

Before Hearing Commissioners at Palmerston North

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*under:* the Resource Management Act 1991

*in the matter of:* Submissions on Chapters 6, 13 and 15 of the Proposed One Plan

*between:* **Fonterra Co-operative Group Limited**  
*Submitter*

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

Statement of supplementary evidence of Dr John Michael Russell on behalf of Fonterra Co-operative Group Limited

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Dated: 17 February 2010

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**STATEMENT OF SUPPLEMENTARY EVIDENCE OF DR JOHN  
MICHAEL RUSSELL ON BEHALF OF FONTERRA CO-OPERATIVE  
GROUP LIMITED**

**INTRODUCTION**

- 1 My full name is John Michael Russell, and I have the qualifications and experience described in my Evidence in Chief (*EIC*).
- 2 In this statement of evidence I address issues raised by Mr Carlyon in his supplementary evidence for Manawatu-Wanganui Regional Council (*Horizons*). In particular, I comment on the applications that are currently before Horizons for the Longburn and Pahiatua milk product manufacturing plants, and the work being undertaken by Fonterra in finding alternative wastewater management systems.
- 3 The fact that this supplementary evidence does not respond to every matter raised in other supplementary evidence within my area of expertise, or every witness raising those matters, should not be taken as acceptance of the matters raised. Rather, I rely on my EIC and this supplementary evidence to set out my opinion on what I consider are the key issues for Fonterra's processing activities.

**SUMMARY OF EVIDENCE**

- 4 Fonterra's discharges of wastewater to land from its Pahiatua and Longburn processing sites are consented activities. These consents were issued by Horizons under the Resource Management Act 1991 (*RMA*).
- 5 The consent for the Pahiatua site was renewed in August 2004. The discharge of wastewater to land was processed as a discretionary activity, and the consent application considered the effects of the preceding activity on the environment and the likely effects of the activity following consent renewal.
- 6 The consent application stated that the nutrient loadings would have no more than a minor effect on the environment, and this was agreed to by Horizons' Staff at that time.
- 7 A similar approach has been adopted for the Longburn Site, where the consents are currently being renewed. Again, the proposed loadings will have only a minor impact on the environment.
- 8 Fonterra is continually assessing new processes that will result in lowered impacts of its processing operations on the environment. As these improved processes are developed they are incorporated into Fonterra's best practice and implemented at the processing sites.

## CONSENT RENEWALS AT PAHIATUA AND LONGBURN

### Longburn

- 9 As stated in paragraph 6 of Mr Carlyon's Supplementary Evidence, Fonterra is currently renewing its consent to discharge wastewater from the Longburn processing site to land.
- 10 A full assessment of environmental effects has been prepared by Fonterra for this application. Following further consultation with Regional Council Staff, further modifications have been made to the proposal, including improved wastewater spread and use of a nitrification inhibitor if loadings exceed a critical level.
- 11 The nutrient loading to the Longburn irrigation areas has been determined based on observed environmental effects from the existing operations and the expected effects after improvements have been made. These effects have been assessed as minor.

### Pahiatua

- 12 Mr Carlyon also states that Fonterra is applying for the ongoing discharge of waste material from the Pahiatua milk processing site to land. This is not correct. This consent was renewed in August 2004 for a 20-year term.
- 13 However, the farm operations at Pahiatua are considering installing a standoff pad on one of the farms that receives wastewater from the processing plant. Such a system will enable cows to be removed from the land during periods of wet weather, thereby improving farm management, reducing the risk of pugging, and reducing the potential environmental effects from the farming operations. To undertake this process a consent is required to apply farm effluent from the standoff pad to land. Ironically, this same material for which the consent is required would have been applied naturally by the animals on the farm anyway, and the new system will result in no increase in the overall nutrients applied to the farm.
- 14 The proposed loss of 151 N/ha/year described in paragraph 6 of Mr Carlyon's evidence appears to be based on a nutrient budget error in the nutrient budgets prepared for the Pahiatua farm consent application. The nutrient budget has been reassessed and a revised nutrient budget has been prepared.
- 15 In summary, in applying for resource consent renewals for Fonterra's manufacturing operations in the Region the observed effects of existing operations are taken into account and best technologies are implemented to further reduce effects. The approach taken is consistent with that prescribed in the RMA and is effects-based.
- 16 As stated in my EIC, Fonterra prefers that consents for manufacturing activities are determined based on actual or likely

environmental effects rather than implementation of inflexible rules. It is not desirable that the rules are applied blindly, even when an assessment of actual environmental effects shows different outcomes.

#### **ACTIVITIES BY FONTERRA TO IMPROVE ENVIRONMENTAL PERFORMANCE**

- 17 Paragraphs 5 and 7 of Mr Carlyon's supplementary evidence contain a number of strongly worded criticisms of Fonterra's environmental performance, which in my view are mis-directed.
- 18 Within Fonterra, the Environmental Strategy and Development Team, is dedicated to developing processes that will meet the future needs of Fonterra's manufacturing operations. This group considers all of Fonterra's manufacturing operations in New Zealand and has been involved in determining best environmental strategies for Fonterra's offshore operations.
- 19 Fonterra has developed a set of Best Practice operational guidelines for dissolved air flotation, irrigation and biological treatment systems used by Fonterra. These guidelines ensure that the most up-to-date knowledge is used at each site.
- 20 Fonterra has implemented a number of water reduction systems at its plants. These include optimised cleaning schedules and water reuse where appropriate. Fonterra is investigating advanced water treatment systems which will allow greater reuse opportunities.
- 21 Fonterra is investigating novel biological treatment systems and advanced treatment technologies for phosphorus removal allowing discharge of treated wastewater to rivers. Recently, a modern membrane biological reactor was installed at the Fonterra Stirling plant.
- 22 Fonterra is investigating improvements to land treatment systems and has been a member of the New Zealand Land Treatment Collective since its inception. Included in these investigations is the research of nitrification inhibitors to reduce nitrate leaching at wastewater irrigated sites.

#### **CONCLUSION**

- 23 I confirm the conclusions in my EIC.

John Russell  
17 February 2010