

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

**Regional
Plan: Water
for Otago**

Operative version

ISBN 978-0-908324-09-5

1 September 2015

This is a true and correct copy of Plan Change 4C to the Regional Plan: Water for Otago which was approved by the resolution of the Otago Regional Council on Wednesday, 5 August 2015.

Plan Change 4C to the Regional Plan: Water is deemed to be operative on Saturday, 1 September 2015.

The Common Seal of the Otago Regional Council was hereto affixed pursuant to the resolution of the Council passed on Wednesday, 5 August 2015 in the presence of:



A handwritten signature in black ink, which appears to read "Stephen Woodhead".

Stephen Woodhead
Chairperson

A handwritten signature in blue ink, which appears to read "Peter Bodeker".
Peter Bodeker
Chief Executive

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SCHEDULE 4: SPECIFIED RESTRICTIONS ON THE
EXERCISE OF PERMITS TO TAKE GROUNDWATER

4. Schedule of the allocation and restriction regime for groundwater

This schedule sets out restrictions that apply to the taking of groundwater from certain aquifers in Otago.

Schedule 4A identifies maximum allocation limits for the taking of groundwater from aquifers identified in the C-series maps, in accordance with Policy 6.4.10A2 of this Plan. Schedule 4B identifies water levels at which the taking of groundwater will be restricted in accordance with Policy 6.4.10A1(b) of this Plan. Schedule 4C identifies matters to be considered when making additions to these schedules through a plan change.

4A Maximum allocation limits for groundwater takes from aquifers

Aquifer Name	Map Reference	Maximum Allocation Limit (million cubic metres per year)
Cromwell Terrace Aquifer	C7	4
North Otago Volcanic Aquifer	C10	7

4B Restrictions for groundwater takes

4B.1 Restriction levels for groundwater takes

Schedule 4B.1 identifies water levels at which the taking of groundwater will be restricted, and identifies the nature of the restriction, in terms of a reduction in the take of water authorised by water permits.

The aquifer maximum height refers to the historic record of the water level or pressure head after the recharge season. Note that the areas over which the restrictions apply are shown on Maps D1 - D4.

Aquifer See Maps D1–D4	Aquifer Reference Bore See Maps D1– D4	Aquifer maximum height (metres above datum)	Restriction levels (m above mean sea level)		
			25% restriction or response in terms of Council recognised rationing regime*	50% restriction	100% restriction
North Otago Volcanic	Websters Well	130.8	126.0	125.5	125.0
Lower Taieri – West	Momona Bore	101.24	100	99.5	99
Lower Taieri – East	Harleys Well, Piezo. 2	112.5	110.5	110.0	109.5
Ettrick Basin	Calder Bore	172.29	170.29	169.79	169.29
Roxburgh Basin (Coal Creek Terrace)	White-Hall Bore	189.5	188	187.8	187.5

* When the aquifer reaches this level there shall be either a 25% restriction or a water allocation committee, appointed by the Otago Regional Council, will implement a protocol to take all practical steps to curb the decline in the aquifer

SCHEDULE 4: SPECIFIED RESTRICTIONS ON THE
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level so as to avoid a 50% restriction. If there is no water allocation committee or the water allocation committee does not use a protocol approved by the Council, the 25% water restriction will apply.

4B.2 Restrictions for Cromwell Terrace Aquifer

There shall be no takes from the Cromwell Terrace Aquifer for irrigation purposes between 1 May and 31 August inclusive in each year.

Because the Cromwell Terrace Aquifer is hydraulically connected to Lake Dunstan, other restrictions may be imposed on resource consents to take water, to help maintain lake levels.

Table of minor and consequential changes

Plan Provision	Detail of proposed change								
Page numbers	Update page numbers.								
Page referencing	Update all references to page numbers throughout the plan.								
Footers	Change footer to read “Regional Plan: Water for Otago (Updated to 1 September 2015)”.								
Title page	Change the date to read “Updated to 1 September 2015”.								
ISBN number	Obtain new ISBN numbers for Regional Plan: Water for Otago, and Regional Plan: Water for Otago Maps.								
Chronicle of key events	<p>Add the following to the end of table:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #d3d3d3;">Key event</th> <th style="background-color: #d3d3d3;">Date notified</th> <th style="background-color: #d3d3d3;">Date decisions released</th> <th style="background-color: #d3d3d3;">Date operative</th> </tr> </thead> <tbody> <tr> <td><u>Plan Change 4C (Groundwater management: Cromwell Terrace Aquifer) to the Regional Plan: Water</u></td> <td style="text-align: center;"><u>16 August 2014</u></td> <td style="text-align: center;"><u>13 December 2014</u></td> <td style="text-align: center;"><u>1 September 2015</u></td> </tr> </tbody> </table>	Key event	Date notified	Date decisions released	Date operative	<u>Plan Change 4C (Groundwater management: Cromwell Terrace Aquifer) to the Regional Plan: Water</u>	<u>16 August 2014</u>	<u>13 December 2014</u>	<u>1 September 2015</u>
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<u>Plan Change 4C (Groundwater management: Cromwell Terrace Aquifer) to the Regional Plan: Water</u>	<u>16 August 2014</u>	<u>13 December 2014</u>	<u>1 September 2015</u>						
section 1.4	<p>Add the following text:</p> <p><u>Proposed Plan Change 4C (Groundwater management: Cromwell Terrace Aquifer) sets a maximum allocation limit for the Cromwell Terrace Aquifer. It was notified on Saturday 16 August 2014, and a total of 8 submissions and 3 further submissions were received. Following the hearing, decisions on submissions received were released on 13 December 2014. Plan Change 4C was made operative on 1 September 2015.</u></p>								
Policy 6.4.10A1	<p>Amend as follows:</p> <p>Enable the taking of water allocated as groundwater by Policy 6.4.1A, by:</p> <p>(a) Determining the volume available for taking as the maximum allocation limit less the assessed maximum annual take for an aquifer calculated using Method 15.8.3.1; and</p> <p>(b) Applying aquifer restrictions levels where specified in Schedule 4B.</p>								

Plan Provision	Detail of proposed change
<p>Policy 6.4.10AB</p>	<p>Amend as follows:</p> <p>To define restrictions levels where needed to protect aquifer properties and water storage.</p> <p>Explanation Groundwater restriction levels can be useful for protecting an aquifer from over-depletion due to extended periods of low recharge, or in managing localised areas of high demand. They can assist in avoiding land subsidence, aquifer compression, reduced outflows to surface water, and sustaining the life supporting capacity of the aquifer. Near the coast or contaminated sites restrictions can minimise the potential for water quality effects by intrusion.</p> <p>Restrictions levels are listed in Schedule 4B, and new aquifers may be added to the schedule using the plan change process.</p> <p>Schedule 4C.2 provides detail of the matters that may be considered when setting restriction levels.</p> <p>Principal reasons for adopting This policy is adopted to enable the taking of groundwater while assisting to maintain groundwater levels and water storage, water quality, aquifer interaction with other water bodies, and avoiding aquifer compression</p>
<p>12.2.3.2A</p>	<p>Amend as follows:</p> <p>Except as provided for by 12.0.1.3, 12.2.1A.3 and 12.2.3.1A, the taking and use of groundwater is a restricted discretionary activity, if:</p> <p>(a) The volume sought is within:</p> <ul style="list-style-type: none"> (i) The maximum allocation limit identified in Schedule 4A; or (ii) 50% of the mean annual recharge calculated under Schedule 4D, for any aquifer not identified in Schedule 4A; or (iii) That volume specified in an existing resource consent where the assessed maximum annual take of the aquifer exceeds its maximum allocation limit; and <p>(b) It is subject to any aquifer restriction levels identified in Schedule 4B; and</p> <p>(c) Where the rate of surface water depletion is greater than 5 l/s, as calculated using Schedule 5A:</p> <ul style="list-style-type: none"> (i) Primary surface water allocation is available; and (ii) For the Waitaki catchment, allocation to activities set out in Table 12.1.4.2 is available.

Plan Provision	Detail of proposed change
	The matters to which the Otago Regional Council has restricted the exercise of its discretion are set out in Rule 12.2.3.4.
12.2.3.4	<p>Amend as follows:</p> <p>Restricted discretionary activity considerations In considering any resource consent for the taking and use of groundwater in terms of Rule 12.2.3.2A, the Otago Regional Council will restrict the exercise of its discretion to the following:</p> <ul style="list-style-type: none"> (i) The maximum allocation limit for the aquifer; and (iA) The assessed maximum annual take for the aquifer; and (ii) The mean annual recharge of the aquifer; and (iii) The effect of the take on the hydrodynamic properties of the aquifer and the vulnerability of the aquifer to compaction; and (iv) Whether any part of the take would constitute allocation from any connected perennial surface water body, and the availability of that allocation; and (v) The rate, volume, timing and frequency of groundwater to be taken and used; and (vi) The proposed methods of take, delivery and application of the groundwater taken; and (vii) The source of groundwater available to be taken; and (viii) The location of the use of the groundwater, when it will be taken out of a local catchment; and (ix) In the case of takes from an aquifer identified in Schedule 4B, the restrictions levels for the aquifer (as identified in that schedule) to be applied to the take of groundwater, if consent is granted; and <p>....</p>

Plan Provision	Detail of proposed change															
Schedule 4	<p>Amend as follows:</p> <p>Schedule of the allocation and restriction regime for groundwater</p> <p>This schedule sets out restrictions that apply to the taking of groundwater from certain aquifers in Otago.</p> <p>Schedule 4A identifies maximum allocation limits for the taking of groundwater from aquifers identified in the C-series maps, in accordance with Policy 6.4.10A2 of this Plan. Schedule 4B identifies water levels at which the taking of groundwater will be restricted in accordance with Policy 6.4.10A1(b) of this Plan. Schedule 4C identifies matters to be considered when making additions to these schedules through a plan change.</p>															
Schedule 4B.1	<p>Replace the words “(m above mean sea level)” with “(metres above datum)” under the heading “Restriction levels” as follows:</p> <table border="1" data-bbox="411 972 1390 1245"> <thead> <tr> <th data-bbox="411 972 563 1182" rowspan="2">Aquifer See Maps D1– D4</th> <th data-bbox="563 972 715 1182" rowspan="2">Aquifer Reference Bore See Maps D1– D4</th> <th data-bbox="715 972 903 1182" rowspan="2">Aquifer maximum height (metres above datum)</th> <th colspan="3" data-bbox="903 972 1390 1055">Restriction levels (metres above datum above mean sea level)</th> </tr> <tr> <th data-bbox="903 1055 1093 1182">25% restriction or response in terms of Council recognised rationing regime*</th> <th data-bbox="1093 1055 1264 1182">50% Restriction</th> <th data-bbox="1264 1055 1390 1182">100% restriction</th> </tr> </thead> <tbody> <tr> <td data-bbox="411 1182 563 1245"></td> <td data-bbox="563 1182 715 1245"></td> <td data-bbox="715 1182 903 1245"></td> <td data-bbox="903 1182 1093 1245"></td> <td data-bbox="1093 1182 1264 1245"></td> <td data-bbox="1264 1182 1390 1245"></td> </tr> </tbody> </table>	Aquifer See Maps D1– D4	Aquifer Reference Bore See Maps D1– D4	Aquifer maximum height (metres above datum)	Restriction levels (metres above datum above mean sea level)			25% restriction or response in terms of Council recognised rationing regime*	50% Restriction	100% restriction						
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Glossary	<p>Amend the definition of datum as follows:</p> <p>Datum The fixed level for basing subsequent level measurements, in this case datum <u>means Otago Metric Datum, which is the Dunedin Vertical Datum (DVD 1958) plus 100 metres below mean sea level.</u></p>															