

02 May 2016

Central Plains Water Trust  
Attn To: Susan Goodfellow  
PO Box 9424  
Tower Junction  
Christchurch 8149



Customer Services  
P. 03 353 9007 or 0800 324 636

PO Box 345  
Christchurch 8140

P. 03 365 3828  
F. 03 365 3194  
E. [ecinfo@ecan.govt.nz](mailto:ecinfo@ecan.govt.nz)

[www.ecan.govt.nz](http://www.ecan.govt.nz)

Dear Sir/Madam

## **CORRECTION TO RESOURCE CONSENT DECISION(S)**

**RECORD NO: CRC165680, NAME: Central Plains Water Trust**

Errors were found in the above consent(s).

- **Condition 4:** a reference is made to bywash discharges that will no longer be occurring as part of this consent.

The condition read:

*The consent holder shall measure leakage from pipes and structures forming part of the reticulation system that delivers water from the Waimakariri and Rakaia Rivers to the farm supply points for comparison with the target of on average not more than 20% of water taken being lost by bywash discharges and leakage from the total reticulation system between 1 September and the following 30 April.*

The condition has been amended to read:

*The consent holder shall measure leakage from pipes and structures forming part of the reticulation system that delivers water from the Waimakariri and Rakaia Rivers to the farm supply points for comparison with the target of on average not more than 20% of water taken being lost by leakage from the total reticulation system between 1 September and the following 30 April.*

- **Condition 7:**

The condition read:

*Prior to and during the use of water from the Central Plains Water Enhancement Scheme for irrigation on individual properties, there shall be a Farm Environment Plan (FEP) prepared, produced, maintained and implemented for each property which shall cover the total farm property (including areas not using water authorised by this consent) as resource consent CRC165686 or any replacement or subsequent variation thereof.*

Our Ref: CRC165680  
Your Customer No: EC127598  
Contact: Customer Services

The condition has been amended to read:

*Prior to and during the use of water from the Central Plains Water Enhancement Scheme for irrigation on individual properties, there shall be a Farm Environment Plan (FEP) prepared, produced, maintained and implemented for each property which shall cover the total farm property (including areas not using water authorised by this consent) as required by resource consent CRC165686 or any replacement or subsequent variation thereof.*

- **Schedule 2:** Condition 29(c) contained an incorrect cross-reference

The condition read:

*“The consent holder may offer to mitigate or remedy the situation immediately subject to the complainant agreeing to reimburse the consent holder for the relevant portion of the cost of any such remedy as in condition 32(b)(ii). Such reimbursement will not extend to the consent holder’s cost in assessing the complaint or any costs of reviews of the complaint by the GSWERP.”*

The condition has been amended to read:

*“The consent holder may offer to mitigate or remedy the situation immediately subject to the complainant agreeing to reimburse the consent holder for the relevant portion of the cost of any such remedy as in condition 29(b)(ii). Such reimbursement will not extend to the consent holder’s cost in assessing the complaint or any costs of reviews of the complaint by the GSWERP.”*

- **Schedule 2:** Condition 19 contained an incorrect cross-reference

The condition read:

*The consent holder shall submit Part 1 of the Ground and Surface Water Plan to the GSWERP for its review and recommendations in accordance with condition 18(d)(i)-to certify that the Plan meets the requirements set out in condition 18.*

The condition has been amended to read:

*The consent holder shall submit Part 1 of the Ground and Surface Water Plan to the GSWERP for its review and recommendations in accordance with condition (18)(c)(i) to certify that the Plan meets the requirements set out in condition 18.*

Please destroy the document(s) currently in your possession and replace it with the enclosed.

**For all queries please contact our Customer Services Section by telephoning (03) 353 9007, 0800ECINFO (0800 324 636), or email [ecinfo@ecan.govt.nz](mailto:ecinfo@ecan.govt.nz) quoting your CRC number above.**

Yours sincerely



**Cecilia Tolan**  
Consents Assistant

2 May 2016

Central Plains Water Trust  
Attn To: Susan Goodfellow  
PO Box 9424  
Tower Junction  
**Christchurch 8149**



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Dear Sir/Madam

## **NOTICE OF RESOURCE CONSENT DECISION(S)**

**RECORD NO: CRC165680**

**NAME: Central Plains Water Trust.**

The decision of Environment Canterbury is to grant your application(s) on the terms and conditions specified in the attached resource consent document(s). Your resource consent(s) commences from the date of this letter advising you of the decision. The reasons for the decision are:

1. No additional adverse effects on the environment, or other persons, due to the change in conditions when considered in combination with discharge permit CRC165686.

For some activities a report is prepared, with officer recommendations, to provide information to the decision makers. If you require a copy of the report please contact our Customer Services section.

If you do not agree with the consent authority decision, you may object to the whole or any part. Notice of any objection must be in writing and lodged with Environment Canterbury within 15 working days of receipt of this decision.

Alternatively you may appeal to the Environment Court, PO Box 2069, Christchurch. The notice of appeal must be lodged with the Court within 15 working days of receipt of this decision, with a copy forwarded to Environment Canterbury within the same timeframe. If you appeal this decision, the commencement date will then be the date on which the decision on the appeal is determined. If you are in any doubt about the correct procedures, you should seek legal advice.

Environment Canterbury takes every measure to improve both applications and processes, and we appreciate your feedback as an important component in ensuring this occurs. You can complete a consents survey on-line at <http://www.ecan.govt.nz/services/resource-consents/pages/surveys.aspx>. Alternatively, you can call our Customer Services Section on 0800 EC INFO who will be happy to complete the survey with you.

Charges, set in accordance with section 36 of the Resource Management Act 1991, shall be paid to the Regional Council for the carrying out of its functions in relation to the administration, monitoring and supervision of resource consents and for the carrying out of its functions under section 35 of the Act.

**Our Ref: CRC165680**  
**Your Ref: EC107911**  
**Contact: Customer Services**

Thank you for helping us make Canterbury a great place to live.

**For all queries please contact our Customer Services Section by telephoning (03) 353 9007, 0800 ECINFO (0800 324 636), or email [ecinfo@ecan.govt.nz](mailto:ecinfo@ecan.govt.nz) quoting your CRC number above.**

Yours sincerely

A handwritten signature in black ink, appearing to be 'J. S.', written in a cursive style.

**CONSENTS PLANNING SECTION**

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# RESOURCE CONSENT CRC165680

*Pursuant to Section 104 of the Resource Management Act 1991*

## The Canterbury Regional Council (known as Environment Canterbury)

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GRANTS TO:	Central Plains Water Trust
A WATER PERMIT:	to change conditions of CRC061973 - to take and use surface water
CHANGE TAKES EFFECT DATE:	06 Apr 2016
EXPIRY DATE:	25 Jul 2047
LOCATION:	Rakaia River, CANTERBURY PLAINS

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### **SUBJECT TO THE FOLLOWING CONDITIONS:**

#### **GENERAL**

##### **Administrative conditions**

- 1 This consent is also subject to the conditions listed in Schedule 2: Administrative Conditions.

##### **Location of water Use**

- 2 Water shall only be used for the irrigation of up to approximately 60,000 hectares of land shown on attached Plan CRC165680.

##### **Authorised persons**

- 3 The consent holder shall not authorise or permit any person to use water under this resource consent unless that authorised person provides a written undertaking that to comply with all the conditions of this resource consent and resource consent CRC165686 or any replacement or subsequent variation thereof, to the same extent as if the resource consent had been granted to that person as well as the consent holder.

##### **Water use requirements**

- 4 The consent holder shall measure leakage from pipes and structures forming part of the reticulation system that delivers water from the Waimakariri and Rakaia Rivers to the farm supply points for comparison with the target of on average not more than 20% of water taken being lost by leakage from the total reticulation system between 1 September and the following 30 April.
- 5 The consent holder shall require all water users supplied with irrigation water for irrigation under this consent to take all practicable steps to:
  - a. ensure that the volume of water used for irrigation does not exceed that required for the soil to reach field capacity; and
  - b. avoid the application of water onto non-productive land such as impermeable surfaces and river or stream riparian strips, and

- c. avoid surface run-off from irrigation, and
- d. avoid leakage from pipes and structures.

Note 1: For the purposes of this consent, "field capacity" is defined as being the moisture content of soils when the addition of further water would result in saturation and/or drainage of water from the soil.

6 Water application rates:

- a. The maximum application rate shall not exceed 5.18 millimetres per day on a scheme-wide basis, provided that if this application rate is shown to result in a particular property exceeding field capacity then the consent holder shall ensure that the application rate is reduced accordingly.
- b. In the event that water authorised for use under this consent is applied to land concurrently with water abstracted from groundwater, the combined volume of water used on that land shall not exceed:
  - i. 6,250 cubic metres per hectare between the 1st July and the following 30th June;
  - ii. the volume authorised on a groundwater irrigation permit if that volume is greater than 6,250 cubic metres per hectare between 1 July and the following 30 June, should the shareholder possess a groundwater permit authorizing irrigation of the same area of land.

## FARM ENVIRONMENT PLANS

### Number and scope

- 7 Prior to and during the use of water from the Central Plains Water Enhancement Scheme for irrigation on individual properties, there shall be a Farm Environment Plan (FEP) prepared, produced, maintained and implemented for each property which shall cover the total farm property (including areas not using water authorised by this consent) as required by resource consent CRC165686 or any replacement or subsequent variation thereof.

## REPORTS

### Annual report on exercise of consent on all properties

- 8 The consent holder shall report annually to the Canterbury Regional Council information on the previous irrigation season in accordance with the reporting requirements stipulate in resource consent CRC165686 or any replacements or subsequent variations thereof.

## ADDITIONAL CONDITIONS

### Conditions of supply

- 9 Water supply restrictions:
- a. The consent holder shall not use water to supply any farm or group of farms, where the farm or group of farms is causing significant adverse localised effects resulting in:
    - i. breaches of the Drinking Water Standards for New Zealand 2005 (revised 2008); or
    - ii. land drainage problems; or

- iii. adverse environmental effects of surface waterways, including any breaches of relevant water quality standard defined in Tables WQL5, WQL6 or WQL16 of the Canterbury Natural Resources Regional Plan Chapter 4: Water Quality – Operative 11 June 2011;  
unless each of the effects listed above are adequately mitigated to an extent that is considered acceptable by Central Plains Water Limited, Attention Compliance Committee, the Groundwater and Surface Water Expert Review Panel and the Compliance and Enforcement Manager of the Canterbury Regional Council.
    - b. For the purposes of this condition the farm or group of farms referred to at (a) of this condition shall be determined by the Compliance Committee of Central Plains Water Limited, Compliance and Enforcement Manager of the Canterbury Regional Council and the GSWERP (as defined in Schedule 2; Administrative Conditions, condition 20).
- 10 No water shall be supplied by the consent holder to any property that has been assigned, in accordance with Part C of Appendix CRC165686 (attached to and forming part of consent CRC165686 or any subsequent replacements or variations thereof), two consecutive C or D grades until that property is re-audited and has been assigned, in accordance with Part C of Appendix CRC165686, an A or B grade. However, until 1 July 2019, if any property would have been graded A or B, and the reason for not receiving this audit grade is a result of not meeting effluent management objectives, then the above supply restriction does not apply.

**Advice note:** the above supply restrictions will only take effect for C or D grades awarded for poor effluent management post 1 July 2019.

#### **Costs for Lake opening**

- 11 The consent holder shall pay 12.5% of the annual costs incurred by the holders of any consent to open Te Waihora/Lake Ellesmere.

**Issued at Christchurch on 2 May 2016**

Canterbury Regional Council



Scale: 1:260,000 @A4

Map Created by Canterbury Maps on 3:37:49 p.m.





## **SCHEDULE 2: ADMINISTRATIVE CONDITIONS**

1. The lapsing provisions of Section 125 of the Resource Management Act 1991 shall not apply until after the expiry of eight years from the commencement date of the consents included in this decision.

### **Environmental Management Fund**

1. Prior to the exercise of this consent, the consent holder shall establish:
  - a. an Environmental Management Fund (EMF) to be managed and distributed by an independent Environmental Management Fund Committee (EMFC) for the purpose of:
    - i. environmental mitigation of the effects of the operation of the water enhancement scheme which is not otherwise required by the individual Farm Environment Plans (FEPs) or specific consent conditions; and
    - ii. environmental management projects within the area affected by the operation of the scheme as shown on Plan CRC165680;
  - b.
    - i. a Te Waihora Environmental Management Fund (TWEMF) to be managed and distributed by Te Rūnanga o Ngai Tahu.
    - ii. No later than 31 August each year, Te Rūnanga o Ngai Tahu shall submit a report to the consent holder setting out the projects supported by the TWEMF.
2. Prior to the exercise of this consent, the consent holder shall establish an EMFC. There shall be at least six members on the EMFC and shall include representatives of:
  - a. Central Plains Water Trust or Central Plains Water Limited;
  - b. Te Rūnanga o Ngai Tahu (being two individuals proposed by Te Rūnanga o Ngai Tahu);
  - c. environmental and recreational interests;
  - d. community interests; and
  - e. Selwyn District Council, Christchurch City Council, Canterbury Regional Council and/or a representative from the Canterbury Water Management Strategy Selwyn-Waihora zone committee.

The nominated membership of the EMFC shall be submitted to the CRC attention Compliance Enforcement Manager, who will confirm their suitability prior to the EMFC being able to operate

3. The fund shall not be utilised for any of the following:
  - a. measures required by any resource consent conditions;
  - b. any administration or education associated with any resource consent conditions, the EMS or FEPs.
4. The consent holder shall submit a report to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Officer which details the following:
  - a. Fund structure and management;
  - b. The level of levy (initially at least \$0.40 per share per annum);
  - c. Criteria for seeking , selecting and approving applications;

- d. Criteria for a rebate of the levy to recompense water users for the capital costs of environmental enhancement work on water users own properties, which is not otherwise required by their Farm Environment Plan or the consent conditions (up to 50% rebate of the levy paid by any one water user in any one year).
5. By the time 10,000 hectares of land is irrigated under this scheme, the EMF shall have a minimum amount of \$300,000. Each water user that enters a Water Users Agreement with the consent holder shall commence paying the levy from the date which the Water Users Agreement is signed.
6. The levy shall increase annually based on the all groups consumer price index as published quarterly by Statistics NZ. The initial rate of 40 cents per share shall be established as equivalent to the all groups consumer price index for 1 July 2010. The first annual adjustment of the levy shall take place on 1 July 2011.
7. The priority for the distribution and use of the scheme EMF, shall be the following environmental mitigation if it is not also required by the individual FEPs or consent conditions specified in resource consents CRC165680 and CRC165686, or any replacement or subsequent variation thereof, and the Ground and Surface water Plan:
  - a. Minimising nutrient losses to lowland streams and Te Waihora/Lake Ellesmere;
  - b. Excluding stock from wetlands, riparian margins and beds of rivers and streams;
  - c. Physical protection or enhancement of indigenous vegetation planting along riparian margins;
  - d. Indigenous wetland enhancement or indigenous wetland creation, including the development of indigenous wetlands along intermittent streams;
  - e. Permanent protection of wetland areas that may contain mudfish.
8. The consent holder shall facilitate the use of the EMF to implement and where appropriate maintain meaningful environmental enhancement projects which will commence as soon as practicable following the first exercise of the water use consent CRC165680

### **Community Liaison**

9. The consent holder shall, prior to the exercise of this consent, undertake an open, public process to offer membership positions on a Community Liaison Group.
10.
  - a. The Community Liaison Group shall consist of a maximum of six persons with a preference for representatives who can each demonstrate skills or knowledge in at least one of the following:
    - i. Ngai Tahu cultural values;
    - ii. Management of indigenous biodiversity;
    - iii. Recreational uses of the Waimakarri River or Rakaia River;
    - iv. Sustainable irrigated agricultural practices;
    - v. Water quality and sustainable land management;
    - vi. Community and/or business in Central Canterbury;
    - vii. Lowland drainage network operation.
  - b. If required, the Community Liaison Group shall have an Independent Facilitator appointed by the consent holder and approved by the Compliance and

Enforcement Manager of the Canterbury Regional Council, to facilitate the Group's activities.

- c. The consent holder shall meet all the reasonable expenses involved with the running of the Community Liaison Group.
11. The members of the Community Liaison Group shall, at the consent holder's expense, be offered:
  - a. The opportunity to meet every six months, or less frequently as determined by the Community Liaison Group;
  - b. An annual inspection of the Scheme area; and
  - c. The provision of any information to which Canterbury Regional Council is entitled by virtue of this consent.
12. If the Community Liaison Group elects to hold a meeting in accordance with Condition 14, then the Scheme Manager or their nominated representative shall attend the meeting.
13. At least one representative from each of Canterbury Regional Council (in its resource consent regulatory capacity); Canterbury Regional Council (in its river and drainage management capacity); and Christchurch City Council and Selwyn District Council shall be invited to attend meetings.
14. The main purposes of the meetings of the Community Liaison Group are to:
  - a. Be presented by, and discuss with, the consent holder the results of monitoring and reporting as required by the conditions of this consent, including the Annual Environmental Report and the annual overall audit report on compliance with FEPs and EMS
  - b. Discuss, as far as practicable, any community concerns regarding the operation of the Central Plains Water Enhancement Scheme.
  - c. Review and recommend to the consent holder projects for the distribution of funds from the environmental levy to environmental mitigation projects in accordance with Condition 2(b).
  - d. To recommend projects to be considered by the Environmental Management Fund Committee.
15. The Community Liaison Group shall be offered the opportunity to submit information to the Canterbury Regional Council, Attn: RMA Compliance and Enforcement Manager annually in relation to the review of the EMS required by CRC165686 and annual reports.

### **Ground and Surface Water Expert Review Panel**

16. The consent holder shall avoid, remedy or mitigate adverse effects on groundwater, gravel pit operations and lowland drainage which occur as a result of the exercise of this consent.
17. Ground and Surface Water Expert Review Panel:
  - a. Prior to the commencement of any activities authorised by these consents (including the finalisation of the Ground and Surface Water Plan listed in condition 18), the Canterbury Regional Council shall, in consultation with the consent holder, appoint a Ground and Surface Water Expert Review Panel (GSWERP).

- b. The GSWERP shall comprise of five to nine people. The panel members shall be selected so that collectively they provide expertise in the following area:
- i. The operation of the Central Plains Water Enhancement Scheme;
  - ii. Ngai Tahu cultural values;
  - iii. Lowland drainage network operations in Canterbury;
  - iv. Hydrogeology;
  - v. Land drainage;
  - vi. Groundwater quality monitoring; and
  - vii. Surface water monitoring; and
  - viii. The Christchurch and Kaiapoi artesian aquifer systems.

Note: It is acceptable for one person to fill more than one of the roles listed above, provided that person has the appropriate experience and expertise.

- c. The GSWERP shall comprise at a minimum the following:
- i. A technical representative appointed by Central Plains Water Enhancement Scheme management;
  - ii. A technical representative of drainage schemes management from the lower plains;
  - iii. An engineer with expertise and experience in both large scale and localised solutions to land drainage needs;
  - iv. An engineer or scientist with expertise and experience in Canterbury groundwater systems;
  - v. A technical representative chosen by Te Rūnanga o Ngai Tahu;
  - vi. And may also comprise -
  - vii. A technical representative from the Canterbury Regional Council;
  - viii. A technical representative chosen by Christchurch City Council;
  - ix. A technical representative chosen by Selwyn District Council

Provided that no more than one technical representative shall be an employee of, or shall otherwise represent, one of the entities listed in (vi) to (viii)

Note: It is acceptable for one person to fill more than one of the roles listed above provided that person has the appropriate experience and expertise.

- d. The role of the GSWERP shall be to:
- i. review the Ground and Surface Water Plan described in condition 18, and recommend any amendments as it considers appropriate;
  - ii. consult with Te Runanga O Ngai Tahu regarding:
    - A. The monitoring and mitigation measures related to effects on Te Waihora/Lake Ellesmere as proposed in the Ground and Surface Water Plan; and
    - B. The cultural monitoring to be undertaken;

- iii. receive and review reports on the environmental monitoring and mitigation undertaken by the consent holder and any other relevant monitoring results and reports prepared by the Canterbury Regional Council or other bodies;
  - iv. review reports submitted by the consent holder and complaints referred to it in accordance with condition 25, and within two months of the receipt of these reports, convey recommendations to the consent holder regarding the validity of the interpretation of monitoring data and implementation of mitigation measures undertaken by the consent holder;
  - v. determine the likely cause of reported problems with drainage, groundwater or localised surface water quality issues, including using information gathered in accordance with conditions 21 to 24; propose mitigation or remedial measures and determine the extent to which the consent holder must implement them; or contribute to the cost of implementing them, given the consent holder's degree of contribution to the problem. Where effects cannot be addressed by mitigation or remedial measures they shall be addressed by way of financial compensation;
  - vi. recommend to the Community Liaison Group projects for the distribution of funds from the environmental levy to environmental mitigation projects in accordance with Condition 2(b).
  - vii. advise the Canterbury Regional Council if there are grounds to review conditions of consent in the event that an adverse effect arises which is not mitigated or remedied by the consent holder to the extent recommended by the GSWERP; and
  - viii. address other matters that may arise from the exercise of consent CRC165680 and CRC165686 and any subsequent replacements or variations thereof;
- e. The GSWERP shall:
- i. meet no less frequently than once a year; and
  - ii. be funded by the consent holder; and
  - iii. operate on a majority basis; and
  - iv. report no less frequently than once a year on its conclusions and recommendations including any complaints referred to it to Te Rūnanga ō Ngai Tahu, Central Plains Water Limited, Attention Compliance Committee and the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Officer and the consent holder.

18. Ground and Surface Water Plan:

- a. Prior to the first exercise of this consent, the consent holder shall develop a Ground and Surface Water Plan outlining the measures undertaken to monitor and mitigate potential adverse effects that may arise in regard to the following issues:
  - i. Loss of Waimakariri River seepage on the Christchurch-West Melton and Kaiapoi aquifer systems; and
  - ii. Increase in the concentrations of nitrate-nitrogen or other contaminants in the groundwater both beneath and downstream from the Scheme area; and
  - iii. Raised groundwater levels both beneath and downstream from the Scheme area, including any effects on gravel pit operations; and

- iv. Increase in the concentrations of contaminants, including nitrate-nitrogen and phosphorus in surface water bodies, in particular lowland streams and Te Waihora/Lake Ellesmere.
- b. The key objectives of the Ground and Surface Water Plan shall be to outline the cultural and technical aspects of groundwater and surface water monitoring and reporting programme and to describe how the consent holder will avoid, remedy or mitigate adverse effects on groundwater quantity, groundwater quality, surface water levels, surface water quality and lowland drainage which occur as a result of the exercise of this consent.
- c. The Ground and Surface Water Plan shall be submitted to the Central Plains Water Limited, Attention Compliance Committee and Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager in two parts:
  - i. Ground and Surface Water Plan: Part 1 (location and monitoring); and
  - ii. Ground and Surface Water Plan: Part 2 (mitigation and trigger response procedures)
- d. Part 1 of the Ground and Surface Water Plan shall include:
  - i. The location of all farms using water from the Central Plains Water Enhancement Scheme and the associated land use.
  - ii. The location of all surface water quality monitoring sites.
    - A. There shall be at least two monitoring sites in each of the following eight lowland streams that flow into Te Waihora/Lake Ellesmere: the Halswell River, LII River, Selwyn River, Irwell River, Boggy Creek, Hanmer Road Drain, Doyleston Drain, and Harts Creek. The monitoring sites on lowland streams shall include one site near the spring-fed source in the upper catchment and one site upstream of the discharge point to Te Waihora/Lake Ellesmere.
    - B. Unless the GSWERP determines it impracticable to do so:
      - (a) There shall be a minimum of two water quality monitoring sites located to the west of State Highway 1 on each of the following rivers:
        - i. Waikirikiri/Selwyn River;
        - ii. Hororata River;
        - iii. Hawkins River;
        - iv. Waianiwaniwa;
      - (b) On each river, one monitoring site shall be positioned above the Scheme area and one site shall be located within the Scheme area but west of State Highway 1, and located in areas that will be affected by the consent holders activity;
      - (c) There shall be a water quality monitoring site located to the west of State Highway 1 on the springs which feed the Irwell River.
      - (d) The location of each monitoring site shall be determined by the GSWERP and may be altered by the GSWERP from the time to time to ensure compliance with condition 18(d)(B(a) and (b) above.

(e) In the absence of there being a sufficient flow to undertake a valid water quality test, subsurface flow shall be measured.

C. There shall also be at least four monitoring sites located at the terminus of the stockwater network which flows through the Scheme's command area.

Note: the lower stream sites are those currently monitored on a monthly basis by the Canterbury Regional Council.

Where feasible, the upstream monitoring locations shall be sited (or replaced with sites) located within the Scheme supply area where those locations are most likely to be directly affected by the consent holder's activities, as determined by the GSWERP.

D. There shall be at least four monitoring sites in Te Waihora/Lake Ellesmere.

E. The consent holder may rely on data collected on Te Waihora/Lake Ellesmere, lowland streams, other rivers/streams or drains and stockwater network by the Canterbury Regional Council or any other entity in lieu of establishing new monitoring sites. In the event that this third party monitoring is reduced, then the consent holder shall ensure that the sixteen lowland stream monitoring sites and the four Te Waihora/Lake Ellesmere monitoring sites are maintained.

iii. The location, depth and screened interval of specific monitoring bores for assessing effects of the scheme activities on groundwater: specifically groundwater levels, groundwater quality, surface water flow and surface water quality. The minimum requirements for monitoring bores shall be as follows:

A. There shall be at least twenty monitoring bores within the scheme area. At least ten bores shall be located at the down-gradient boundaries of ten different farms that are irrigated by the scheme. At least ten other bores shall be located at the down-gradient boundaries of farms that are not irrigated by the scheme, including some areas that have no irrigation activities. The farms selected shall represent a variety of farm types.

Where feasible, at least half of the monitoring bores that are at the down-gradient boundaries of the farms that are irrigated by the scheme shall be installed in areas of shallow groundwater that could respond relatively quickly to the consent holder's activities, as determined by the GSWERP.

B. Each monitoring bore shall have a screen length sufficient to cover the fluctuations of the water table at that site, ensuring that the water table is intercepted by the screen at all times

C. The diameters of individual bores shall be sufficient to allow the bores to be purged and sampled according to the sampling procedure specified in condition 24(c).

D. If one of the scheme farms associated with a monitoring bore no longer irrigates using water from the scheme, a new bore

shall be established immediately down-gradient of another scheme farm. Similarly, if one of the non-scheme farms associated with a monitoring bore joins the scheme, a new bore shall be established immediately down-gradient of another non-scheme farm.

- E. A monitoring bore shall be replaced by a deeper monitoring bore if a monitoring bore is dry for more than six months.

An alternative monitoring programme recommended by the GSWERP may form part of the Ground and Surface Water Plan, to obtain representative samples of groundwater levels and groundwater quality across and down gradient of the scheme area.

ADVICE NOTE: An alternative monitoring programme recommended by the GSWERP may include additional monitoring related to the effects on groundwater quality from landfills and waste water systems as a result of increased water levels.

- iv. The frequency of groundwater level sampling in the monitoring bores identified in the Ground and Surface Water Plan, with measurements taken at least once per month or any subsequent frequency agreed upon by the GSWERP.
  - A. Groundwater level measurements shall commence at least one year prior to the use of water under resource consent CRC061973 or any replacement or subsequent variation thereof.
  - B. The frequency of the water level measurements may only be reviewed by the GSWERP two years after the commencement of the use of water under resource consent CRC061973.
- v. The frequency of groundwater quality sampling in the monitoring bores identified in the Ground and Surface Water Plan, and shall include the following as a minimum:
  - A. For two years prior to, and ten years after the use of water under CRC061973 commences, groundwater quality samples shall be taken from the bores identified in the Ground and Surface Water Plan in March, June, September and December each year.
  - B. Ten years after the use of water under CRC061973 commences, the frequency of groundwater quality sampling shall reduce to twice per year, where each sample shall be taken during August-September and April-May each year.
- e. Part 2 of the Ground and Surface Water Plan shall include:
  - i. A description of the mitigation measures that may be implemented to address all the potential adverse effects related to groundwater level, groundwater quality and surface water flow and quality issues;
  - ii. A description of the specific trigger levels for each monitoring programme for surface water quality, surface water flows, lake water quality, groundwater quality and groundwater levels;
  - iii. A summary of trigger level response actions for each monitoring programme;



- iv. A description of the range of mitigation measures to be implemented in the event of an adverse effect resulting from the operation of the Scheme;
  - v. The strategy for the monitoring and reporting on the trigger, response and mitigation measures to the Canterbury Regional Council, the GSWERP and the affected land owners.
- 19. The consent holder shall submit Part 1 of the Ground and Surface Water Plan to the GSWERP for its review and recommendations in accordance with condition (18)(c)(i) to certify that the Plan meets the requirements set out in condition 18.
- 20. Prior to the implementation of the monitoring programme outlined in Part 1 of the Ground and Surface Water Plan, the consent holder shall submit the Plan: Part 1 to the Central Plains Water Limited, Attention Compliance Committee and Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, including a report from the GSWERP certifying that the Plan meets condition 18.
- 21. Surface water monitoring:

Prior to the finalisation of the Ground and Surface Water Plan: Part 2, the consent holder shall:

- a. use the existing recent surface water quality and appropriate groundwater quality data and data collected from the surface water monitoring prior to commencement of irrigation activity, to identify specific baseline nutrient and other contaminant concentration levels in the lowland streams, and annual average mass load of nutrients (Nitrate-N) from streams to Lake Ellesmere.
- b. Identify trigger levels as a percentage increase or an absolute concentration increase in nutrient (Nitrate-N) concentration from the agreed mean baseline levels at individual sites, and as a percentage increase or absolute increase from the annual average annual mass load to Lake Ellesmere calculated from the standard monitoring sites and previously determined as the baseline.
- c. The trigger levels shall be included in the Ground and Surface Water Plan: Part 2, and shall be submitted to the GSWERP for its review and agreement.

22. Groundwater levels:

Prior to the finalisation of the Ground and Surface Water Plan: Part 2, the consent holder shall:

- a. Use existing groundwater level data, appropriate surface water quality data and data collected from the groundwater level monitoring to identify specific groundwater levels that shall trigger a response from the consent holder to avoid, mitigate or remedy any adverse effects related to increased groundwater levels, as a result of exercising this consent, including increased groundwater levels or increased duration of high groundwater levels.
- b. The trigger levels shall be included in the Ground and Surface Water Plan: Part 2, and shall be submitted to the GSWERP for its review and agreement.

23. Lowland drainage

Prior to the finalisation of the Ground and Surface Water Plan: Part 2, the consent holder shall:

- a. Undertake a baseline survey of the lowland drainage systems of the Central Plains taking into consideration historical data. The survey shall build on existing data, and include:

- i. An evaluation of the current cultural health and identification of the mahinga kai values of these waterways;
  - ii. An inventory of drains and streams, their location, size and capacity;
  - iii. An inventory of sewerage systems (reticulated and individual septic tanks);
  - iv. The conditions of these facilities, their capacities, maintenance activities, dates of installation, histories of water-level related issues;
  - v. Records of stream and drain flows and groundwater levels;
  - vi. Existing management and administration arrangements for the drainage schemes;
  - vii. Current costs of maintenance and operation of the drainage schemes;
- b. Identify groundwater levels that would trigger the implementation of mitigation measures as specified in condition 22(a). The baseline survey and trigger levels shall be incorporated into the Ground and Surface Water Plan.

24. Groundwater quality monitoring:

- a. For two years prior to, and ten years after the use of water under CRC165680 commences, groundwater quality samples shall be taken from the bores identified in the Ground and Surface Water Plan in March, June, September and December each year;
- b. Ten years after the use of water under CRC165680 commences, the frequency of groundwater quality sampling shall reduce to twice per year, where each sample shall be taken during August-September and April-May each year;
- c. Water quality sampling shall be undertaken in accordance with the latest version of the Canterbury Regional Council guidelines for the collection of groundwater quality samples;
- d. As a minimum, the water quality analyses shall include E.coli, pH, electric conductivity, alkalinity, chloride, ammonia-N, nitrate-nitrogen, total-N, dissolved reactive phosphorus and sulphate.

25. Results of Monitoring:

- a. The consent holder shall prepare a report describing the results of the environmental monitoring outlined in the Ground and Surface Water Plan, for the period from 1 July to the following 30 June for each year;
- b. The consent holder shall submit the report to the GSWERP by the following 1 September. The groundwater report shall include all the monitoring data and an interpretation of background conditions and impacts arising from the consented activities;
- c. The consent holder shall also submit the report to the Central Plains Water Limited, Attention Compliance Committee and Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, by 1 September each year;
- d. Using the results from the environmental monitoring, the consent holder shall prepare Part 2 of the Ground and Surface Water Plan as specified in condition 18(e).

26. The consent holder shall submit Part 2 of the Ground and Surface Water Plan to the Central Plains Water Limited, Attention Compliance Committee and Canterbury

Regional Council, Attention: RMA Compliance and Enforcement Officer prior to the use of water by the Scheme for irrigation. Written confirmation that the Ground and Surface Water Plan complies with the requirements of this condition must be obtained from the Canterbury Regional Council prior to using water for irrigation. Confirmation shall not be unreasonably delayed or withheld.

27. Prior to 1 October each year, the GSWERP shall review the monitoring report described in condition 25(a) and make recommendations to the Central Plains Water Limited, Attention Compliance Committee and the consent holder regarding the validity of the interpretation of monitoring data and the implementation of mitigation measures undertaken by the consent holder. The GSWERP shall also recommend additional mitigation measures that should be undertaken by the consent holder and/or enforcement or condition review actions that should be undertaken by the Central Plains Water Limited, Attention Compliance Committee and Canterbury Regional Council. Within 20 working days of any meeting of the GSWERP, the consent holder shall provide the Central Plains Water Limited, Attention Compliance Committee and Canterbury Regional Council, Attention: RMA Compliance and Enforcement Officer, a copy of the recommendations made by the GSWERP.

28. Exceedance of Trigger Levels:

- a. If any bore within the area shown on the attached Plan CRC061973 exceeds a nitrate-nitrogen concentration of 11.3 grams per cubic metre and the bore supplies domestic water to a dwelling that has infants under the age of six months at the time of the exceedance, then the consent holder shall immediately supply an alternative drinking water supply to those dwellings until it can be demonstrated that the concentration of nitrate-nitrogen in the subject bore is below 11.3 grams per cubic metre, unless it can be demonstrated that the concentration of nitrate-nitrogen in the subject bore exceeded 11.3 grams per cubic metre on at least one occasion prior to the use of water by the consent holder or unless it is concluded that the use of water by the consent holder is not the likely cause of the exceedance.
- b. The Canterbury Regional Council may serve notice on the consent holder of its intention to review the conditions of this consent to deal with any exceedance of any surface water quality trigger level specified in the Ground and Surface Water Plan, which is due to the exercise of this consent.
- c. In the event that the groundwater trigger levels specified in the Ground and Surface Water Plan are reached, the consent holder shall undertake measures to avoid, mitigate or remedy any adverse effects related to groundwater levels that may arise as a result of exercising this consent. Mitigation measures may include but not be limited to:
  - i. Additional monitoring; restricting the use of water for irrigation;
  - ii. The widening and/or deepening of drains to increase their capacity;
  - iii. The installation of more drains;
  - iv. Providing pumped drainage for affected properties or facilities;
  - v. Upgrading sewerage reticulation systems to reduce groundwater infiltration into pipes;
  - vi. More frequent maintenance of existing drains, including cleaning;
  - vii. Financial compensation in lieu of remedial works;
  - viii. Complementary enhancement measures which may include but are not limited to the construction of wetlands; and

- ix. Response measures outlined in Part 2 of the Ground and Surface Water Plan.

29. Response to Groundwater and Surface Water Complaints

When the consent holder is notified by a “complaint” of an adverse environmental effect, then:

- a. Within 10 working days of receipt of the “complaint, the consent holder (or a suitable qualified nominee) shall commence an investigation of the complaint.
- b. Within five working days of completion of its investigation, the consent holder shall notify the complainant (and the CRC Enforcement and Compliance Officer) of:
  - i. the outcome of the investigation, including a description of the assessment process that the consent holder has undertaken regarding the issue raised by the complainant;
  - ii. descriptions of actions to be or that have been undertaken and/or mitigation options, including details of timing and cost sharing and time frames for the implementation of any actions;
  - iii. the complainant’s right to refer the complaint to the Central Plains Water Limited, Attention Compliance Committee and GSWERP, and the contact details of the GSWERP.
- c. The consent holder may offer to mitigate or remedy the situation immediately subject to the complainant agreeing to reimburse the consent holder for the relevant portion of the cost of any such remedy as in condition 29(b)(ii). Such reimbursement will not extend to the consent holder’s cost in assessing the complaint or any costs of reviews of the complaint by the GSWERP.
- d. The consent holder may, instead of undertaking any remedial work or completing the assessment process, with the agreement of the complainant choose to negotiate with the complainant to undertake or pay the cost of those remedial works directly to the complainant, or agree to provide financial compensation to the complainant for losses, or otherwise reach agreement with the complainant in respect of any damage.
- e. Any agreement for the consent holder to pay costs directly to the landowner shall include a written undertaking from the property owner, that on the sale of the property, the property owner will advise the purchaser that the holder of this consent is no longer liable for any effects associated with the use of water that may occur on that property.
- f. For the purpose of this condition, mitigation or remedy shall include works to an extent that alleviates the significance of the adverse effects of the exercise of consent CRC061973.
- g. The consent holder shall notify the Central Plains Water Limited, Attention Compliance Committee and Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager of any complaints made, any recommendation made by the GSWERP, whether or not the consent holder and the complainant are satisfied with the recommendation, and any actions undertaken to remedy the situation.

## **Bond**

30. Prior to the commencement of the activity authorised by this consent, the consent holder shall provide a bond in accordance Schedule 3 attached to this consent.

## **Review**

31. The Canterbury Regional Council may in the last five working days in June and December during the first five years from the date of the first exercise this consent, or until the completion of construction works and thereafter annually on the last five working days of June each year serve notice of its intention to review the conditions of this consent for the purpose of:
  - a. dealing with any adverse effects on the environment which may arise from the exercise of this consent, including on the operation of the Christchurch International Airport;
  - b. ensuring the adequacy of sampling and/or monitoring programmes;
  - c. dealing with any adverse effects or other issue identified in any report submitted as a condition of this consent;
  - d. altering the rate of abstraction from the Rakaia and/or Waimakariri Rivers to correspond to the actual rate of water usage; and/or
  - e. amending the minimum flow restrictions in the takes from the Rakaia and/or Waimakariri Rivers to reflect any changes in the abstraction rate of the other abstractors from the river;
  - f. Altering the rate of abstraction from the Waimakariri River to protect the recharge into the Christchurch-West Melton and Kaiapoi aquifer systems;
  - g. Altering the way in which water is use and/or the way in which mitigation measures are implemented if there is any failure to meet the Drinking Water Standards for New Zealand 2005 (revised 2008), or any future more rigorous standard, in any community water supply wells where that failure is materially contributed to by the activities authorised by this consent;
  - h. Addressing any differences between actual calculated scheme-wide nutrient discharges and the catchment wide Nutrient Discharge Allowance (being provisions to limit the volumes of N or P that can be discharged into the catchment by land use) ("NDA") information being published as part of the work for the Canterbury Water Management Strategy.
32. Charges, set in accordance with section 36 of the Resource Management Act 1991, shall be paid to the Regional Council for the carrying out of its functions in relation to the administration, monitoring and supervision of resource consents and for the carrying out of its functions under section 35 of the Act.