpability** F4PC are concerned that the responsibility and culpability for remediating contaminant loss must not jump to wrong conclusions that are unfounded.

124. **Phosphorus, Sediment and Microbial pathogens** F4PC know that Phosphorus, Sediment and Microbial pathogens contaminant loss is generally problematic on farms with low N loss because the landform / topography in hill country is a mixture of slope some steep and often in high rainfall areas.

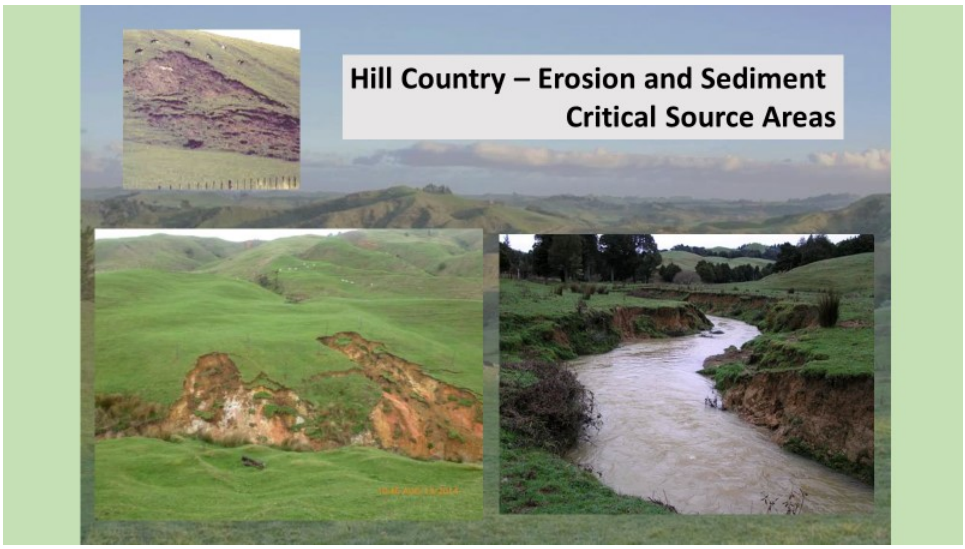


125. **Phosphorus** F4PC recognise that Phosphorus (P) loss from soil due to leaching or overland flow is implicated in eutrophication of surface waters. It is known the most cost-effective management options to reduce P loss is to apply mitigation

actions at the source on farm in a tailored manner focusing on P application and point of origin where loss occurs e.g. fertiliser, effluent disposal, livestock and other disturbance and critical source areas etcetera.

126. **Sediment** Adoption of good management and particularly management of critical source areas in a planned, robust and enduring manner. Mitigation to be undertaken progressively with actions having best cost benefit undertaken preferentially before other options.

127. **Microbial Pathogens**Adoption of good management and particularly management of critical source areas and likely hot spots e.g. rural septic tanks, livestock yards etcetera in a planned, robust and enduring manner. Additional guidance to demonstrate size of required reductions should be put forward regarding pathogen limits for contact swimmability applicable only during the swimming season. Mitigation to be undertaken progressively with actions having best cost benefit undertaken preferentially before other options.



128. **Livestock Exclusion and Cultivation** F4PC are concerned that rules pertaining to Livestock Exclusion, Riparian buffer widths and Cultivation are too rigid and prescriptive not allowing pragmatic flexibility to adjust to the local situation and be applied in the right context. This should be rectified by providing opportunity and scope using the Farm Environment Plan to tailorise mitigation that has a better cost benefit fit.

- See discussion below Livestock Exclusion and Cultivation
- See discussion below about Farm Environment Plans
  (Noting this is a Block 3 topic)

129. **Livestock exclusion (cattle and deer) from waterways**

F4PC concede there is a need for mandatory therefore permanency of livestock exclusion where contaminant loss is likely to be high. F4PC acceptance is foundered on risk associated with livestock intensity and where this occurs

A risk-based approach avoids the complication of determining slope measurement in more broken steeper hill country

High stocking rate is based on an extensive / intensive threshold

High intensity ≥ 18 su / ha ~ 1000 kgLW/ha

It is very probable most intensive farming occurs on flat – easy country ≤ 15-degree slope as this class of land is the most versatile and capable. It is also considered that cost of fencing for livestock exclusion on flat – easy country is significantly cheaper and less difficult than would occur in steeper country.

- Low slope ≤ 15 degree (easy country)
    - Recognises that on easy country the land class is more versatile with greater capability to support intensive farm systems with associated increase in contaminant loss risk
- All permanent flowing year-round waterways when slope ≤ 15 degree
    - (and 80 percent of paddock area)
- Other waterways e.g. wetlands are also included
- No stocking rate differential
- Acknowledges on easy country (livestock exclusion more doable)
    - Ability to use a tractor + post driver
    - Less need to bench in fencelines with a bulldozer

In steeper country > 15-degree slope where livestock are managed intensively then the livestock should be excluded from “Dairy Accord” definition waterways

This recognises risk and the potential size of the job considering doability in the time period for Plan Change 1. It is considered the scope of this may change in PC2.

Other waterways outside of the “Dairy Accord” definition which could be deemed as a critical source area may require livestock exclusion ascertained using the Farm Environment Plan process rather than a mandatory prescriptive rule.

130. **Intermittent (with defined water channel) and Ephemeral**

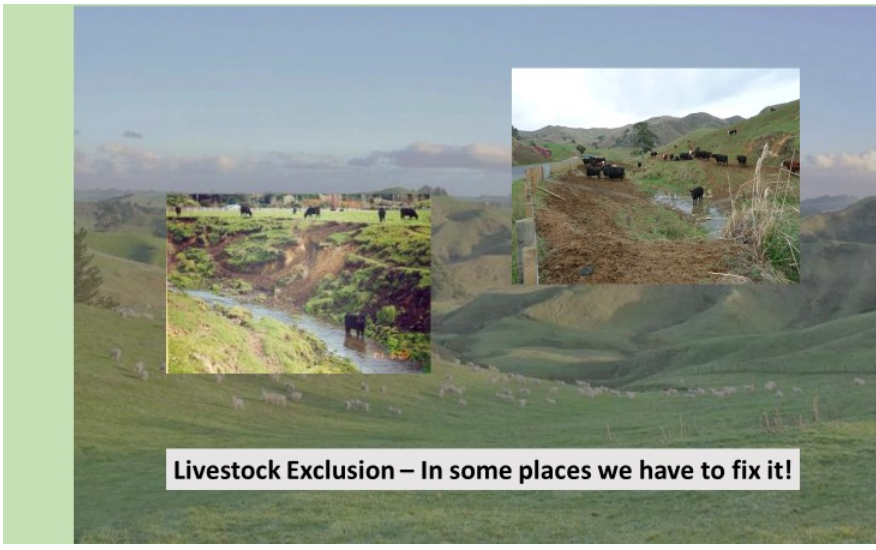
Where intermittent and ephemeral waterways occur the risk of contaminant loss should be assessed using the FEP. This would be most pertinent when livestock are managed intensively i.e. ≤ 18 su / ha ~ 1000 kgLW / ha consequently there must be close examination of likely risk. The proposed mitigation action should allow for innovation and flexibility and possibly also temporary as would best fit the situation

Livestock Exclusion above 15 degree slope

A pragmatic risk based solution

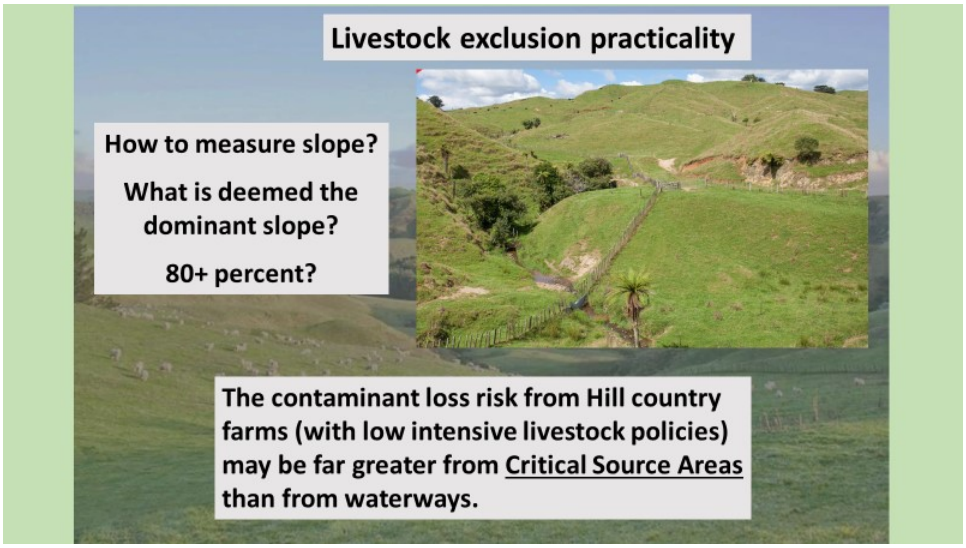
- Intensity threshold
  - Stocking rate ≥ 18 su/ha or ~ 1000 kgLW /ha
  - winter period 1st May – 30th September

Note - Livestock exclusion will only be applied on the farm or part of above stocking rate intensity threshold



Livestock Exclusion – In some places we have to fix it!


Livestock Exclusion – Some places it gets harder to fence
And the cost increases substantially!


Livestock exclusion practicality
How to measure slope?
What is deemed the dominant slope?
80+ percent?
The contaminant loss risk from Hill country farms (with low intensive livestock policies) may be far greater from Critical Source Areas than from waterways.

131. **Forage Cropping Direct-Grazed**

132. **Misplaced Land Use – it does not fit!**

133. **Misplaced land use (round peg in a square hole)**

F4P have recognised that some land use does not fit because contaminant loss is too high and applied management with goo practice may not be enough to avoid, mitigate and reduce. In some subcatchments the contaminant loss is high relative to the Table 3.11.1 80-year target. Consequently, these subcatchments are already in a state of over-allocation

A farm in an over-allocated subcatchment may already or intends to be operating at good practice, but this may be insufficient to ultimately make additional reductions in contaminant losses.

- This is particularly pertinent where a farm has greater contaminant relative to neighbouring farms in the same subcatchment so contributing more contaminant loss that cannot be justified.
- Farms with greater contaminant loss will have more expectation to proportionally reduce their contaminant loss

Ultimately this land use could be misplaced

- What signal should be conveyed to the land user of this situation?
- What is the expectation via Plan Change 1 considering this knowledge?
- Plan Change 1 provides no certainty – what comes next?

134. Undertaking mitigation actions now may be insufficient for example livestock exclusion when ultimately afforestation is the only feasible outcome. Ultimately (with current knowledge and available technology) the existing land use would need to change to usage with a lower environmental footprint

135. This again highlights the need for an interim target state of water quality year – 2050 to provide clear guidance and certainty of expectation

136. There is some land use with a poor fit with land class. This incurs problematic contaminant loss difficult to mitigate without change. For example, intensive stocking rates on steep hill country that exacerbates sediment loss

This is particularly evident during winter

1st May to 30th September

How will this be identified and remedied?

How will this be managed through the FEP?

137. **Good Management Practice** F4PC is supportive of industry developed and approved guidance as to what constitutes good management practice.

138. **Good Management Practice Thresholds** F4PC are suggesting that good practice thresholds be established for guidance within Plan Change 1 that if observed by all land users would lead more quickly towards real and enduring improvement to the state of water quality that supports ecosystem health. The

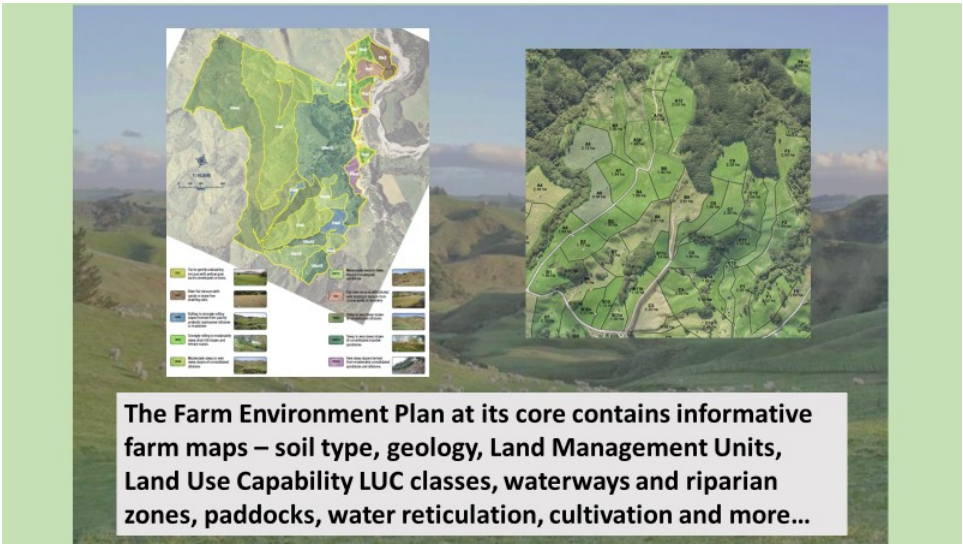
thresholds will assist guide understanding of risk and how to prioritise mitigation actions where required.

139. F4PC therefore suggest the guidance thresholds would be applicable only to Plan Change 1, to assist define and rank risk where mitigation actions should occur and by whom.

Farm management and practices to avoid and / or minimise intensification

- Nitrogenous fertiliser ≤ 50 kgN/ha,
- Imported supplementary feeds Dairy Farm System 1 and 2 or equivalent

140. **Farm Environment Plans** F4PC recognise and support that Farm Environment Plans should be universally undertaken by every land user



141. F4PC are supportive of using Farm Environment Plans (FEPs) * to manage the natural resource i.e. the land available to each farm business, to understand the issues related to each individual subcatchments particularly the contaminant profile relative to target concentrations and load and to be cognisant of likely impacts different farm systems may have with respect to their environmental footprint.

142. The Farm Environment Plan process has two key pathways, separate but with overlap

- **Industry designed and supported plans linked to market**
    - The FEP is firstly a management decision support tool
- **Regulatory expectation and Compliance plans**
    - The FEP Compliance (Pull out) module

143. F4PC also recognise that FEPs will have oversight by a Certified Farm Advisor and have third-party auditing hence there is good robustness in this process

See discussion below Certified Farm Advisor

144. A Farm Environment Plan process must empower and encourage

- It provides a pathway towards a successful outcome and opens up opportunity
    - There must be greater expectation than simple compliance to one-size-fits-all policy and rules. This narrow view is limited yet will suffice regulatory expectation and compliance
- It must foster and encourage an open and receptive mind by allowing innovation
- There is clear sight to the requirement of achieving contaminant loss reduction
- Mitigation actions can be tailored to the farm
- This risk for any individual farm business is managed by presenting the program of mitigation in a prioritised order, that accepts limitation on capability restrict deliver so creating a staged ordered plan spread across a known time period.
- Where the magnitude of mitigation actions is substantial this will acutely trigger reflection upon whether current land use is misplaced and so raise question about land use continuance or change

145. **The FEP is firstly a management decision support tool** rather than a document to be used for compliance purposes. As a management decision support tool, the FEP assists and guides a farmer as a land user to make good decisions. The plan is populated with a wide array of information providing knowledge and insight about the natural resource including soil types, rainfall data, Land Use Capability maps and more. It is not complicated but there is a need for thoroughness and for good information.

Having broad knowledge about the farm then decisions can be made about land use, the creation of land management blocks, livestock policies and more. Towards the end decisions are then made about where the livestock policies should be placed in relation to the different land management blocks. It is an iterative process focusing more and more on finer detail including day-to-day management. There is more understanding how land use could cause detrimental impact and possibly degradation and this leads to decisions about how best to manage for a good outcome.

146. A key feature or task assigned to the FEP is to ensure the contaminant loss of nitrogen, phosphorus, sediment and microbial pathogens is limited in loss to cause no more than an acceptable environmental footprint. Every farm is unique in so many respects that one-size-fits-all rules are problematic and often overbearing. Rather guidance should be provided about expectation and then a process developed to systematically assess existing state, risk of further impacts which will allow a program of mitigation work tailorised to the farm be developed with prioritised order of mitigation actions that must be undertaken considering affordability, reasonableness and pragmatism.

147. The FEP in the context of Plan Change 1 should not consider Nitrogen is a contaminant in the same manner as the other contaminants because other rules and policy directly pertinent to N management apply chiefly the Nitrogen Reference Point, Grandparenting and 75th reduction. The FEP however does need consider how nitrogen is managed with respect to likely critical source areas e.g. livestock yards, stock camps, runoff from raceways, effluent disposal and more. This recognises the different loss pathways, the predominant type of loss pathway, the seasonal and other timing difference when contaminant loss occurs.

148. **Farm Environment Plan – material and subject out of scope** The Farm Environment Plan must consider the whole and so there must be integration with other spheres of influence that shape farm businesses including **Biodiversity** and **Greenhouses Gases** which are very important and cannot be ignored. This may be out of scope for Plan Change 1 nevertheless it must be incorporated into the Farm Environment Plan as one document because management and mitigation actions invariably have overlap and similarity.

149. **FEP - to demonstrate how the farm management will operate with Good Farming Practice**

The FEP will include an assessment against Good Farming Practice (GFP), and where the farm is not operating at GFP, a description of how it intends to achieve GFP along with a set of actions that will be undertaken in order to achieve GFP.

150. **The Farm Environment Plan is more than simply a Farm Environment Compliance Plan**

151. **Farm Environment Plan – A Compliance Module** F4PC are of the firm belief that Farm Environment Plans should be the principal communicative tool to understand, prepare, address, report and review how contaminant loss and so the environmental footprint is to be managed, what mitigations are to be undertaken and the timeframes to do so.

152. F4PC recognise that a well prepared FEP will contain more material and information that was is needed for compliance purposes. F4PC are recommending that only that part of the FEP required to assess compliance needs to be presented and this be undertaken in a module format to allow easy extraction

153. **Farm Environment Plan – Certified Farm Environment Planner** F4PC recognise that the FEP will need to be developed in conjunction with and then approved by the Certified Farm Environment Planner (CFEP)

154. It must be recognised that not all mitigation actions can be undertaken at once, the affordability and capability to do so has limitations which must be appreciated and this requires prioritisation, staging and cross over into future plan changes. The Certified Farm Environment Planner must be conferred appropriate authority to assist develop prioritisation and approve scheduling of when mitigation action could be undertaken in the context of affordability.

155. Some mitigation action must be done immediately but this is not necessarily so for everything.

156. The Certified Farm Environment Planner must be competent and knowledgeable to assess the risk or likelihood of contaminant loss, what the different levels or thresholds of risk would demand mitigation action be undertaken and how different levels of risk can be prioritised.

157. The Certified Farm Environment Planner must be well supported and provided guidance to ensure all CFEPs can offer services that is consistent and repeatable.

158. The Certified Farm Environment Planner must also be knowledgeable and versed to recognise that real and enduring reduction of contaminant loss may ultimately require land use change because mitigation good practice actions will not deliver satisfactorily enough contaminant loss reduction and / or the abatement costs are not recoverable.

159. That allocation frameworks are embedded within Plan Change 1 to ensure there is seamless progress going forward into the next plan change and those that follow. There must be good recognition to integrate and balance the four well-beings (environment, social, cultural and economy) taking on board Te Mana o te Wai Mountain to Sea concepts.

160. The FEP is firstly a collation of informational material relating to the natural resource of the farm i.e. the land, and the neighbouring receiving environment i.e. the subcatchment. The subcatchment information would include profiles of contaminant load, trends and issues. It is from this information that provides the land user an understanding to guide how to overlay land use that is complimentary, neither misplaced nor marginal with a low environmental footprint within acceptable ecosystem health limits i.e. Farming Fits the Land.

161. The FEP is important to demonstrate good practice management of all contaminants, how mitigative action is prioritised and time bound (with acceptable flexibility to adjust according to circumstances)

162. All land users must adopt good practices to mitigate the discharge of all four contaminants to water bodies (N, P, sediment and microbial pathogens

163. **Certified Industry Schemes (CIS)** F4PC consider that Certified Industry Schemes (CIS) are a worthwhile approach for industry to share the burden, cost and responsibility to achieve compliance. The design of the CIS however cannot promulgate a process less burdensome, or an easier pathway, be less informative and importantly not endeavour or encourage lock-in of existing land use despite use that may in some locales be misplaced and / or marginal with high contaminant loss.

164. The benefits of CIS are evident albeit with requisites including:

- Preparation of FEPs with certified advisors to assist
- CIS advisors will themselves need certification and auditing
    - It is paramount there is consistency and repeatability of advice message
- The CIS and advisors would support and assist with monitor plus reporting which in turn ensures good industry compliance
- A group of land users assisted and guided by a CIS would be administratively more efficient (one-stop-shop) thereby reducing costs
- The CIS and advisors could facilitate group learning and actions at different scales e.g. discussion group, subcatchment groups, FMU groups etcetera
- The CIS can ensure that timeline progression of FEPs, mandatory mitigation occurs before end dates
- The CIS and advisors would assist streamline consenting arrangements with those land users who require to be worked through consents
- The CIS should not be granted any leeway / dispensation with respect to land management relative to all other applied land use controls. This is particularly relative to
    - Winter forage crops
    - Management blocks on steep land ≥ 25-degree