

IN THE MATTER OF the Resource Management Act 1991

AND an application for resource consent by Central Plains Water Trust for use of water to irrigate land (CRC061973 and CRC061972).

**STATEMENT OF EVIDENCE BY MARK CONON MCGRATH ON BEHALF
OF DEPARTMENT OF CORRECTIONS.**

1. Introduction

- 1.1 My name is Mark Conon McGrath. I am an Environmental Planner with the Christchurch office of Opus International Consultants Limited. My relevant qualifications are a Bachelor of Resource Studies and a Masters of Applied Science - Environmental Management from Lincoln University.
- 1.2 I have over three years' experience in resource management work for central government agencies, and over ten years experience as an environmental consultant. This includes substantial experience in district planning under the Resource Management Act 1991 ("RMA"), plan assessment, resource consents, environmental effects assessment and consultation.
- 1.3 I have been engaged by Department of Corrections ("Corrections") to provide planning advice in response to a resource consent application to Environment Canterbury (ECan) by Central Plains Water Trust ("CPW") to use water to irrigate land on the Canterbury Plains ("the proposal"). The proposal is assessed as a discretionary activity under Environment Canterbury's Proposed Natural Resources Regional Water Quantity Plan ("PNRRP").

2. Overview of my Evidence

- 1.4 For purposes of clarity and brevity I will refer to the original submission lodged by Corrections dated 8 August 2006. My evidence will describe Corrections' submission and CPW's potential adverse effects on the environment in a resource management context, including the Resource Management Act 1991 ('RMA').
- 1.5 I will conclude that it is essential that the ability of Corrections assets, which Corrections manages on behalf of the community, are able to continue to perform in the

manner they were designed for. The guaranteed quality and quantity of water supply is vital to the health, well-being and sustainability of Corrections facilities; and is vital for the long term growth, security and development of the facilities.

3. Background to Submission

- 1.6 Corrections manage three prisons in the Canterbury region: Rolleston, Christchurch Men's and Christchurch Women's Prisons. Corrections have an obligation to ensure the sustainable management of the prisons in a way that ensures the safety and security of the wider community including the prison community.
- 1.7 Corrections have responded in opposition to the CPW consent application unless it can be demonstrated that all potential adverse effects on Corrections property and interests can be avoided, remedied or mitigated. This is especially with regard to access to water which complies with New Zealand's drinking water standards (NZDWS) and a guaranteed supply of drinking water to a standard as set down under the NZDWS.
- 1.8 The size and scale of the Christchurch Men's and Women's Prisons requires a water supply capacity of 1200m³/day to meet the current and projected future needs of the prison community. This volume of water has been consented and needs to remain secure. Corrections have undertaken significant capital expenditure in drilling two new deep bores (135m and 145m) to ensure the security of supply for the prison community now and in the medium term:

2 Assessment of Actual and Potential Effects

- 2.1 Corrections considers that insufficient information and certainty has been provided to adequately address effects, especially in regard to the community drinking water supply at the Christchurch Men's and Women's Prisons. These two prisons are solely reliant on groundwater to meet water requirements for the prisons' operations.
- 2.2 Groundwater sourced from this part of the recharge zone flows towards West Melton, Templeton and Halswell. The Assessment of Effects presented by CPW does not adequately address water quality effects, nor proposes mitigation measures, to ensure uninterrupted and quality of water supplied to Corrections facilities.

- 2.3 The information provided by CPW, including that on changes to groundwater and ground surface water levels, water quality and interactions with potential climate changes, is not sufficient. Increased groundwater levels have been predicted but not interpreted in terms of their effects on community and individual assets and properties, specifically Corrections' assets and properties. Groundwater quality and potential long term changes will be strongly dependent on land use, including irrigation and farming practices especially within the recharge area.
- 2.4 Elevated nitrate concentrations are already an issue in the Central Plains groundwater zones for shallow wells. The addition of more nitrogen sources would present an increased risk to Corrections water supply, and it is not desirable to see further elevation in such levels.
- 2.5 Information on predicting and managing the long term effects from increased nitrification is insufficient. There is still a need to confirm that the effects of the proposal on Corrections facilities will be no more than minor, or alternatively that they can be satisfactorily mitigated.
- 2.6 The CPW application contains draft conditions based on proceeding with the proposal, monitoring effects and mitigating them if necessary. In my opinion, the scope of potential effects and the ability to mitigate them have not been satisfactorily demonstrated by the applicant. I consider that the 'wait, see and fix as required' approach fails to acknowledge the potential for permanent and irreversible effects regarding groundwater contamination.
- 2.7 Corrections specific concerns are:
- the cumulative effects of nitrogen loading to groundwater supplies and
 - increased microbial concentrations within the groundwater resource.
- There has been insufficient evidence provided by CPW to confirm that drinking water quality at the Correctional facilities will not be adversely affected by this proposal.
- 2.8 In the event that the drinking water was contaminated and/or failed to meet NZDWS this would have potential and significant operational and financial risk to Corrections. The risk of substandard drinking water quality could create a temporary closure of the prison facilities which would trigger ramifications on a national scale.

- 2.9 Corrections express concern that the potential adverse effects surrounding water quality would be of a permanent and irreversible nature. Should the water quality become tainted from nitrification it is questioned what alternative water supply arrangements would be able to provide the quality and volume of water required on an ongoing basis.
- 2.10 On this basis, it must be guaranteed that the supply and quality of the drinking water at the Christchurch Mens and Womens Prisons and Rolleston is not adversely affected by the CPW scheme proposal. As noted above, there are major uncertainties with the current levels of information provided by the applicant.
- 2.11 I note that groundwater assessed as being secure does not require any further treatment to comply with the section of the NZDWS on protozoa contamination. However, should a source breach the security standards, then treatment and/or new deeper bores will be required. This option is capital intensive and still cannot guarantee that improved water quality will be found at a deeper level. As already noted, the new bores drilled at Mens and Womens Prisons are already at depths of 135m and 145m respectively in order to abstract from secure aquifers.
- 2.12 Consideration also needs to be given to the Ministry for the Environment's National Environmental Standard (NES) for Sources of Human Drinking Water. This takes effect as at 20 June 2008 and promotes a multiple barrier approach between potential sources of contamination and community water supplies. In particular, the NES requires that a regional council must not grant a water permit or a discharge permit for an activity that will occur if the activity is likely to introduce or increase the concentration of a contaminant that might cause the water supply to no longer meet the health criteria specified in the NZDWS.
- 2.13 I recognise that there are uncertainties in determining the cause of effects, however CPW have stated that they will cause groundwater levels to rise and land drainage flows to increase. It is considered unreasonable to wait 20 years or more to observe reduction in groundwater quality. Such effects are simply a transfer of the problem and without addressing these issues prior, become an issue for future administration.

4. Consistency with Part II of the RMA

- 2.14 The matters contained in Part II of the RMA apply to the assessment of all resource consent applications. In reaching a decision on a resource consent application, the Council has to be satisfied that by granting the application, Part II Purpose and Principles of the RMA will be achieved.
- 2.15 The purpose of the RMA is to promote the sustainable management of natural and physical resources, in a way or at a rate that enables people and communities to provide for their social, economic and cultural wellbeing and for their health and safety. Section 5(2)(c) of the RMA states, in summary, that activities must be managed so that adverse effects on the environment are avoided, remedied or mitigated.
- 2.16 Section 7 of the RMA sets out those “other matters” that Council is to have particular regard to in achieving the purpose of the RMA. Matters in Section 7 that are considered relevant to the proposal include:
- (b) The efficient use and development of natural and physical resources...
 - (c) The maintenance and enhancement of amenity values...
 - (f) Maintenance and enhancement of the quality of the environment...”
- 2.17 Based on Part II of the RMA it is considered critical to the integrity of the Resource Management Act that Sections 5, 6 and 7 RMA matters will be adequately considered in deciding the outcome of the CPW proposal.
- 2.18 In closing, it is essential that the ability of the assets, which Corrections manages on behalf of the community, is able to continue to perform in the manner they were designed for. The guaranteed quality and quantity of supply is vital to the health, well-being and sustainability of Corrections Facilities; and is vital for the long term growth, security and development of these facilities. Unless the issues raised in this evidence cannot be adequately avoided, remedied or mitigated it is Corrections request that these consent applications be declined.

