

IN THE MATTER OF

The Resource Management Act 1991

AND

IN THE MATTER OF

Lake Rotorua Nutrient Management –
PROPOSED PLAN CHANGE 10 to the Bay of
Plenty Regional Water and Land Plan

**STATEMENT OF EVIDENCE OF STEPHEN GUY LAMB
OF THE BAY OF PLENTY REGIONAL COUNCIL**

Evidence topic: Planning Context and Process

Contents:

- 1. Qualifications and Experience**
- 2. Scope of evidence and Summary**
- 3. Planning Context for Proposed Plan Change 10**
- 4. Rule Development Process**
- 5. The Proposed Rules**
- 6. Elements of the Rules Framework**
- 7. Appropriateness of Rules**
- 8. Conclusion**
- 9. Appendices**

“Te Rotorua-nui-a-Kahumatamomoe named by Ihenga who was the grandson of Tamatekapua, the captain of the Arawa canoe. Lake Rotorua is the largest lake in the district and the most productive trout fishery in Aotearoa, New Zealand. The lake was formed from the crater of a large volcano in the Taupo Volcanic Zone. The quality of the water in Lake Rotorua also affects Lake Rotoiti as the two lakes are linked by the Ohau Channel.”

www.tearawa.iwi.nz/lakes

Qualifications and experience

1. My full name is Stephen Guy LAMB. I am a manager of the Natural Resources Policy Team that was responsible for the development of Proposed Plan Change 10. I have been employed by the Bay of Plenty Regional Council for 13 years. I have been directly involved with the Lake Rotorua programme since March 2014 and involved as a manager of the rules project since mid-2012.
2. I hold a Masters of Science Degree from Lincoln University in the subject of resource management and I have worked in resource management and general planning for most of my career.

Scope of Evidence and Summary

3. The scope of my evidence concerns the process of developing Proposed Plan Change 10 within the context of the package of interventions designed to achieve the community objectives for Lake Rotorua's water quality. Following a discussion of the process I have also addressed a number of other elements that are important aspects of the rule development process.
4. Although this is a Council Hearing, I note that I have read the Code of Conduct for Expert Witnesses contained in the Practice Note issued by the Environment Court December 2014. I have complied with that Code when preparing my written statement of evidence and I agree to comply with it when I give any oral presentation.
5. My evidence addresses the following subjects:
 - (a) Planning context for Proposed Plan Change 10
 - (b) Rule development process
 - (c) The Proposed Rules
 - (d) Elements of the Rules Framework (covering allocation, trading and the use of nitrogen management plans)
 - (e) Appropriateness of rules.

Planning Context for Proposed Plan Change 10

6. Lake Rotorua's nutrient issues have been well documented over a long period and the enhancement of the Lake's poor water quality has been of community interest for decades¹. The Rotorua community has invested heavily in cleaning up the Lake (through sewerage reticulation) and the community's objective for lake water quality is clearly expressed. The desire for enhanced water quality is also held by Te Arawa – the owners of the Lake bed².
7. The detail of Proposed Plan Change 10 has been developed over a two-year period however the planning context within which Proposed Plan Change 10 was constructed started in 2000 with the development of the Strategy for the Lakes of the Rotorua district. The return of the Lake bed to Te Arawa in 2006 and the associated Crown Funding Deed are an integral part of this ongoing momentum that resulted in Proposed Plan Change 10
8. The regulatory genesis of the Proposed Plan Change comes from two operative regulatory documents that contain community objectives for Lake Rotorua. These are the:
 - (a) Regional Policy Statement ('RPS') (that contains the Lake Rotorua sustainable lake load of 435 tN/yr and direction for achieving the required water quality by 2032); and
 - (b) Regional Water and Land Plan (that contains the trophic level index ('TLI') – the water quality target for Lake Rotorua).

Regional Policy Statement

9. The RPS was notified in November 2010 and contained Objective 28 which required the water quality of the lakes within Rotorua to be enhanced along with other catchments at risk. This objective went through the decision making process unchanged. A cost benefit analysis was completed as part of the section 32 report

¹ A relatively recent example of this is the community concern that led to the 2003 request by the community to the PCE to investigate the declining state of the Rotorua Lakes (page 7): 'Restoring the Rotorua Lakes: the ultimate endurance challenge' Parliamentary Commissioner for the Environment April 2006. *"I begin by acknowledging the major efforts and considerable resources now being invested in protecting and hopefully restoring the Rotorua Lakes. It is superb. However, it is clear the task is Herculean and that, globally and locally, there are some very tough realities associated with sustaining lake and river water quality as nutrient inputs increase."* (Page 5).

² The Te Arawa Lakes Settlement Act 2006 vested ownership of the lake beds of 12 Rotorua lakes in the Te Arawa Lakes Trust settlement entity.

for the RPS to determine the most effective and efficient option to achieve Objective 28. The four following options were assessed:

1. Do nothing under the Act
 2. Provide guidance
 3. Develop a suite of policies that require plan changes to establish rules
 4. Provide broad direction to district and/or regional plans.
10. Option 3 was determined to be the most efficient and effective resulting in RPS Policies WL 2B, 3B, 4B, 5B and 6B, and Methods 2, 3, 22 and 28. In total these policies and methods provide specific direction for the Proposed Plan Change 10 process. Key elements of this direction are:
- (a) Lake Rotorua is defined as a 'catchment at risk' and the managed reduction of contaminants in excess of any limits is required
 - (b) The total amount of nitrogen that enters Lake Rotorua shall not exceed 435 tonnes per annum
 - (c) The 435 tonne nitrogen limit is to be allocated amongst land use activities
 - (d) Require, including by way of rules, the managed reduction of any nitrogen losses in excess of the 435 tonne limit
 - (e) A catchment intermediate target for the managed reduction of nitrogen loss is to be set to achieve 70% of the required reduction 2022.
11. These policies were subject to appeal and were resolved via mediation and a collaborative process, (explained further below). They became operative in October 2014. The relevant RPS policies are appended for ease of reference.

Regional Water and Land Plan

12. The operative Regional Water and Land Plan ('the Plan') established a number of key policy parameters that relate to Proposed Plan Change 10. Foremost among these was the setting of the water quality target for Lake Rotorua that needed to be maintained or improved – the Trophic Level Index of 4.2. This TLI was notified in the

Proposed Plan in 2002 - at the same time as other TLIs for the Rotorua Lakes³. The Plan became operative in 2008.

13. The Plan also contains rules 11-11F⁴ (collectively known as 'Rule 11'), which relate to discharges of nitrogen or phosphorus from land use and discharge activities in the Rotorua Lakes Catchment.
14. Introduced in 2005, Rule 11 set a discharge limit or nutrient benchmark based on the land use of each property based on nitrogen discharges for 2001-2004. The intention of Rule 11 was to stop further increases in nitrogen leaching into the lake. This is the basis for the benchmarking data collection that informed Proposed Plan Change 10. Nutrient reduction was not required by Rule 11.
15. Benchmarking was required of larger properties within the catchment – over 40 hectares. A limited number of smaller properties were also benchmarked for various reasons (such as to inform subdivision proposals). Without the benchmarking exercise Council would not have been in a position to advance Proposed Plan Change 10. Not all of the properties required to obtain benchmarks complied⁵.
16. Method 14 of the Plan contains the methodology for when action plans for lakes would be developed by Council. This led to the development of the Lake Rotorua and Rotoiti Action Plan in 2009. This Action Plan included the sustainable lake loads of nitrogen and phosphorus for Lake Rotorua and identified the need to explore regulatory interventions.

The Oturoa Agreement

17. The Oturoa Agreement came out of the Environment Court mediation on appeals on water quality Policies WL 2B, 3B, 4B, 5B and 6B of the RPS. It involved the Lake Rotorua Primary Producers Collective, Lakes Water Quality Society, Bay of Plenty Regional Council and Federated Farmers. Through this process the sustainable nitrogen load for Lake Rotorua and timeframes for reductions were endorsed and it

³ See evidence of Andrew Bruere for further explanation on this.

⁴ Consequential changes resulting from PC 10 to the operative Regional Water and Land Plan were notified as part of PC 10 excluding the application of the rules in Section 9.4 to Lake Rotorua and inserting new Part III LR (Lake Rotorua Nutrient Management) in its place. Refer to the document "Consequential changes resulting from Proposed Plan Change 10 (Lake Rotorua Nutrient Management) to the Operative Bay of Plenty Regional Water and Land Plan" dated 29 February 2016.

⁵ This non-compliance resulted in PC 10 needing to provide a process to set benchmarking for those properties that did not undertake the R 11 process.

was acknowledged rules to implement the RPS were needed – see Policy WL 6B(c) and its “Explanation”⁶.

18. This agreement resolved appeals lodged against the RPS on these points and provided a number of critical elements for the rules development process.

Central Government policy and guidance

19. A key Central Government contribution to the context for Proposed Plan Change 10 is the Crown Funding Deed for the Rotorua Lakes. This Funding Deed delivers \$72.2 million of taxpayer support to a \$144.4 million Rotorua Lakes programme and was agreed in 2006. This Funding Deed was associated with the return of the beds of the Rotorua lakes to Te Arawa in 2006.
20. Also in 2006, the Parliamentary Commissioner for the Environment released a report on the Lake Rotorua challenge. This report, titled “Restoring the Rotorua Lakes - The ultimate endurance challenge”⁷, noted concerns about the declining water quality in lakes across the country.
21. In 2011, Central Government released the National Policy Statement for Freshwater Management⁸. This NPS requires that regional councils work with their communities to identify values and to set objectives and limits for freshwater bodies. The RPS, Regional Water and Land Plan and now Proposed Plan Change 10 deliver on key aspects of the NPS as it relates to Lake Rotorua.

Reshaping of the Crown Funding Deed

22. The Crown Funding Deed noted above was reshaped in 2014 to be more outcome focussed. This provided flexibility for participants in the Rotorua Lakes Programme (specifically the Rotorua Te Arawa Lakes Strategy Group) to consider a wider range of options to achieve the necessary reductions in nitrogen entering Lake Rotorua.
23. The funding that is available under the Deed supports the Rotorua economy by providing \$45.5 million to support change in the farming sector. The Incentives Scheme funding mitigates a significant proportion of the potential impact on the pastoral sector.

⁶ See Appendix 1.

⁷ See Footnote 1.

⁸ Amended in 2014.

24. The Crown, through the Ministry for the Environment, has been integrally involved in the Rotorua Lakes programme and in the decisions around investing in nutrient reduction.

The Rotorua Lakes Programme

25. While the focus of the hearing of submission process is on the robustness and appropriateness of Proposed Plan Change 10, the Programme within which the Proposed Plan Change sits is critically important to understanding why the proposed rules are how they are. This context includes:
- (a) Why the option of achieving the sustainable lake load through rules alone was discounted;
 - (b) The commitment to science reviews that has been made;
 - (c) The funding deed that delivers \$72.2 million of taxpayer support to a \$144.4 million Rotorua Lakes programme;
 - (d) The community funded incentives scheme that negates the need to secure a 100 tonne nitrogen reduction of nitrogen entering the lake through rules⁹;
 - (e) Consented infrastructure (such as the Ohau Wall) and operational activities (alum dosing) that assume a sustainable solution will be forthcoming. The resource consent conditions can be made available if required.
26. As noted above, this context extends into the significant and continuing investment made by the Rotorua community over time to remove sewage discharges into Lake Rotorua. It also includes the continuing investment in Lake Rotorua science, monitoring, university-led research, land use advice and communications that occurs under the umbrella of the Rotorua Lakes Programme.
27. Rotorua Lakes Council and Te Arawa Lakes Trust have been part of the rule development process as partners in the Rotorua Lakes Programme. Throughout the rule development process, the Rotorua Te Arawa Lakes Strategy Group has approved and endorsed the approach being taken and aspects of rule design.
28. Material has also been provided to the Rotorua Lakes Programme Steering Group and Work Stream Leads (collective forums of staff from Te Arawa Lakes Trust,

⁹ Discussed further at paragraph 61.

Rotorua Lakes Council, Regional Council and Ministry for the Environment) for direction and monitoring purposes.

29. The Regional Council also coordinates a Water Quality Technical Advisory Group and a Land Technical Advisory Group under the Programme that have assisted the science and analysis that supports the rules. (These are explained in the evidence of Andrew Bruere).

Rule Development Process

30. The rule development process followed the consultation requirements of Schedule 1 of the RMA. Over and above these requirements Council undertook a range of engagement activities and these are discussed below.

Schedule 1 Consultation

31. Schedule 1 of the RMA requires consultation in the preparation of a plan change with the Minister for the Environment, other relevant ministers¹⁰, relevant local authorities¹¹ and the tangata whenua of the area (through iwi authorities).
32. At two distinct stages, Schedule 1 consultation occurred. A draft rules structure was provided to all relevant parties in March 2014 and draft rules in September 2015. The Section 32 report details the extent of this consultation and engagement.

Engagement with Iwi

33. A summary is provided at section 6.1 to 6.4 of the section 32 report¹². All iwi authorities received project updates and offers of meetings. The nutrient rules were presented to a range of forums with Māori audiences or participants (such as Komiti Māori, Rotorua Te Arawa Lakes Strategy Group, Te Arawa Māori Landowners Collective and StAG).

¹⁰ No other Ministers were seen as being relevant noting that the Ministry for the Environment was involved in the Rotorua Lakes programme – being represented on Rotorua Te Arawa Lakes Strategy Group and the Programme Steering Group – due to their Crown Funding Deed responsibilities.

¹¹ Rotorua Lakes Council is the only relevant territorial authority. Waikato Regional Council was consulted over cross boundary issues – specifically the land within the groundwater catchment that lies outside of the jurisdictional boundary of the Bay of Plenty Regional Council.

¹² See also at <http://www.boprc.govt.nz/media/464678/komiti-maori-agenda-01-october-2015.pdf> at page 17 onwards for the October 2015 update to Komiti Maori on Iwi consultation that details the pre-notification consultation and feedback process undertaken in development of the Proposed Plan Change.

34. Targeted engagement was also initiated with Māori land owners to recognise that a significant proportion of the catchment is in Māori ownership. This included drop-in days for Māori landowners, organised hui and special meetings. In late 2014 further, targeted efforts were made to engage with Māori/iwi landowners¹³.
35. The Te Arawa Lakes Trust is part of the Rotorua Lakes Programme but has also presented to Regional Council as part of developing the understanding of iwi perspectives on Lake Rotorua issues. Staff also engaged with Te Tumu Paeroa/Office of the Maori Trustee¹⁴ specifically on the impact of the rules on land managed by Te Tumu Paeroa.
36. As part of the plan change development process, iwi management plans were reviewed and relevant material was considered. Key matters related to the recognition of declining water quality and its impact on mauri, and the view from the owners of the lake beds that alum dosing is not an in perpetuity intervention. These sources provide a useful framework to consider cultural impacts relating to the nutrient issues affecting Lake Rotorua. Cultural impacts have also been analysed within the Section 32 Report (see for example section 9 and Appendix 4).

Overview of Community Engagement

37. Section 6.2 of the Section 32 provides more detail around the community engagement process including consultation/engagement with iwi.
38. To progress this Proposed Plan Change, Council was required to identify an objective, explore options and seek community views. In the case of PC10 the objective was set within the Operative RPS. Options have been explored on an ongoing basis through the rule development process – at a macro and micro level. Through early 2013 high level options were explored as discussed in section 9.1 of the Section 32 Report. The discussions around options informed the Proposed Plan Change as well as leading to the discounting of a number of options. The end point of this part of the process was the Integrated Framework. From there, option analysis centred on the parts of the rule framework.
39. Community feedback has been sought in a variety of ways and at various stages of the rule development process and all feedback was considered during the drafting process. A number of changes were made as a result of feedback and consultation.

¹³ See section 6.4 of the Section 32 Report.

¹⁴ Te Tumu Paeroa was also a member on StAG.

40. Draft rules were released to the wider community in June 2014 and again in September 2015. This involved media releases, mail outs, contact through email lists, public workshops, presentations and information sessions, hui and sector meetings and feedback forms.
41. A comprehensive community engagement programme was undertaken throughout the development of Proposed Plan Change 10. Key elements of this programme are highlighted below. Outside of formal communications channels and process staff maintained an openness to meet with any interested parties. This led to invitations to stakeholder meetings or to café discussions.
42. First consultation period - June – October 2014
- (a) Draft rules released in June 2014
 - (b) Extensive mail out, email distribution and media campaign
 - (c) 7 public meetings and drop-in days
 - (d) 2 Maori land owner drop-in days
 - (e) 3 hui and 29 meetings
 - (f) 6,090 website visits (July- Oct 2014), 68% first time.
 - (g) 330 items of feedback were received
 - (h) Meetings: Deer Farmers, Te Arawa Lakes Trust, Rural Professional meetings (including Real Estate, Property Managers), Rotorua Lakes Community Board, Dairy sector, Drystock sector, small block owners (150+ attendees), Primary Producers Collective, Grow Rotorua, Kaitiaki Kiwi and others
43. Second consultation period - July- October 2015
- (a) Draft rules released in September 2015
 - (b) Extensive mail out and email distribution
 - (c) Drop-in days x 2 (50+ attended)
 - (d) 4,429 website visits (July- Sept) with 2,383 being unique visitors.

- (e) Letter to all Te Arawa iwi authorities
 - (f) Site visits and further discussion with property owners
 - (g) Calls to all known deer farmers to communicate with this sector.
44. As an example of the community engagement over 200 individuals engaged with staff over the impact of the draft rules (for example through drop-in days, property visits, phone calls and emails).
45. In late 2015 also Council carried out specific engagement with an advocacy group – Protect Rotorua. This involved:
- (a) A public meeting (estimated 90 attendees)
 - (b) Phone calls – over 70 people identified as part of this group
 - (c) Written responses to the Protect Rotorua group
 - (d) Phone calls and property visits to members
 - (e) Group members also attended drop-in days.
46. The Proposed Plan Change has been developed and notified based on the feedback undertaken to date. The feedback was reported to Council at various stages of the process¹⁵. These reports also identified the range of changes being made or recommended as a result of the feedback. A range of land owners and interested parties have subsequently taken up the opportunity to formally submit on PC10 under the Schedule 1 process.
47. Throughout the process there was a deliberate approach to offer opportunities members of the public, iwi, stakeholders/industry sectors and organisations to meet staff or for staff to attend external meetings. This was designed to provide a range of opportunities for engagement outside the formal consultation processes.

The Stakeholder Advisory Group (StAG)

48. Following the Oturoa Agreement, in late 2012 StAG was established with the key role to oversee and provide advice on the development of the rules for Lake Rotorua. This upheld the requirement of the RPS and Oturoa Agreement for these rules to be

¹⁵ Such as the reports to Council on feedback received 9 December 2014, 17 November 2015 and 14 December 2015, and letter written from Council to small block owners December 2014.

developed in a collaborative manner. Representatives included the partnership of the Rotorua Te Arawa Lakes Programme (Te Arawa Lakes Trust, BOPRC, Rotorua Lakes Council); iwi land owners; Lake Rotorua Primary Producers Collective; Lakes Water Quality Society; Te Tumu Paeroa Office of the Maori Trustee, Forestry sector; and small block owners.

49. These members were selected based on their ability to provide insight and represent the interests of a number of agencies and sectors. The terms of reference for StAG state that “Wherever possible, decisions on advice (the Group’s primary purpose) shall be by consensus”. The terms of reference for StAG are publically available on the Rotorua Lakes website and a copy can be made available at the Hearing if required.
50. The terms of reference also required members to facilitate engagement with all stakeholders and for individual members to engage with respective agencies and sectors to ensure a two-way flow of ideas and feedback. For example, through the Collective there was feedback loops with rural farmers (including deer), rural professionals, Federated Farmers, Dairy NZ and Beef and Lamb NZ. A number of other organisations attended StAG on a regular basis (such as Dairy NZ and Beef and Lamb NZ) or presented to StAG (such as the presentations made by Dairy NZ on the economic analysis).
51. The membership of StAG did change over time as the process progressed. For example additional small block representatives were added as it became apparent that this group was difficult to engage with due to their dispersed nature.
52. As explained in the preceding sections, this was not the only way in which Council consulted the community or sought input into the rule development.

StAG process

53. The StAG process involved regular (monthly) meetings over a two-year period. At these meetings staff, members and technical experts presented on a wide range of rule development matters. The StAG process was intensive and required substantial Council resourcing¹⁶. It relied upon voluntary and stakeholder participation for its effectiveness.

¹⁶ Council also committed substantial resources to an appeal and mediation process involving land use change rules in the Rotorua District Plan specific to this catchment, and worked collaboratively

54. A key piece of work by StAG was development of the proposed framework to deliver Lake Rotorua's sustainable nitrogen limit as an integrated programme of Nitrogen Discharge Allowances (NDAs), incentives and gorse conversion.
55. The integrated framework was first presented to StAG by the Lake Rotorua Primary Producers Collective in July 2013. This framework was amended by StAG and then later approved and endorsed by the Regional Council (through the Strategy Policy and Planning Committee) on 17 September 2013.
56. A function of StAG was testing the robustness of concepts and, as time progressed, the rule framework. StAG provided advice and recommendations on a range of macro and micro issues through this process. For example:
 - (a) Macro: allocation
 - (b) Micro: how grazed trees should be treated for allocation purposes.
57. Any minutes, research or reports completed as part of StAG operations were available to the public for review on a dedicated website. (www.rotorualakes.co.nz). It is also noted that newsletters completed by the Collective provided updates on the progress of the rules to their mail list. Agenda items presented to the Regional Direction and Delivery committee of Council and Rotorua Te Arawa Lakes Strategy Group were available online through the Council website.

The Integrated Framework

58. The Integrated Framework is the expression of the context noted above as it applies most directly to Proposed Plan Change 10. The Integrated Framework is included in the introductory section to the Proposed Plan Change due to the recognition of the part it plays. The Integrated Framework was initiated by the Lake Rotorua Primary Producers Collective and recommended by StAG to Council. The Integrated Framework carries a number of commitments by the community (through Council) as well as the associated risks. A full analysis of the effectiveness and efficiency of the framework is included in the section 32 report, see section 9.2.1.
59. In addition to the new provisions proposed in this Proposed Plan Change, financial incentives, engineering interventions and a gorse conversion project are also being implemented to achieve the nitrogen reductions required in the catchment.

with the District Council, other appellants and interested parties (including StAG members) to achieve an appropriate land use rules framework for land use change as a result of nitrogen reduction.

Rules Programme – 140 tonne reduction		
2015	Farm Nutrient Plans	Plans will be put in place for every farm, setting out a practical pathway of staged nitrogen reductions.
2017	Resource consents	Farms will be consented, with a Farm Nutrient Plan as a consent condition.
By 2032	Nitrogen Discharge Allowances	Average of 35 kgN/ha/yr for dairy and 13 kgN/ha/yr for drystock, with adjustments made for geophysical and farm system characteristics.
<i>\$5.5m available to support meeting the requirements of the rules and to engage with the incentives fund.</i>		
Incentives Programme – 100 tonne reduction		
By 2022	Incentives fund	\$40m “below the line” to remove 100 tonnes of nitrogen.
Gorse Programme – 30 tonne reduction		
By 2022	Gorse fund	Separate funding to remove 30 tonnes of nitrogen from gorse.
Engineering – 50 tonne reduction		

Note: the nitrogen loss values in this table are consequently adjusted for later OVERSEER® versions¹⁷. Figures are in terms of nitrogen entering the Lake.

60. This framework involves a reduction of 140t/N from the rural farming sector by way of rules. This required reduction became the basis of the rule framework but is clearly part of the wider framework that also requires reductions to be secured by means other than rules. Proposed Plan Change 10 is part of a comprehensive response that is regulatory and non-regulatory in nature.
61. A key element of the Integrated Framework is the Incentives Scheme. This intervention reduces by 100 tonnes the requirement for nitrogen reduction that would otherwise be required through rules from the pastoral sector. The Incentives Scheme provides a voluntary alternative for landowners. The Incentives Scheme is a substantial commitment by the community to achieving the sustainable lake load¹⁸.

Dealing with Uncertainty

62. A degree of uncertainty is inherent within frameworks that rely on modelling, science and research to provide their foundation. Proposed Plan Change 10 is no exception and it has always been recognised within the process that there are confidence limits, error margins and scientific uncertainty at play. In juxtaposition to this recognition - the planning system needs a degree of absolutes to deliver a workable framework.

¹⁷ For an explanation of OVERSEER see the evidence of Simon Park, and Alistair MacCormick.

¹⁸ Other community commitments include the gorse and engineering programmes.

63. The specific numbers in Proposed Plan Change 10 are an example of this. The exactness of the numbers cannot be the reality – particularly over the long timeframe required to fix the Lake. They do however provide a firm framework to allow the community to understand the direction of Proposed Plan Change 10 and the outcome that it is looking to achieve, and for property owners to understand what is required of them. They also provide an absolute 2032 upper limit beyond which Council cannot allow more nitrogen to flow into the Lake¹⁹.
64. There is not the ability to wait for additional certainty and indeed it is unlikely to ever eventuate. It is my opinion that Proposed Plan Change 10 is built on “best science” and incorporates within itself the commitment to monitor and respond to developing science. The science may be undertaken in the catchment, in New Zealand or may be observed internationally. Method 2 is important in this regard. It has previously been criticised as not being something that Council should include as it is an executive function. Criticism was also levelled at the “recommendations” aspect of Method 2 – in that this is the realm of “planning” not a “science review”. The view of staff, in opposition to this criticism, was that this was an important commitment being made and the wording that came from StAG should be retained.
65. As identified in Policy LR P4 the concept of adaptive management is used to express the need to start on the process but to be mindful of new information. This again is a commitment from Council to being aware of any changes in the nutrient management landscape and to not be rigid in responding. This does of course carry a risk that the programme may need to respond to greater reduction scenarios. It is also worth mentioning that this plan change is primarily about reducing the amount of nitrogen that is lost to the Lake. The NPS-FM process will look at other nutrients/contaminants.

The Proposed Rules

66. The form that the Proposed Rules have taken has been informed by:
- (a) The need to balance administrative effort and cost with the risk of un-managed nitrogen (particularly in reference to the size of properties/farming enterprises);

¹⁹ RPS Policy WL 6B(c).

- (b) The desire to base the rule structure generally around “allowing” farming activities through permitted and then controlled activities - rather than using discretionary activities;
 - (c) The need for the rules to be based on land use activity rules (section 9 of the RMA) rather than discharge rules (section 15 of the RMA);
 - (d) The recognition of the difference between “effective area” – which is essentially the farmed area – and other parts of a property that do not contribute nitrogen loss;
 - (e) The need for a property-based approach to securing nitrogen loss reductions;
 - (f) The timeframes within the RPS, Oturoa Agreement and Integrated Framework.
67. Ignoring the various timeframes that apply, the rules generally provide for small, non-commercial properties, forestry/bush scrub and low intensity landuses to operate as permitted activities. The specific rules are described below.
68. Larger, higher intensity pastoral properties/farming enterprises are required to obtain controlled activity consents on the basis Nitrogen Management Plans are submitted that show pathways to the relevant NDA (see Schedule LR 6 of the Proposed Rules).

Permitted Activities

69. LR R1: This rule is a bridging rule from the point of notification to 01 July 2017 – the date specified in the Integrated Framework – to allow for current land uses to continue under a rule (following section 9 of the RMA “No person may use land in a manner that contravenes a regional rule...”).
70. LR R2: Plantation forestry and bush/scrub are permitted activities due to their comparatively low levels of nitrogen loss.
71. LR R3: The use of land on lots of five hectares and under is a permitted activity – unless it is commercial in nature. This reflects the balance of the generally low level of nitrogen losses from these sized properties (being mostly rural residential in nature) with administrative effort.
72. LR R4: This rule defines permitted activities on properties between 5ha and 10 ha in effective area on the basis of compliance with a stocking rate table.

73. LR R5 and LR R6: Until 2022 properties between 10 and 40 ha – or properties that were not managed under Rule 11 are permitted activities – provided there is no increase in activities that would increase the nitrogen loss.
74. LR R7: This rule is designed to allow low intensity but potentially large properties/farming enterprises to maintain their low nitrogen loss profiles. An OVERSEER[®] file is required as the basis of showing compliance with the required limitation on nitrogen loss.
75. In some cases there is also interplay between the permitted activity rules so that where specific rule conditions cannot be met activities can still be permitted up to a certain date. For example, LR R5 covers commercial activities on properties under 5ha (LR R3) up to 2022. This is designed to treat properties in a similar way.

Controlled Activities

76. LR R8 and LR R9: Controlled activity consents are required for properties greater than 40 ha in effective area in 2017 and less than 40 ha in effective area in 2022 – unless permitted activity status can be demonstrated. So for example, a 60 ha property may choose to operate under LR R7 as a low intensity operation. Conversely a smaller block may be intensively farmed with high levels of nitrogen that need to be managed.
77. Each resource consent requires the development of a Nitrogen Management Plan that demonstrates the pathway of mitigation actions to reduce nitrogen losses from the start point to the Nitrogen Discharge Allowance ('NDA').
78. The rules (Schedule LR One) contain the methodology for calculating the relevant start points and NDAs.
79. LR R10: This rule provides for trading to occur. Trading occurs through the issuing of new consents with associated new Nitrogen Management Plans.
80. Trading is restricted by the rules until after 2022. This reflects the risk that trading places on the Incentives Scheme and the recognition that trading should only become necessary at the first Managed Reduction Target point – 2022.
81. LR R11: As OVERSEER[®] cannot be used to model every land use type in the catchment rule LR R11 was introduced to provide an alternative approach to

developing nitrogen management plans in support of issuing consents. The basic premise is that “equal effort” reductions in nitrogen loss are required.

Non-complying

82. LR R12: Non-compliance only occurs upon a Nitrogen Discharge Allowance or Nitrogen Management Plan not being provided as part of a resource consent application (under rules LRR8 to LRR11) or where the use of land does not meet the conditions of permitted or controlled rules.

Discharge Rule

83. LR R13: The discharge rule is part of the Proposed rule framework in relation to section 15 of the RMA. This rule expressly allows for the discharge of contaminants into water – on the basis that the associated land use is one that is authorised/managed through the above land use rules.

Elements of the Rules Framework

84. The rules also establish a number of elements that drive the system such as the framework for allocation of discharges, how trading of those allocations occurs and how Council will ensure the 2032 sustainable lake load can be met. Three important elements that are therefore useful to discuss are:
- (a) The nitrogen allocation methodology;
 - (b) The trading system;
 - (c) The use of Nitrogen Management Plans.

Nitrogen Allocation

85. Allocation is the share of the sustainable lake load of nitrogen that is assigned to a property. In most cases this is a lower amount than that property’s benchmarked nitrogen loss.
86. Throughout the two-year long process of determining the nitrogen allocation approach, there has been a consideration of the RPS and StAG principles – and later the commitments made within the Integrated Framework that were agreed to by Council resolution. It is my opinion that the position that was reached represents a practical solution that is strongly based on economic and social considerations.

87. Allocation is a difficult subject within any nutrient management framework as there will always be winners and losers under any allocation method. A significant reduction of nitrogen discharge is required for Lake Rotorua to reach its sustainable load. This will have impacts on financial returns, capital value and opportunity cost. In essence the allocation process is about how the necessary reduction is shared out.
88. The ability to discharge nitrogen needs to be matched to the assimilative capacity of Lake Rotorua. This requires a reduction from the steady state load to the Lake (755 tonnes per annum²⁰) down to the sustainable load (435 tonnes per annum) by 2032. A significant and challenging nitrogen reduction is required from the pastoral sector and this limits the options that are available (for example, providing an allocation to other sectors to compensate for existing limitations on land development that are continued).
89. Significant time and energy was devoted to evaluating this issue and the Section 32 report (sections 10.3, 10.4 and 10.5) records the decisions and milestones that were reached along the path to a final position. The Section 32 report also identifies key reference documents (page 90).
90. For Proposed Plan Change 10 the allocation methodology results in a Nitrogen Discharge Allowance being allocated to each block within the catchment. These are summed for a property/farming enterprise and this is the limit required to be met by 2032. The NDA are expressed as a percentage of a reference file. These technical matters are explained in the evidence of Simon Park and Alistair MacCormick, and in the Section 32 report (see above references).
91. The decisions on nitrogen allocation are not decisions made in isolation, but were made in relation to an approach that evolved over time and that considered a range of alternatives. The parts of the approach can be described simply as follows:
- (a) RPS sustainable lake load 435 tN
 - (b) RPS allocation principles (Policy WL 5B)
 - (c) StAG additional principles
 - (d) Sharing of the reduction burden – not all by rules (the Integrated Framework)
 - (e) Agreed sector reductions

²⁰ ROTAN 2011 – see Rutherford et al 2011 and confirmed by Rutherford 2016 (see evidence of Dr Kit Rutherford).

- (f) Primary allocation method
 - (g) Consideration of ranges that support the allocation method
 - (h) Choice of specific ranges and process detail (for example movement to range boundaries)
 - (i) NDA methodology (Proposed Plan Change 10 Schedule LR One).
92. At each step the higher level policy above it was considered. So for example, any allocation methodology that did not accord with the sustainable lake load, allocation principles or Integrated Framework was discounted. For example this occurred through the highly iterative StAG process of defining the sector ranges.
93. Through the process matters such as OVERSEER[®] version change and decisions about how grazed trees were to be treated changed some of the outputs of the allocation framework but not the framework itself. At every point the integrity of the allocation approach – extending right back to the RPS and overarching integrated framework – was maintained.
94. The allocation methodology described in Proposed Plan Change 10 can best be described as a hybrid. It combines elements of:
- (a) grandparenting (due to the use of benchmarking as a start point)
 - (b) natural capital (“better” areas for nitrogen loss management will be able to do more with less NDA)
 - (c) “polluter pays” (high nitrogen loss blocks/properties lose more under the clawback regime)
 - (d) Sector averaging (as a start point for the ranges).
95. The allocation methodology is built on sector averaging with ranges – based on Rule 11 benchmarking as the start point. This option was preferred by StAG through the workshop process and approved by Regional Council on 02 July 2015. An iterative process was undertaken to find the preferred ranges that are contained with Proposed Plan Change 10.
96. The allocation methodology also includes the ability to consider exceptional circumstances should this be warranted in any specific case. It does this by providing matters that may be considered under Schedule LR One for amendments to a NDA.

Trading of Nitrogen Discharge Allowances

97. Trading of Nitrogen Discharge Allowances (NDA) has been part of the thinking for some time. It was acknowledged as being important within the Oturoa Agreement and has been supported by the Crown through discussion around the Funding Deed.
98. Trading is also an important aspect of the economic impact of Proposed Plan Change 10 as without trading the movement of NDA to more efficient landuses and land areas would not be able to occur. This would increase adverse economic effects. These economic matters are covered in the evidence of Sandra Barns, Lee Matheson, Graeme Doole and Nicky Smith.
99. A number of options for a trading system were explored and the decision was to use a simple process of reflecting any trade in resource consents for the source and destination properties. The land use advisors in the catchment are familiar with the “nitrogen landscape” and their clients’ aspirations so a facilitated market is unnecessary. The business costs of new consents are minor in the context of medium or long term farming decisions.
100. Trading also includes the ability for short term trading to meet the five-year managed reduction targets. This adds a degree of complexity but was a mechanism sought by farmers as an option to increase choices around mitigation actions. See Appendix 2 for diagrams showing short and long term trading.
101. Trading is not allowed until 2022. This is seen through the process by some as legislating for a monopoly as prior to this date NDA can only be purchased by the Incentives Board. The 2022 date has been implemented for two reasons. The first is that the Incentives Scheme has a challenging task – to purchase a 100 tonne reduction in nitrogen entering the lake by 2022. The risk associated with not achieving this is borne by the community (via the Regional Council). Removing the 2022 date increases this risk.
102. The second reason is that there was a view that properties should not be able to purchase the ability to discharges nitrogen above their benchmarks. This was seen as being contrary to what was trying to be achieved for the Lake.

Use of Nitrogen Management Plans

103. Proposed Plan Change 10 requires Nitrogen Management Plans as a part of a resource consent. They are defined as the plan for a property or farming enterprise

that identifies the sources of nutrients associated with farming activity and the mitigation actions to reduce nitrogen losses to meet Managed Reduction Targets and the Nitrogen Discharge Allowance. The key aspect of a NMP is the schedule of actions that when modelled in OVERSEER[®] show the pathway to the NDA.

104. Outside of discussions on rule, plans of this nature are best practice in farming sectors and are useful tools for farmers to identify opportunities, and consider options and solutions with farm advisors.
105. A key aspect of the NMP approach is that they allow individual farmers to best respond to meeting the NDA requirements by making their own decisions in collaboration with advisors and Council. Council is not in the business of telling farmers how to farm.
106. The 15 year timeframe covers three iterations of the NMP (from 2017 to 2022, from 2022 to 2027 and from 2027 to 2032). The NMP will contain mitigation actions to show how managed reduction will meet the Managed Reduction Targets and then NDA. The actions will be modelled using OVERSEER[®] to show that the targets can be met. The degree of specificity will be such that:
 - (a) The first 5-year block has clear actions to deliver the required result;
 - (b) The second and third 5-year blocks have less specificity (recognising that future planning is uncertain) but that a general picture of achieving the Nitrogen Discharge Allowance will need to be provided.
107. The NMP contains nitrogen budgets, block information and mitigation actions that are designed to achieve the required reductions. If the mitigations are not being carried out and therefore the nitrogen reductions are not occurring Council needs to have the ability to undertake compliance. This needs to be put within the context that property owners set the NMPs and can review them. As noted above it is not Council making choices on mitigation but the land owners/managers. Council's role is in ensuring that the outcome of the land management decisions is achieving the required reduction in nitrogen losses.
108. Mitigation actions can be reviewed and NMPs amended if required. Council will quality assure changes but only to ensure the mitigations are bona fide and that the managed reduction targets and NDA can be met.

109. NMPs do impose a cost on the farming sector however “best practice” would suggest that sector plans should be in use anyway and the NMP requirements can be aligned with these sector templates. In the future farming within a nutrient sensitive catchment such as Lake Rotorua will mean that this is a standard cost of doing business. It is noted that other areas of New Zealand have – or are moving to – this type of requirement for farm management planning (including nutrient management).

Appropriateness of Rules

110. Irrespective of the specific direction provided by the operative RPS, consideration was given to whether rules were an appropriate regulatory intervention. Section 9.4 of the Section 32 Report describes the challenges and responses.

111. In summary, challenges to the appropriateness of rules (in the sense that they are not needed) centre around alum dosing and phosphorus management. Specific research was commissioned to explore these challenges and the outcomes of these have demonstrated that nitrogen reduction is still required²¹. It was on this basis that Council adopted the rules for notification.

Conclusion

112. In my opinion Proposed Plan Change 10:

- (a) Is based on a robust platform of science;
- (b) Is a result of credible and reasonable choices between options – both at a macro and micro level;
- (c) Represents a series of compromises to reach a workable solution;
- (d) Adequately manages the risks associated with any future changes that may or may not arise and provides clear signals of adaptive management.

²¹ See Science Overview: Andrew Bruere, 2016 that details the science programme and expert reports.

Appendices

- Appendix 1: Relevant Operative RPS policies
- Appendix 2: Short and Long Term Trading Diagrams

Name: Stephen Lamb

Date: 17 January 2017

Relevant Operative RPS Policies

Policy WL 3B: Establishing limits for contaminants entering catchments at risk

Establish limits for the total amount of specified contaminants that enter the receiving waters within a catchment at risk including:

- (a) Contaminants to be managed to avoid compromising public health and each catchment's ecology, mauri, fishability, swimmability and aesthetics;
- (b) For the Rotorua Te Arawa Lakes the amount of nitrogen and phosphorus that can enter each lake in order to achieve its target trophic level index; and
- (c) For Lake Rotorua the total amount of nitrogen that enters the lake shall not exceed 435 tonnes per annum.

Explanation

Within the region, both surface water and groundwater are used for a wide range of purposes. Each use requires water of a corresponding quality. Some uses potentially conflict with others; the assimilation of contaminants may compromise consumptive uses. Water management policy, while enabling people and communities to provide for their social, economic and cultural well-being, must ensure that statutory water quality requirements are met.

Nutrient limits are necessary to meet the regional community's water quality targets for all at-risk catchments within the Rotorua Te Arawa lakes area.

The operative Bay of Plenty Regional Water and Land Plan sets trophic level indices (TLIs) for lakes of the Rotorua District as a means of measuring long-term trends in water quality to see whether each lake is improving or declining. Target TLIs for each lake have been determined through a public process, and are contained in the Regional Water and Land Plan. The TLI system is used as a means of measuring water quality based on the amount of total nitrogen, total phosphorus and chlorophyll A (algae) present in a lake, and the clarity of the water.

The 435 tonne annual sustainable nitrogen load for Lake Rotorua includes stream and groundwater flows, rainfall, and treated sewage effluent and excludes internal loads from the lake bed. The 435 tonnes is required to achieve the 4.2 trophic level index target currently set in the Regional Water and Land Plan.

When the target TLIs are reached, they may need to be reviewed to ensure that statutory (sections 70 and 107 of the Act) water quality requirements are met.

Policy WL 5B: Allocating the capacity to assimilate contaminants

Allocate among land use activities the capacity of Rotorua Te Arawa lakes and other water bodies in catchments at risk to assimilate contaminants within the limits established in accordance with Policy WL 3B having regard to the following principles and considerations:

- (a) Equity/Fairness, including intergenerational equity;

- (b) Extent of the immediate impact;
- (c) Public and private benefits and costs;
- (d) Iwi land ownership and its status including any Crown obligation;
- (e) Cultural values;
- (f) Resource use efficiency;
- (g) Existing land use;
- (h) Existing on farm capital investment; and
- (i) Ease of transfer of the allocation.

Explanation

Each water body is able to assimilate a certain amount of nutrients or other contaminants before the values of the water body are unacceptably compromised.

Essentially, what is being allocated is the capacity of Lake Rotorua and other at-risk catchments to assimilate a discharge of a contaminant. A 2005 amendment to the Act introduced as a new function of regional councils the establishment of regional rules to allow the allocation of this resource on other than a first-come/first-served basis. Thus, allocation mechanisms are implemented through rules in regional plans. This policy seeks to direct this by requiring, and providing principles and considerations for, allocation.

The management of activities and land uses within the context of the catchment of a receiving water body allows the particular characteristics of each water body to be taken into account. In the context of Lake Rotorua, for example, the amount of nitrogen that the lake can assimilate without adverse effect comes from the whole of the catchment. How that amount is to be distributed within the catchment presents management issues requiring policy guidance. Consequently, allocation decisions will be undertaken in consultation with the affected community, particularly landowners directly affected by the allocation.

Policy WL 6B: Managing the reduction of nutrient losses

Require, including by way of rules, the managed reduction of any nutrient losses that are in excess of the limits established under Policy WL 3B by ensuring that:

- (a) Rural production land use activities minimise their loss of nutrients as far as is reasonably practicable by implementing on-farm best management practices;
- (b) Any land use change that is required within the Rotorua Te Arawa lakes catchments to achieve the limits takes into account an equitable balancing of public and private costs and benefits; and
- (c) No discharges shall be authorised beyond 2032 that results in the limit for Lake Rotorua being exceeded. A catchment intermediate target for the managed reduction of nitrogen loss is to be set to achieve 70% of the required reduction from 746 t/yr to 435 t/yr by 2022.

Explanation

Managed reduction in the amount of nutrients derived from land use activities is necessary to halt the decline in water quality in at-risk catchments.

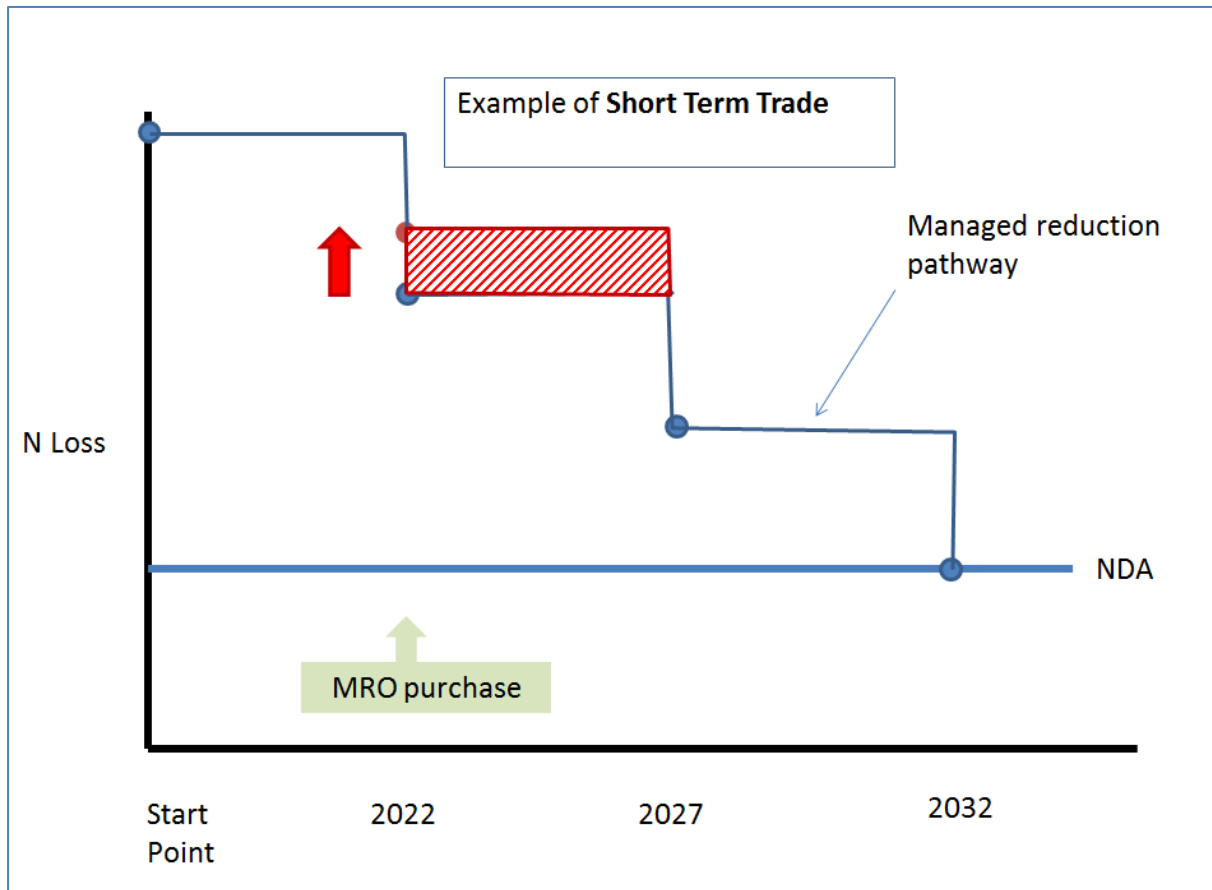
On-farm best management practices should be implemented to ensure that all rural production land use activities minimise their nutrient losses as far as is reasonable, practicable and affordable. The aim is to ensure that all rural production land users are operating in accordance with industry best practice.

For Lake Rotorua, current on-farm best practice alone will not achieve the nitrogen load reduction required to reach the sustainable nitrogen load of 435 tN/yr and land use change will be necessary. Beyond 2032 only discharges which enable the 435 tN/yr to be met will be authorised. The development of further resource management policy will have regard to the Oturoa Agreement.

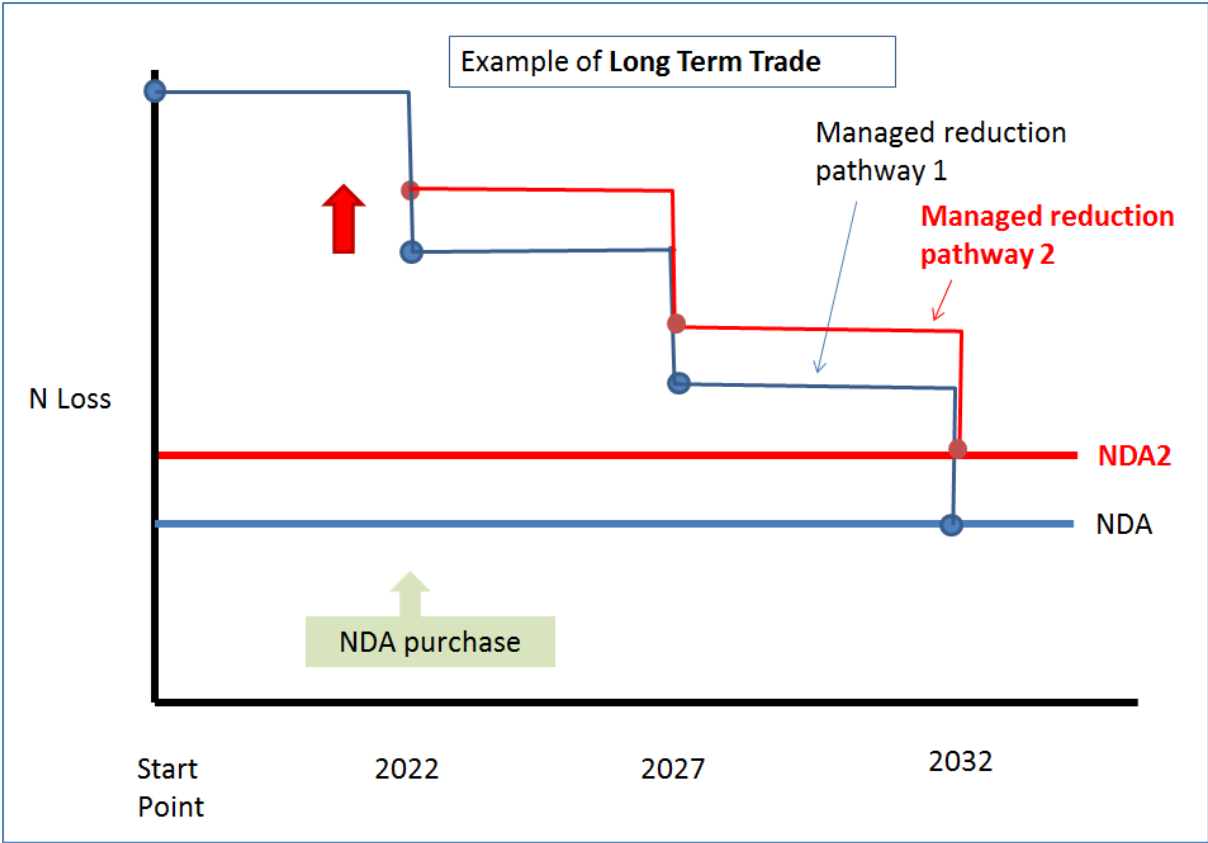
The cost of achieving any further reduction in nutrient losses over and above on-farm best practice in a particular catchment will have a mix of public and private benefits and should be funded accordingly. Consequently, the implementation of Policy WL 6B will require the development of further policy under the Regional Council's Resource Management Act 1991 and Local Government Act 2002 responsibilities.

Nutrient reduction targets have been established to enable lakes such as Rotorua, Rotoiti, Ōkaro, Rotomā, Rotoehu and Ōkāreka to meet their target trophic level indices (TLIs).

Short and Long Term Trading Diagrams



The above diagram shows the use of a Managed Reduction Offset (the hatched area) by a farming enterprise. The ability to discharge this amount of nitrogen exists for a 5-year period only and disappears at the point of the next Managed Reduction Target.



The above diagram shows the transfer of NDA to a destination property/farming enterprise. The base NDA has the additional amount of nitrogen discharge added to it. The new, higher level of NDA is permanent.

An equivalent amount of NDA would be removed from a source property/farming enterprise lowering their NDA – with no net impact on nitrogen loss within the catchment.