

**BEFORE THE ENVIRONMENT COURT**

<i>In the matter of</i>	the Resource Management Act 1991 ("the Act")
<i>And in the matter of</i>	the Proposed One Plan for the Manawatu-Wanganui Region
<i>Between</i>	WELLINGTON FISH & GAME ENV-2010-WLG-000157
<i>And</i>	FEDERATED FARMERS OF NEW ZEALAND ENV-2010-WLG-000148
<i>And</i>	MINISTER OF CONSERVATION ENV-2010-WLG-000150
<i>And</i>	DAY, MR ANDREW ENV-2010-WLG-000158
<i>And</i>	HORTICULTURE NEW ZEALAND ENV 2010-WLG-000155
<i>And</i>	<b>Appellants</b> MANAWATU-WANGANUI REGIONAL COUNCIL <b>Respondent</b>

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**STATEMENT OF REBUTTAL EVIDENCE OF DR NEELS BOTHA ON BEHALF OF  
WELLINGTON FISH & GAME**

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1. **INTRODUCTION**

- 1.1 My full name is Cornelius Alewyn Johannes Botha. A full description of my qualifications and experience was provided in my statement of evidence dated January 2012, which was filed with the Court and circulated to the parties.

**Purpose and scope of evidence**

- 1.2 I have read the statement of evidence of Dr Parminter for Fonterra Co-operative Group Limited dated 18 March 2012; the statement of evidence of Dr Scarsbrook for Fonterra Co-operative Group Limited dated 14 March 2012; and the statement of evidence of Mr Newland for Fonterra Co-operative Group Limited dated 14 March 2012.
- 1.3 The purpose of this evidence is to respond to matters raised in the evidence of Dr Parminter, Dr Scarsbrook, and Mr Newland.

**Expert Witness Code of Conduct**

- 1.4 I have been provided with a copy of the Code of Conduct for Expert Witnesses contained in the Environment Court's Consolidated Practice Note 2011. I have read and agree to comply with that Code. This evidence is within my area of expertise, except where I state that I am relying upon the specified evidence of another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

2. **DR MICHAEL SCARSBROOK**

- 2.1 At paragraph 192 of his evidence in chief, Dr Scarsbrook says:

*"... Many of the Region's rivers have issues with elevated levels of nutrients, sediments, faecal contaminants and a range of other stressors. However, public perception of water quality is generally positive."*

- 2.2 I disagree with his statement that "...public perception of water quality is generally positive." I note that a longitudinal study (Hughey et al, 2010), as discussed in paragraph 2.2 of my evidence in chief, has clearly shown that for 10 years, spanning 2000-2010, New Zealanders have had overall positive views about the state of New Zealand resources, but they have rated *rivers and lakes*, and marine fisheries, *significantly negative*.

- 2.3 The public clearly wants development that does not wreck fresh water environments they recreate in. They want to be able to fish and swim in rivers which have high amenity value and which are not polluted. They do not want farming to pollute the fresh water environments they have a right to enjoy. They want the ecology and nature of fresh water resources protected because these are highly valued by them. This does not mean the public is against farming at all, because they are willing to see water used, although not at the expense of these other values. The public also wants an economic value placed on the commercial use of water and for charging users, which is tied in with economic and regulatory approaches for achieving desired outcomes.
- 2.4 I note that these public perceptions have been studied over almost a decade and have been well documented.

3. **DR TERRY PARMINTER**

- 3.1 At paragraph 37.2 of his evidence in chief, Dr Parminter states the following:

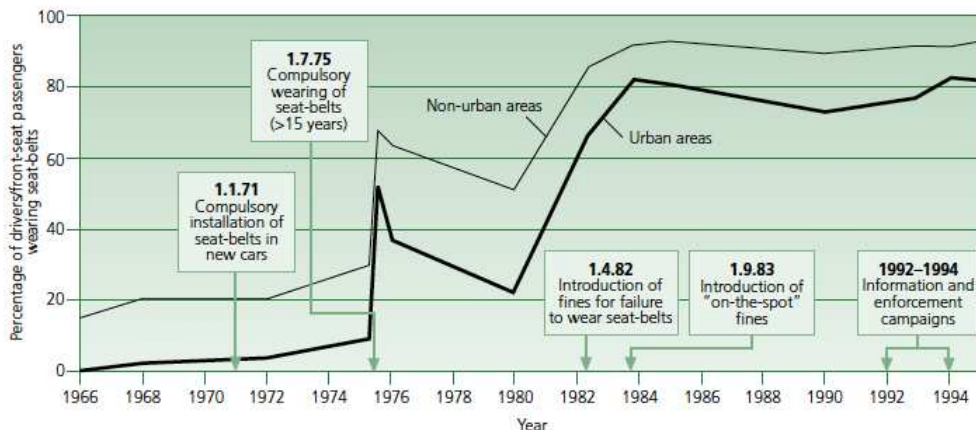
*“So far in the evidence, only technologies that have a material benefit to potential uses have been considered. However, the benefit of some technologies is that they reduce the risks of harmful outcomes and so the benefits are less tangible to potential users. These are known as “preventative technologies”. When the introduction of preventative technologies is examined in New Zealand, these consistently have taken a longer period for adoption, as predicted by Rogers. For example, the wearing of seatbelts was made compulsory in passenger cars in 1975. However, it took a further twenty years (until 1995) before seat belts were being worn by over 85% of front seat passengers (Ministry of Transport 2010).”*

- 3.2 If Dr Parminter is saying that it takes 20 years to change behavior through legislation, based on this one example, I disagree. Evidence from Australian research, specifically on the impact of regulations on the wearing of seat belts, has shown that during a public campaign only approach, adoption rates can actually go down. For example, Milne (1985, page 6) concluded that, between 1960-1970, in Australia, “... after ten years of sustained publicity and some legislated fitting requirements, the majority did not wear them [seat belts].” In fact, Milne (1985, page 7) shows that in South Australia, for example, the seat belt wearing rates for drivers, occupants and passenger actually went down between 1964 and 1969. In South Australia seat belt fitting became compulsory in 1967 and seat belt wearing in 1971 (Conybeare, 1980, page 30). Milne (1985, page 11) concluded that:

*“In all States the **legislation had an immediate and significant effect** on wearing rates. Generally, during the first month, police were instructed to educate and caution motorists rather than prosecute for non-compliance. Even during this period, wearing rates rose substantially; for example from 25 per cent to around 50 per cent in Melbourne.”*

- 3.3 From this conclusion it is clear that legislation, together with an appropriate education campaign, turned the tide of non-seat belt use dramatically.
- 3.4 A Finnish study (European Transport Safety Council, 1996) also showed the dramatic impact of enforcement (see Figure 4.1) on seat belt use.

**FIGURE 4.1**  
Use of seat-belts by car drivers/front-seat passengers in urban and non-urban areas of Finland, 1966–1995



- 3.5 A new law took effect in Finland at the beginning of 2003 which prohibits the handheld use of mobile phones while driving a motor vehicle. A study of the impact of this law shows that the hands-free law reduced handheld phone use, among occasional users especially, but did not reduce phone-related hazards. The effect of the law on phone use substantially declined after the first year (Rajalin et al, 2005). A similar study in New York showed the same pattern and concluded that “vigorous enforcement campaigns accompanied by publicity appear necessary to achieve longer term compliance with bans on drivers' cell phone use” (McCartt and Geary, 2004).
- 3.6 Dr Parminter concludes, at paragraph 38 of his evidence:

*“What these examples illustrate is that the effectiveness of regulations to achieve widespread social change is dependent upon realigning social norms as well. The rate of overall social behaviour change is*

*closer to the change in social norms rather than the level of coercion used to achieve compliance (Watson 2004b)."*

3.7 I disagree with one part and agree with another part of Dr Parminter's conclusion. I disagree with the way in which it underplays the role and necessity of regulation to dramatically stimulate the adoption of "preventative technologies."

3.8 On the other hand, I agree with Dr Parminter's conclusion, to the extent that I agree that voluntary approaches, which help to realign social norms, should go hand-in-hand with regulation. This view is consistent with our joint conferencing statement, which was provided to the Court, where we concluded that a mix of rules and voluntary approaches are required.

3.9 At paragraph 57 of his evidence Dr Parminter says:

*"Social change takes time and the level of progress already achieved in the farming community in the Region needs to be recognised. Introducing coercive rules at this stage could slow that rate of progress down."*

3.10 I agree that the farming community needs recognition for the progress already achieved in the Region. However, that does not mean it should not be the subject of regulation to achieve further progress

3.11 I have shown, through the examples in paragraphs 3.2, 3.4 and 3.5 above, that the introduction of regulation, which Dr Parminter describes as "coercive rules," can dramatically change behavior and enhance adoption rates. I cannot disprove Dr Parminter's statement that "*Introducing coercive rules at this stage could slow that rate of progress down*" (because no-one can predict or knows for certain what will happen). However, it is just as likely that regulation at this juncture will dramatically enhance the rate of progress (adoption), as has happened in the examples I have given in my evidence in chief and paragraphs 3.2, 3.4 and 3.5 of this statement.

#### 4. **MR SEAN NEWLAND**

4.1 In paragraph 26.7 (b) of his evidence in chief, Mr Newland says the POP as proposed by Ms Clare Barton for the Council (*Council's Version*):

*"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."*

- 4.2 I disagree that there will be insufficient time to raise awareness. Land managers should by now be aware of environmental issues and the need to manage N-loss from pasture. The process of public consultation for the POP commenced in April 2004, it was notified in May 2007, and extensive hearings on it were held which finished in 2010. The POP and the hearings have had a lot of attention in the press, and I am aware that Federated Farmers has been communicating with its 1,200 members in the Region about this issue over that period, and that communication is still continuing. Both Federated Farmers and Fonterra (together with a number of individual farmers) provided extensive submissions on the POP as notified. The POP has been in the public arena for over 5 years now.
- 4.3 I consider that Mr Newman has overstated the time required to raise awareness because farmers, both in this region and nationwide, are by now well aware that they need to manage N-loss. They should know by now that the issue is how, not whether, they should do so.
- 4.4 In paragraph 45 of Mr Newman's evidence in chief he says: "We will be spending over half a million dollars in 2013 to check that every supplier with Accord streams has achieved 100% stock exclusion." This is a form of self-regulation.
- 4.5 Self-regulation is very rarely successful as a 'stand-alone' mechanism of social control. Rather, the most effective self-regulatory initiatives have involved an underpinning of government regulation, or third-party oversight, or more commonly both (Gunningham and Rees, 1997).

**Dr Neels Botha**

**April 2012**

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