

**Proposed Plan Change 4C  
(Groundwater management:  
Cromwell Terrace Aquifer)**

**to the**

**Regional Plan: Water for Otago**

**Decisions of Council**

Otago Regional Council resolved to adopt the recommendations of the Hearing Committee on Proposed Plan Change 4C (Groundwater management: Cromwell Terrace Aquifer) at its meeting on Wednesday 10 December 2014, as follows:

*That Council:*

- 1. Adopt the recommendations of the Hearing Committee on Proposed Plan Change 4C (Groundwater management: Cromwell Terrace Aquifer) to the Regional Plan: Water for Otago with tabled amendments as its decision;*
- 2. Publicly notify its decisions on Proposed Plan Change 4C (Groundwater management: Cromwell Terrace Aquifer) to the Regional Plan: Water for Otago on Saturday 13 December 2014; and*
- 3. Notify submitters of its decision.*

All references to the recommendations of the Hearing Committee must now be read as being the decisions of Council in the following report.

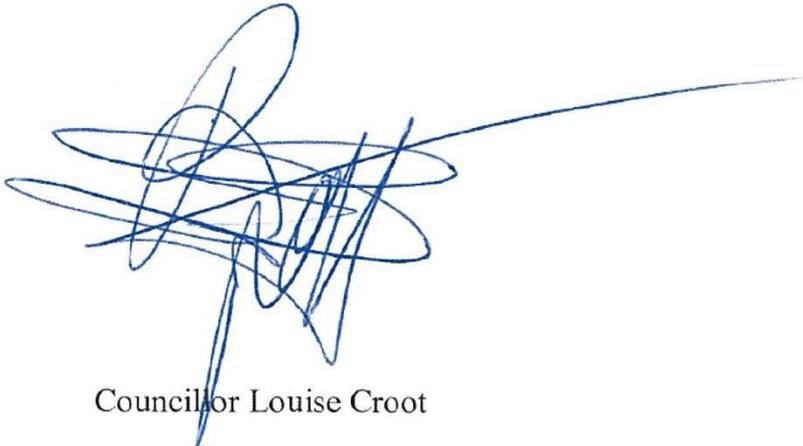


This report presents the recommendations of the Hearing Committee to the Otago Regional Council on submissions and further submissions to Proposed Plan Change 4C (Groundwater management: Cromwell Terrace Aquifer) to the Regional Plan: Water for Otago.

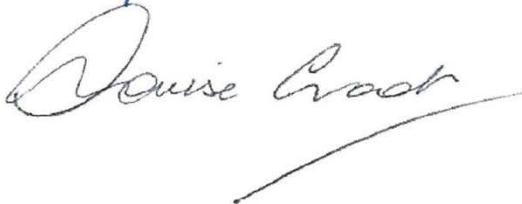
**Hearings Committee:**

Councillor Bryan Scott

Chairperson



Councillor Louise Croot



Councillor Sam Neill



## Abbreviations

MAL	Maximum Allocation Limit (previously Maximum Allocation Volume (MAV))
MAR	Mean annual recharge
NPSFM	National Policy Statement for Freshwater Management 2014
ORC	Otago Regional Council
Proposed plan change / plan change	Proposed Plan Change 4C (Groundwater management: Cromwell Terrace Aquifer) to the Regional Plan: Water for Otago
RMA	Resource Management Act 1991
Section 32 Evaluation Report	The evaluation report assessing alternatives, benefits and costs for proposed plan change 4C to the Water Plan as required by Section 32 of the RMA
SOE	State of the Environment (monitoring undertaken in accordance with Section 35(2) RMA)
Water Plan	Regional Plan: Water for Otago (operative at 1 May 2014)

**Note: use of section / Section:**

section	A reference to another section in this report. A reference to a section of the Water Plan.
Section	A Section of the RMA.

**Note: text marking**

<del>Operative word</del> / <u>notified word</u>	Notified change, showing change proposed from the Water Plan
<del>Notified word</del> / <u>amended word</u>	Amendment recommended in this report

## Background

Proposed Plan Change 4C (Groundwater management: Cromwell Terrace Aquifer) proposes to set a maximum allocation limit of 4 Mm<sup>3</sup>/yr for the Cromwell Terrace Aquifer in Schedule 4A of the Water Plan. This aquifer is currently shown in Map C3 of the Water Plan Maps.

The maximum allocation limit will apply to new groundwater takes that are not permitted under the provisions of the Water Plan.

Plan Change 4C was publicly notified in the Otago Daily Times on Saturday 16 August 2014 and submissions closed on Friday 12 September 2014. A total of 8 submissions were received.

The *Summary of Decisions Requested* and request for further submissions was notified on Saturday 27 September 2014, with further submissions closing on Friday 10 October 2011. There were 3 further submissions received.

The *Officer's Report on Decisions Requested* which evaluated decisions requested by submitters and further submitters and made recommendations to the Hearing Committee was released on Thursday 23 October 2014.

Submissions on the proposed plan change were heard on Tuesday 11 November 2014 in Dunedin.

The main matters raised by submitters on Plan Change 4C broadly related to:

- Protecting the lake levels of Lake Dunstan and hydro-electric operations on the Clutha/Mata-Au;
- Monitoring the effects of the proposed maximum allocation limit of 4 Mm<sup>3</sup>/yr on the water levels in the Cromwell Terrace Aquifer; and
- Providing for surface water takes.

We thank all of the people who have participated in this plan change process. We have read all submissions and listened to evidence presented at the hearing. In preparing our recommendations we have also been mindful of the Otago Regional Council's statutory responsibilities under the Resource Management Act 1991 (RMA), the National Policy Statement on Freshwater Management 2014 (NPSFM).

As a result of the submission and hearing process, our recommendation to the Otago regional Council is to adopt the plan change as proposed.

Our recommendations follow.



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## CHAPTER 1 – A NEW MANAGEMENT REGIME

The notified changes to the Water Plan sought to set a tailored maximum allocation limit for the Cromwell Terrace Aquifer in Schedule 4A of the Water Plan.

### 1.1 Proposed Maximum Allocation Limit

*Schedule 4A*

*Plan Change 4C page 1*

*Summary of Decisions Requested: pages 11–157*

The notified plan change proposed to set a maximum allocation limit of 4.0 Mm<sup>3</sup>/yr for the Cromwell Terrace Aquifer in Water Plan Schedule 4A.

Most submitters were in support of the proposal to set a MAL of 4.0 Mm<sup>3</sup>/yr in Schedule 4A, although one submitter stated there was a need to make sure that Lake Dunstan is not affected by an excessive groundwater abstraction.

#### 1.1.1 Recommendations

We considered the submissions and recommend the following:

- (a) Adopt Schedule 4A as notified.

#### 1.1.2 Reasons

- The proposed MAL of 4.0 Mm<sup>3</sup>/yr is based on a comprehensive scientific investigation and has been developed in consultation with relevant stakeholders within the local and wider community.
- A MAL of 4.0 Mm<sup>3</sup>/yr will allow the community to provide for their social and economic well-being, while avoiding any adverse effects on the aquifer, nearby surface water bodies (Lake Dunstan) or on any existing value supported by these resources. Therefore, it is considered that the proposal achieves the goal of sustainable management of our natural and physical resources.

### 1.2 Aquifer restriction levels

*Schedule 4B*

*Plan Change 4C page 1*

*Summary of Decisions Requested: pages 11-16*

The notified plan change does not propose to set aquifer restriction levels for the Cromwell Terrace Aquifer in Schedule 4B of the Water Plan.

Most submitters accepted the proposal not to include aquifer restriction levels for the Cromwell Terrace Aquifer. However, one submitter stated there was a need to set restriction levels for groundwater takes from the aquifer in order to provide better protection for existing hydro-electric operations on the Clutha.

### **1.2.1 Recommendations**

We considered the submissions and recommend the following:

- (a) Adopt Plan Change 4C as notified.

### **1.2.2 Reasons**

- There are currently no known issues with generalised or localised water table decline. Scientific investigations have indicated that the risk of future water table decline is negligible due to the aquifer's high transmissivity and permeability, and its strong hydrological connection to Lake Dunstan.
- The effectiveness of restriction levels to protect hydro-electric operations on the main stem of the Clutha is limited because of the distance of bores from the lake. The magnitude and timing of stream depletion effects on Lake Dunstan caused by groundwater takes on the Cromwell Terrace depends on a wide range of factors, including hydraulic properties of the aquifer, the location of the take and the rate of pumping.
- Any potential impacts of new groundwater takes from the Cromwell Terrace Aquifer on nearby bores or on lake levels of Lake Dunstan can be more effectively dealt with through the resource consent decision-making process.
- Resource consent conditions restricting the taking of water during periods of low surface flows in the Upper Clutha catchment can be imposed where a proposed groundwater take is likely to have a high degree of hydraulic connection to the Clutha or Kawarau Rivers.
- Setting restrictions levels for groundwater takes from the Cromwell Terrace Aquifer based on the lake and/or flow levels of various surface water bodies and for the purpose of protecting hydro-electricity generation operations on the Clutha requires amending the layout of Schedule 4B and the policy framework in Chapter 6. This is considered beyond the scope of the current plan change.

## **CHAPTER 2 – RECOMMENDATIONS ON OTHER PLAN CHANGE MATTERS**

### **2.1 Minor and consequential amendments**

*Chronicle of Key Events, Section 1.4, Schedule 4B  
Plan Change 4C page 2  
Summary of Decisions Requested: page 16*

The plan change proposes a number of minor and consequential changes.

#### **2.1.1 Recommendations**

We considered the submissions and recommend the following:

- (a) Amend the definition of Datum in the Glossary:

*Decisions of Council on Proposed Plan Change 4C  
(Groundwater management: Cromwell Terrace Aquifer)*

*13 December 2014*

**Datum**

The fixed level for basing subsequent level measurements, in this case datum means Otago Metric Datum, which is the Dunedin Vertical Datum (DVD 1958) plus 100 metres below mean sea level.

(b) Adopt any other minor and consequential changes as notified.

### 2.1.2 Reasons

- The correction to Schedule 4B provides for the correct interpretation and consistent administration of the Plan.
- The amended definition of Datum in the glossary provides clarity and avoids level measurements being based on the mean sea level, which is likely to vary over time.
- Clause 10(2) of Schedule 1 RMA provides for any necessary consequential alterations.

## CHAPTER 3 – MATTERS NOT ADDRESSED IN THIS PLAN CHANGE

### 3.1 Beyond the scope of the plan change

*Summary of Decisions Requested: page 16*

Matters that were raised during the submissions and hearing process and that are considered beyond the scope of Plan Change 4C include requests relating to the taking of surface water and the monitoring of the effects of the proposed plan change.

#### 3.1.1 Recommendations

We considered the submissions and recommend the following:

- (a) Make no amendment to address matters beyond the scope of this plan change

#### 3.1.2 Reasons

- Amending the plan change to extend its scope to surface water takes would require a new plan change to ensure that the communities that are potentially affected by these matters are consulted, notified and heard.
- Since 2011, ORC has been monitoring groundwater fluctuations and groundwater quality as part of its State of the Environment (SOE) monitoring program. ORC's SOE monitoring program will continue to assist with identifying issues in regards to any effects groundwater abstraction may have on the aquifer. However, the budget and targets for ORC's monitoring function are set through the annual planning process under the Local Government Act 2002 and there is no need to prescribe in a regulatory plan how ORC will monitor the effects of the plan change.