In the Environment Court
at Wellington

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in the matter of: appeals under clause 14 of the First Schedule to the Resource Management Act 1991 concerning proposed One Plan for the Manawatu-Wanganui region

between: **Federated Farmers of New Zealand**
(ENV-2010-WLG-000148)

and: **Minister of Conservation**
(ENV-2010-WLG-000150)

and: **Horticulture NZ**
(ENV-2010-WLG-000155)

and: **Wellington Fish & Game Council**
(ENV-2010-WLG-000157)

and: **Andrew Day**
(ENV-2010-WLG-000158)

Appellants

and: **Manawatu-Wanganui Regional Council**
Respondent

and: **Fonterra Co-operative Group Limited**
Section 274 Party

Statement of evidence of **Sean Matthew Newland** for Fonterra Co-operative Group Limited

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Dated: 14 March 2012

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STATEMENT OF EVIDENCE OF SEAN MATTHEW NEWLAND FOR FONTERRA CO-OPERATIVE GROUP LIMITED

QUALIFICATIONS AND EXPERIENCE

1 My full name is Sean Matthew Newland.

2 I hold a Bachelor of Science degree with majors in ecology and plant biology from Massey University.

3 I am employed by Fonterra Co-operative Group Limited (*Fonterra*), as the Manager, Sustainable Dairying Policy, within the Global Sustainablity Team of the Fonterra Supplier and External Relations group. My role is to identify current and emerging sustainability issues facing Fonterra suppliers and develop responses to these. A specific area of focus of my role relates to water use, it's impacts, and allocation across Fonterra's supplier base. I do this across all regions in New Zealand from which Fonterra sources milk.

4 Previously my role within Fonterra included a regional advisory component. This saw me provide advice to the approximately 1060 Fonterra suppliers within the lower North Island, including those within the Manawatu-Wanganui region (*Region*), on a wide range of sustainability issues. I also worked with regional councils and other stakeholders to identify and address dairy related planning and on-farm sustainability issues.

5 I have previously held roles as National Technical Manager for Meat & Wool New Zealand (the industry good body for the sheep and beef farming sector), and several national roles within the Ministry of Agriculture, including that of National Adviser for Indigenous Flora and Fauna.

6 I represent Fonterra on a range of industry groups, including the Primary Sector Water Partnership, as well as on various government working groups, such as the Primary Industry Climate Change Adaptation Working Group. I am member of the working group within the Land and Water Forum focussed on the issue of water allocation.

7 I am familiar with the Proposed One Plan (*POP)* to which these proceedings relate. I presented evidence to the Council Hearing Panel in July and October of 2009 and have been present at most mediation sessions on the topic of non-point source discharges during 2011.

8 I am authorised by Fonterra to provide this evidence on its behalf as a Fonterra representative. I am not offering evidence as an expert witness, although I do have considerable practical experience in water quality and related farm management matters given my work for Fonterra and for previous employers.

SCOPE OF EVIDENCE

9 My evidence will deal with the following:

9.1 An introduction to Fonterra's interest in this proceedings, including Fonterra's original position in relation to the Notified Version of POP (*NV*) and how that position has been refined following the Manawatu-Wanganui Regional Council's (*Council*) Decision Version (*DV*) on POP;

9.2 Key principles that Fonterra considers should be applied to the planning provisions in dispute in this case;

9.3 A description of Fonterra and its various interests in the Region and nationally. I also address Fonterra's non-regulatory programmes to improve on-farm performance, including those presently operating within the Region, areas of work in progress, and how these programmes are intended to work together with the POP regulation;

9.4 My observations of dairy farmers and their practices in the Region and nationally;

9.5 Comments on the areas of uncertainty regarding the costs of POP for dairy farmers;

9.6 Fonterra's comments on the planning regime for managing Nitrogen leaching (*N-loss*) arising from existing dairy farms, looking at Council's and Fonterra's alternative regimes. I also comment on the proposed use of the Land Use Capability Classes (*LUC*) in this section; and

9.7 Conclusions.

SUMMARY OF EVIDENCE

10 Fonterra is interested in the POP because it directly impacts on dairy farms and milk processing facilities in the Region.

11 Fonterra acknowledges the need to address water quality issues and recognises that dairy is a contributor to contamination of water in some areas. It accepted through the DV of POP the principle of all dairy farms in targeted catchments being regulated through a resource consent process.

12 However, when addressing water quality issues and designing regulations, Fonterra considers that there is a need for a balance between environmental, economic and social outcomes. Dairy is significant to the Region and the nation, both from social and economic perspectives.

13 Regulations of the nature proposed in the POP are new for New Zealand and relatively untested. In comparison to the two other water N-loss regimes which have been implemented in New Zealand, a large number of farms will be affected by the POP.

14 Fonterra considers that any rules which seek to restrict existing dairy farming activities in particular that were lawfully established need to be efficient, realistic and achievable, acknowledging existing investments. The rules also need to be tailored to the many different circumstances of each farm both from physical and management perspectives. Bad performers should be the main target of the rules. Grand-parenting is an established planning tool for providing for existing interests in a new regulatory regime. Fonterra's proposed approach in this case is a hybrid form of grand-parenting.

15 We oppose Council's LUC class based approach for existing farmers, which I note was also rejected by the Council's own hearings commissioners. The approach does not meet a number of Fonterra's key considerations.

16 Fonterra remains concerned that an adequate cost-benefit analysis has not been carried out to justify the approach proposed by the Council. In addition, the science of N-loss, water quality, and the contributory factors, contain some gaps which need to be rectified. The implications of imposing new N-loss rules on farms is also relatively uncertain, given the limited testing in this area. A regime which is adaptable is therefore appropriate.

17 In the absence of better knowledge, Fonterra is promoting a pragmatic regime which it considers will recognise the individual circumstances of farms and their ability to react to the new regulations. Small steps are required to change farming behaviour, particularly where other contributors to N-loss problems are not proposed by Council to be regulated and public funding is limited.

18 Fonterra already seeks to drive better environmental performance on dairy farms. Some of its activities are around encouraging better environmental performance through research and education. Other activities, particularly more recently, have been more forceful in addressing poor practice. These initiatives are discussed below. Fonterra expects that the industry as a whole will continue to drive N-loss reductions with or without regulation in the future. We will work collaboratively with other stakeholders and the Council for that common purpose.

INTRODUCTION

Broad context to Fonterra's involvement in the POP proceedings

19 Fonterra has a significant interest in the POP because of its direct impact on dairy farms and milk processing facilities in the Region. It was also particularly interested in the POP because of the regime's unique proposed approach in New Zealand addressing dairy activities when compared to other regulatory regimes. POP is one of the first regional plans in New Zealand which has sought to impose a resource consenting requirement on dairy farming as a land use for significant component of regional dairy community.

20 It is also worth noting that POP is only the third instance where non-point source agricultural discharges of N-loss regulation from pasture has been attempted to be regulated in New Zealand. The other instances are 'Variation 5' which applies to the Taupo catchment (implemented by Environment Waikato) and Rule 11, applying in the Rotorua Catchment (implemented by Environment Bay of Plenty). Mr Willis will discuss these regimes in more detail, but I note that both the Variation 5 and Rule 11 approaches used a grand-parented cap on N-loss for existing farmers. A similar approach is supported by Fonterra (as it would seem to me from the DV of POP, was also supported by the Commissioners) for existing farmers in this case[1]. I also note that both of the other examples address discrete catchments and affected a limited number of farming interests (in Taupo, 4 dairy farms were affected and in Rotorua, 25 were affected, whereas POP would currently affect approximately 433 existing dairy farmers). POP therefore has a much larger 'on the ground' impact for dairy farmers and their communities.

21 To add some further context, I note that the topic of N-loss and methods to manage it is a relatively new area of agricultural science at other than the theoretical level. It is currently the subject of a significant body of developing research being undertaken by a range of groups – universities, consultancies, research institutes, the dairy sector and government groups. My understanding from involvement with various groups involved is that the science underpinning N-loss issues, the potential solutions, and, importantly, the mechanisms to transition the current farm behaviour and investment to a new approach, are still very much works in progress. I will discuss later, some of the areas of research and related initiatives that Fonterra is directly involved in and how they are being used to provide solutions.

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[1] Mr Willis explains in more detail in his evidence the reasons why grand-parenting is the most effective mechanism for regulating N-loss in this case and he also responds to Ms Clare Barton's criticisms of the grand-parenting approach, as set out in her evidence.

22 It is my understanding that the Region is a relatively good N-loss performer when compared to other regions in New Zealand. Evidence given by Dr Ledgard indicates an average N loss of 22-23kg N/hectare for the 2010 year while Overseer shows a national average of 32kg N/hectare.[2] Farmers in the Region are likely to be relatively N-efficient when compared to other regions[3]. In addition, dairy is a relatively low proportion of land use as a total for the Region.

23 In view of this background, N-loss regulation in the manner proposed in the NV of POP was seen as a particularly novel approach. Given its broad implications, and concerns as to the likely consequences for individual dairy farmers and the dairy sector within the region as a whole, Fonterra considered that it needed to be substantially tested.

Fonterra's submissions on POP

24 Fonterra lodged a submission on the NV of POP (dated 28 September 2007), and further submissions on 18 December 2007.

25 Broadly speaking, Fonterra's submission supported the overall intention of the NV of POP. It acknowledged the need to address water quality and recognised that dairy farming was one of the main contributors in certain areas. Fonterra also recognised room for improved practice among dairy farmers.

26 However, a key issue was (and still is) the method used, in that it imposed undue risks and costs on farmers, the dairy industry and the wider economy. A number of these concerns remain in the context of the present proceedings, specifically:

Values and aspirations of community and costs to it

26.1 In Fonterra's view, the POP process has been overly focussed on water quality outcomes with less consideration of how the broader combination of values and aspirations of the community would be met. Fonterra remains concerned that the public has never been provided with adequate information to assess the cost-benefit, achievability and regional consequences of the POP targets, other than the significant

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[2] I note the 2010-11 season (August 2010 through July 2011) was best described as a poor to mediocre season for dairying in the Region and different from the norm. Climatic conditions were unfavourable and unseasonable, which impacted feed production, availability and utilisation, and ultimately production was flat. Generally cow numbers dropped back pre-Christmas against usual levels as farmers adjusted to the lower feed levels.

A wet autumn, followed by a dry October-November, with limited useful rain until December, left many farmers in a feed position they had been unable to plan for. Limited grass growth (against the norm), failure of early crops, and limited ability to make supplements drove a need for ongoing adjustments to farming system throughout the season as farmers reacted to conditions.

[3] These points are outlined in more detail in Dr Stewart Ledgard's evidence for Fonterra.

per farm cost figures developed by the Council's own economic witnesses during the Commissioner's Hearing process[4]. The sheer weight of scientific evidence procured by the Council is telling of that, particularly when considering that the Council produced no cost benefit analysis as part of its original s32 analysis. It subsequently procured a report (from Neild and Rhodes) when directed to do so by its own hearings commissioners at the Overall Hearing of the POP, following Fonterra and other submitters raising concerns in their submissions. That report, however is still lacking in a number of areas, as discussed by Mr Ballingall in his economics evidence.

26.2 Fonterra's concerns with the NV were further compounded by the acknowledgement by Council officers that even the regime they proposed would not achieve the desired environmental objectives, nor, as was identified by the Commissioners during questioning of Council officers, could Council state the level of improvement in key environmental parameters that they expected to achieve through implementation.

Water quality objectives

26.3 A related point is that Fonterra still has concerns about whether water quality numerics provided in the POP are causatively linked to the water values and objectives and are practically achievable, and if so at what cost to the community and individuals involved. As an example of the apparent disconnect between water quality goals and achievability, Dr Alec Mackay's evidence[5] records that "*Attempting to achieve the absolute water quality standard [the actual Schedule D SIN standards] would cause massive upheaval, because it would require radical changes to current land uses. The only land uses that could continue unchanged would be land under native or exotic forest, scrubland and extensive sheep and beef. For intensive livestock, radical and unrealistic changes would be required.*" In short, the D SIN standard was completely unrealistic.

26.4 The Council's Decision on the NV also recorded that *"the background water quality in the Region's rivers exceeds the Schedule D standards in some cases. It is therefore*

[4] The Council's economic evidence was that the cost of implementing Rule 13-1 across 428 dairy farm businesses was $58 million: Neild and Rhodes, Economic Impacts of Proposed One Plan LUC Nitrogen Leaching/Run-off Values August 2009, page 7.

[5] Section 42A Report of Dr Alec MacKay on behalf of Horizons Regional Council, at paragraph 56 (and also referred to in the Council's decision on POP in V1, P 8-45).

nonsensical to require discharge activities to comply with the Schedule D standards in all cases."[6]

26.5 The original water "standards" were accordingly renamed by the Council's hearings commissioners as "targets" in the DV of POP and are now, by agreement with the other parties, referred to as "numerics". The POP's objectives are now proposed to be less about "achieving" the standards, but rather making progress towards them, which Fonterra largely accepts.

26.6 In Fonterra's view, this context is important when establishing a management regime to address N-loss. It needs to be kept in mind that while the numerics may be the ideal outcome from a strictly environmental perspective, they are not all necessarily actually achievable (nor do they need to be for those that are "guidelines" and therefore to be viewed in the context of the actual situation rather than simply as a number[7]). And, in any case, achievement of the numerics is inappropriate when considered in balance with social and economic considerations.

Speed of achievement

26.7 Similarly, Fonterra is concerned that the POP as proposed by Ms Clare Barton[8] for the Council (*Council's Version*):

(a) Is relatively arbitrary in terms of the time limits required of existing dairy farmers to achieve N-loss limits based on the LUC classes;

(b) Does not provide sufficient time to raise land manager awareness of the need to manage N-loss from pastures and to up-skill and educate farmers on the available techniques to reduce N-loss; and

(c) Does not provide adequate timeframes for implementing management tools on farms across the Region, particularly for those most affected who are likely to find it difficult to adapt without significant economic hardship.

26.8 Furthermore, based on analysis of the water quality trend data for the Region provided in the evidence of Dr Mike Scarsbrook, Fonterra considers that there is no critical need to take drastic action immediately. The trends show that

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6 V1, p. 8-22.

7 Mike Scarsbrook discusses in his evidence the fact that periphyton growth parameters should only be used as guidelines.

8 Clare Barton's statement of evidence dated 14 February 2012.

water quality is not declining and in some cases, it is actually improving.

Understanding present farming systems and the impacts of change

26.9 Fonterra is concerned that the POP was developed and would be implemented under the Councils Version without adequate knowledge of current on-farm practices (what N-loss mitigation practices are currently in use across the wide range of farms), the ability of land managers to change behaviour (what additional N-loss mitigation practices are practical to implement), and the impacts on the individuals, regional industry and the Region as a whole.

26.10 Fonterra considers that the appropriate starting point for developing water quality management policies should be to gain a more comprehensive understanding of current on-farm practices, especially in relation to nutrient management. This information is not currently available outside of a small number of case study farms that may or may not be representative of the broader 433 dairy farms that are affected by the Council's proposed N-loss rules. Dr Ledgard discusses the limitations of the Council's on-farm testing in more detail in his evidence.

Role of non-regulatory mechanisms

26.11 Fonterra accepts the regulated approach as set out in the DV of the POP (as amended though the mediation process), however Fonterra also considers that non-regulatory approaches will continue to play a significant role. The initiatives presently underway will aid the understanding of the problem and available methods to manage it, and should progress N-loss reductions through the finding of new solutions, as Dr Ledgard points out in his evidence. This work will therefore help to refine future planning regimes so that they are fit for purpose, ultimately with a view to achieving water quality and social and economic goals. Fonterra's work in this area is dealt with in more detail later in my evidence.

Science, information, and knowledge

26.12 Fonterra considers that the limitations in the underlying science supporting the water quality numerics, need to be properly acknowledged. While recognising the research the Council has carried through the POP process to date, Fonterra considers significant questions remain over whether this work in fact supports the Council's Version. Ms Barton for the Council acknowledges the imperfect nature of the science and that there are areas of uncertainty to a limited extent in her evidence[9]. Fonterra's experts consider, however, that the imperfections are more pronounced than Ms Barton has

[9] Paragraph 10(a), p. 4878 of the Common Bundle.

stated and that these limitations need to be properly acknowledged.

Equity for Existing Dairy Farmers with other Land users

26.13 Fonterra is also greatly concerned that existing dairy farmers, who have until now been operating in an environment that did not impose regulatory controls on N loss levels from their farming operations, are now, along with new dairy farmers, the only group of land users being regulated. This group will be the only one who will face controls on land use change (conversions), and consenting costs, and will also be subject to a compliance regime. This is in spite of the level of N loss from other land uses in a number of the target water management zones, being either:

(a) less per hectare but spread across a greater area equal to or exceeding the total N loss from dairying (e.g. where total losses from sheep and beef farming are, due to the large area they occupy within a zone, a significant source of loading to waterways); or

(b) greater on a per hectare basis, and in some cases as or more significant as a land use within zones.

26.14 As noted in evidence presented to the Commissioner's hearing, in the only other regulatory instances where a similar approach has been considered, grand-parenting of existing N losses was the starting point. This was, amongst other things, in recognition of the sunk investments previously made by land users.

Council's decision and Fonterra's current interest

27 Fonterra prepared and presented evidence at the Council level hearing for the POP in support of its submissions. In essence, Fonterra sought a delay in the effect of the NV of POP in order for industry non-regulatory initiatives to be given time to prove they could work without regulation. Through this request, Fonterra also sought to provide farmers with sufficient time to adapt their practices without incurring undue costs.

28 The Council's decision did not accept Fonterra's proposal to delay the implementation of the regulatory regime. Instead, it imposed a set of standards and requirements in the context of a controlled activity regime, which farmers would need to meet in order to continue operating their dairy farms. This decision did however recognise issues of equity and practicality by grand parenting (though with expectation of operation at good industry practice) existing dairy farmers affected by the regulation at a level of good practice appropriate to their individual farm circumstance. Fonterra accepted this as a pragmatic and appropriate position.

29 Fonterra's current interest in the proceedings is as a section 274 party. To that extent, overall Fonterra supports the Council's DV of POP. Although not a perfect outcome, Fonterra did not appeal the DV regime, primarily because it had the following key characteristics:

29.1 It created a guaranteed consenting pathway for existing farmers to continue farming without the risk of not obtaining further consent, thereby giving investment certainty to farmers.

29.2 That pathway was based on requiring existing farmers to undertake "reasonably practicable" steps on farm to reduce N-loss (i.e. no one would be asked to do more than was realistic and achievable).

29.3 Those steps were proposed to be assessed on a farm–by-farm basis.

29.4 In applying the rules in this way, the regime for existing farmers recognised the wide differences in current farming practices, N-leaching profiles and physical/landscape characteristics, farm system and viability, and associated opportunities for, and limitations to, implementing N-loss mitigations.

29.5 The regime focussed on catchments in the Region where dairy farming was more likely (recognising some scientific uncertainty) to be one of the main contributors to the heightened N-loss concentrations in the associated waterways.

29.6 The regime acknowledged the role that non-regulatory initiatives would play in supplementing and improving the regulatory regime over time. This aspect recognised that the science underpinning POP was and is not perfect, and that the dairy sector has a collaborative role to play in addressing the issues into the future.

FONTERRA'S VIEW OF THE RELEVANT PRINCIPLES TO BE APPLIED IN THIS CASE

30 Bearing in mind the above context, Fonterra's position in this proceedings is underpinned by the following principles:

30.1 Imposing a consenting process for N-loss is new nationally and regionally. Farmers who have lawfully established themselves need time to adapt and change their practices where this can occur.

30.2 Any rules which seek to restrict existing dairy farming activities that were lawfully established need to be realistic

and achievable. Where the rules apply to existing farmers, they need to be tailored to the individual circumstances of each farm.

30.3 The POP should not include rules which threaten the ongoing use of established dairy farms or which would result in resource consent conditions that would impose undue financial hardship.

30.4 Small steps are required to change farming behaviour. This is particularly so bearing in mind there is little 'public' financial contribution proposed to assist with the water quality issues (as, for example, is central to Variation 5 to the Waikato Regional Plan to control N-loss into Lake Taupo – Mr Willis discusses this regime in more detail in his evidence). The Government announced very recently that as part of its Fresh Start for Fresh water Clean-up Fund, it intends to provide the Council and the Manawatu River Leaders' Accord with $5.2 million for the remediation of the Manawatu River[10]. That funding is certainly a start, although I note that of the $5.2 million granted, dairying is expected to receive just $300,000. Most (approximately $4.3 million) will go to cleaning up point sources. $160,000 will go to improving native fish habitat, $300,000 for riparian fencing on sheep/beef farms and $140,000 for supporting community initiatives.

30.5 Existing dairy farmers operate at various levels of performance, but it would be unfair to say that as a generality, dairy farmers are not being responsible about their environmental impacts. Based on Mr Ledgard's evidence, my understanding of the regional N loss averages compared to other regions, and from my own observations, on the whole, most dairy farmers are likely to be operating at what would be considered reasonable to good industry N-loss practice. I acknowledge that there is room for improvements, but that opportunities for those improvements will vary from farm-to-farm.

30.6 As noted above, Fonterra does not dispute that there is an environmental problem with water quality to which the dairy sector contributes, and in some areas is a significant contributor. Therefore substantive progress to reduce that problem needs to be made. As noted earlier, dairy is by no means the only contributor, a point noted and commented on by the Council's hearings commissioners in their decision[11].

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[10] Press release: http://www.mfe.govt.nz/issues/water/freshwater/fresh-start-for-fresh-water/cleanup-fund.html.

[11] See for example, section 8.6.9.2, P 8-36, V1.

30.7 However, it is unrealistic to expect that phase out of nitrate losses from farms in the Region's rivers and streams to the extent proposed under the NV of the Plan will take place over the life of the POP without a significant and inequitable impact on existing dairy farmers and their communities. A regime which is adaptable is appropriate given present scientific uncertainty, the need for time to effect change, and the expected impacts on dairy farmers.

30.8 In addition, Fonterra considers that there is a need for a balance between environmental, economic and social outcomes. Dairy is significant to the Region and the nation, both from social and economic perspectives.

FONTERRA AND ITS VARIOUS INTERESTS IN THE MANAWATU-WANGANUI REGION AND NATIONALLY

Assets and economic statistics

31 Fonterra is New Zealand's largest company, accounting for 25% of New Zealand's total export earnings and 95% of New Zealand's dairy production.

32 Fonterra's corporate structure is unusual – effectively it is owned by the individual farmers who supply milk to it. Fonterra has approximately 10,500 supplier farms nationally, and processed more than 15 billion litres of milk in New Zealand in the 2010-2011 year. Fonterra's revenue for the year ended 31 July 2011 was $19.8 billion.

33 Within the Region, Fonterra currently employs approximately 757 staff[12], and approximately 831 dairy farmers in the Region supply milk to Fonterra. Approximately 7% of national milk production comes from the Region. As well as their economic contribution, dairy farmers make an important social contribution to the Region. Dairy farmers and their families are on school boards of trustees, take part in local sports, and volunteer their time for a wide range of causes. Their farms provide a pastoral landscape and amenity which is valued by the community and reflects the agricultural heritage and identity of many in the Region.

34 Fonterra has significant assets in the Region:

34.1 Manufacturing sites are located at Longburn and Pahiatua; and

34.2 The Fonterra innovation research institution is located in Palmerston North. This campus makes a key contribution to the Region, and in particular, Palmerston North's reputation as a centre for scientific excellence.

[12] Peak staff figures at January 2010 (non-peak 711).

Growth of dairying in Manawatu

35 Growth of dairying within the Region has been less than the national average and still only sees dairying use 4.8% of the total land area within the Region. Rather than a boom in dairying, as has been seen in such regions as Canterbury and Southland, the Region may be better described as having experienced gradual and natural growth due to the ebbs and flows of land use flexibility.

FONTERRA'S CURRENT NON-REGULATORY PROGRAMMES AND SUCCESSES

Existing programmes

36 Fonterra strives to lead the way toward better environmental performance on dairy farms. Fonterra, either individually or in conjunction with others within the dairy or primary sector, already undertakes a number of activities with the purpose of improving on-farm environmental performance including programmes which seek to address N-loss.

37 While the Dairying and Clean Streams Accord (*Accord*) is the best known of these, it is only one of a number of activities currently underway. Other initiatives include:

37.1 The ***Dairy Industry Strategy for Sustainable Management*** (*Dairy Environment Strategy*), which encompasses the targets from the Accord, but which also includes outcome targets (30% reduction in dairy farm system footprint) for sensitive catchments, and which integrates research and leadership.

37.2 The ***Primary Sector Water Partnership*** commitments, which encompass the practices of the Accord and the outcomes of the Dairy Environment Strategy. These commitments contain targets, action plans, and linkages to other primary sector players.

37.3 Changes to our conditions of supply to incorporate stock exclusion requirements of ***the Accord***.

37.4 ***Every Farm – Every Year*** was introduced in the 2009/10 season. This programme sees the effluent infrastructure of all Fonterra suppliers assessed as to the level of environmental risk posed (not merely risk of non-compliance). Where a system is identified as posing a risk the farmer receives one on one support from Fonterra sustainability officers to ensure action is taken to address the risks within appropriate timeframes. For example, any high risk infrastructure identified requires addressing immediately with contact being made within a 48 hour period. All identified risks are required to be addressed, some immediately and remedial action taken. This is captured

within a documented improvement plan containing actions and timelines, against which action is monitored. Where agreed actions are not undertaken a sliding scale of incentives, ranging from additional costs through to potential non-collection of milk are used.

37.5 ***Audited Nutrient Management***. Funded through the Primary Growth Partnership and DairyNZ this project, due to be completed at the end of this dairy season, will provide dairy companies with a system for monitoring and measuring nutrient management performance on all farms. A trial of the system is currently underway in three dairy farming catchments across New Zealand, this includes approximately 80 farmers in Mangatainoka.

37.6 ***Development of Industry*** - agreed indicators of nutrient management performance. Fonterra, DairyNZ and the fertiliser industry have partnered to produce regional indicators of nutrient management, providing information to allow farmers to benchmark themselves against their peers (see http://www.dairynz.co.nz/page/pageid/2145874223/Nutrient_Use_Efficiency). These indicators are now being used by industry extension specialists to raise awareness amongst farmers and drive continual improvement in nutrient management.

37.7 ***Supply Fonterra*** – Supply Fonterra is a farmer-facing package of continuous improvement initiatives to help us future-proof our dairying suppliers' practices.

37.8 At its heart, Supply Fonterra is a long-term change model. It leverages Fonterra's successful history in continuously improving on-farm sustainability and food safety performance. It is built on a proven change model that reflects Fonterra's 10 years of experience in changing on-farm performance and modules that have been successfully piloted over the last three years – the Farm Dairy Assessment, Milk Quality Service Model, Every Farm, Every Year and the Mastitis Support Programme.

37.9 Successful on-farm programmes have six key elements in common:

(a) Clearly defined standards and best practices.

(b) Technical training and accreditation programmes for rural professionals.

(c) Practical education and resources for farmers.

(d) A community of professional practice where experience is shared and best practice evolves.

(e) On-farm coaching to embed change.

(f) Effective tools to track performance.

37.10 Supply Fonterra builds on these elements. The key to accelerating pace in improving on-farm performance is **one-to-one support over time**. This intervention must be provided by credible practitioners that understand the detail of the individual's practice in order to provide logical, achievable next steps for improvement.

37.11 With the above design elements in mind, Fonterra's terms and conditions of supply will be altered from 1 June 2012 to enable Supply Fonterra to be rolled out. It will include the following:

(a) Stock must be excluded from all Accord waterways. This includes riparian fencing, and installing bridges and culverts where required. Significant wetlands must also be fenced.

(b) All farms must have an accurate nutrient budget, refreshed annually, and make this data available to Fonterra. Farmers identified as at-risk of causing environmental damage from phosphorus and sediment loss and / or inefficient N use and / or N-loss will be required to implement an environmental improvement plan to mitigate the risk.

(c) All farms must fully comply with their Regional Council effluent management rules and consents, year-round. Farms identified as at-risk of effluent non-compliance will be required to implement an environmental improvement plan to mitigate the risk.

37.12 Fonterra will measure, monitor and audit performance against these terms and conditions of supply. All farmers will be made aware of whether they have critical, major or minor issues, and given general advice for how to improve performance.

37.13 Farmers with critical or major issues will be referred to the Sustainable Dairying Advisor (*SDA*) field team, who will work one-on-one with shareholders to develop tailored Environmental Improvement Plans (*EIP)* for the farm. The implementation of these plans will be coached, monitored and enforced by the SDAs. Timelines for implementation of the actions in the EIP Plan will vary depending on whether the

environmental effect is critical, major or minor. The EIP is a living document and will be refreshed periodically as required. A farm may have an EIP for selected targets, but not for others. EIPs will build on each other year on year, and may have varying implementation timeframes depending on the scale of action required.

37.14 Fonterra will work with DairyNZ to provide education and support programmes, and where appropriate, penalties and recognition, to ensure that suppliers have every opportunity and incentive to meet expectations.

38 These industry-led programmes are essentially non-regulatory. In general their first aim is to increase awareness of sustainability issues across the industry, including farmers, farm staff, and across the supporting sector of rural professionals and suppliers. By increasing farmer awareness Fonterra looks to increase industry ownership of both issues and solutions.

39 The second aim of these programmes is to provide decision-makers (farmers, share milkers etc) with information and support that encourages the consideration, and uptake, of sustainable dairying practices.

40 Other aims of the programmes are to:

40.1 Motivate and support change: for example, the Every Farm – Every Year programme;

40.2 Align dairy sector and primary sector action and research (e.g. the Primary Sector Water Partnership); and

40.3 Ensure the rules within which the sector operates are practical, well thought through, and understood.

Dairying and Clean Streams Accord

41 The use of a non-regulatory approach is best exemplified through the Accord. This was developed by Fonterra, in partnership with regional councils, Local Government New Zealand, and the Ministry for the Environment and Ministry of Agriculture. The Accord promotes, via non-regulatory means, sustainable dairy farming in New Zealand. It was signed in 2003 and runs, in its present form, until 2012. One aspect, stock exclusion from Accord waterways, has been incorporated within Fonterra's conditions of supply. This will become a requirement for Fonterra suppliers to meet from the 2013 season.

42 Discussion has also started between the wider dairy sector, led by DairyNZ, and a wide range of interested parties on the need for and possible form of any successor to the Accord.

43 Particular successes from the Accord to date include:

43.1 The 99% uptake of (initially) nutrient budgets, and now nutrient management plans, by Fonterra suppliers;

43.2 The level of Accord type stock crossings now bridged or culverted (only 2% remain); and

43.3 Stock are now excluded from 78% of the length of Accord waterways. There is, on average, 780 metres of Accord waterway yet to fence per farm.

44 I note that a recent Ministry of Agriculture and Fisheries' (*MAF)* assessment stated that 56% of farms are not yet at the Accord stock exclusion target. The manner by which the information was gathered and assigned differed between the MAF and third party assessments carried out on behalf of Fonterra. For example, a proportion of our farmers use temporary electric fences during the four or five times a year when the cows happen to be in the paddock down by the stream. The MAF assessors marked this as "*stock not-excluded*" when they walked the margins of the property's Accord streams. By comparison, the independent contractors who conduct the annual Fonterra survey would have marked it as 'stock excluded'.

45 We know it is easier to make good progress early in the process but harder to get the last 15-20% across the line in any environmental endeavour. For this reason Fonterra has made the decision to move from information, support, annual monitoring and advocacy to now require stock exclusion from Accord waterways as a condition of supply. We will be spending over half a million dollars in 2013 to check that every supplier with Accord streams has achieved 100% stock exclusion.

46 Through this non-regulatory approach, there has been a major shift in the dairy industry in relation to environmental performance. Achievement of Accord targets is mentioned repeatedly within the Council's farm case studies as a means to achieve N-loss mitigation and underpins the POP. For example, Section 6.1.4 of the DV of POP, Water Quality, states that:

> *The agricultural sector is recognising the impact it is having on the nation's water bodies and has started to act. The dairy sector was the first to respond, with the Dairying and Clean Streams Accord (an agreement between Fonterra, the Ministry for the Environment, Regional Councils and others on an approach to enhance water quality). Such voluntary approaches are one way of lowering nutrient and faecal levels in the Region's water bodies and the Regional Council supports them, although further improvements are needed.*

Fonterra's environmental activities within the Region

47 Fonterra currently has a Sustainable Dairying Field Team of 15 staff. The majority of these staff operate regionally, to provide advice to dairy farmers on sustainability issues such as the Accord. A key area of focus currently is improving sector performance with regard to effluent management and compliance.

48 In 2010, a staff member was recruited to the Fonterra Sustainability team to provide additional targeted effluent improvement advice to suppliers in the Region.

49 As the dairy sector has become aware of the concerns relating to nutrient loss from pasture, it has worked with those councils that have raised it as a growing issue. This has occurred with Environment Waikato and Environment Bay of Plenty in relation to Variation 5 and Rule 11 respectively, and is occurring now with Environment Canterbury and Environment Southland, both of whom are currently considering such a rule. A number of research projects which focus on this particular issue are also underway[13].

Future Programmes for the Region

50 These programmes and activities are either currently in train or will be phased in as base work is completed and further detail of the regulatory regime is confirmed.

51 For example, the dairy sector is carrying out a national audited nutrient management trial to better understand implementation needs and implications for national role out of audited nutrient management plans (note, this differs from the audit of nutrient management plans which is undertaken by the fertiliser industry, which has an objective of ensuring those developing the plans do so correctly). One sample group within this trial is made up of those dairy farmers within the Mangatainoka catchment, with others being within the Hurunui (Canterbury) and Upper Waikato catchments. The outcomes will provide the dairy sector with a process to provide for robust data to quantify changes in farm nutrient management performance over time and allow dairy farmers to better understand their N-loss and N use efficiency levels and how these compare to at a regional and national scale.

52 The DairyLink Initiative (http://www.dairynz.co.nz/page/pageid/2145871990/DairyLink_-_Tararua_Project) involves local dairy farmers and representatives from DairyNZ, Federated Farmers, Fonterra and the Council. The project seeks to help farmers by identifying the opportunities and limitations of the natural resources on their specific properties such as their soils, pastures, waterways and livestock through focus farms , field days and related communications and has the goals of:

[13] See for example: AgResearch "Pastoral 21 Environment Programme", April 2009.

52.1 Demonstration of improved productivity and reduced environmental impact from dairying, e.g. by greater pasture utilisation,

52.2 Increased compliance rates on dairy farms and improved water quality, and

52.3 Promotion of "good environmental practice" e.g. nutrient management.

53 This is occurring on three separate focus dairy farms within the Region.

54 This work will be a continuing investment by Fonterra and DairyNZ. Fonterra also expects that its non-regulatory initiatives will help to continue reductions of nutrient loads to waterways from existing dairy farms. In addition, Fonterra will be actively engaged with farmers when the POP is implemented to ensure they understand and are able to comply with its provisions.

Other policy-making contributions

55 Fonterra is actively involved across New Zealand in public planning processes where the efficiency and effectiveness of various regulatory responses to dairy activities are being worked through with councils, their communities and other stakeholders.

56 Fonterra is also represented on the Land and Water Forum, which comprises a wide group of primary industry representatives, environmental and recreational NGOs, iwi and other organisations with an interest in freshwater and land management. The Government has tasked that Forum with conducting a stakeholder-led collaborative governance process to recommend reform of New Zealand's freshwater management. I myself am a member of the Allocation Working Group, which is developing suggested approaches for allocating either currently utilised or newly available resources.

57 Locally, Fonterra is also a signatory to the Manawatu River Leaders' Accord. In August 2010 the members of that group (which also comprises s a diverse range of stakeholders) signed an Accord to take action to improve the state of the Manawatu River.

58 Mr Ledgard also sets out in his evidence a number of research/science programmes and initiatives with regard to future N-mitigations that Fonterra is actively involved in.

OBSERVATIONS OF DAIRY FARMERS AND THEIR PRACTICES

59 In my past role as Fonterra's Sustainability Strategist , I spent approximately half of my time speaking to dairy farmers directly. This was usually in one of two ways; providing advice on how to

address specific sustainability issues on their farms, or providing and getting feedback on broader sustainability issues facing the sector.

60 From my observations I consider that dairy farmers and their farming practices vary widely depending on each farmer's education and skill levels, general environmental awareness, financial/economic status and the physical/landscape circumstances of their farms. It is not therefore realistic in my view to seek a relatively generalised target based approach to managing N-loss from existing dairy farms in the Region, as currently proposed by Ms Barton through her LUC based regime.

61 Farmers vary widely in age, from very young farmers in their early 20s through to much older farmers approaching retirement. Some have been involved in dairying for a considerable part of their careers. Others are relatively new entrants, having converted to dairying from some other farming activity or through a career change.

62 As a result, existing dairy farmers have a wide variety of education and skill levels. Some farmers have studied agricultural science at the likes of Massey and Lincoln universities and are likely to have been trained in courses addressing environmental management techniques. Others may have 'learned on the job' and be much less aware of the issues and potential options available on farm.

63 Dairy farming takes place in a variety of physical and landscape characteristics of farms, as illustrated in the Mr Lachie Grants' evidence on the various LUC classes that apply in the Region. The differences arise primarily in relation to soil type, slope, erosion potential (type and severity of risk) and vegetation. Many farms will have a range of LUC classes on their properties – and may be overcoming the constraints that led to specific LUC classes being assigned (e.g drainage or aridity factors). This highlights the complexity of the physical landscapes that farms operate within.

64 In addition, all farming systems are different. Farmers will be optimising the use of their land to meet their own business and family needs in a variety of different ways through a range of technology and management practices. These practices themselves will be constrained by the individual's knowledge, experience, and financial situation.

65 The business of farming also needs to be responsive. Farming conditions can change throughout the year or between years, through market conditions, but more particularly, because of unpredictable climate conditions. For example, the timing and extent of rainfall throughout the year directly impacts feed production, has a knock on effect to milk production, the need to

buy in or make use of supplementary feed, and ultimately the financial health of the farm as a business.

66 It should be made clear that I have found there is no such thing as an average farmer or an average farm. Each farmer is operating within differing matrices of economic, physical, biological and personal (knowledge, skills etc) from almost any other. Some, while operating at best practice (as appropriate to their farm's biological and physical constraints) will be in a different position from others who, due to higher levels of debt, may not be able to operate in a similar manner (e.g. they may well have purchased the farm more recently and have less equity, reducing their ability to invest in significant infrastructure at this time).

67 All farmers operate within one common constraint: as costs rise they only maintain the economics of their farms through one of three means:

67.1 Improving production;

67.2 Reducing costs; or

67.3 Having returns increasing at such a rate that these balance the increasing costs.

LACK OF SUFFICIENT COST BENEFIT ANALYSIS

68 Fonterra remains concerned that even at this late stage of the process, limited credible analysis of the costs and benefits of the Council's Version of POP, along with any viable alternatives, has occurred.

69 No one can say with any certainty what the impacts of the POP will be, except on a very small group of individual land managers who have been subject to specific case studies. Even then, the economic consequences appear to have been assessed only at the margin. Fonterra has little confidence that the small sample size of dairy farmers involved (21 within the Council's case studies carried out) is representative of the very variable environmental, farm management and economic position of the 433 Fonterra suppliers who would be affected by Rule 13.1.

70 As noted earlier, farms vary greatly in where they are starting from economically, skill wise, and in N-loss mitigation practice. The impacts of meeting the LUC linked N-loss targets, even if only considering these parameters and not considering the additional issues of rainfall, slope, and soil types, raises the question of whether the small sample size adequately accounts for region-wide variability, and therefore whether it provides a sound basis for asserting the potential economic (and social) impacts of the POP.

71 The evidence of Mr Ballingall assesses and comments on the limited cost-benefit analysis carried out to-date. In summary, Mr Ballingall's evidence supports Fonterra's view that there is insufficient understanding of the costs of POP to allow a properly informed decision on the most effective and efficient response to be made and that the benefits to society outweigh the costs of regulation is demonstrably made. Further, the economic evidence of Neild and Rhodes lacks clarity and fails to address annual production loss, annual costs, and impacts on profitability and land value.

72 In my review of the officer reports, I could find only limited consideration of compliance costs associated with the POP, or any alternative approaches, and in the main these were limited to consideration of whether the Council could charge monitoring costs under a permitted activity approach. It would have been appropriate for these costs to have been modelled and considered within the section 32 report. However, at present there is limited to no information available on how Rule 13.1 will be implemented in practice and therefore no scope to assess the costs of:

72.1 Monitoring, auditing and reporting;

72.2 Support infrastructure requirements (administration, data collection, audit and storage);

72.3 Additional compliance staff and staff training (given the move into regulation of a new area for these compliance staff – on-farm nutrient management and loss); and

72.4 The type and extent of approach that will be taken if non-compliance is detected.

73 These costs will accrue to both the Council and to those affected by the POP.

74 In the absence of better knowledge on costs, Fonterra is promoting a regime which it considers will recognise the individual circumstances of farms and their ability to react to the new regulations. In so doing, Fonterra's view is that farmers' businesses will not be put at risk of incurring undue economic hardship

FONTERRA'S POSITION ON THE MANAGEMENT OF N-LOSS

75 Primarily, Fonterra's interests in this hearing relate to Policies 6-7, and Rules 13-1 and 13-1B, although Mr Willis addresses some related points in his evidence. The discussion below therefore focuses on the main aspects of those provisions of interest to Fonterra.

Performance-based threshold

76 As I understand, the main parties involved in this case have generally agreed[14] that the regulation for N loss from existing dairy farms should occur through a two-tier planning structure where existing dairy farmers would initially need to meet the greater of:

76.1 A yet to be determined maximum (referred to as 'x'); or

76.2 A grand-parented figure based on historical use, assessed against a reasonably practicable "test".

77 Fonterra considers that a two pathway approach is appropriate and that 'x' should be performance-based (rather than LUC based as proposed by the Council).

78 The concept is discussed in more detail in Gerard Willis' planning statement, but in summary, Fonterra's approach would work as follows:

78.1 If an existing dairy farm met a quantified N-loss limit, that farm would go down an easier consenting route, although would still be required to prepare and submit to Council an annual nutrient management plan, undertake stock exclusion and comply with the other standards of chapter 13. N-loss would be grand parented, but with some room to increase N-loss in limited circumstances;

78.2 If a farm's existing N loss is above the quantified N-loss threshold, then it would take a different planning path where it would be subject to greater scrutiny using a "reasonably practicable" test. The likely result would be that the Council would require some changes 'on farm' that may not be offered by the farmer, but would not unreasonable in the circumstances. As Mr Willis points out, Chapter 13 needs some additional policy guidance to assist decision-making under this pathway. The benefit of this approach is while it recognises the existing investment and lawfully established activity of current dairy farmers, it does not provide a "reward" for those who are not managing their nutrient losses in an efficient manner.

79 In both scenarios, a controlled activity status would apply, which gives investment certainty to farmers that a farmer's consent will be granted.

80 In Fonterra's view, the value of 'x' should be set at a level where approximately 20-25% of farms would be directed down the pathway of greater scrutiny (i.e. the bottom 20-25% would be subject to the more onerous regime). Dr Ledgard explains where

[14] Paragraph 12, memorandum of the parties dated 28 October 2011.

farmers in the Region sit in relative N-loss performance terms. Dr Parminter also explains that regulatory change should target the 20% of worst performers. On the basis of this evidence, the number Fonterra seeks to use as the 'x' threshold is 27 kg/ha/year of N-loss.

Use of LUC

81 I note that the Council is seeking to set its 'x' on the basis of maxima associated with different LUC classes. From a policy perspective, Fonterra sees the rationale or the LUC approach as only applying to new conversions – the regime incentivises new N-losing land uses to establish on the more "versatile" land of the Region (i.e. intensive use is directed towards the land most naturally capable of intensive use). Those businesses will also be developed from the same starting point. Costs and financial viability will be considered before new entrants make their decisions to start dairying. Having additional costs added post start-up will, if significant enough (either as an additional capital cost or through increased operating costs/decreased returns), unravel the basis for the business case. This is one of the reasons that Fonterra is cautious with its payout forecasts, given this information will be used when a farmer decides to convert to dairy or intensify.

82 Fonterra does not, therefore, support the LUC approach for existing farms. This is also partly because it is unclear how many farms would be affected by the use of this approach. The Council has not undertaken a comprehensive assessment of how Ms Barton's regime would apply 'on the ground'.

83 Other issues relating to the use of LUC which follow from earlier points are as follows:

83.1 Using LUC classes as the basis for allocation of N-loss limits may have validity where land use decisions have not already been made. However, in an existing agricultural area such an approach does not recognise existing land use decisions and investments.

83.2 While it may make theoretical sense from a policy perspective to push higher N-loss activities to land which has higher productive potential, it is inefficient in my view to do that where existing farmers have invested heavily in fixed infrastructure (shed, yards, lanes etc) on their current farms. It would seem to me that such an approach, if not recognising the reality of existing land use decisions, makes it entirely probable that some existing dairy farms on land types arbitrarily allocated a lesser N loss limit could be placed in a position of not being able to continue to function under that land use. The N loss associated with the land use would not be enough to allow for the production required for ongoing financial viability. It could be argued that production could

occur on other land which has a high N loss allocation. This would see a duplication of investment in those fixed (in position) assets already existent elsewhere.

83.3 An N-loss grand-parenting regime represents a more equitable regime if only for determining the starting point from where an assessment can then be made as to whether N-loss reductions can or should be achieved (i.e. whether it is reasonably practical to do so).

83.4 Similarly, the LUC approach does not account for the actual conditions on farms now, when investment has been made in overcoming the inherent constraints in the "natural state" of the land at the time LUC assessment took place (e.g. through drainage, irrigation). Through technology and efficient land use practices, farmers are likely to be getting more productivity out of their farming systems than the LUC approach anticipates. How much more will vary from farm to farm. Dr Ledgard explains the potential anomalies of an LUC approach in more detail in his evidence.

84 I note that Ms Barton has sought to address the conditions that may make it more difficult for some farms to comply with its LUC limits by providing exceptions as follows:

84.1 Making specific provision for farms in high rainfall and poorer LUC class areas (which as pointed out by Dr Ledgard and Mr Willis, does not appear to be supported by technical evidence); and

84.2 Refining the LUC classes applying to the 'sand country' water management subzones from the regime[15].

85 In Fonterra's view, the 'high rainfall' exception proposed in the Council's Version of POP in particular is not sufficient to address the issues inherent in the Council's LUC regime outlined above. First, the exceptions still default to a restricted discretionary category, which means that a consent for an existing farming use is not guaranteed. Secondly, as Mr Taylor acknowledges in consideration of actual farms under these conditions, for two farms it would be possible but with some difficulty and for three farms very difficult to comply with the LUC regime in the suggested time provided by Council. Essentially, he says that the primary barrier is cost, which is unknown[16]. Two of the farms Mr Taylor refers to are not apparently in the defined exceptions categories and would find it "very difficult" to meet the LUC maxima[17].

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[15] Evidence of Lachie Grant, dated 31 January 2012.

[16] Paragraph 32, p 4801.

[17] Paragraph 35, p 4802.

86 It does not, in Fonterra's view, make sense to propose a regime which may not be achievable. The sample group considered by Mr Taylor is also very small, so it is very difficult to predict the effect on all other farms.

CONCLUSIONS

87 Fonterra accepts that there are water quality issues in parts of the Region that need to be addressed and that dairying is one of the main contributors. However, the Council's numerics are unrealistic targets.

88 The regime proposed by Council has not been properly costed, not just at a compliance and implementation level but specifically the level of costs to be placed by the community on a small subset of land managers within the Region.

89 Existing farmers have a wide range of personal and farm type characteristics that will influence the opportunities and limitations to making changes to achieve N-loss. There is insufficient knowledge about existing dairy farmers in the Region to make comfortable assumptions about the effect of the Council's regime on them.

90 Fonterra considers that the DV of POP creates a reasonable and realistic approach to addressing N loss given varying individual circumstances and uncertainties by allowing case by case consideration of each dairy farm.

91 That said, Fonterra acknowledges that the approach of the DV of POP creates some implementation challenges. Mr Willis has proposed changes that, should that Court decide to depart from the DV of POP, be preferred because they will allow for:

91.1 A more equitable, efficient, less costly, less intrusive regulatory approach; and

91.2 A reduced risk of unforeseen impacts on affected farmers.

92 Grand-parenting is an established planning tool for providing for existing interests in a new regulatory regime. Fonterra's approach is a hybrid form of grand-parenting.

93 The approach is justified because this is the first time a regulatory approach has been taken to managing N-loss from pasture within the Region and there are only two other examples in the country where this has previously been undertaken.

94 Non-regulatory programmes, with the aim of increasing farmer awareness and comfort with reducing N-loss from their farming operations, as well as the understanding water quality issues and opportunities to remedy them, will be vital to the ongoing success of any regulatory regime.

95 In addition, the next stage of water management will involve further monitoring and data collection to help inform the science around N-loss, which should lead to more focussed planning regimes in the future.

96 Fonterra through its current and planned programmes will continue to work collaboratively with the Council and other stakeholders to ensure that progress is made to achieve better water quality in the Region.

Sean Matthew Newland
14 March 2012