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Report To: Strategy, Policy and Planning Committee
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Framework for allocation and incentives in the Lake Rotorua catchment

Executive Summary

To achieve the sustainable nitrogen limit for Lake Rotorua, a rules and incentives project has been initiated. For the rules, the first step has been determining the way nitrogen can be allocated to pastoral land uses in the catchment. Allocation of nitrogen loss will naturally influence the design of the incentives scheme.

This paper presents two allocation and incentives approaches for the Lake Rotorua catchment and seeks a decision by this Committee on their preferred framework:

Approach One: this approach achieves the nitrogen reductions required through an integrated programme of nitrogen discharge allowances (NDAs), incentives and gorse conversion. This approach was proposed by the Lake Rotorua Catchment Stakeholder Advisory Group.

Approach Two: this approach achieves the nitrogen reductions required through the allocation of NDAs alone. The incentives scheme will work alongside the rules to encourage land use change. Under this framework a decision would also be required on the preferred allocation mechanism (sector-based or grandparenting).

After consideration of the benefits, risks and advantages for each approach, staff recommend Approach One: the integrated framework. This recommendation is based on:

- This approach signifies a collaborative solution
- Lower level of economic impact to pastoral land users (compared with Approach Two)
- Ability of land users to comply with NDAs (compared with Approach Two)
- Risk associated with this approach can be managed.

The decision sought in this report is to agree on a preferred rules and incentives framework. Once staff have a clear direction on the preferred option, the rules and implementation mechanisms to support this framework can be developed.

The scale of nitrogen loss reduction required (around 51%) involves leading edge policy work that will be of interest to other regional councils. The water quality limit set for Lake

Rotorua and the framework used to achieve it, will ensure Council meets its requirements under the National Policy Statement for Freshwater Management.

1 Recommendations

That the Strategy, Policy and Planning Committee under its delegated authority:

- 1 **Receives the report, *Framework for allocation and incentives in the Lake Rotorua catchment*.**
- 2 **Confirms the preferred framework for allocating nitrogen to land use activities in the Lake Rotorua catchment is:**

EITHER

Approach One: an integrated framework that will achieve the required nitrogen reductions through a programme of nitrogen discharge allowances, incentives and gorse conversion

OR

Approach Two: an allocation-dependant framework that fully allocates the sustainable pastoral load to land uses in the catchment using either a sector average approach or a grandparenting approach.

- 3 **Notes that this report will be presented to the Rotorua Te Arawa Lakes Strategy Group for endorsement at their next meeting.**
- 4 **Confirms that the decision is within the Bay of Plenty Regional Council's strategic planning framework (Council's Ten Year Plan, and planning documents and processes under the Resource Management Act 1991, Biosecurity Act 1993, Land Transport Management Act 2003, Civil Defence and Emergency Management Act 2002, and Local Government Acts 1974 and 2002).**

2 Purpose

The purpose of this report is to seek agreement on the preferred framework for:

- a. allocating nitrogen to land use activities in the Lake Rotorua catchment; and
- b. the incentives scheme to support a reduction in pastoral nitrogen loss.

Three supporting documents are appended to this report:

- **Appendix 1:** Initial policy paper on nitrogen allocation developed by staff. Includes the policy context for action and a detailed analysis of two approaches for allocating the lake's sustainable nitrogen limit to pastoral land uses in the catchment
- **Appendix 2:** An alternative allocation approach developed by the Lake Rotorua Primary Producers Collective in response to staff's initial policy paper

- **Appendix 3:** The Lake Rotorua catchment Stakeholder Advisory Group's proposed allocation approach that builds on the work done by the Primary Producers Collective, but includes stronger monitoring, implementation and review requirements.

These reports reflect the evolving process to be expected from a collaborative approach. To avoid repetition between this report and the content in the appended papers, relevant parts of the accompanying documents will be referenced when necessary.

3 Background

3.1 Problem definition

A water quality target for Lake Rotorua has been set in the Regional Water and Land Plan. This target is a Trophic Level Index (TLI) of 4.2, based on community consultation and a desire for the level of water quality enjoyed in the 1960s. The target has been endorsed by all partners of the Rotorua Te Arawa Lakes Strategy Group.

The Lake Water Quality Technical Advisory Group has confirmed that to reach the target TLI of 4.2 no more than 435 tonnes of nitrogen should enter Lake Rotorua each year.

Modelling undertaken by NIWA in February and April 2011, using the Rotorua and Taupō Nitrogen (ROTAN) model, indicates that the current nitrogen input to the lake from the catchment is approximately 755 tN/yr¹. This means the nitrogen entering Lake Rotorua from the catchment needs to be reduced by approximately 320 tonnes a year.

Further details on current nitrogen inputs to the lake are provided in Appendix 1: Section 2.

3.2 Programme for change

3.2.1 Policy direction: the rules

There is a long history of actions and policies to improve water quality in Lake Rotorua. The effect of nutrient discharges on the Rotorua Te Arawa lakes has been identified as a regionally significant issue in the Proposed Regional Policy Statement 2012-2022 (Proposed RPS).

The Proposed RPS provides specific direction for the management of nitrogen² in the Lake Rotorua catchment. The direction is:

- **Policy WL 3B:** the total amount of nitrogen that enters Lake Rotorua shall not exceed 435 tonnes per annum

¹ The ROTAN modelling done in 2011 is considered to be the best available information at this stage. Staff and the Stakeholder Advisory Group have agreed to use this information in developing the rules and incentives package. It is noted that the Proposed Regional Policy Statement refers to a current input of 746 tN/yr, derived from the 2009 Lake Rotorua and Rotoiti Action Plan.

² During the development of the Regional Policy Statement, it was decided the difference between the current and sustainable loads of phosphorus into Lake Rotorua was not so great as to require a limit to be set.

- **Policy WL 5B:** allocate the 435 tonne limit amongst land use activities
- **Policy WL 6B:** no discharges shall be authorised beyond 2032 that result in the 435 tonne limit being exceeded. An intermediate catchment-wide target is to be set to achieve 70% of required reduction by 2022.

Council has confirmed that rules will be required to give effect to the intent of these policies.

In order to achieve the limit specified in the Proposed RPS, the first step is determining the way nitrogen can be allocated to pastoral land uses in the catchment, giving effect to Policy WL 5B. Once a preferred approach has been decided, rules to support the allocation approach will be developed.

3.2.2 Funding provisions: the incentives

Key projects and budgets have been agreed in the Regional Council's Ten Year Plan 2012-2022 in order to achieve Lake Rotorua's nitrogen limit. In particular, a nutrient reduction fund of \$45.5 million has been provided to facilitate nitrogen reduction from rural land. This \$45.5 million nutrient reduction fund is referred to as the "incentives scheme".

A decision from Central Government that will confirm their contribution to the funding is expected in December.

3.2.3 Integrating the rules and incentives

In July 2012,³ Council agreed that the development of rules for Lake Rotorua would begin immediately and in conjunction with the development of the incentives scheme. Reasons for integrating the rules and incentives included:

- In order for the incentive scheme to work, landowners need to know what the rules are going to be. This is because the rules are the main driver for change; incentives are just tools that can help achieve the target
- Efficiencies and synergies can be gained by working on the rules and incentives together. Both pieces of work address nutrient loss from rural land and will have the same stakeholders and issues to resolve
- We need to ensure that the incentives scheme complements the rules and that all actions supported through the incentive scheme contribute to reaching the required targets.

3.2.4 Lake Rotorua Catchment Stakeholder Advisory Group

Council directed staff to actively engage with stakeholders throughout development of the rules and incentives. As a result, the Lake Rotorua Catchment Stakeholder Advisory Group was established in September 2012. This Group is also known as StAG.

The main purpose of the Group is to provide oversight, advice and recommendations on "rules and incentives" options that will achieve the nitrogen reduction targets needed from rural land to meet Lake Rotorua's water quality

³ Strategy Policy and Planning Committee agenda paper "Process to deliver a package of rules and incentives for reaching Lake Rotorua's nitrogen limit" 31 July 2012

target. This includes advice on implementation options and district and regional statutory plans.

The Group includes members from the Lake Rotorua Primary Producers Collective, Lakes Water Quality Society, Bay of Plenty Regional Council, Rotorua District Council, Te Arawa Lakes Trust, Office of the Maori Trustee, the forestry sector, iwi landowners and small block owners.

The Group first convened in November 2012 and has met every month since. A sub-committee has also been established to help keep up with the Group's work schedule. It has been involved in the development of policies on rules and incentives by considering options and the information available.

3.2.5 Collective action

In addition to the time, expertise and experience invested by the Stakeholder Advisory Group, other examples of commitment by Lakes Programme partners and key stakeholders include:

- The Primary Producers Collective and Lakes Water Quality Society signed the Waioira Agreement in 2011, agreeing to work together to achieve a clean and healthy Lake Rotorua
- Bay of Plenty Regional Council, Federated Farmers Rotorua and the Primary Producers Collective signed the Oturoa Agreement in 2013, agreeing the most effective way to achieve a sustainable rural sector and a clean healthy lake is through the adoption of a collaborative approach that includes all stakeholders
- The Rotorua District Council is developing Transferrable Development Rights through the Proposed District Plan to facilitate change to lower nitrogen loss land uses
- Dairy NZ has offered substantial support for dairy farmers in the transition to lower nitrogen-loss farming practices
- A number of primary industry groups are leading research and innovation initiatives to help achieve nitrogen loss reductions and up-skill advisors and landowners on latest techniques and technology to reduce nitrogen loss
- To provide landowners with economically viable options, Bay of Plenty Regional Council and Grow Rotorua are running a 'Rotorua Land Innovation Contest' to help source innovative, alternative and practical land uses to help achieve nitrogen reductions.

3.3 Uncertainties and impacts of change

The scale of change required to achieve Lake Rotorua's sustainable nitrogen limit is significant and cannot be underestimated. Through its decisions on setting the nitrogen limits for the lake, Council will be aware that the cost of meeting the limit is very high. There will be significant and direct costs to pastoral farmers, and indirect costs and downstream impacts to industries such as suppliers, manufacturers, processors, contractors and the Rotorua community in general.

In making decisions around the rules and incentives, Council must remain aware of both the uncertainties that exist in our knowledge base, and the impacts that the changes will have on the Rotorua district and its community.

An overview of the assumptions and uncertainties in our knowledge base are described in Appendix 1: Attachment 1 and include:

- Assumptions that the community's expectations have been adequately taken into account in setting water quality limits, and that the costs and benefits of achieving these limits are understood by the community
- Uncertainties in lake dynamics and the effects of phosphorous, given the TLI for the lake is at the Trophic Level Index target despite current nitrogen loads
- Inherent uncertainties in the model used to predict nitrogen yields and exports in the catchment (ROTAN) and the tool used to model nutrient losses at the farm scale (Overseer)
- Limitations in our data on land use in the catchment.

An overview of the impacts associated with achieving the sustainable limit is described in Appendix 1: Section 2.3. Costs include:

- Significant and direct costs to pastoral farmers, both in terms of farm gate costs (estimated at over \$88 million) and substantial loss of farm value (estimated at over \$35 million for sheep and beef farms)⁴
- Indirect and downstream costs to industries such as suppliers, manufacturers, processors and contractors
- Social and welfare impacts across the wider community.

Potential benefits include:

- Intangible non-market benefits from improved water quality, including increased recreational opportunities and enhanced provision of ecosystem services
- Potential benefits to industries linked to water quality such as tourism, fishing and real estate.

Importantly, the scale of change required is going to place a significant monitoring and administrative burden on farmers and on the Regional Council. To manage nutrient reductions, whether authorised by rules or voluntary agreement, we must be able to monitor discharges and be able to ensure compliance.

4 **Policy development process**

The Regional Policy Statement requires that the sustainable limit of 435 tN/yr be allocated amongst land use activities in the Rotorua catchment. Staff confirm that to achieve the sustainable limit, no more than 256 tN/yr can be allocated to pastoral land use activities in the catchment:

- A 320 tN/yr catchment wide reduction is required to achieve the 435 tN/yr sustainable limit. It is estimated that 50 tonnes can be achieved through engineering solutions, leaving 270 tonnes that can only be achieved from a reduction in nitrogen loss from pastoral land use.

⁴ Note these specific estimates have been provided by a project focused on assessing direct costs of change to current landowners in the catchment (Farmers Solutions Project, 2012). The costs of change have not been optimised and do not consider higher returning land uses.

- The current estimated loss of nitrogen from pastoral land is 526 tN/yr. In order to achieve the 270 tN/yr reduction, total pastoral loss must be reduced to 256 tN/yr, a 51% reduction.

4.1 Initial staff analysis

There are a number of ways nitrogen can be allocated to land use activities across the catchment in order to achieve a total pastoral loss of 256 tN/yr. Using two agreed sets of criteria, staff and the Stakeholder Advisory Group undertook a rigorous assessment of a variety of different allocation methods (Appendix 1: Section 3.2).

Pros and cons of the different allocation methods were identified, but only two approaches were considered appropriate for the Lake Rotorua catchment:

Allocating under a “grandparenting” approach – where allocation is based on existing individual discharge rates. In applying this approach, staff proposed that allowances would be based on benchmarks issued under Rule 11 of the Regional Water and Land Plan. However, to reduce the current pastoral discharge to 256 tN/yr, a 51% reduction would be required from each benchmark.

Allocating under a “sector average” approach - where allocation is based on an average nitrogen allowance for specific types of land use or sectors (e.g. every hectare of dairy land receives the same allowance and every hectare of drystock land receives the same allowance). In applying this approach, staff proposed that to achieve the required 256 tN/yr a dairy allowance of 26.5kg N/ha/yr and a drystock allowance of 7.7kg N/ha/yr would be required. It is recognised that such low allowances could not be achieved without substantial land use change and/or the purchase of allowances from a willing seller.

Both allocation approaches will have a significant level of impact to the catchment. The impacts are outlined in *Appendix 1: Section 4.0*. Importantly, both are likely to result in large scale land use change across the catchment and both are likely to hit the drystock sector particularly hard as this sector has less capacity to adapt.

The scale of reduction required also means that major impacts will occur regardless of the allocation approach (grandparenting or sector averaging), although the approach chosen will impact different people in different ways. Staff have outlined the scale of impact throughout Appendix 1 and have identified who will be affected by each allocation method and to what degree.

4.1.1 Role of the incentives scheme under this approach

Under the grandparenting or sector averaging approaches proposed by staff, the incentives scheme will be designed to encourage reductions in nutrient loss from land in the catchment to help achieve the sustainable limit. The scheme would be used to meet a portion of the transition costs, encourage early adoption of change and reduce the financial loss to farmers.

Issues needing to be addressed in the design of the scheme under this approach include the level of ‘good practice’ to be expected at landowners costs, and the quantum of nutrients to be targeted.

4.2 Primary Producers Collective alternative approach

This approach, provided as Appendix 2, was developed by the Primary Producers Collective in response to the initial staff analysis. It relies on the incentives scheme to remove a fixed amount of nitrogen (100 tonnes) from the catchment. It also factors in a reduction of 30 tonnes through the conversion of gorse infested land.

The effect of removing 100 tonnes of nitrogen through the incentives scheme means that a higher NDA can be provided to pastoral farmers than proposed through the initial staff analysis. An average of 35kg N/ha/yr for the dairy sector and 13kg N/ha/yr for the drystock sector is proposed, although adjustments within sectors are identified to account for factors such as soil type, rainfall and slope.

Under this approach, the responsibility for achieving required reductions are shown in Table 1.

The NDAs proposed in the Collective’s alternative approach will be more economically viable for pastoral farmers than those proposed in the initial staff analysis. An expert panel had previously been convened to inform policy development on nitrogen allocation and its potential impacts. The panel explored the possible lower limit of nitrogen losses on dairy and sheep and beef farms while maintaining farm viability.

The information provided by the expert panel indicated that the minimum level a “low” nitrogen loss dairy farm could conceivably operate at is around 35kg N/ha/yr. For sheep and beef, the minimum level a “low” nitrogen loss farm might be able to operate at is around 13kg N/ha/yr.

Table 1: Summary of nitrogen loss reduction responsibilities

N reduction responsibility	tN
Farmers meet NDAs by 2032	140
Gorse project by 2022	30
Mitigation fund with focus on meeting the intermediate catchment target of 70% by 2022	100
Total N reduction	270

Under this approach there is a strong reliance on voluntary action. It also has the deliberate effect of sharing the risk of achieving the 435tN target between the farmers and the incentive fund.

4.2.1 Role of the incentives scheme under this approach

The Collective proposal suggests a substantial proportion (\$33.1 million) of the \$45.5 million incentive fund will focus on buying 100 tonnes of nitrogen below NDAs (i.e. ‘below the line’ funding); the remainder of the incentives fund (\$12.4 million) is proposed to help farmers achieve their NDAs (i.e. ‘above the line’ funding).

These figures are based on the recommendations in the Farmer Solutions Report that farmers, on average, could get to 40 and 17kg N/ha/yr for dairying and drystock respectively under the adoption of industry best practices. Reductions below this

required farm systems changes that were untested and therefore carried risks and a much higher likelihood of negative farm surpluses.

Examples of how the incentive fund could be designed are provided in *Appendix 2: Section 4*.

4.3 Stakeholder Advisory Group proposal

The Stakeholder Advisory Group has been actively involved in the development of policy on nitrogen allocation. The Group considered the approach developed by the Primary Producers Collective, and in response to concerns developed a revised proposal. This proposal is provided in Appendix 3.

The key decisions and milestones of the Group that have led to this point are outlined in Table 2 below:

Table 2: Key decisions and milestones of the Stakeholder Advisory Group

Meeting Date	Action
3 Dec	Confirmed requirement to reduce pastoral N from 526t/yr to 256t/yr
29 Jan	Discussed different approaches to allocating the 256tN/yr
14 Feb	Drafted allocation principles
19 Mar	Assessment of allocation approaches; put some methods of allocation aside as not deemed appropriate for Lake Rotorua's catchment; broad agreement to analyse sector-average allocation but compare against grandparenting
16 Apr	Agreed to include Rule 11 data in allocation analysis; considered draft principles for the incentives scheme
13 May	Considered Mōtū's draft results from analysis of allocation options
18 June	Considered policy options for allocating nitrogen and agreed for the Collective to develop an alternative approach
16 July	Considered Collective proposal and agreed to it as an allocation approach but with caveats
13 Aug	Endorsed the Stakeholder Advisory Group proposal

Key elements of the Stakeholder Advisory Group's proposal are shown in Table 3:

Table 3: Stakeholder Advisory Group proposed programme of action

Programme	tN	Actions and Accountability
Rules Programme	140tN	<ul style="list-style-type: none"> - Approved Farm Nutrient Plans which will include specific plans for N reduction - implemented for individual farms by 01 December 2015 - Staged reductions via Farm Nutrient Plans mandated through resource consents

		<ul style="list-style-type: none"> - Individual farmer resource consents applied for by 01 December 2017 - Farmer accountability, obligatory by 01 December 2032
Incentives Programme	100tN	<ul style="list-style-type: none"> - Regional Council accountability, to be achieved by 01 December 2022 through the incentives scheme
Gorse Re-vegetation Programme	30tN	<ul style="list-style-type: none"> - Regional Council responsibility through a gorse conversion programme to be achieved, in collaboration with farmers and landowners, by 01 December 2022 using separate funding

4.3.1 Role of the incentives scheme under this approach

The Collective's approach had proposed \$12.4 million 'above the line' funding be available to assist land owners to meet their NDAs. At the 13 August StAG meeting, it was agreed that only \$5.5 million be provided for this purpose. The remainder of incentives funding (\$40 million) is proposed as 'below the line' funding to achieve a 100tN reduction in the catchment.

StAG proposed the change in above the line/below the line funding ratios in recognition of the high costs associated with below the line reductions. Nitrogen reductions in Taupō were achieved at approximately \$400/kg, and this is considered a conservative estimate. At that price, a 100 tonne reduction would cost \$40 million.

If this funding is shown to be lower or higher than that required to achieve the intended outcome, StAG propose the relative appropriation of funding may be revised in 2017 prior to both the 5-year programme review and finalisation of farmer consents.

This proposal aims to achieve the total below the line reduction by 2022 which will contribute towards the 70% catchment load target. Under this proposal the smaller amount of funding to assist farmers achieve their NDA would also be used by 2022.

5 Decision on preferred framework for rules and incentives

In order to allocate nitrogen to pastoral land uses in the catchment and achieve the sustainable nitrogen limit for the lake, Council needs to make a decision on a preferred framework for delivering rules and incentives.

Staff consider there are two approaches that Council could consider:

Approach One (preferred approach): The integrated framework proposed by the Stakeholder Advisory Group: this approach achieves the nitrogen reductions required through an integrated programme of NDAs, incentives and gorse conversion.

Approach Two: The allocation-dependant framework drafted by staff: this approach achieves the nitrogen reductions required through the allocation of NDAs alone. The incentives scheme will work alongside the rules to encourage land use change. Under this framework a decision would also be required on the preferred allocation mechanism (sector-based or grandparenting).

5.1 Approach One: integrated framework

This approach has been proposed by the Stakeholder Advisory Group. It is provided in Appendix 3 and refers to the Primary Producers Collective approach provided in Appendix 2. The basic framework of this approach is:

- The responsibility for achieving the sustainable limit is shared between the community and pastoral land users: 100 tonnes of nitrogen removed through the incentives scheme, 30 tonnes of nitrogen removed through a separate gorse project and 140 tonnes of nitrogen removed by farmers meeting their NDAs
- Average NDAs of 35kg N/ha/yr will be allocated to the dairy sector and 13kg N/ha/yr will be allocated to the drystock sector. Adjustments within sectors may also be made for geophysical or farm system characteristics, provided that the aggregate for each sector is not exceeded
- Resource consents will be required by 2017 for all pastoral land use activities.⁵ In order to get consent, applicants must provide a 'Farm Nutrient Plan' that outlines a pathway for managed reduction and will get consent holders to their NDA by 2032
- Key monitoring, compliance and review clauses (as proposed in Appendix 3) are incorporated as part of the policy framework

5.1.1 Meeting the target

The NDAs proposed under this approach are an average of 35kg N/ha/yr for the dairy sector and 13kg N/ha/yr for the drystock sector. On their own, these allowances will result in a total pastoral discharge of 386 tN/yr which is higher than the required discharge of 256 tN/yr.

This approach therefore places a high dependency on the incentives scheme to deliver the balance of nutrients required to meet the target sustainable limit. At this stage it is proposed that \$40 million will be provided as 'below the line' funding to achieve a 100tN reduction in the catchment, and \$5.5 million will be provided as 'above the line' funding to help landowners reach their NDAs.

The scheme will need to be carefully designed to ensure the 100 tonne reduction can be achieved. Council needs to be confident \$40 million is sufficient to achieve this reduction. An expert panel was convened on 3 September 2013 to assess the feasibility of the incentives scheme using this approach. Indications from the expert panel are that it is technically feasible to achieve the reductions required, but that there are other issues (e.g. behavioural and social issues) that will make it challenging.

The expert panel considered the willingness of land owners to make the necessary changes. The panel considered that owners of unproductive land (where little to no income is earned from the land) or marginal farming operations (such as sheep and beef) are most likely more willing to change. These findings will be taken into account when designing the incentives scheme.

This approach also places a dependency on the removal of gorse. There is some confusion around how gorse is accounted for but staff are confident that removing

⁵ Property size determining who will require consent has not been agreed yet.

30 tonnes of nitrogen through gorse removal is part of the 270 tonne reduction requirement. The staff position on this is provided in *Appendix 1: Section 8.1*.

5.1.2 Meeting the interim target

Policy WL6B(c) of the Proposed Regional Policy Statement states: “A catchment intermediate target for the managed reduction of nitrogen loss is to be set to achieve 70% of the required reduction from 746 tN/yr to 435 tN/yr by 2022”. This implies that a 218 tonne reduction is required by 2022⁶.

Together with the 50 tonne reduction expected from engineering solutions, this approach would achieve the required interim reduction target through front loading the incentive scheme (100 tonnes) and the gorse project (30 tonnes). The balance would be expected to be met by landowners meeting components of their NDAs (managed reductions specified through the Farm Nutrient Plans).

5.1.3 Monitoring and review

The approach includes a strong focus on the monitoring and review of progress – both by landowners in meeting their NDAs, and the Lakes Programme in meeting Incentives Scheme and Gorse Programme targets. Reviews are proposed from 2017, and every five years thereafter. Decisions will need to be made if targets aren't met. The way in which these decisions are made, and the choices available, will be addressed through the design of the rules, incentives and gorse programmes.

Regular review of the relevant land and water science is also proposed, to ensure targets and actions remain appropriate.

5.1.4 Design and details

If the integrated framework is supported by Council, staff will work with the Stakeholder Advisory Group to undertake the analysis and firm up the detail required to implement this integrated approach. Work includes, but is not limited to:

- *confirmation of sector definitions:* are dairy and drystock the most appropriate ‘sectors’ to use in the allocation of NDAs? Should dairy support be included as a separate sector?
- *agreed good management practice:* what can be expected as a minimum?
- *development of NDA ranges around the proposed 35kg N/ha/yr and 13kg N/ha/yr averages:* what ranges are acceptable (accounting for factors such as soil type, rainfall and slope) but still meet the total reduction required?
- *role of Farm Nutrient Plans:* how they can implement the managed reduction of nitrogen loss that will be required, and in what way
- *rule design:* specification of activity status and what the consent conditions will look like

⁶ As previously noted the 746 tN/yr estimate referred to in the Proposed RPS is not the figure being used in this process. The load estimate from 2011 ROTAN is 755 tN/yr, which means a 320 tN/yr reduction is required (see Page 2 Problem Definition). 70% of this is 224 tonnes not 218 tonnes, but the difference not considered to be significant.

- *monitoring and review conditions*: the integrated framework includes a tiered approach to monitoring and review. These will be included in the design of the various programmes and the wording needs to be carefully considered
- *incentives scheme design*: how will the mechanism work for above the line and below the line funding?

5.1.5 **Benefits of the approach**

This approach represents a collaborative solution to deliver improved water quality outcomes and a viable rural sector in the Rotorua catchment. It has been developed by key stakeholders and therefore should be a solution that is better supported by the community, landowners and industry groups.

Other benefits of this approach include:

- It is a pragmatic approach and reflects shared responsibility between the community and pastoral land owners
- Because it is the result of a collaborative process it will have a higher chance of farmer buy-in, both through development and implementation phases
- By spreading risks across programmes, NDAs are more reasonable so the approach is potentially more economically viable for farmers
- \$45.5 million is not enough money to get the job done. The only way to increase this pot of money is through enabling debt. To do this, there must be viable farms and the NDAs signal this viability. This allocation approach supports future income beyond 2032 being used to finance current actions
- It presents a clear pathway for managed reduction over time – both for farmers and Council
- Given industry support, implementation could attract significant industry investment
- Will provide a level of transparency on incentive levels that will allow long-term decision making for farmers to start as soon as the policy is operative
- A collaborative solution may result in supportive submissions and evidence from industry groups, rather than opposition, through the notification process. This may reduce the risk of subsequent appeals in the Environment Court
- It may provide a better opportunity for undeveloped Māori land where the modified sector averages proposed (ie 35 and 13kg N/ha/yr) are higher than the benchmarks established under Rule 11
- Importantly, it buys time to develop alternative land uses and more effective on-farm mitigation techniques.

5.1.6 **Risks of the approach**

Although this approach is the preferred framework for developing the rules and incentives, staff note there are a number of associated risks with this approach that need to be recognised:

- It depends entirely on the availability of \$45.5 million for the incentives scheme. This requires a funding transfer in the Funding Deed and this has not been confirmed by the Crown

- Achieving the sustainable load hinges on the ability to remove 100t of nitrogen from the catchment through incentives. This assumes landowners will participate, that the incentives scheme will have enough money, and that this amount of nitrogen can be effectively 'bought out'. Stringent monitoring and review clauses will be required to ensure the scheme remains on track
- There is a potential that front-loading 'above the line' funding to help farmers meet their NDAs will mean Council will be incentivising before the full costs of future reductions are known. Incentive funding will not be available for the reductions needed to be made by farmers from 2027-2032
- No programme in place yet to achieve a 30 tonne reduction through gorse removal, and there are uncertainties in the quantum of nitrogen reduction that can be achieved by addressing gorse (outlined in Appendix 1: Section 8.1). A business case will be presented to Council shortly outlining a programme for this gorse reduction
- A focused gorse project could have a number of unintended consequences:
 - 60% of gorse in the catchment is on Māori land. The project could further limit the opportunities for undeveloped Māori land as Council's position is that land use change will only be supported where the new use is at or below 4kg N/ha/yr
 - 70% of gorse in the catchment is on land classified as "drystock", and associated parcels are likely to have low benchmarks. The project may encourage people to clear the gorse themselves and utilise the proposed NDA of 13 kg N/ha/yr rather than being locked into 4 kg N/ha/yr. Under this scenario, a 30 tonne reduction from gorse removal would not be achieved as the land use would intensify
- While the allowances of 35 and 13 kg N/ha/yr are higher than those proposed in Approach Two (26.5 and 7.7kg N/ha/yr), they are still lower than good practice levels, and will be hard for landowners to achieve and represent the minimum level for farms to remain viable
- Only 4 of the 25 benchmarked dairy farms in the catchment are farming below 35kg N/ha/yr and only 55 of the 141 benchmarked drystock farms are farming below 13kg N/ha/yr. This approach will still require substantial changes across the catchment and will be costly
- The reduction to NDAs is proposed to be managed through the Farm Nutrient Plans, to be in place by 2015. There is a risk of non-action if these plans and NDAs are voluntary and this will need to be managed through the consenting regime. Provisions can be developed to ensure action
- StAG support does not necessarily equate to wider landowner support. StAG members have been working hard through this process and have had access to a great deal of information and discussion that the wider farming community have not.

5.2 Approach Two: allocation-dependant framework

If the integrated approach proposed by the Stakeholder Advisory Group is not supported, the default option would be to fully allocate the sustainable pastoral load to land uses in the catchment. This will have the effect of making the achievement of the reduction the responsibility of the rules.

Under this approach, the incentives scheme will be designed to encourage land use change in the catchment to help achieve the sustainable load. The scheme would be used to meet a portion of the transition costs, encourage earlier adoption of change and reduce the financial loss to farmers.

A detailed assessment of the framework, costs, benefits and risks are provided in Appendix 1. If Council decides to agree to this framework as the preferred approach, a decision will be required on the option for allocation. The two options proposed in Appendix 1 are:

- a. **Allocation using a sector average approach** – an allowance of 26.5kg N/ha/yr is proposed for the dairy sector, and an allowance of 7.7kg N/ha/yr is proposed for the drystock sector.
- b. **Allocation using a grandparenting approach** – where individual allowances will equal 51% of benchmarked discharges.

The issue of gorse was not specifically addressed as part of developing Approach Two. Gorse would need to be included in the same manner as being discussed for Approach One.

5.2.1 Meeting the interim target

The analysis presented in Appendix 1 focuses on achieving the target for the year 2032. As with Approach One, the detail of transition including meeting the 2022 interim target has yet to be developed.

5.2.2 Benefits of the approach

There are some benefits associated with the allocation-dependant framework. These include:

- There is a clearer pathway for Council in achieving the sustainable limit for Lake Rotorua because the limit will be achieved by rules alone, rather than three separate programmes of work
- Because the approach relies on rules alone, the monitoring and review process that will be required are likely to be less complex. Tracking progress and mitigating risks will only relate to one programme, not three
- It may be simpler from an implementation and administration perspective
- Much less dependency on the incentive scheme to achieve the reductions required, so the risks of landowners not participating in the scheme does not put targets at risk
- Risk of not getting transfer of funding approved by the Crown is less as the rules will reach target alone

5.2.3 Risks of the approach

The impacts and costs of this approach have been clearly identified in Appendix 1. When compared with the integrated approach proposed by the Stakeholder Advisory Group, there are additional risks that need to be considered:

- This approach will result in some higher economic and social impacts on pastoral land owners as well as the wider community

- Very unlikely to be accepted by pastoral land users so the approach presents a risk of significant non-compliance across the catchment. If people see regulations as too harsh, they don't abide by them. Non-compliance will be costly from a monitoring and enforcement perspective
- The proposal has been rejected by the Stakeholder Advisory Group so Council could be seen as wasting the time that the Group has invested in the process
- The Stakeholder Advisory Group is unlikely to continue to collaborate on the next steps in the rules and incentives development as they won't see the benefits of working with Council
- The incentives scheme may appear to be paying farmers to meet environmental standards
- Greater importance on identifying good management practice for incentives scheme (as a basis to fund actions that go further than this) and this is problematic to identify.

5.3 Summary of approaches

It is clear that the scale of nitrogen reduction required means both of the approaches proposed will have a significant economic and social impact to pastoral farmers in the Lake Rotorua catchment, as well as the wider Rotorua community. Neither approach is an easy option - the effort and commitment required from pastoral land users should be acknowledged.

Approach One places a higher dependency on other programmes (incentives scheme and gorse removal) to achieve the nitrogen limit. This risk can largely be managed through an integrated framework with stringent monitoring and review processes. The higher NDAs allocated to land uses under this proposal will make it more favourable to pastoral land users, although it should be noted that land management and land use change will still need to happen. The Stakeholder Advisory Group is committed to this approach and this will undoubtedly help its acceptance by the wider farming community.

Approach Two does not reflect the collaborative process. The lower NDAs proposed under this approach will be much harder to achieve and may require a higher level of land management and land use change by all landowners. This may result in little buy-in or from the farming community and an inability to comply. The advantage of this approach is the lower dependency on other programmes to achieve the nitrogen limit, and that the administrative and monitoring requirements for Council could be simpler.

After consideration of the benefits, risks and advantages for each approach, staff recommend Approach One: integrated framework. This recommendation is based on:

- This approach signifies a collaborative solution
- Lower level of economic impact to pastoral land users (compared with Approach Two)
- Ability of land users to comply with NDAs (compared with Approach Two)
- Risk associated with this approach can be managed.

6 Next steps

The decision sought in this report is to agree on a preferred rules and incentives framework. Once staff have a clear direction on the preferred option, implementation mechanisms to support this framework (rules, incentives and gorse conversion) can be developed.

Rule design

The focus for staff in the next phase of rule development is to start drafting rule provisions that reflect the allocation approach chosen. Key considerations for Council in rule development will include:

- *Giving effect to the 20 year implementation period in the Proposed RPS.* The Proposed RPS requires that no discharges shall be authorised beyond 2032 that result in the 435 tonne limit being exceeded, and that an intermediate target is to be set to achieve 70% of required reduction by 2022. How the allocation of nitrogen allowances are transitioned over this timeframe will need careful consideration. While Appendix 3 proposes a process for managed reduction, the suggested provisions need to be designed and tested.
- *Developing a Resource Management Act rules framework.* Consideration will need to be given to how we transition from the existing Rule 11⁷ to new rules and what activity status land use activities will have under new rules. Further intricacies of rule design include how the consenting regime will incorporate compliance and nutrient management plan provisions.
- *Enabling nutrient trading.* A separate paper explaining how nutrient trading could support nitrogen allocation is being presented to this Committee at this meeting.
- *Adopting an adaptive management approach.* Rules need to be flexible enough in nature to allow staff and land users to respond to changes in science. For example, our understanding of the lake and its catchment continues to evolve, particularly the relationship between nitrogen and phosphorous and their effects on water quality. Rules also need to recognise the role of supporting initiatives e.g. TDRs and industry-led developments.

As rule development progresses, staff will seek direction regularly from this Committee over the next six months.

In keeping with our collaborative approach to this complex policy development, staff will continue working closely with the Stakeholder Advisory Group. Other key stakeholders staff will need to work with through the rule development phase include iwi, Lakes Programme partners, landowners, industry and rural advisors, colleagues from other councils, legal experts and operational staff.

It is anticipated a draft plan change will be ready for wider community consultation by June 2014.

⁷ Rule 11 regulates nutrient discharges from land in the catchments of five lakes: Okaro, Okareka, Rotoehu, Rotorua and Rotoiti and has been operative since October 2005. The primary purpose of Rule 11 is to provide a cap on nutrients to the average 2001-2004 levels.

Incentives design

The focus for staff in the next phase of incentives development is to start implementation design. Key considerations will include:

- *Funding principles.* Parameters for what will be funded and what won't be funded need to be established. Different parameters will be required for the "above the line" funding and "below the line" funding.
- *Setting up the governance structure.* Decisions will need to be made on how the Incentives Scheme will be managed and operated. Consideration will need to be given to the resources required to do this, and the infrastructure that may need to be set up (e.g. databases and legal structures).
- *Operational design.* The implementation processes need to be designed and established. This includes the start-up process (how does the Scheme become 'live'), the application process (including how applications are assessed), the funding process once applicants are successful (including contract management and compliance) and the review process (what will be reviewed and how often).
- *Links to the rules.* Consideration needs to be given to how the Incentives Scheme will operate in conjunction with rule implementation. This will be particularly important if nitrogen trading is established.

Further decisions and approval will be required for each phase in the incentives development. These will be developed in collaboration with the Stakeholder Advisory Group and presented back to Council and the Rotorua Te Arawa lakes Strategy Group for approval.

Less complex but similar decisions and approvals will also be required for the gorse conversion project. Like the rules and incentives work, the project will also be developed in collaboration with the Stakeholder Advisory Group.

7 **Context: Freshwater management and Council's NPS Implementation Programme**

To deliver National Policy Statement for Freshwater Management (NPS)⁸ requirements, Council has adopted a staged Implementation Programme and agreed to first steps and priorities⁹. These include prioritising some waterbodies, initiating plan changes for specific issues and reviewing internal systems and knowledge gaps. Development of rules and incentives for the Lake Rotorua catchment is one of the key priorities that was confirmed through this process.

A key aspect of the NPS and our Implementation Programme is the setting of objectives and limits for freshwater quality and quantity in all waterbodies across the region. Water Management Areas have been adopted and limit setting (for quality and quantity) will need to be delivered in each of these Water Management Areas.

The timing of limit setting and the way in which it is done will need to recognise priority work that is already underway. For example, achieving the nitrogen target for Lake Rotorua will place a substantial demand on individuals, the Rotorua

⁸ The National Policy Statement for Freshwater Management (NPS) was gazetted in May 2011.

⁹ Strategy Policy and Planning agenda paper, *The NPS Implementation Programme – Priorities and First Steps*, November 2012.

community, and the Council. This existing burden will need to be taken into account when Council makes choices around progressing the limit setting process.

8 Financial Implications

Current Budget

The development of new regional plan rules is covered by the Strategic Policy (responsive policy) budget. Notification of a separate plan change to the Regional Water and Land Plan for nutrient management of priority catchments is planned as a key project for next year (Year Three, 2014/15). This Committee decided last year that rules for Lake Rotorua need to be developed with urgency and separately to rules for the other Rotorua lakes.

Future Implications

The development and implementation of rules and incentives to reduce nitrogen in the Lake Rotorua catchment will have significant resourcing implications for Council, individuals and the community (as outlined in section 3.3 of this report).

A Resource Management Act section 32 assessment, as with any good policy development, requires robust cost and benefit evidence to support Council's approach to rule development. Once a preferred framework for rules and incentives is chosen, staff will continue to focus and better understand the costs associated with that framework. These costs will continue to be documented throughout the policy development process.

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