

**BEFORE INDEPENDENT HEARING COMMISSIONERS
AT HAMILTON**

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of the hearing of submissions on Proposed Plan
Change 1 to the Waikato Regional Plan

**STATEMENT OF REBUTTAL EVIDENCE OF
DR MARTIN WILLIAM NEALE
FOR FONTERRA CO-OPERATIVE GROUP LTD (SUBMITTER 74057)**

BLOCK 2 HEARINGS

FRESHWATER SCIENCE

10 MAY 2019

RICHMOND
CHAMBERS

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1. EXECUTIVE SUMMARY

- 1.1 My rebuttal evidence addresses issues in Fonterra's submissions that are being heard in the Block 2 hearing.
- 1.2 I discussed in my primary evidence my concerns around the concept of water quality offsetting in PC1 being conflated with biodiversity offsetting in the Section 42A report. This issue is also apparent in the evidence of some of the submitters.
- 1.3 I remain concerned that the wholesale application of biodiversity offset principles to water quality offsetting is problematic. Guidance for one purpose is not necessarily appropriate for another purpose.
- 1.4 Whilst some of the biodiversity principles may be relevant, I consider that it would be more appropriate to take direction from existing policies, guidelines and frameworks designed specifically for water quality offsetting. By necessity, this will involve using overseas examples as offsetting guidance used in New Zealand has focussed almost exclusively on biodiversity.
- 1.5 I remain of the opinion that water quality offsetting is a management tool that can be used to achieve more effective water quality outcomes in the context of PC1, whilst providing opportunities for technical, financial and logistical efficiencies.
- 1.6 I consider it problematic that the principles of, and guidance for, biodiversity offsetting are being promoted in the context of water quality offsetting. There are more appropriate policies, guidance and frameworks available for use in relation to the water quality offsetting proposed in PC1.

2. INTRODUCTION

- 2.1 My full name is Dr Martin William Neale.
- 2.2 I am a Director and Lead Scientist at Puhoi Stour Limited, an environmental science and management consultancy based in Auckland.

2.3 I have the qualifications and experience stated in my Primary Evidence.

2.4 Of particular relevance to this statement of evidence is my role as the lead scientist for the Stream Ecological Valuation project between 2006 and 2016, which is the most widely used freshwater offsetting tool in New Zealand (Neale et al, 2011; Neale et al, 2017).

Code of conduct

2.5 I have read the Expert Witness Code of Conduct set out in the Environment Court's Practice Note 2014 and I agree to comply with it. I confirm that the issues addressed in this Statement of Evidence are within my area of expertise, except where I state I am relying on the specified evidence of another person. I have not omitted to consider material facts known to me that might alter or detract from my expressed opinion.

2.6 My rebuttal evidence focuses on the following matters:

- (a) water quality offsetting;
- (b) the issues associated with applying biodiversity offsetting principles to water quality offsetting; and
- (c) the terminology used in relation to water quality offsets.

2.7 I respond to the primary evidence of:

- (a) Mr Matthews (Genesis Energy).
- (b) Ms McArthur (Department of Conservation).
- (c) Mr Wilson (Fish and Game).
- (d) Mrs Marr (Fish and Game).

3. WATER QUALITY OFFSETTING

3.1 I discussed in my primary evidence how the Section 42A report had conflated water quality offsets with biodiversity offsets (para 6.3), and how

some of the concepts that are important for biodiversity offsetting are not relevant, or are actually inappropriate, for water quality offsetting.

- 3.2 This issue is also apparent in the evidence of some submitters. For example, witnesses for the Department of Conservation and Fish and Game argue that the principles of biodiversity offsetting should be incorporated into the PC1 provisions relating to water quality offsetting.
- 3.3 I remain concerned that the wholesale application of biodiversity offsetting principles to water quality offsetting is problematic. Guidance for one purpose is not necessarily appropriate for another purpose. Indeed, in his evidence Mr Matthews (para 77) recommended using different terminology for water quality offsetting because of the implications of using the term "offsetting" and its association with biodiversity. I will return to the issue of terminology below.
- 3.4 Whilst some of the biodiversity principles may be relevant, I consider that it would be more appropriate to take direction from existing policies, guidelines and frameworks designed specifically for water quality offsetting. By necessity, this will involve using overseas examples as offsetting guidance used in New Zealand has focussed almost exclusively on biodiversity (e.g. Maseyk et al., 2018; NZ Government, 2014; Environment Institute of Australia and New Zealand, 2018). This includes the case law that Mrs Marr refers to in her evidence (para 5.25 and 5.26). In the cases referred to, the Court may have considered some of this guidance as best practice, but it is best practice for biodiversity offsetting, not water quality offsetting.
- 3.5 Furthermore, this issue is related to Ms McArthur's statement that "*the use of off-sets in resource management is usually applied to biodiversity offsetting*" (para 12). I provide qualified support for this statement, in that it is probably correct in the New Zealand context, but water quality offsets are widely used overseas as described in my primary evidence.
- 3.6 In terms of using the "best practice" principles of biodiversity offsetting in a water quality context, the following examples demonstrate the problems

with using guidance material developed for one purpose for a different purpose:

- (a) **No net loss principle** (and preferably a gain) – interpreted literally this would translate to an offset requiring an increase in a contaminant. More generally, the no net loss principle seeks measurable conservation outcomes, through no net loss (or preferably a net gain) of biodiversity. This is challenging in a water quality context as a single action (or offset) to reduce a contaminant load cannot be directly linked to a conservation outcome or a change in biodiversity (i.e. the reverse of cumulative effects).¹
- (b) **Permanence principle** – water quality offsets are typically required for the duration of the activity, because if the point source discharge stops, then there is no discharge to offset. This contrasts with biodiversity offsets, where the impact is typically permanent (often associated with the removal of native vegetation to facilitate development) and therefore the offset should be permanent.

3.7 Given these issues, I recommend that if further principles/considerations/guidelines/criteria for water quality offsetting are included in PC1, they are developed directly from examples of water quality offsetting frameworks and guidance. Given water quality offsetting and trading has existed for decades (Feldman et al., 2015), it seems very odd to rely on guidance provided for a different purpose (i.e. biodiversity offsetting).

3.8 Based on my review of water quality offsetting documents, I would propose that any such criteria should include at least the following:

- (a) No significant environmental effects associated with the primary discharge.

¹ This is an issue with the modification of offset definition proposed by Mrs Marr (para 5.30).

- (b) The offset is in the same catchment as, and upstream of, the primary discharge.
- (c) The offset results in a net reduction in contaminant load.
- (d) The offset is like for like (i.e. same contaminant).
- (e) The offset is transparent and is part of a formal process (i.e. through a consent process).
- (f) The offset is addition to any reduction that would occur in response to the PC1 management framework.²
- (g) The offset is monitored and operates for the duration of the point source discharge.
- (h) The offset is protected by a legally binding instrument.

TERMINOLOGY

- 3.9 Mr Matthews raised concerns about the "offset" terminology in his evidence (para 11 and 77), such that he recommends avoiding the use of "offsetting" because of its biodiversity implications.
- 3.10 As described in my primary evidence, biodiversity offsetting remains a complex and often controversial issue (e.g. Maron et al, 2016), therefore I can see the appeal of using different terminology. However, I prefer a refinement of the language in PC1 to refer to 'water quality offsets' to be consistent with similar approaches elsewhere.
- 3.11 There are number of conceptually simple and consistent definitions of a water quality offset available, for example "An action taken to counter-balance a pollutant discharged from a point source" (Queensland Government, 2017).

² For example, reductions in contaminant discharges required by PC1 rules should not be considered as an offset; only reductions beyond those that would be achieved by these rules should be considered as a potential offset.

- 3.12 Similar definitions are found in the State Legislation for Victoria (Victoria State Government, 2018), US EPA guidance (US EPA, 2004) and in international reviews of water quality offsetting (e.g. International Institute for Sustainable Development, 2019; Corrales et al., 2013).
- 3.13 The implementation of water quality offsetting via policies or guidance universally seeks to ensure that offsets provide a positive environmental outcome specifically related to the discharge. Two principles in particular ensure this is the case:
- (a) that an offset results in a net reduction in contaminant load; and
 - (b) the offset is like-for-like in terms of the contaminant (i.e. offsetting is always for the same contaminant).
- 3.14 This is where Mr Matthews' suggestion to use the term 'environmental compensation' (para 81) is problematic. As defined, environmental compensation is less stringent and open to greater subjectivity than offsetting (EIANZ, 2018; Maseyk et al, 2018). For example, environmental compensation is not restricted to like-for-like, and as a result the benefit from environmental compensation may be unrelated to the effects of the activity undertaken.
- 3.15 Mr Wilson provides an excellent example of this in his evidence, where the environmental compensation offered for the effects of point source discharges have included funding of environmental trusts (para 5.1). The funding for the trust might be valuable, but it is not a water quality offset as it has no measurable benefit in terms of contaminant load.
- 3.16 I agree with Mr Wilson's concluding statement that there should be a net environmental benefit to any offset measure and that it is difficult to quantify the nutrient reductions from offset measures. In my opinion, this latter point is why water quality offsetting is, and should be, predominantly a tool for point source discharges. The contaminant loads in point source discharges are easily measured and quantified, which allows the necessary reductions from any offset measures to be readily calculated.

- 3.17 The application of water quality offsets range in complexity. This can range from one-off offsets within or between organisations, to multi-objective, multi-agency water quality trading programmes (Feldman et al, 2015; Selman et al 2009).
- 3.18 Given that water quality offsetting may be used in this way, I am unsure of the consequence of Ms McArthur's view that the water quality offsetting proposed in PC1 is "contaminant trading" (para 16). Water quality offsetting is a tool that may be used in isolation for a single discharge or as the basis of a water quality (or contaminant) trading scheme. The key difference is the scale of the co-ordination and governance of the process. In addition, the PC1 process does not seek to establish a 'cap and trade' system, rather it seeks a 'sinking lid' approach to contaminant loads. I consider that water quality offsetting is a tool that could be useful in the achievement of water quality objectives associated with the 'sinking lid' approach.

4. CONCLUSION

- 4.1 I remain of the opinion that water quality offsetting is a management tool that can be used to achieve more effective water quality outcomes, whilst providing opportunities for technical, financial and logistical efficiencies.
- 4.2 I find it problematic that the principles of, and guidance for, biodiversity offsetting are being promoted in the context of water quality offsetting. There are more appropriate policies, guidance and frameworks available for use in relation to the water quality offsetting proposed in PC1.

5. REFERENCES

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