TRUSTPOWER LIMITED

BARRHILL CHERTSEY IRRIGATION LIMITED

ELECTRICITY ASHBURTON LIMITED

STORED WATER RELEASE AGREEMENT

RUSSELL McVEAGH

2509319

CONTENTS

AGREEMENT dated 18th. March. 2013

PARTIES

TRUSTPOWER LIMITED a duly incorporated company having its registered office at Truman Lane, Rd 5, Tauranga 3175 ("**TrustPower**")

BARRHILL CHERTSEY IRRIGATION LIMITED a duly incorporated company having its registered office at Croys Ltd, Level 2, 161 Burnett Street, Ashburton ("**BCIL**")

ELECTRICITY ASHBURTON LIMITED a duly incorporated company having its registered office at 22 JB Cullen Drive, Ashburton Business Estate, Ashburton ("**EAL**")

INTRODUCTION

A. TrustPower has developed a water storage concept whereby:

(a) TrustPower stores water in Lake Coleridge;

(b) this stored water can be released by TrustPower either into the Rakaia River or into the Canal at such times as is required to provide water to certain persons who can take that stored water so released, provided that they:

(i) are recorded on the Register;

(ii) have any Resource Consent required to take water from the Rakaia River or the Canal;

(iii) amend that Resource Consent to authorise the taking of stored water when the Rakaia River is below certain minimum flows; and

(iv) have a separate agreement with TrustPower authorising the taking of stored water (with this agreement being such a separate agreement for BCIL).

This is more fully described in the annexure.

B. TrustPower may construct a canal from Lake Coleridge which can be used to convey water for electricity generation purposes as well as for irrigation purposes.

C. BCIL and EAL have entered into an unincorporated joint venture to construct and operate water distribution systems.

D. The parties have entered into the Pumping Deed whereby TrustPower may pump up to 8 cumecs of water from the Rakaia River into the Rangitata Diversion Race.

E. The JV Parties hold resource consents to take up to 17 cumecs of water from the Rakaia River.

F. The JV Parties wish to have a portion of the Stored Water Released into the Rakaia River and / or the Canal from time to time, which the JV Parties propose to extract in accordance with the terms set out in Introduction A.

G. The parties have entered into this agreement to set out the terms and conditions applicable to the arrangements referred to in Introductions A and F.

AGREEMENT

1. INTERPRETATION

1.1 **Definitions:** In this agreement, unless the context otherwise requires:

"Additional Water" means the additional water requested and agreed to be Released for any particular Release Season in excess of the Contracted Take or Pay Water, as referred to in clause 5.1 and 5.2(a).

"Additional Water Release Charge" has the meaning ascribed to that term in clause 12.1(b).

"Authority" means any minister, department of state, government authority, regional council, territorial authority or other statutory authority having jurisdiction or authority to perform or exercise functions or powers under or pursuant to any Law.

"Business Day" means a day on which registered banks are open for business in Tauranga and Christchurch, excluding Saturdays, Sundays and public holidays.

"Canal" means any structure constructed whereby water may be diverted or discharged by TrustPower from Lake Coleridge for such water to be able to be Released by TrustPower, and includes the canal currently proposed to be constructed by TrustPower along the true left bank of the Rakaia River whereby water may be diverted or discharged by TrustPower from Lake Coleridge.

"Charges" means the Storage Charge, the Additional Water Release Charge and the Stored Water Refill Release Charge.

"Commencement Date" means such date agreed between the parties, or, if no such agreement, means the later of:

(a) 1 October 2013; and

(b) 1 October immediately occurring after the condition in clause 2.1(a) has been satisfied.

"Consent" means, in relation to any activity, any designation, plan change or variation, rule, approval, Resource Consent or other consent, licence, permit or other authorisation that the party undertaking, or proposing to undertake, the activity determines to obtain from any Authority in relation to that activity, or which is required in respect of that activity.

"Contracted Take or Pay Water" means the volume of Stored Water TrustPower is to Release to JV Parties, as referred to in clause 4.1, and as may be increased as referred to in clause 4.5 and clause 4.6, but which may not thereafter be decreased except as it may be reduced in respect of any Release Season in accordance with clause 4.7.

"CPI" means the Consumer Price Index as calculated by Statistics New Zealand and published quarterly or such replacement index as is reasonably nominated by TrustPower if the Consumer Price Index ceases to exist or is varied from that applicable as at the date of this agreement.

"cumecs" means cubic metres per second.

"**Daily Take**" means the volume of water (Stored Water and non-Stored Water) extracted from the Rakaia River and the Canal by or on behalf of JV Parties in the immediately preceding Day.

"**Day**" means a period of 24 hours commencing at midnight of the previous day (and "**Daily**" shall have a corresponding meaning).

"**Default Rate**" means the aggregate of 5% plus the mid or "FRA" rate for 90 day bank accepted bills (expressed as a percentage) as quoted on Reuters page BKBM (or any successor page) at or about 10:45am on the first Business Day of the period in respect of which such rate of interest is to be calculated, and thereafter at intervals of 90 days from that Business Day.

"**Discharge Metering Equipment**" means metering equipment installed at a Discharge Point to measure and record the water Released at that Discharge Point.

"**Discharge Point**" means as at the date of this agreement, the discharge point at the Coleridge Hydroelectric Power Scheme as specified by TrustPower, and after the construction and commissioning of the Canal, the discharge point(s) from the Coleridge Hydroelectric Power Station and/or the Canal as specified from time to time by TrustPower.

"**Dispute**" has the meaning given in clause 16.1.

"**Expert**" has the meaning given in clause 16.2(c).

"**Extraction Maximum Flow Rate**" means the maximum rate, in cumecs but averaged over a 24 hour period, at which JV Parties can extract Stored Water from either the Rakaia River or the Canal, whichever is applicable.

"**First Participants**" mean the persons (including JV Parties):

(a) who have an agreement with TrustPower which is then in force and applicable in respect of the relevant Release Season, for the supply of Stored Water in respect of that Release Season; and

(b) are on the Register; and

(c) whose Contracted Take or Pay Water for the supply of Stored Water, when aggregated with each other, equals 100 million cubic metres (or such other volume as is aggregated should the total Contracted Take or Pay Water of all persons be less than 100 million cubic metres); and

(d) who entered into their agreement referred to in paragraph (a) prior to other persons whose volume of Contracted Take or Pay Water, if aggregated with the First Participant's, would exceed 100 million cubic metres

provided that, if the last First Participant has a volume of Contracted Take or Pay Water which, when aggregated with the contracted release of all other First Participants, would cause the aggregate to exceed 100 million cubic metres, their Contracted Take or Pay Water will be reduced on a pro rata basis for the purposes of this agreement such that the aggregate equals 100 million cubic metres.

"**Force Majeure Event**" means any event or circumstance, or combination of events and circumstances:

(a) that causes or results in preventing or delaying a party from performing any of its obligations in this agreement; and

(b) which is beyond the reasonable control of that party, or where the effects of that event or circumstance, or that combination of events or circumstances, could not have been prevented or delayed, overcome or remedied by the exercise by the party of a standard of care and diligence consistent with Good Industry Practice,

which occurs after the date of this agreement including:

(c) an act of God;

(d) strike or lockout, act of public enemy, war (whether declared or undeclared), blockade, revolution, riot, insurrection, malicious damage, civil commotion;

(e) lightning, landslide, cyclone, storm, flood, drought, fire, earthquake, explosion, tidal wave, epidemic;

(f) action, inaction, demand, restraint, restriction, requirement, prevention, frustration or hindrance by any governmental agency or other competent authority, including any review of any consent conditions by an Authority;

(g) order of the Court;

(h) embargo, unavailability or shortage of essential equipment, or other materials, goods, labour, water, electricity, or services, lack of transportation or communication;

(i) any breakage or failure of any equipment, machinery, lines or pipes;

(j) restraint on access to property; or

(k) lack of water arising from an event or circumstance, or events or circumstances, beyond the reasonable control of TrustPower, or where the effects of that event or circumstance, or that combination of events or circumstances, could not have been prevented or delayed, overcome or remedied by the exercise by TrustPower of a standard of care and diligence consistent with clause 7.6, thereby preventing TrustPower from accumulating or replenishing all the required volume of Contracted Take or Pay Water for that Release Season.

"**GST**" means goods and services tax or similar value added tax levied or imposed under the Goods and Services Tax Act 1985.

"**Good Industry Practice**" means the exercise of that degree of skill, diligence, prudence, foresight and economic management which would reasonably and ordinarily be expected from a skilled and experienced person engaged in the provision of services the same as or similar to those provided under the same or similar circumstances as apply in New Zealand at the time.

"**Gorge Flow**" means the mean Daily flow of the Rakaia River as estimated for the preceding Day by the Canterbury Regional Council from measurements at:

(a) the recorder site maintained by that Council at the Rakaia Gorge Bridge (map reference K35:014424 on Map series NZMS260); or

(b) the recorder site maintained by National Institute of Water and Atmospheric Research Limited at Fighting Hill (map reference K35:997437 on Map series NZMS260,

and including the mean Daily flow of Normal Water diverted or discharged into any canal from Lake Coleridge, but minus the mean Daily flow of Stored Water discharged from Lake Coleridge into the Rakaia River above the Rakaia Gorge.

"**JV Parties**" means BCIL and EAL.

"**Lake Coleridge Project**" has the meaning ascribed to that term in the Water Conservation Order.

"**Laws**" includes all applicable Consents, statutes, regulations, codes (including the Electricity Industry Participant Code), local authority requirements, district plans and district rules, and regional plans and regional rules.

"**Loss**" means all costs, losses, liabilities (including legal and other professional expenses on a full indemnity basis and GST and similar taxes), claims, demands, damages, fines and penalties including any consequential or indirect losses, economic losses or loss of profits and "**Losses**" shall have a corresponding meaning.

"**Normal Water**" means water in the Rakaia River or in the Canal which is not Stored Water.

"**Off-take Metering Equipment**" means metering equipment installed at Off-take Points of Supply to measure and record the water taken by (or on behalf of) JV Parties from any part or parts of the Rakaia River and / or the Canal at that or those Off-take Point(s) of Supply.

"**Off-take Point of Supply**" means the structure or structures on the Rakaia River and / or the Canal where water is taken from any part or parts of the Rakaia River by or on behalf of JV Parties.

"**Pumping Deed**" means the deed between the parties dated 3 December 2009, as amended.

"**Ramping Period**" means a period of 10 years commencing on 1 October 2013.

"**Ramping Period Notice**" means a notice given by the JV Parties to TrustPower pursuant to clause 4.2 specifying the volume of Contracted Take or Pay Water the JV Parties request be released in the relevant Ramping Period.

"**Ramping Period Release Season**" means a Release Season occurring in the Ramping Period.

"**Register**" means the register administered by the Canterbury Regional Council which lists the holders of Resource Consents to abstract or divert water from the Rakaia River downstream of the Rakaia Gorge Bridge who have obtained the written approval of the holder of the Consents for the Lake Coleridge Hydroelectric Power Scheme to take or divert Stored Water.

"**Release**" means for TrustPower to discharge water into either the Canal or into the Rakaia River from Lake Coleridge, and "**Released**" shall have a corresponding meaning.

"**Release Season**" means the period commencing on 1 October in one year and ending on 30 April in the immediately following year.

"**Resource Consent**" means a resource consent under the RMA.

"**RMA**" means the Resource Management Act 1991.

"**RRIA Inc Agreement**" has the meaning ascribed to that term in clause 7.2(a).

"**Storage Charge**" has the meaning ascribed to that term in clause 12.1(a).

"**Stored Water**" means water that has been taken or diverted into Lake Coleridge which is no greater than:

(a) half of the excess Gorge Flow (the excess Gorge Flow is that part of the Gorge Flow that exceeds the minimum Gorge Flow specified in clause 7 of the Water Conservation Order by more than 140 cubic metres per second); plus

(b) any water that could have been taken or diverted from that part of the Rakaia River between the Rakaia Gorge Bridge and the sea by the holders of Resource Consents listed on the Register and subject to the conditions of those Resource Consents listed on the Register, but which was not taken or diverted.

"**Stored Water Refill**" has the meaning ascribed to that term in clause 5.4.

"**Stored Water Refill Release Charge**" has the meaning ascribed to that term in clause 12.1(c).

"**Technical Dispute**" means a dispute which, in either party's opinion, is of a technical nature relating to matters such as metering and should be resolved using the procedure in clause 16.2, provided however that if the recipient of the notice of Dispute objects to the matter being treated as a Technical Dispute within 10 Business Days of the written notice of the Dispute having been received by the recipient, it may give notice to the other party requiring clause 16.1 to apply.

"**Water Conservation Order**" means the National Water Conservation (Rakaia River) Order 1988 (SR 1988/241), as amended from time to time.

1.2 **Interpretation**: Unless the context otherwise requires:

(a) Headings are inserted for convenience only and do not affect the interpretation of this agreement.

(b) References to a person include an individual, partnership, firm, company, body corporate, corporation, association, organisation, trust, estate, state or government or any agency thereof, municipal or local authority, and any other entity, whether incorporated or not (in each case whether or not having a separate legal personality) and that person's successors, permitted assigns, executors and administrators (as applicable).

(c) The singular includes the plural and vice versa, and words denoting individuals include other persons and vice versa.

(d) A reference to any document includes reference to that document as modified, novated, supplemented, varied or replaced from time to time.

(e) The expression "at any time" also means from time to time.

(f) A reference to a section, clause, sub-clause, Schedule or a party is a reference to that section, clause, sub-clause, Schedule or party to this agreement unless stated otherwise.

(g) Referring to anything after the word "including" does not limit what else might be included and any such reference is without limitation to what else might be included.

(h) A reference to any legislation or to any provision of any legislation (including regulations, orders and codes) includes that legislation or provision as from time to time amended, re-enacted or substituted and any statutory instruments, regulations, orders or codes issued under any such legislation or provision.

(i) A reference to a prohibition against doing anything includes a reference to not permitting, suffering or causing that thing to be done.

(j) The rule of construction known as the contra proferentem rule does not apply to this agreement.

(k) Any covenant or agreement on the part of two or more persons binds those persons jointly and severally.

1.3 **Annexure:** The annexure provides a description of the water storage concept. If there is any conflict between the annexure and the balance of this agreement, the balance of this agreement will prevail.

2. CONDITIONS

2.1 **Conditions:** This agreement is conditional upon:

(a) TrustPower commencing the classification of water in Lake Coleridge as Stored Water pursuant to the terms of any amended or replaced Water Conservation Order, on terms acceptable to TrustPower, including with effect that:

(i) TrustPower may store Stored Water in Lake Coleridge; and

(ii) TrustPower may Release Stored Water when requested by persons listed on the Register, with the intention that such persons may extract from the Rakaia River and / or the Canal the volume of water Released in accordance with Consents held by those persons, and irrespective of any minimum flow restrictions or flow sharing otherwise imposed by the Water Conservation Order on holders of Consents; and

(iii) when TrustPower releases Stored Water into the Rakaia River when requested, it is not required to Release any more water than the amount requested;

(b) JV Parties applying for a Consent or varying its Consents so that JV Parties are entitled to extract a volume of water from the Rakaia River on any Day equal to the volume TrustPower Releases as Stored Water at the request of JV Parties in respect of that Day during periods when JV Parties' Resource Consents, as at the date of this agreement, imposes minimum flow restrictions on taking of water from the Rakaia River. TrustPower acknowledges that JV Parties shall not be obliged to apply to vary its Consents until the satisfaction of the condition in clause 2.1(a).

2.2 **Waiver:** JV Parties and TrustPower acknowledge that the conditions contained in clause 2.1 have been inserted for the benefit and protection of both parties and that these conditions may only be waived with the written agreement of both parties.

2.3 **Termination**: If the conditions in clause 2.1 are not fulfilled (or waived in accordance with clause 2.2) by 5.00 pm on 30 September 2013, either party may terminate this agreement by giving written notice to the other.

2.4 **Fulfilment of conditions**: In order to fulfil the conditions in clause 2.1:

(a) JV Parties will apply for the Consent or variation of the existing Consent referred to in clause 2.1(b), diligently pursue that application, and do all things reasonably within its power to obtain that Consent or variation and TrustPower will support that application if requested by JV Parties, provided that such application will not, in TrustPower's reasonable opinion, result in a derogation of TrustPower's existing rights;

(b) TrustPower will seek the amendment or replacement of the Water Conservation Order as referred to in clause 2.1(a), diligently pursue that matter, and do all things reasonably within its power in respect of that matter and JV Parties will support such matter if requested by TrustPower provided that such matter will not, in JV Parties' reasonable opinion, result in a derogation of JV Parties' existing rights;

(c) each party shall use reasonable endeavours, and cooperate with the other party, to cause those conditions to be satisfied; and

(d) each party shall at the request of the other party, provide to the other party such information as the other party may require in respect of satisfaction of those conditions.

This clause does not require a party to pay any money (other than normal fees, costs and charges) (including charges of professional advisers) or incur any material liability, in order to satisfy these conditions nor to undertake any legal action in respect of a matter.

2.5 **Enduring good faith**: If the conditions described in clause 2.1 are not met such that the agreement terminates in accordance with clause 2.3, then the parties shall work in good faith to identify any proposal that is to their mutual benefit and which will improve the reliability of water supply to the JV Parties, however neither party will be required to agree to any such proposal. This obligation will continue until either party gives notice to the other to terminate this obligation.

2.6 **Water Usage Protocol**: Upon satisfaction of the conditions in clause 2.1, the parties shall establish a mechanism acceptable to them, acting reasonably, to provide to each party forecasts on water flows/storage volumes and Releases and such other information as a party may reasonably require assisting it to perform its obligations pursuant to this agreement. The mechanism so established shall be reviewed by the parties prior to the 1st July in each year for the next ensuing Release Season. If the parties are unable to reach agreement on the mechanism or any of the content of the mechanism, then the disagreement shall be a Technical Dispute which shall be resolved in accordance with clause 16.2. Such mechanism shall include:

(a) A mechanism for JV Parties to advise TrustPower of:

(i) JV Parties' forecast Stored Water requirements to enable TrustPower to efficiently manage the storage of water; and

(ii) the Extraction Maximum Flow Rate,

(b) A mechanism for TrustPower to advise a Daily inventory of the volume of Stored Water available to JV Parties for use by the JV Parties, using

TrustPower's reasonable estimates and identifying the amount of Contracted Take or Pay Water, Additional Water and Stored Water Refill that is available to JV Parties.

(c) The sharing between the parties of real time information calculating flows into and out of Lake Coleridge, Rakaia River flows and abstraction of water at any JV Parties intake.

3. TERM

3.1 **Term**: This agreement will continue until 19 December 2031 unless terminated earlier in accordance with its terms.

3.2 **Renewal**: Following the termination of this agreement the parties shall work in good faith to renew this agreement; however neither party will be required to agree to any renewal. This obligation will continue until either party gives notice to the other to terminate this obligation.

4. SUPPLY OF CONTRACTED TAKE OR PAY WATER

4.1 **Total volume of Contracted Take or Pay Water**: Unless TrustPower otherwise agrees or unless varied in accordance with clause 4.5, the total volume of Contracted Take or Pay Water which JV Parties may request be Released to it in any Release Season shall not exceed 20 million cubic metres.

4.2 **Initial Contracted Take or Pay Water during Ramping Period**: By 1 June in each year of the Ramping Period (and on 1 June in the year of the Ramping Period within which the first Release Season commences), JV Parties will provide TrustPower by way of a Ramping Period Notice specifying:

(a) the volume of Contracted Take or Pay Water it wishes to reserve from Stored Water which it can call to be Released during the Ramping Period Release Season beginning 1 October of that year provided that each Ramping Period Notice shall be for a volume of Contracted Take or Pay Water that is:

(i) equal to, or in excess of, the volume of Contracted Take or Pay Water specified in the immediately previous Ramping Period Notice; and

(ii) less than or equal to 20 million cubic metres, unless subsequently increased pursuant to clause 4.5,

and

(b) such other information as TrustPower may require, acting reasonably.

4.3 **TrustPower's obligation:** Subject to clause 7.2(c), upon receipt of a Ramping Period Notice that complies with clause 4.2 TrustPower will agree to the request.

4.4 **Final Contracted Take or Pay Water after Ramping Period**: At the expiry of the Ramping Period, the volume of Contracted Take or Pay Water allocated to JV Parties for the Release Season beginning the next 1 October and for all following Release Seasons for the balance of the Term shall be equal to the volume of Contracted Take or Pay Water contained in the immediately prior Ramping Period Notice, unless subsequently increased pursuant to clause 4.5.

4.5 **JV Parties initiated increase in volume of Contracted Take or Pay Water either during or after the Ramping Period:**

(a) Should JV Parties wish to increase the volume of Contracted Take or Pay Water to be Released in each Release Season, such that the volume of Contracted Take or Pay Water will:

(i) during the Ramping Period, exceed 20 million cubic metres; or

(ii) following the expiry of the Ramping Period, exceed the volume of Contracted Take or Pay Water determined pursuant to clause 4.4,

then it may, prior to 1 June in any year, give written notice to TrustPower ("**Contracted Take or Pay Water Increase Notice**") requesting such an increase for the immediately following Release Season.

(b) JV Parties shall specify in the Contracted Take or Pay Water Increase Notice:

(i) the increase in the volume of Contracted Take or Pay Water it wishes to be Released in each Release Season commencing after the Contracted Take or Pay Water Increase Notice; and

(ii) such other information as TrustPower may require, acting reasonably.

(c) Following the receipt of the Contracted Take or Pay Water Increase Notice TrustPower will advise the JV Parties whether the increased volume is available to be allocated to the JV Parties and advise the Charges that will apply in respect of Contracted Take or Pay Water in excess of 20 million cubic metres, as referred to in clause 12.4. If all the proposed increased volume is not available to be allocated, the parties will discuss the reason why that is the case and will seek to agree a lower volume which is available to be allocated to JV Parties.

4.6 **TrustPower initiated increase in volume of Contracted Take or Pay Water**: Without limiting clause 4.5 or 7.2(b), should TrustPower elect to increase the total volume of Contracted Take or Pay Water which may be requested to be Released in all Release Seasons for the balance of the Term, TrustPower will seek to offer such Stored Water to the First Participants, on a proportionate basis (on the basis of each First Participant's Contracted Take or Pay Water at that time) and on such other terms as are determined by TrustPower, acting reasonably. Any Stored Water not so accepted by a First Participant shall be offered to those First Participants who did take up in full TrustPower's offer pursuant to this clause, on a proportionate basis. Any Stored Water not so accepted may then be dealt with by TrustPower as it may determine, provided that any such water not taken up by a person in accordance with this clause 4.6 shall be subsequently offered to the remaining persons who have expressed an interest in further Stored Water, on a proportionate basis based on each such party's Contracted Take or Pay Water at that time.

4.7 **Increased volume of Contracted Take or Pay Water not to be reduced**: If the volume of Contracted Take or Pay Water is increased pursuant to clauses 4.2 to 4.6 (both inclusive), the Contracted Take or Pay Water may not be decreased except by written agreement between the parties.

4.8 **Pre-Season**: Notwithstanding clause 4.2, TrustPower may, in its absolute discretion agree to provide Contracted Take or Pay Water for a Release Season earlier than the commencement of that Release Season if the JV Parties request, in writing, TrustPower to do so. Any agreement by TrustPower to do so will only apply for the relevant Release Season and does not increase the volume of the Contracted Take or Pay Water.

5. SUPPLY OF ADDITIONAL WATER AND STORED WATER REFILL

5.1 **Total volume of Additional Water and Stored Water Refill**: Unless TrustPower otherwise agrees, the maximum total volume of Additional Water or Stored Water Refill which JV Parties may request be Released to it in any Release Season shall be the lesser of the volume calculated in accordance with clause 5.2 and the following:

(a) 13.67 million cubic metres of Additional Water; and

(b) 6.33 million cubic metres of Stored Water Refill.

Nothing in this clause 5.1 implies that Additional Water or Stored Water Refill will be available in any Release Season.

5.2 **Available volume of Additional Water and Stored Water Refill at any one time proportional to Contracted Take or Pay Water volume**: Subject to clauses 5.1 and 5.3, the maximum volumes of Additional Water and Stored Water Refill able to be called upon for Release by JV Parties in accordance with this agreement shall be calculated as follows:

(a) Additional Water = 2/3rd of the volume of the Contracted Take or Pay Water for the relevant Release Season.

(b) Stored Water Refill = 1/3rd of the volume of the Contracted Take or Pay Water for the relevant Release Season.

5.3 **Request in one Release Season for Additional Water**: Should JV Parties require Additional Water to be Released in a particular Release Season in accordance with clause 5.1 or 5.2, then JV Parties may, prior to or at any time during the relevant Release Season, give written notice to TrustPower ("**Additional Water Notice**") requesting Additional Water, specifying in the Additional Water Notice:

(a) the volume of Additional Water JV Parties wish to be Released in the Relevant Release Season; and

(b) such other information as TrustPower may require.

Subject always to clauses 7.2(d), 5.1 and 5.2, upon receipt of the Additional Water Notice, TrustPower will advise JV Parties whether the increased volume of Additional Water is available to be allocated to JV Parties. If it is not, the parties will discuss the reason why that is the case and will seek to agree a lower volume which is available to be allocated JV Parties in the Relevant Release Season.

5.4 **Stored Water Refill**: Where, during a Release Season, and subject first to clause 7.1, further Stored Water arises ("**Stored Water Refill**") (whether from TrustPower Releasing Stored Water creating capacity for further Stored Water to arise, or otherwise), TrustPower will allocate such Stored Water Refill as follows:

(a) Any allocation of Stored Water Refill is subject to the following requirements:

(i) Stored Water Refill shall not be provided to the JV Parties if on any Day A + B > C.

A = Volume of Contracted Take or Pay Water still to be provided by TrustPower to the JV Parties for the Relevant Season.

B = Volume of Stored Water Refill previously provided by TrustPower to the JV Parties for the Relevant Release Season.

C = Volume of Contracted Take or Pay Water contracted to the JV Parties for the Relevant Release Season;

and

(ii) Stored Water Refill shall not be allocated to a person if that person has previously been supplied with Stored Water Refill in that Release Season equal to 1/3rd of that person's Contracted Take or Pay Water; and

(iii) where the JV Parties and another person or persons are entitled to Stored Water Refill, the allocation shall be made on a proportionate basis based on each person's Contracted Take or Pay Water for that Release Season; and

(iv) all calculations of Stored Water Refill, and any allocation thereof, will be undertaken by TrustPower on a daily basis during each Release Season.

(b) Any Stored Water Refill not allocated to a First Participant in accordance with clause 5.4(a) may be dealt with by TrustPower as it may determine.

A hypothetical scenario illustrating this process is set out at paragraph 20 onwards in Annexure One.

6. RELEASE OF CONTRACTED TAKE OR PAY WATER, ADDITIONAL WATER, OR STORED WATER REFILL

6.1 **Record to be kept by TrustPower**: TrustPower will publish a Daily inventory, calculated using TrustPower's reasonable estimates, of the Contracted Take or Pay Water and the volume of Stored Water Refill then still available to be Released to JV Parties. The parties acknowledge that the Daily inventory is an estimate only, and on a monthly basis TrustPower will undertake a formal reconciliation that might result in adjustments to the volume of Stored Water remaining and the amount used.

6.2 **Request during each Release Season for supply of Stored Water**: JV Parties will call for the Release of any Contracted Take or Pay Water, Additional Water or Stored Water Refill as might be available from time to time pursuant to this agreement such that:

(a) JV Parties will, by 6 pm on each Day of the Release Season (and the Day immediately prior to the commencement of that Release Season but excluding the last Day of that Release Season), provide TrustPower with a notice (in the form and in a manner agreed between the parties in accordance with clause 2.6) setting out the volume of Stored Water (and the category of that Stored Water being Contracted Take or Pay Water, Additional Water or Stored Water Refill) required to be Released during the following Day ("**Daily Notice**").

(b) Provided that the Daily Notice is in accordance with this agreement, within 2 hours after receipt of a Daily Notice, TrustPower will advise JV Parties if TrustPower is aware of any reason why it believes that the request for the Release of water set out in the Daily Notice cannot be met. If any such notification is given, TrustPower will include in that notice the following information (to the extent available to TrustPower at that time):

(i) the reason why a request for Release cannot be met and its expected duration; and

(ii) the volume of Stored Water which can be Released during the relevant Day.

6.3 **Release of Stored Water**: Subject to the terms of this agreement, TrustPower will Release Stored Water in accordance with each Daily Notice with the volume Released (together with that Released for other persons having similar arrangements) to be determined from the Discharge Metering Equipment.

6.4 **Advice as to volume taken by JV Parties in the previous Day**: During each Release Season JV Parties will advise the Daily Take to TrustPower by 6 pm on each Day.

6.5 **Release**: If TrustPower is to Release any Stored Water in a Day, TrustPower may do so during such time or times during that Day as it determines and, subject to clause 6.6, at such rate as it determines. This clause assumes that the Water Conservation Order amendments referred to in clause 2.1(a) are enacted in a form that allows all takes and discharges to be measured as 24 hour averages. If the Water Conservation Order is not so amended or is subsequently amended such that takes and discharges cannot be measured as 24 hour averages (together "**Non-Averaging**"), TrustPower and JV Parties will, in good faith, endeavour to agree on an alternative Release arrangement that ensures that no Stored Water is Released to JV Parties pursuant to this agreement at a rate or at a time that prevents the JV Parties from fully taking that Stored Water. The parties acknowledge that any alternative release arrangement will require a re-assessment and renegotiation of the Charges. If agreement cannot be reached within 12 months of Non-Averaging, this agreement can be terminated by either party by written notice to the other within the following three month period (or such other period as the parties agree). The parties will continue with their respective obligations pursuant to this agreement during this 12 month period provided that the Non-Averaging does not give rise to a Force Majeure Event (in which case clause 14 will apply).

6.6 **Release rate**: TrustPower agrees that it will not Release Stored Water to JV Parties at a rate greater than the Extraction Maximum Flow Rate.

7. GENERAL PROVISIONS APPLYING TO STORED WATER

7.1 **Water Shortage event for Stored Water on 1 October:**

(a) TrustPower will monitor the Stored Water inflows into Lake Coleridge and will advise JV Parties if such inflows will, or are likely to, result in a Force Majeure Event (pursuant to sub-clause (k) of the definition of that term) for any part of a Release Season. For the avoidance of doubt and provided that TrustPower acts in accordance with clause 7.6, it is not necessary that the full Contracted Take or Pay Water is available as at any date if TrustPower, acting in accordance with clause 7.6, reasonably believes that Stored Water will arise after that date so that TrustPower can comply with this agreement without notifying a Force Majeure Event (pursuant to sub-clause (k) of the definition of that term), with such subsequent water being classified as Stored Water (and not Stored Water Refill) and dealt with in accordance with this agreement.

(b) If such a Force Majeure Event arises then, subject to clause 7.2(a), the first 100 million cubic metres of Stored Water will be reserved to meet all obligations to the First Participants for Contracted Take or Pay Water. If there is less than 100 million cubic metres of Stored Water available to be supplied to the First Participants, the volume of Stored Water which is available to be supplied will be allocated to the First Participants proportionately according to their respective Contracted Take or Pay Water volumes applicable in respect of the relevant Release Season until such time as there is further Stored Water which permits TrustPower to thereafter provide to each First Participant their

respective Contracted Take or Pay Water of Stored Water (prior to the reduction pursuant to this clause) for the balance of the relevant Release Season (without being required to provide any Stored Water which was not supplied because of the operation of this clause). For the avoidance of doubt, the Stored Water supplied, up to the Contracted Take or Pay Water volume, will be charged at the Storage Charge, not the Stored Water Refill Release Charge.

7.2 **Assurances:**

(a) Notwithstanding any other provision of this agreement, prior to the supply of Stored Water to any other party, TrustPower will supply the Stored Water to which Rakaia River Irrigators Association Incorporated (including the individual members thereof) is entitled to as recorded in the agreement between those parties and TrustPower dated 9 March 2012 (**"RRIA Inc Agreement"**).

(b) Subject to clauses 7.1 and 10.1, the Contracted Take or Pay Water is assured to be provided in each Release Season.

(c) If, prior to the expiry of the Ramping Period, the Contracted Take or Pay Water of JV Parties is less than 20 million cubic metres, then, before TrustPower agrees to supply Stored Water to another person which would result in JV Parties not being able to increase its Contracted Take or Pay Water to 20 million cubic metres, TrustPower will give notice to JV Parties of the proposal to supply a person which will have this result and will give JV Parties the option to increase its Contracted Take or Pay Water to 20 million cubic metres. Should JV Parties not take up this option within a period reasonably specified by TrustPower, TrustPower may proceed with the proposed supply of Stored Water to the other person (with the consequence that JV Parties will not then be able to increase its Contracted Take or Pay Water except in accordance with clauses 4.5 and 4.6, unless otherwise agreed to by TrustPower).

(d) Additional Water will be provided at TrustPower's sole discretion to the extent such Additional Water is available as Stored Water and is deemed by TrustPower to be available for Release during that Release Season. TrustPower will be free to enter into similar arrangements as that referred to in clause 5.3 with other persons. Clause 8.3 will apply in respect of Additional Water.

7.3 **Equality of Treatment**: Except in respect of the arrangements between TrustPower and the Rakaia River Irrigators Association Incorporated (including the individual members thereof) recorded in the RRIA Inc Agreement, TrustPower agrees that it will not offer any other person more favourable terms, taken as a whole, than those applicable to JV Parties, where such persons have agreed to substantially the same terms as accepted by JV Parties. Without limiting the foregoing, TrustPower will be entitled to offer more favourable terms to a person (but not so as to affect clause 7.1) where such person may agree to a lesser standard of certainty of supply of water. TrustPower shall not extend or vary the RRIA Inc Agreement without advising JV Parties of the nature and effect of any such proposed extension or variation and without allowing JV Parties an opportunity to present any concerns it might have to TrustPower.

7.4 **Excess Water**: In the event that JV Parties does not wish to be supplied all its Contracted Take or Pay Water in respect of any Release Season, JV Parties may advise this to TrustPower and TrustPower will then be free to dispose of that water to other parties. Any sum or sums obtained by TrustPower from the disposal of that water to third parties will belong to TrustPower but TrustPower will reduce the amount of the Storage Charge in respect of that water by an amount equal to the lesser of:

(a) the amount received by TrustPower (excluding GST) from the sale of that water to a third party; and

(b) the volume of the water disposed of by TrustPower to a third party (measured in cubic metres) multiplied by $0.07 (as adjusted in accordance with clause 12.2).

7.5 **Water outside the Release Season**: JV Parties may request TrustPower to supply Stored Water outside any Release Season. TrustPower will consider any such request and agrees to negotiate in good faith with JV Parties the terms, including price, at which such supply may be made available.

7.6 **Operation of the Coleridge HEPS**: JV Parties acknowledges that the Lake Coleridge Hydroelectric Power Scheme is one of a number of power schemes operated by TrustPower. TrustPower will operate the Lake Coleridge Hydroelectric Power Scheme in accordance with Good Industry Practice and as part of its portfolio of power schemes so as to seek to optimise, in its discretion, TrustPower's overall revenue and so as to comply with all applicable laws, Consents and contractual obligations including, without limitation, the terms of agreements with parties for the supply of Stored Water. In accordance with this clause, but without limiting clause 7.2(b) or clause 10.1 TrustPower will operate the Lake Coleridge Hydroelectric Power Scheme and will manage the lake level of Lake Coleridge, in a manner that relies on reasonably forecast inflows and outflows, and accordingly there is no absolute requirement on TrustPower to retain the full volume of Contracted Take or Pay Water within Lake Coleridge for each day of the Release Season.

7.7 **Non-use of Water**: Should JV Parties not request to be Released all Stored Water it is entitled to request to be Released to it in any Release Season in accordance with this agreement, then at the end of that Release Season:

(a) JV Parties will not be entitled to request that water to be Released in any subsequent Release Season;

(b) such water may be dealt with as TrustPower sees fit; and

(c) JV Parties will not be entitled to any refund or credit in respect of any charges relating to that water.

7.8 **Further Water**: Should TrustPower have additional Stored Water which it elects may be supplied in any Release Season (but not, necessarily, in any other subsequent Release Season), TrustPower will offer it to the First Participants first on a proportionate basis (based on the amount of water TrustPower is contractually obliged to supply each of the First Participants if requested in a Release Season, excluding Stored Water Refill) and on such other terms as are determined by TrustPower, acting reasonably. Any Stored Water not so accepted may be dealt with by TrustPower as it may elect. For the avoidance of doubt, water purchased by the JV Parties under this clause 7.8 will not be added to the JV Parties' Contracted Take or Pay Water volume.

8. SOURCE OF WATER

8.1 **Lake Coleridge**: JV Parties acknowledge that TrustPower intends to obtain the water which it proposes will be Stored Water from inflows into Lake Coleridge.

8.2 **Delivery**: JV Parties acknowledge that TrustPower's obligation to Release water under this agreement is an obligation to Release water into the Rakaia River and / or Canal from Lake Coleridge by releasing the water from the Lake Coleridge Project at a Discharge Point. As at the date of this agreement, the Discharge Point is, or will be,

upstream of JV Parties' extraction point. The parties will co-operate with each other to ensure that this remains the case. TrustPower is not, pursuant to this agreement, responsible to:

(a) assist JV Parties to extract water from the Rakaia River and / or Canal; nor

(b) to prevent persons other than JV Parties extracting any Stored Water from the Rakaia River and / or Canal which TrustPower has Released in accordance with the requirements of JV Parties.

8.3 **No preference**: If for whatever reason, but subject to clause 7.1 and clause 10, TrustPower is not able to Release the required volume of water to all persons who have entered into arrangements with TrustPower for the Release of water (or at a rate so requested by each of those persons), TrustPower will seek to Release water to the First Participants first (and on a proportionate basis between the First Participants if the volume available is less than that to be supplied to the First Participants, with the proportion on the basis of each First Participant's Contracted Take or Pay Water at that time). The JV Parties acknowledges that, given the nature of this agreement, capacity will be over-allocated. TrustPower is not in breach of this agreement due to such over allocation.

8.4 **Design of Infrastructure**: JV Parties acknowledges that TrustPower is still to build the Canal and may also build other infrastructure to assist with the Release of Stored and Normal Water. Each party will:

(a) subject to clause 8.4(b), work in good faith with the other party to optimise the design of their respective schemes to their mutual benefit (including, but not limited to, the design and location of intakes to take water from either the Rakaia River and/or the Canal); but

(b) shall not be required to agree to the construction or operation of any infrastructure that may derogate from the Consents held by that party. Each party reserves the right to oppose any application for Consents that might be made by the other party to an Authority.

9. OFF-TAKE METERING

9.1 Metering is required for the benefit and protection of both parties and accordingly both parties will take all reasonable and practicable steps to ensure that the metering is undertaken and maintained to best industry standards and practices.

9.2 **Off-take Metering**:

(a) JV Parties will:

(i) install, or ensure that there is installed, Off-take Metering Equipment at each Off-take Point of Supply to determine the volume of water taken from the Rakaia River and / or Canal by JV Parties at that Off-take Point of Supply during each Day in a Release Season;

(ii) ensure that:

(aa) the Off-take Metering Equipment is operated, maintained and read in accordance with good industry practice;

(bb) TrustPower is provided with the Daily Take and data or reports in a form, at the times, and containing the information

reasonably required by TrustPower, from the Off-take Metering Equipment;

(cc) TrustPower is permitted to obtain data directly from the Off-take Metering Equipment and to install (and obtain data directly from) a check meter if requested by TrustPower provided that the check meter does not affect the Off-take Metering Equipment; and

(dd) the Off-take Metering Equipment is tested in accordance with Good Industry Practice if requested by either party.

(b) Neither party may require a test of the accuracy of the Off-take Metering Equipment more frequently than once annually, unless such a test indicated a recording error of greater than 5% in which case further tests may be requested until such time as the accuracy is verified to within +/- 5% recording accuracy. The cost of testing will be borne by the party requesting the test unless the Off-take Metering Equipment is found to be measuring inaccurately, when the cost of the tests will be borne by the Party responsible for installing that Off Take Metering Equipment.

(c) Nothing in this clause 9.2 requires the JV Parties to install, test, maintain, or provide any data from, any Off-take Metering Equipment on any pumps or associated infrastructure owned and operated by TrustPower pursuant to the terms of the Pumping Deed.

9.3 **Discharge Metering Equipment**:

(a) TrustPower will:

(i) install, or ensure that there is installed, Discharge Metering Equipment at each Discharge Point to determine the volume of water Released at that Discharge Point during each Day in a Release Season; and

(ii) ensure that:

(aa) the Discharge Metering Equipment is operated, maintained and read in accordance with Good Industry Practice;

(bb) JV Parties is provided with the Daily discharge and data or reports in a form, at the times, and containing the information reasonably required by JV Parties, from the Discharge Metering Equipment;

(cc) JV Parties is permitted to obtain data directly from the Discharge Metering Equipment and to install (and obtain data directly from) a check meter if requested by JV Parties provided that the check meter does not affect the Discharge Metering Equipment; and

(dd) the Discharge Metering Equipment is tested in accordance with Good Industry Practice if requested by either party.

(b) Neither party may require a test of the accuracy of the Discharge Metering Equipment more frequently than once annually, unless such a test indicated a recording error of greater than 5% in which case further tests may be requested until such time as the accuracy is verified to within +/- 5% recording

accuracy. The cost of testing will be borne by the party requesting the test unless the Discharge Metering Equipment is found to be measuring inaccurately, when the cost of the tests will be borne by TrustPower.

10. INTERRUPTIONS

10.1 **Interruptions by TrustPower:**

(a) TrustPower may suspend or interrupt or cease the Release of Stored Water where TrustPower has given a notice of termination of this agreement due to the default of JV Parties.

(b) TrustPower may suspend or interrupt the Release of water:

(i) when, in TrustPower's reasonable opinion, anything in this agreement would have the effect of requiring TrustPower to seek any additional Consent or any variation to a Consent or may have the effect of any existing Consent being reviewed;

(ii) in accordance with clause 13.9;

(iii) to enable TrustPower to inspect or effect alterations, maintenance, repairs or additions to any method by which TrustPower makes the Release;

(iv) to avoid danger to persons or property;

(v) upon instructions from any Authority;

(vi) due to any Force Majeure Event; or

(vii) to comply with any Law, including to avoid a breach or likely breach of a Consent.

(c) TrustPower will exercise Good Industry Practice to time outages resulting from any action under clause 10.1(b)(iii), where possible, so that they occur outside of the Release Season.

10.2 **Notices of planned interruptions**: TrustPower will give JV Parties as much prior notice as practicable, but with a minimum of 10 Business Days notice, of any planned interruption to Releases. In addition, TrustPower will consult annually with JV Parties regarding TrustPower's annual asset management plan in respect of the mechanism by which water is released from Lake Coleridge and the Canal.

11. FARM PLAN

11.1 The JV Parties will use all reasonable endeavours to ensure that its customers comply with the consent conditions and farm management plan contained in Schedule 1. If the JV Parties supply water to any person who is not to use the water for irrigation purposes, the JV Parties will ensure that that person (and all persons to whom that person supplies the water and so on) must ensure that the ultimate user of the water for irrigation purposes agrees to comply with the requirements of this clause.

12. CHARGES

12.1 **Charges**: In consideration of TrustPower entering into this agreement and agreeing to Release water as contemplated by this agreement, JV Parties agrees to pay to TrustPower the following charges in respect of each Release Season:

(a) a fixed charge ("**Storage Charge**") which is payable irrespective of the level of Releases made by TrustPower in accordance with this agreement, calculated as follows:

A = B x $0.08

Where

A = the Storage Charge

B = the amount of the Contracted Take or Pay Water measured in cubic metres; and

(b) a release charge ("**Additional Water Release Charge**") in respect of Additional Water Released, up to 13.67 million cubic metres, to JV Parties in that Release Season (if any), calculated as follows:

C = D x $0.08

Where

C = the Additional Water Release Charge

D = the volume of Additional Water Released in the Release Season to JV Parties; and

(c) a Stored Water Refill release charge ("**Stored Water Refill Release Charge**") in respect of Stored Water Refill Released, up to 6.33 million cubic metres, to JV Parties in that Release Season, calculated as follows:

E = F x $0.05

Where

E = the Stored Water Refill Release Charge

F = the volume of Stored Water Refill Released in the Release Season to JV Parties.

12.2 **Escalation of the Charges**: The $0.08 of the Storage Charge, the $0.08 of the Additional Water Release Charge, the $0.05 of the Stored Water Refill Release Charge, the $0.07 referred to in clause 7.4(b), and the $0.08 referred to in clause 12.5 shall be escalated, in accordance with the following formula, as at the last Business Day immediately prior to 1 August in each year, to apply in respect of the next Release Season, with the first review being the first August following the Commencement Date:

$$N1 = Nx\left[\frac{A}{B}\right]$$

Where

N = $0.08, $0.08, $0.05, $0.07 or $0.08, as the case may be.

A = the CPI for the quarter ending on 30 June of the relevant Release Season.

B = the CPI for the quarter ending on 30 June 2012, being 1168.

provided that N1 cannot be less than N.

12.3 **Calculation**: TrustPower will be the party undertaking the calculations pursuant to this clause 12 and if any variable required for any calculation pursuant to this clause 12 is not available at the time TrustPower undertakes any of the calculations, TrustPower may, acting reasonably, estimate such variable and upon such variable becoming available, TrustPower will undertake a revised calculation and the parties will make payment to each other to reflect either an over charge or an under charge arising due to the use of the estimated variable rather than the actual variable.

12.4 **Negotiation of Charges:** In respect of:

(a) Contracted Take or Pay Water supplied in excess of 20 million cubic metres;

(b) Additional Water supplied in excess of 13.67 million cubic metres; and

(c) Stored Water Refill supplied in excess of 6.33 million cubic metres,

the Charges payable by JV Parties will be negotiated between the parties.

If, in accordance with clause 7.2(c), the JV Parties have previously declined an offer from TrustPower to increase the volume of Contracted Take or Pay Water, then the amount referred to in clause 12.4(a) in respect of Contracted Take or Pay Water and the amount referred to in clause 12.4(c) in respect of Stored Water Refill will be deemed to refer to the volume of Contracted Take or Pay Water and volume of Stored Water Refill respectively which applied to the JV Parties immediately after declining that offer. In respect of Additional Water, if the JV Parties has previously declined an offer from TrustPower to increase the volume of Additional Water, then the volume specified in clause 12.4(b) will be deemed to be the volume which applied to the JV Parties in respect of Additional Water immediately after declining that offer.

12.5 **Force majeure**: Where TrustPower is unable to Release any Contracted Take or Pay Water because it has suspended or interrupted the Release of Water pursuant to clause 10.1, or a force majeure event occurs under the Pumping Deed preventing TrustPower from pumping water into the Rangitata Diversion Race at the volume required by the JV Parties, and as a direct result, the full amount of the Contracted Take or Pay Water is not Released in the Release Season (being the **"Shortfall"**) the Storage Charge will be reduced by an amount equal to the sum of the amount of the Shortfall (measured in cubic metres) multiplied by $0.08. This sum will be calculated at the end of the relevant Release Season and will be refunded to the JV Parties should the JV Parties have fully paid all sums due by them to TrustPower. If the JV Parties have not fully paid all sums due by them to TrustPower, TrustPower may set this sum off against such outstanding sums with any balance after set off payable to the JV Parties.

13. INVOICING AND GST

13.1 **Invoicing the Storage Charge**: TrustPower will invoice the Storage Charge by calculating this sum for the relevant Release Season and then invoicing this sum by equal monthly instalments during that Release Season. Should the Contracted Take or Pay Water be altered during a Release Season, TrustPower will re-calculate the Storage

Charge for that Release Season and adjust subsequent invoices for that Release Season so as to invoice the correct amount of the Storage Charge in the relevant Release Season.

13.2 **Invoicing the Additional Water Release Charge and the Stored Water Refill Release Charge**: TrustPower will invoice the Additional Water Release Charge and the Stored Water Refill Release Charge monthly, in the month after the first month of the relevant Release Season in respect of which the Additional Water Release Charge and the Stored Water Refill Release Charge is payable.

13.3 **Payment**: All invoices will be payable on or before the 20th day of the month after receipt of the invoice, provided that in all cases JV Parties shall not be required to pay prior to the 20th day of the month in which payment is due.

13.4 **GST and other taxes**: All Charges (and all other sums payable under this agreement) are stated exclusive of GST. TrustPower shall add to the Charges (and where applicable, such other sums) GST and all other taxes, charges and levies, payable to any Authority or Government or regulatory body or payable at Law, as may from time to time be applicable to the Charges or such other sums payable under this agreement or the provision of water pursuant to this agreement, and the same shall be payable contemporaneously with the payment of the Charges and such other sums payable under this agreement.

13.5 **Interest**: Subject to clause 13.10, if JV Parties fails to pay any amount payable to TrustPower under this agreement on the due date, JV Parties will pay to TrustPower interest on that amount at the Default Rate, calculated as at the due date for payment and recalculated in intervals of 90 days thereafter for the period from the due date until the date of payment, provided that nothing in this clause shall affect any rights TrustPower may have, including to suspend its obligations under this agreement, for non-payment of any such amount.

13.6 **Invoice on Termination**: Notwithstanding any provision to the contrary, upon termination or expiry of this agreement, TrustPower will render an invoice to JV Parties for all charges applicable for any period prior to such termination or expiry. JV Parties will pay the amount invoiced within 14 days of receipt of the invoice.

13.7 **No set off**: All amounts payable by JV Parties to TrustPower under this agreement must be paid:

(a) without deduction or set off; and

(b) by way of automatic payment to TrustPower's bank account, as advised by TrustPower to JV Parties from time to time.

13.8 **Combined invoices**: TrustPower may elect to combine any invoices to be sent to JV Parties pursuant to this agreement and to also combine such invoice with any invoices to be sent to the JV Parties pursuant to the Pumping Deed.

13.9 **Prudential Supervision**: Should TrustPower at any time have any concern as to whether the JV Parties will be able to pay any Charges or should EAL cease, or propose to cease, to be a JV Party, TrustPower may at any time thereafter give to the JV Parties a notice requesting that the JV Parties make arrangements acceptable to TrustPower to secure payment to TrustPower of the Charges relating to the current Release Season (or, the immediately succeeding Release Season if the request is made outside of a Release Season), within 10 Business Days of the date of the notice. Should such arrangements not be made TrustPower will be entitled to, without limiting its other remedies, cease the supply of all or part of the Stored Water.

13.10 **Disputed Invoices**: If JV Parties in good faith dispute the accuracy of any invoice, JV Parties shall, within five Business Days after receipt of the invoice, give notice of that fact to TrustPower. That notice shall state the basis of the dispute and give relevant supporting details. JV Parties shall pay the undisputed portion of the invoice and may withhold payment of the portion disputed. If the parties do not resolve the dispute within 20 Business Days of the date of the notice, the dispute shall be determined in accordance with clause 16.

13.11 **Interest**: If upon resolution of a dispute of the nature referred to in clause 13.10 either party has to make a payment to the other, that party shall pay to the other interest on that payment for the period from the due date for payment of the invoice in question to the date of actual payment, calculated at the Default Rate.

13.12 **No payment for Stored Water requested but not supplied**: The JV Parties shall not be obliged to pay TrustPower for Stored Water if TrustPower does not or cannot meet its obligations under this agreement to supply that Stored Water in accordance with the terms of this agreement, and if that is the case the relief from payment shall be limited to the extent to which TrustPower does not or cannot meet its obligations in relation to that Stored Water.

14. FORCE MAJEURE

14.1 **Notice of Force Majeure Event**: If either party is affected by a Force Majeure Event, then it must immediately after the occurrence of the Force Majeure Event notify the other party of the Force Majeure Event and provide details of:

(a) the obligations affected;

(b) the action that the affected party has taken and proposes to take to remedy the situation;

(c) the affected party's estimate of the time during which it will be unable to carry out the affected obligations due to the Force Majeure Event; and

(d) the affected party's estimate of the costs it will incur to remedy the situation.

14.2 **Suspension of Obligations**: Following a Force Majeure Event, the affected party's obligations under this agreement will be suspended but only to the extent and for so long as the period that such obligations are genuinely affected by the Force Majeure Event.

14.3 **Failure to Pay Money or Lack of Finance**:

(a) A party may not rely upon a Force Majeure Event to excuse or suspend any obligation that it has or may have to pay money under this agreement.

(b) A lack of finance can never be a Force Majeure Event.

14.4 **Affected Party's Obligations**: Despite clause 14.1, the party affected by the Force Majeure Event must:

(a) without unreasonable delay use reasonable efforts (including the expenditure of reasonable sums of money) to mitigate the effect upon its performance of this agreement and to fulfil its obligations under this agreement (but without prejudice to the other party's right to terminate this agreement) but nothing in this clause 14 obliges a party to settle a strike, lock out, boycott or other industrial dispute on terms it considers, acting reasonably, to be unacceptable;

(b) keep the other party informed (not less than weekly) of the steps being taken to mitigate the effect upon their performance of this agreement, and an estimate of the continued duration of the delay; and

(c) when the period for which its obligations are affected by a Force Majeure Event ceases, recommence performance of all of its affected obligations under this agreement the subject of its original notice under this clause 14.

14.5 **No Default:** Where a party has validly issued a notice under clause 14.1, that party will not be in default of its obligations under this agreement to the extent that any failure or delay in the observance or performance of those obligations by that party is caused by the relevant Force Majeure Event specified in such a notice.

14.6 **Necessity for New Consents:** The parties acknowledge that an Authority may, during the term of this agreement, require that TrustPower or the JV Parties obtains new Consents so as to allow TrustPower or the JV Parties to fulfil its obligations under this agreement. TrustPower and the JV Parties each agrees that any such requirement by an Authority will, if it prevents the other party from fulfilling its obligations under this agreement, be deemed a Force Majeure Event for the purposes of this agreement.

15. LIMITATION OF LIABILITY

15.1 **Exclusion of Liability:** TrustPower shall not be liable to JV Parties for any Loss which may be sustained by JV Parties in connection with a restriction on, or suspension of, the Release of water pursuant to clauses 7.1, 10 or 13.9.

15.2 **Exclusion of consequential loss:** Neither party nor any of their respective directors, officers, employees or agents shall in any circumstances whatsoever (whether or not the damage is reasonably foreseeable) be liable to the other party, in contract or tort, for:

(a) any indirect loss, consequential loss, loss of profit, loss of revenue, loss of use, loss of contract or loss of goodwill; or

(b) any loss resulting from the liability of the other party to any other person.

This clause does not apply to the Charges, with JV Parties being liable for all Charges, and any Loss which TrustPower may suffer from any failure to pay any Charges.

15.3 **Limitation of Liability:**

(a) Any claims for Loss arising from breach of this agreement by TrustPower must be lodged with TrustPower within six months of the event's occurrence.

(b) TrustPower's maximum aggregate liability to JV Parties for all or any events or breaches of the terms and provisions of this agreement during the Term is the aggregate of the payments made by JV Parties to TrustPower under this agreement in the previous 12 months.

(c) Where a breach arises from a failure by TrustPower to Release water in breach of TrustPower's obligations in this agreement, the maximum liability of TrustPower shall be a sum equal to the charge which JV Parties would have paid for that water if it had been Released.

(d) The aggregate liability of JV Parties to TrustPower for all or any events or breaches of the terms and provisions of this agreement (excluding unpaid Charges and interest thereon) is the aggregate of the payments made by JV Parties to TrustPower under this agreement in the previous 12 months.

15.4 **Benefit**: The benefit of this clause 15 shall extend to the directors, officers, employees and agents of TrustPower and JV Parties respectively and may be enforced by those persons pursuant to the Contracts (Privity) Act 1982.

15.5 **Contracts with customers**: JV Parties will ensure that every agreement between it and its customers contains a clear and unambiguous clause that excludes the liability of TrustPower to that customer including liability in tort. Such a clause must be expressed to be for the benefit of, and enforceable by, TrustPower pursuant to the Contracts (Privity) Act 1982.

16. DISPUTE RESOLUTION

16.1 **Disputes generally**: Any dispute, controversy or claim arising out of or relating to this agreement or the breach, termination or claimed invalidity of this agreement (but expressly excluding any dispute the subject of clause 16.2 or any dispute where the parties have agreed that this clause will not apply) ("**Dispute**") must be dealt with in the following manner:

(a) the party claiming the Dispute must:

(i) give a written notice of the Dispute to the other party; and

(ii) seek to convene a meeting of representatives of the parties to discuss the Dispute with the aim of resolving it;

(b) if such meeting does not take place or fails to resolve the Dispute within 10 Business Days of the written notice of the Dispute having been received, the parties must attempt to resolve the Dispute by negotiation between the chief executive officers of each party, who shall seek to resolve the Dispute within 10 Business Days of the Dispute being referred to them;

(c) if such negotiations between the chief executive officers do not take place or fail to resolve the Dispute within 20 Business Days of the written notice of the Dispute having been received, then:

(i) either party may refer the Dispute to arbitration by a single arbitrator;

(ii) the arbitration will be commenced by a party giving notice to the other party stating the subject matter and details of the Dispute and requiring the Dispute to be referred to arbitration;

(iii) the arbitrator will be appointed by the parties, or failing agreement within 10 Business Days after, and exclusive of, the date of giving the notice, will be appointed at the request of a party by the President for the time being of the New Zealand Law Society (or his or her nominee); and

(iv) the place of arbitration will be Christchurch.

16.2 **Technical Disputes**: Any dispute or controversy as between the parties which is a Technical Dispute must be dealt with in the following manner:

(a) the party claiming the Technical Dispute must:

(i) give a written notice of the Technical Dispute to the other party; and

(ii) seek to convene a meeting of representatives of the parties to discuss the Technical Dispute with the aim of resolving it;

(b) if such meeting does not take place or fails to resolve the Technical Dispute within 10 Business Days of the written notice of the Technical Dispute having been received, the parties must attempt to resolve the Technical Dispute by negotiation between the chief executive officers of each party, who shall be authorised to resolve the Dispute; and

(c) if such negotiations do not take place or fail to resolve the Technical Dispute within 20 Business Days of the written notice of the Technical Dispute having been received, either party may refer the Technical Dispute to the President for the time being of the New Zealand Law Society (or his or her nominee) who shall appoint a professional with expertise in matters similar to the Technical Dispute ("**Expert**") who shall act as an expert and shall following discussions with the parties (which they must make themselves available for at the reasonable request of the Expert) determine the matter within 20 Business Days of his or her appointment. The determination of the Expert (including as to costs) shall be final and binding upon the parties.

16.3 **Interlocutory or urgent relief**: This clause 16 does not prevent any party from seeking urgent interlocutory or declaratory relief from a court of competent jurisdiction where, in that party's reasonable opinion, that action is necessary to protect that party's rights.

16.4 **Continuing obligations**: The parties agree that whilst any Dispute or Technical Dispute is continuing they will (but subject always in the case of TrustPower to clause 10), continue to perform their obligations under this agreement.

17. TERMINATION

17.1 **Termination for cause**: This agreement may be terminated immediately by written notice given by either party (referred to in this clause as the "**first party**") to the other (referred in this clause as the "**second party**") if:

(a) the second party has failed to comply with an earlier written notice given by the first party, specifying a material breach of this agreement by the second party and, in the case of a breach which is capable of remedy, requiring that the second party either:

(i) remedies that breach within 20 Business Days after receipt of that earlier notice (where that breach is capable of being remedied within that period); or

(ii) (if that breach is capable of being remedied, but not within 20 Business Days after receipt of that earlier notice) takes all reasonable steps to remedy that breach as soon as possible and provides a written assurance to the first party that the second party will continue to take such steps until the breach is remedied,

provided that the first party may not at any time give such a notice terminating this agreement if, at that time, the first party is in default under this agreement;

(b) the second party goes into liquidation (otherwise than for a solvent restructuring which has been previously approved in writing by the first party (which approval may not be unreasonably withheld)) or is removed from the New Zealand Companies Register (otherwise than pursuant to an amalgamation approved by the other party) or if a receiver or statutory manager or interim liquidator has been appointed in respect of the second party or any material part of its assets or if any event analogous in nature has occurred in respect of the second party under the laws of any relevant jurisdiction;

(c) the second party makes any assignment to, or enters into an arrangement for the benefit of, its creditors (other than for the purposes of a solvent restructuring); or

(d) the second party has committed any material breach of this agreement, which breach is not capable of being remedied by the second party within 20 Business Days, provided that the first party may not at any time give such a notice terminating this agreement if, at that time, the first party is in default under this agreement.

17.2 **Termination of any Resource Consent**: If:

(a) a party ceases to hold or have the benefit of any Resource Consent or other Consent from any Authority which is necessary for, in the case of TrustPower, its performance of this agreement and, in the case of JV Parties, to extract water; or

(b) it is not lawful for TrustPower to perform of this agreement,

then, without prejudice to the rights and obligation of the parties in respect of such matter, unless the parties otherwise agree, this agreement will thereupon terminate provided that each party will use its respective best endeavours to ensure that in respect of it, the circumstances in this clause 17.2 do not arise.

17.3 **Consequences of termination**: Upon termination of this agreement for whatever reason:

(a) such termination will be without prejudice to the rights and remedies of either party in respect of any breach of this agreement by the other party, where such breach occurred prior to the termination of this agreement; and

(b) the provisions of clauses 2.5, 15 and 23.1, together with those other provisions of this agreement which are incidental to, and required in order to give effect to those clauses, will remain in full force and effect.

18. REPRESENTATIONS AND WARRANTIES

18.1 **Mutual representations and warranties**: Each party represents and warrants to the other party as at the date of this agreement that it:

(a) is of full legal capacity and is duly incorporated under the laws of New Zealand;

(b) has obtained all necessary corporate resolutions and approvals required for it to enter into this agreement and perform its obligations under this agreement;

(c) is able to perform its duties and discharge its responsibilities under this agreement; and

(d) it is not aware of anything which will, or might reasonably be expected to, prevent or impair it from performing all of its obligations under this agreement, in the manner and at the times contemplated by this agreement.

18.2 **Reliance**: The parties acknowledge to each other that the representations contained in this clause 18 are made in circumstances such that they are intended to be relied on by the persons to whom they are made.

19. ASSIGNMENT

19.1 **Binding agreement**: This agreement is binding on, and is for the benefit of, the parties and their respective successors, permitted assigns and transferees.

19.2 **The JV Parties may not assign**: Except as provided by clause 19.3, the JV Parties may not assign or transfer any of their rights or obligations under this agreement without the prior written consent of TrustPower which consent will not be unreasonably withheld. TrustPower will not be unreasonably withholding its consent where the JV Parties do not establish to TrustPower's satisfaction that the proposed assignee or transferee has the financial capability and technical expertise to perform any obligations to be assumed by that assignee or transferee pursuant to such assignment or transfer. There will be deemed to be an assignment of the JV Parties' interest in this agreement in breach of this clause if, without the prior approval of TrustPower, by transfer or allotment of shares or amendment of its company constitution or by some other act or agreement, the effective control of the JV Parties or EAL changes or passes to any person not having effective control as at the date of this agreement.

19.3 **Custodian Company**: The JV Parties may hold their rights under this agreement through a custodian company and subject to the JV Parties guaranteeing all obligations of that custodian company (in a form satisfactory to TrustPower) under this agreement (and without releasing the JV Parties from performing their obligations under this agreement) TrustPower will consent to an assignment to that custodian company. Clause 19.2 will accordingly also apply to the custodian company upon that assignment. In addition, if the custodian company holds as custodian for any person other than the JV Parties solely, this shall be a deemed assignment by the custodian company and a material breach of this agreement.

19.4 **Assignment between JV Parties**: The JV Parties may assign their interest in this agreement between themselves but any proposed assignment by EAL to BCIL of any of its interest under this agreement must not occur until any security required by TrustPower pursuant to clause 13.9 has been provided to TrustPower. Any such assignment shall thereupon release EAL from any liability arising in respect of default by BCIL occurring after the date of assignment.

19.5 **TrustPower may assign**: TrustPower may assign or transfer this agreement to any person who may acquire the Coleridge Hydroelectric Power Station.

19.6 **Sale of water:** Nothing in this agreement prevents JV Parties from selling or otherwise disposing of any water supplied to JV Parties pursuant to this agreement.

20. NO RELIANCE

20.1 **No reliance**: Each party:

(a) acknowledges that it has made its own independent enquiry and investigations in relation to the subject matter of this agreement and has entered into this agreement solely in reliance on its own judgement, and is not relying on any statement or representation (written or oral) made by or on behalf of any party (other than as set out in clause 18.1), or any director, employee, representative or advisor of any party; and

(b) agrees that (to the extent permitted by law) all implied representations or warranties of all other party are excluded; and

(c) unconditionally waives any right to commence any proceeding against any party, or any director, employee, representative or advisor of any party, directly or indirectly arising from any statement or representation not expressly

recorded in this agreement and made or given in connection with the transaction recorded by this agreement.

This clause is intended to be for the benefit of, and to be enforceable under the Contracts (Privity) Act 1982 by, any director, employee, representative or advisor of each party.

21. NOTICES

21.1 **Notice**: Every notice, consent, election or other communication ("**Notice**") for the purposes of this agreement shall:

(a) be in writing; and

(b) be delivered in accordance with clause 21.2.

21.2 **Method of service**: A Notice may be given by:

(a) delivery to the physical address of the relevant party; or

(b) posting it by pre-paid post to the postal address of the relevant party; or

(c) sending it by facsimile transmission to the facsimile number of the relevant party, so long as clause 21.4 is complied with; or

(d) sending it by email to the email address of the relevant party, so long as clause 21.4 is complied with.

21.3 **Time of receipt**: A Notice given in the manner:

(a) specified in clause 21.2(a) is deemed received at the time of delivery;

(b) specified in clause 21.2(b) is deemed received three Business Days after (but exclusive of) the date of posting;

(c) specified in clause 21.2(c) or clause 21.2(d) is deemed (subject to clause 21.4) received:

(i) if sent between the hours of 9am and 5pm on a Business Day, at the time of transmission; or

(ii) if subclause (i) does not apply, at 9am on the Business Day most immediately after the time of sending.

21.4 **Facsimile and email notice**: A Notice given:

(a) by facsimile, is not deemed received unless (if receipt is disputed) the party giving Notice produces a facsimile transmission report of the device from which the transmission was made which evidences full transmission, free of errors, to the facsimile number of the party given Notice;

(b) by email, is not deemed received unless (if receipt is disputed) the party giving Notice produces a printed copy of the email which evidences that the email was sent to the email address of the party given Notice.

21.5 **Addresses**: For the purposes of this clause the address details of each party are:

(a) the details set out below; or

(b) such other details as any party may notify to the others by Notice given in accordance with this clause.

TrustPower:

Physical address:	Truman Lane, Te Maunga, Mt Maunganui, Tauranga
Postal address:	Private Bag 12023, Tauranga Mail Centre, Tauranga
Facsimile number:	(07) 574 4803
Email address:	enquiries@trustpower.co.nz
For the attention of:	Manager Generation Division

JV Parties:

Physical address:	360 Barkers Road, RD12, Rakaia
Postal address:	360 Barkers Road, RD12, Rakaia
Facsimile number:	(03) 302 8897
Email address:	john@wrightfarms.co.nz
For the attention of:	John Wright

22. VARIATION OF AGREEMENT

22.1 **Variation**: Subject to clause 22.2, no alteration to or variation of this agreement shall take effect unless and until the same is in writing, and signed on behalf of each of the parties by a duly authorised representative.

22.2 **Changes in Law**: TrustPower shall be entitled to amend the terms of this agreement by notice to JV Parties where it reasonably considers such amendment is required so as to comply with any Law or any changes in Law or the requirements of any Authority. Unless specified otherwise in such notice, such amendment shall take effect upon receipt by JV Parties of the relevant notice.

23. GENERAL

23.1 **Costs**: Each party shall meet its own costs incurred in relation to this agreement.

23.2 **Authority**: Nothing in this agreement shall create or evidence any partnership, joint venture, agency, trust or employer/employee relationship between the parties, and a party may not make, or allow to be made, any representation that any such relationship exists between the parties. A party shall not have authority to act for, or to incur any obligation on behalf of, the other party, except as expressly provided for in this agreement.

23.3 **Intellectual Property**: All intellectual property owned or developed by a party shall remain the property of that party.

23.4 **Counterparts**: This agreement is deemed to be signed by a party if that party has signed or attached that party's signature to any of the following formats of this agreement:

(a) an original; or

(b) a facsimile copy; or

(c) a photocopy; or

(d) a PDF or email image copy,

and if each party has signed or attached that party's signatures to any such format and delivered it in any such format to the other party, the executed formats shall together constitute a binding agreement between the parties.

23.5 **Third parties**: Except where expressly set out in this agreement, this agreement does not give any rights to any third party or impose on any party any obligations to any third party.

23.6 **No waiver**: Any failure of either party to enforce any of the provisions of this agreement shall not constitute a waiver of any rights to future enforcement.

23.7 **No merger**: The provisions of this agreement, and anything done under, or in connection with, this agreement shall not operate as a merger of any of the rights, powers or remedies of either party under, or in connection with, this agreement or at law, and those rights, powers and remedies shall survive and continue in full force and effect to the extent that they are unfulfilled.

23.8 **Partial invalidity**: If at any time any provision of this agreement is or becomes illegal, invalid or unenforceable in any respect under the law of any relevant jurisdiction, that illegality, invalidity or unenforceability shall not affect the enforceability of the provisions, or (as the case may be) the remaining provisions, of this agreement, nor shall the legality, validity or enforceability of any of those provisions under the law of any other jurisdiction be in any way affected or impaired thereby.

23.9 **Remedies cumulative**: The rights, powers and remedies provided in this agreement are in addition to, and not exclusive of, any rights, powers or remedies provided by the law.

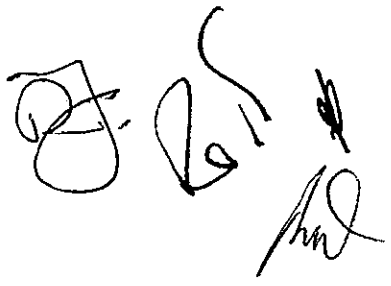
23.10 **Further Acts**: The parties shall do and execute all such further acts and things as are reasonably required to give full effect to the rights given, and the transactions contemplated by, this agreement.

23.11 **Entire agreement**: This agreement constitutes the entire agreement between the parties relating to the subject matter of this agreement and supersedes and cancels any previous agreement, understanding or arrangement whether written or oral.

23.12 **Governing law**: This agreement shall be governed by, and construed in accordance with, the laws of New Zealand, and the parties hereby submit to the non-exclusive jurisdiction of the courts of New Zealand.

23.13 **No priority**: The priority of JV Parties to take water from the Rakaia River pursuant to any Resource Consent is not affected by this agreement. JV Parties will not claim that it has any priority to receive Stored Water over any other person who may contract with TrustPower to the Released Stored Water.

23.14 **Compliance with Laws**: Each party will comply with all Laws in respect of its performance of this agreement. Without limiting the foregoing, JV Parties will comply with its Resource Consents to ensure that it can take water pursuant to this agreement throughout the term of this agreement.



24. VARIATIONS TO THE PUMPING DEED

24.1 **Water Conservation Order**: Upon this agreement becoming unconditional, clause 5 of the Pumping Deed is deleted and will have no further force or effect.

SIGNED AS AN AGREEMENT

TRUSTPOWER LIMITED by:

Michael James Cooney
Name of director

Signature of director

ROBERT WILLIAM HENRY FARRON
Name of ~~director~~/company secretary

Signature of ~~director~~/company secretary

in the presence: ~~Dean~~ O. Wilkey
DEAN OWEN WILKEY
SOLICITOR
TAURANGA

BARRHILL CHERTSEY IRRIGATION LIMITED by:

Name of director

R E McDowell
Signature of director

Roger Anthony Bonifant
Name of director

Signature of director

ELECTRICITY ASHBURTON LIMITED by:

JOHN BRUCE TAVENDALE
Name of director

Signature of director

RAYMOND JAMES DAVY
Name of director

Signature of director

ANNEXURE 1

DESCRIPTION OF STORED WATER CONCEPT

RWCO restrictions

1. The National Water Conservation (Rakaia River) Order 1988 ("**RWCO**") imposes restrictions on the taking of water from the Rakaia River, in order to recognise and sustain identified outstanding values and characteristics. Three of the most important restrictions are:

   (a) the setting of minimum flows for the Rakaia River, below which all taking must cease ("**minimum flow restriction**");

   (b) a limit on the maximum instantaneous take from the Rakaia River of 70 cumecs ("**allocation limit**"); and

   (c) a requirement that, for each cumec of water taken, one cumec must remain in the river - this is known as the 1:1 flow sharing requirement ("**flow sharing requirement**").

2. These restrictions have resulted in Environment Canterbury implementing a "banding system" for the Rakaia River, which essentially ranks the consents to take water, and indicates whether, at any particular river flow, a consent to take water can be exercised in whole or in part. Those consents in the lower bands have more reliable water; those consents in higher bands can only take their water when the flows in the river are higher, and therefore those consents have a lower reliability.

The stored water concept

3. The stored water concept was developed to improve the reliability of water supply to those in the higher (less reliable) bands, while staying within the RWCO's restrictions. This involves amending the RWCO by:

   (a) Permitting certain water entering Lake Coleridge to be classified as "stored water";

   (b) Allowing stored water released from Lake Coleridge to be taken by contracting parties listed on Register:

      (i) at times when those parties could otherwise not exercise their consents (ie because the river's flow is below the minimum flow restriction); and

      (ii) without that stored water being subject to the flow sharing requirement;

   (c) Requiring TrustPower to be able to determine, at any time, what proportion of water in Lake Coleridge is "stored water" (with the balance of the water being called "normal" water).

4. Generally, water entering Lake Coleridge can be classified as stored water if, at the time that water enters Lake Coleridge:

(a) the river flow is more than 140 cumecs above the minimum flow restriction for that month (so, if the minimum flow restriction is 106 cumecs, water entering Lake Coleridge could become classified as stored water if the flow in the river exceeds 246 cumecs) ("**surplus flow water**"); and/or

(b) if consent holders on the Register could have taken water pursuant to their resource consents for that day but did not do so ("**untaken register water**").

5. When water enters Lake Coleridge in both the situations above, both the minimum flow restriction and the flow sharing requirement would be met. Because the stored water met those restrictions when the water was stored, there is no requirement for the water to meet those restrictions when the water is subsequently released.

6. At the end of each day, TrustPower will need to undertake a reconciliation of the water in Lake Coleridge, deducting from the total volume of stored water any stored water released during that day pursuant to requests from contracting parties, but adding back onto the total volume any water entering Lake Coleridge during that day that can be classified as stored water, either because it represents surplus flow water or it represents untaken register water.

7. Water can be classified as stored water throughout the entire year, and it is likely, based on the hydrological modelling, that the vast majority of water will be classified as stored water during spring and early summer. TrustPower therefore expects that, by 1 October (or the latest 1 November) each year, TrustPower will have 100 million cubic metres of stored water available for its use in Lake Coleridge; in the initial tranche of contracts, TrustPower is intending to offer for supply 50 million cubic metres.

8. In addition, it is possible that during the irrigation season there will be occasions when water entering Lake Coleridge could be classified as stored water. However, the most likely source of stored water during this period would be untaken register water. Stored water so classified during an irrigation season is referred to in the agreement as "stored water refill". Stored water refill can also be contracted for supply although, because there is no certainty whether (or how much) stored water refill will be available during any year, the pricing structure differs.

9. Stored water can be called for by those contracting parties in accordance with the process set out in the agreement. This water will be released into either the Rakaia River or into the proposed future canal, and it will be the contracting party's responsibility to take that water. A contracting party will need to vary their resource consent to take water so as to expressly allow them to take stored water when the RWCO would otherwise prevent such taking.

10. Any stored water so taken will count towards any contracting party's daily or weekly volume limitations specified in their resource consent, and stored water cannot be taken (from the river or canal) if the river's allocation limit of 70 cumecs would be exceeded.

11. To be a contracting party and to be able to call for and take stored water, a party must place their consent on a register to be administered by Environment Canterbury. The greater the volume of water on the register, the more often water entering Lake Coleridge will be able to be classified as stored water and so the faster the lake will be filled with stored water at the start of the irrigation season, and more quickly will the lake fill with stored water refill. Because the reconciliation undertaken by TrustPower to assess the volume of untaken register water occurs at the end of each day, placing a consent on the register does not restrict the use that a consent holder can make of that consent on a day to day basis.

12. Environment Canterbury will require all takes to be telemetered, will want to ensure that:

(a) only contracted parties are taking stored water; and

(b) the volume of stored water taken by any contracted party on any day does not exceed the volume of stored water released by TrustPower on that day.

13. Where stored water or stored water refill arises because of untaken register water, that untaken register water does not belong to the relevant consent holder who did not initially take that untaken register water, but will be dealt with as part of the stored water or stored water refill (as the case may be).

Worked examples

13. Attached to this appendix are two diagrams to assist with the worked examples below. Diagram 1 demonstrates how stored water would be calculated in a time of high river flow, while Diagram 2 does likewise for a time of low flow.

Diagram 1 - Stored Water calculation in High Flow

14. Working through Diagram 1:

(a) The month is October, and the minimum flow for October specified by the RWCO is 106 cumecs.

(b) On this particular day in October, the mean daily flow for the Rakaia River was 326 cumecs.

(c) Because of the river's high flows, the full allocation limit (of 70 cumecs) and the full flow sharing associated with that allocation limit (ie an additional 70 cumecs) could be satisfied, and there was surplus flow of 80 cumecs above this flow (ie 326 - (106 + 70 + 70)). Assuming that one half of this excess flow was left in the river to satisfy a further flow sharing allocation, 40 cumecs of flow would be available to TrustPower as surplus flow stored water.

(d) On that same day, the combined maximum rate of take for all consents listed on the register was 50 cumecs.

(e) The telemetry connected to those takes on the register indicated that those consent holders only took 5 cumecs of the 50 cumecs that could have been taken that day - in other words, there was 45 cumecs that could have been taken pursuant to those consents, but which was not.

15. So, in respect of Diagram 1, TrustPower could say that, of the water entering Lake Coleridge that day, there was **85 cumecs** (= 40 cumecs surplus flow stored water + 45 cumecs of untaken register water) that could be classified as stored water. However, the actual flow entering Lake Coleridge on that day was only 50 cumecs, and accordingly the maximum rate at which TrustPower can classify water as stored water is 50 cumecs.

16. At the end of this particular day, TrustPower would convert the 50 cumecs into a daily volume (50 cumecs * 86,400 seconds), and that would represent an "inflow" of stored water of 4,320,000m3.

Diagram 2 - Stored water calculation in Low Flow

17. Turning now to Diagram 2:

(a) The month is April, and the minimum flow for April specified by the RWCO is 97 cumecs.

(b) On this particular day in April, the mean daily flow for the Rakaia River was 137 cumecs.

(c) Because of the river's low flows, there were significant restrictions in place, and the amount able to be taken was only 20 cumecs (with an additional 20 cumecs representing the 1:1 flow sharing requirement). Because of the low flows, there was no surplus flow stored water available (as in Diagram 1).

(d) On that same day, the combined maximum rate of take for all consents listed on the register was 50 cumecs.

(e) However, because of the minimum flow restrictions in place, only 20 cumecs could be taken that day. Of this 20 cumecs that could have been taken, the telemetry indicates that 18 cumecs of this normal water was actually taken, and accordingly there was **2 cumecs** of stored water. (We have assumed for this example that the 50 cumecs on the register includes this 20 cumecs of the most reliable water.)

18. So, in respect of Diagram 2, TrustPower could say that, of the water entering Lake Coleridge that day, there was only 2 cumecs that could be classified as stored water. The actual flow entering Lake Coleridge that day was actually 10 cumecs, however, TrustPower can only use 2 cumecs for the purpose of calculating the stored water accumulated that day.

19. At the end of this particular day in April, TrustPower would convert the 2 cumecs into a daily volume (2 cumecs * 86,400 seconds), and that would represent an "inflow" of stored water of 172,000m3. On this day, pursuant to contracts, TrustPower released 20 cumecs of stored water into the river, and accordingly the net "loss" of stored water in Lake Coleridge for that day is 1,555,200m3 (ie 18 cumecs * 86,400).

Example allocation of Stored Water Refill

20. For the purposes of this example:

(a) At the start of the relevant release season, there is 50 million cubic metres of stored water in Lake Coleridge.

(b) The following parties are allocated Contracted Take or Pay Water for the particular day in the relevant release season, giving a total of 30 million cubic metres:

(i) RRIA - 3 million cubic metres;

(ii) JV Parties - 12 million cubic metres;

(iii) CPW - 15 million cubic metres.

21. By 1 February in the relevant release season, the contracting parties' remaining Contracted Take or Pay Way is as follows:

(i) RRIA - 2 million cubic metres;

(ii) JV Parties - 6 million cubic metres;

(iii) CPW - 12 million cubic metres.

22. On 2 February, there a is fresh flowing down the Rakaia River tributaries, and the volume flowing into Lake Coleridge over a period of several days generates an inflow of

water that can be classified as stored water and accordingly 2 million cubic metres of water is classified as stored water refill.

23. In terms of allocating that stored water as stored water refill, TrustPower would proceed as follows (this calculation and allocation would be made on a daily basis during the times of any such inflows of stored water refill):

(a) The parties eligible for receipt of stored water refill would be those parties who have, at the time, contracted with TrustPower, namely RRIA, JV Parties and CPW.

(b) The allocation to CPW would be calculated as follows: CPW stored water refill = stored water refill volume x (CPW Contracted Take or Pay Water volume / Total Contracted Take or Pay Water Volume).

(c) Using the above example, CPW stored water refill volume would be 1 million cubic metres: 2M m^3 x (15M m^3 / 30M m^3) = 1M m^3.

(d) TrustPower would confirm that CPW has used at least 1M m^3 of its Contracted Take or Pay Water volume. In this case, it has, and so CPW would be allocated its full 1M m^3. (If at this time, CPW's Contracted Take or Pay Water was at 14.5M m^3 (ie if only 0.5M m^3 had been used) then CPW would only be eligible to receive 0.5M m^3 of stored water refill). The remaining 0.5M m^3 of stored water refill, unable to be allocated to CPW, would be then be allocated across remaining parties based on their Contracted Take or Pay volumes.

(e) Similarly, if in this example if JV Parties had, on a particular day;

(i) not used any Contracted Take or Pay Water or,

(ii) previously, within the current release season, received but not used sufficient stored water refill to bring their total available stored water volume back to 12M m^3 or,

(iii) already received sufficient stored water refill to reach their entitlement of stored water refill for the given release season (1/3rd of 12M m^3 = 4M m^3), then,

the portion of stored water refill they would have otherwise been eligible to receive, is re-allocated across the other parties (CPW and RRIA in this example). Based on the above numbers JV Parties would have been eligible for 0.8M m^3: 2M m^3 x (12M m^3 / 30M m^3) = 0.8M m^3. This stored water refill, would therefore be re-allocated to CPW and RRIA with CPW getting an additional 0.67M m^3: 0.8M m^3 x (15M m^3 / (30-12)M m^3) = 0.67M m^3.

(f) The calculation in (e) would be repeated should further parties reach any of the criteria specified in (e) (i), (ii) and (iii).

DIAGRAM 1 - CALCULATION OF STORED WATER (HIGH RIVER FLOW)

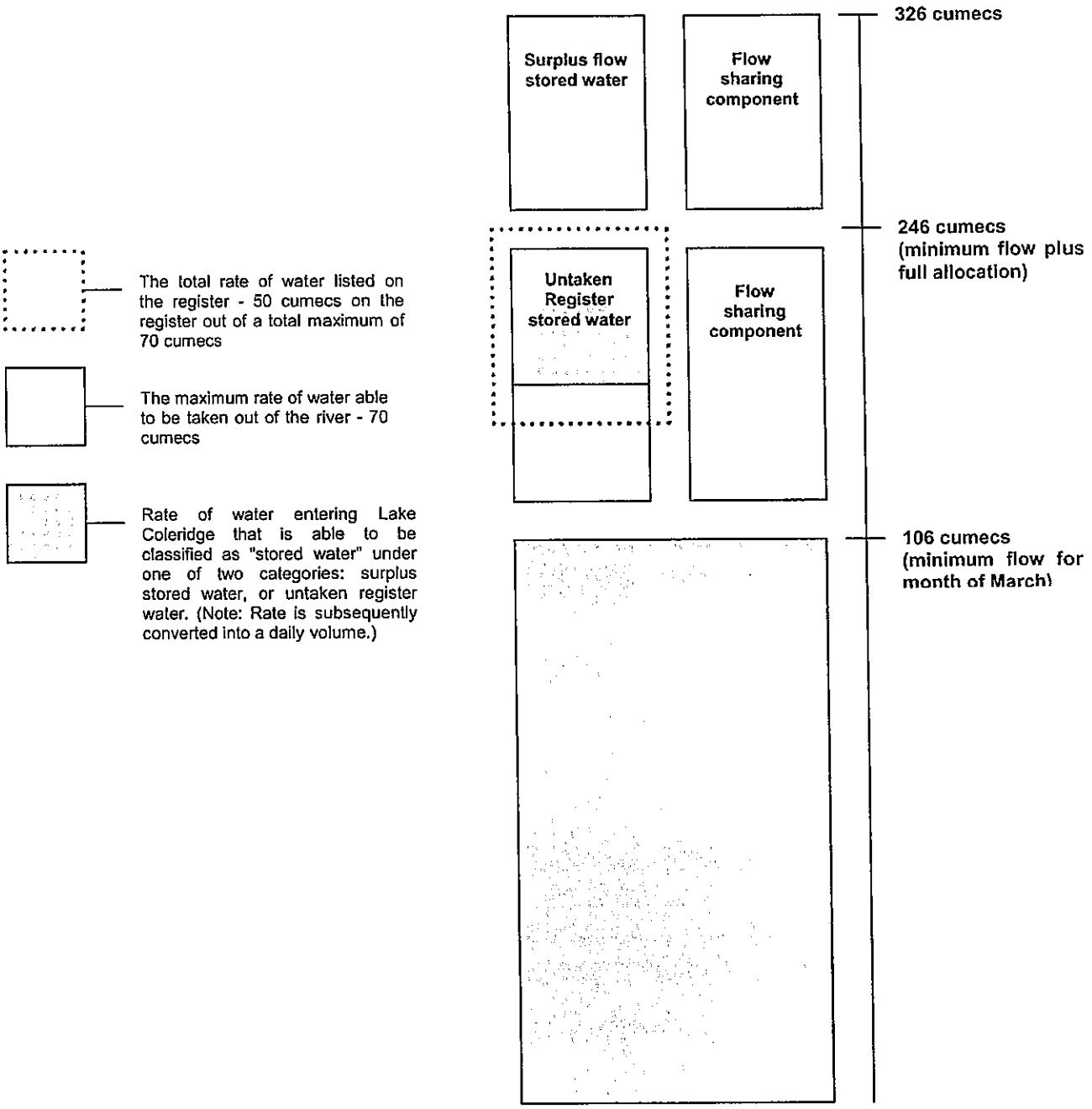
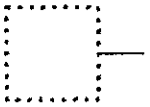
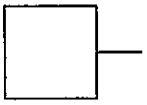


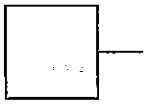
DIAGRAM 2 - CALCULATION OF STORED WATER (LOW RIVER FLOW)



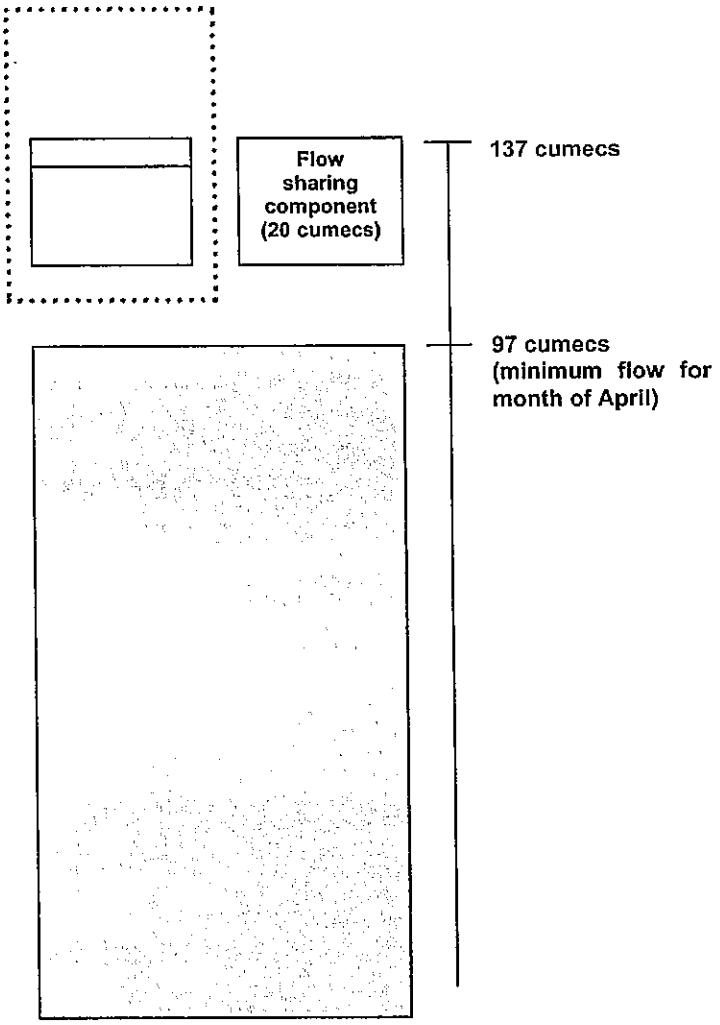
The total rate of water listed on the register - 50 cumecs on the register out of a total maximum of 70 cumecs



The maximum rate of water able to be taken out of the river in this example - 20 cumecs



Rate of water entering Lake Coleridge that is able to be classified as "stored water". In this example there is only a small amount of untaken register water available to be classified as stored water.



SCHEDULE 1

FARM MANAGEMENT PLAN

RDRML and Stakeholders

Farm Environmental Plan for Irrigated Land Use

Property name:

Property owner:

Property sharemilker/manager:

Person responsible for plan implementation:

Email:

Phone:

Mobile:

Irrigation scheme:

Farm Plan No:

Our Environmental Commitment

As a farming business we are committed to ensuring that all activities undertaken on our property are undertaken in an environmentally sustainable manner.
We will monitor our performance against our environmental targets and take appropriate action where necessary to address those areas where an improvement in performance is required.

Name (Owner) ..... **Signature** ..... **Date:** / /

Plan Implementer: As the person responsible for preparing this plan I confirm that the information provided is correct:

Name (Plan implementer)..... **Signature** .....

Position (e.g. owner/manager)..... **Date** / /

Office Use Only	Comments
Technical approval by *Rangitata Diversion Race Management Ltd (RDRML)*	
I have considered this plan and believe it to be:	
1. Technically sound and feasible **Yes No**	
2. Addressing the cause of any environmental issue **Yes No**	
3. Able to meet the plan objectives **Yes No**	
Name:	
Signature: ***(for RDRML)***	
Date: / /	

Contents

1.0 Purpose of plan

Rangitata Diversion Race Management Ltd (RDRML) and the associated community and private irrigation schemes have developed an Environmental Management Strategy to ensure that both the scheme operators and the water users can achieve high environmental standards and sustainable outcomes. Each water user of RDRML and stakeholders is required to prepare and implement a Farm Environmental Plan for Irrigated Land Use to demonstrate how they are actively managing their use of natural resources in order to achieve high standards of environmental management and optimise production from irrigation. The plan provides a risk management approach to environmental protection and enhancement on irrigated farms and is designed so that it can be adapted for each farm business. The plan requirements often have both economic and environmental benefits.

The environmental risks that can be associated with irrigated land use include:

- Inefficient water use, ponding, excessive runoff, losses to groundwater and surface water, or drainage to other properties
- Nitrogen (N) and Phosphorus (P) losses through runoff and leaching with poor irrigation, fertiliser and stock management practices
- Stock damage to waterways causing sedimentation and contamination
- Soil loss causing sedimentation of waterways

Plan/Do/Monitor/Review - A continuous improvement process will be used by farmers to plan, implement, monitor and review their on-farm practices and how these are achieving the objectives and targets of the Farm Environmental Plan. Record keeping is an important part of this process. The farm plans are dynamic in nature and will be updated over time as information, technology and good practice change.

Auditing and Compliance - Farm procedures, practices and environmental performance will be audited regularly, against the objectives and targets in this Farm Environmental Plan, by both internal and external auditors. The RDRML audit, compliance and enforcement processes and procedures are outlined in the RDRML Scheme Management Plan.

2.0 Property Information

(Automatically populated from RDR Rubicon system)

1.1 Property name			Dairy/Other Supply Company	Name	
Physical address				Number	
Legal description			Farm identifier/GPS coordinates		
1.2 Owner name			Phone no.		
Postal address			Mobile no.		
		Post code	Fax no.		
Email address					

1.3 Sharemilker-Manager name			Phone no.	
Postal address			Mobile no.	
	Fax no.		Fax no.	
Email address				

1.4 Plan Implementer name			Phone no.	
Postal address			Mobile no.	
	Post code		Fax no.	
Email address				

(Mostly automatically populated from Rubicon system – these in turn determine which sections of the Farm Environmental Plan are opened)

1.5 Irrigation Scheme	Ashburton Lyndhurst	☐	Mayfield Hinds	☐	Valetta	☐	Barrhill Chertsey	☐
Scheme allocation (hrs/week)		Current delivery		Constant flow l/s (3.5mm/day)		Constant flow l/s (5mm/day)		
1.6 Property total area (ha)			Effective area (ha)					
1.7 Irrigation type			Irrigation Area (ha)					

Type	Present	Description	Scheme Water (Ha)	Other Water (Ha)
Pivot	☐			
Lateral move	☐			
Borderdyke	☐			

K-Line	☐			
Gun	☐			
Rotorainer	☐			
Sprinkler	☐			
Other	☐			
Total Irrigation (ha)				
Storage pond/s (ha, m^3)				

1.8 Effluent Irrigation	Present	☐	Effluent irrigation area (ha)	Consented (ha)		Maximum application rate (mm/hr)	
				Applied (ha)			
	Effluent irrigation type/s ○ Pivot ☐ ○ Low pressure – k-line ☐ ○ Spray – travelling irrigator ☐ ○ Other ☐		Effluent storage type/system and storage days				

1.9 Resource Consents	Groundwater take consent expiry date ○ Consent 1 ○ Consent 2 ○ (Add more lines if needed)	Description	Date	Effluent Consent Expiry Date

1.10 Farming Operations (%: stock %, crop % Stock numbers: peak milked, wintered)	Dairy	☐ % Peak milked + wintered	Crop	☐ %	Sheep	☐ % wintered	Beef	☐ % wintered	Dairy Support Winter Grazing	☐ % numbers & months	Other	☐ % wintered

1.11 Biophysical Resources	Average annual rainfall (mm)		Main Soil Type/s[1] (as used in nutrient budget)		Soil Water Holding Capacity (PAW) (mm/60cm)[2]	

1.12 Biodiversity areas	Significant Vegetation or habitat protection area present	☐	If Present – Description and area (ha)
1.13 Waterways and wetlands	NA ☐	Yes ☐	If Present – Description

1.14 Nutrient Budgeting	N loss to Water	Block Name & Date	(kgN/ha)	P loss to Water	Block Name & Date	(kgP/ha)

[1] For reference see http://smap.landcareresearch.co.nz/home
[2] For reference see http://smap.landcareresearch.co.nz/home

Nutrient budget prepared by: (name of person, company & contact details)						
Guidelines and Resources Soil water holding guidelines (Profile available water – PAW) Soil type guidelines						

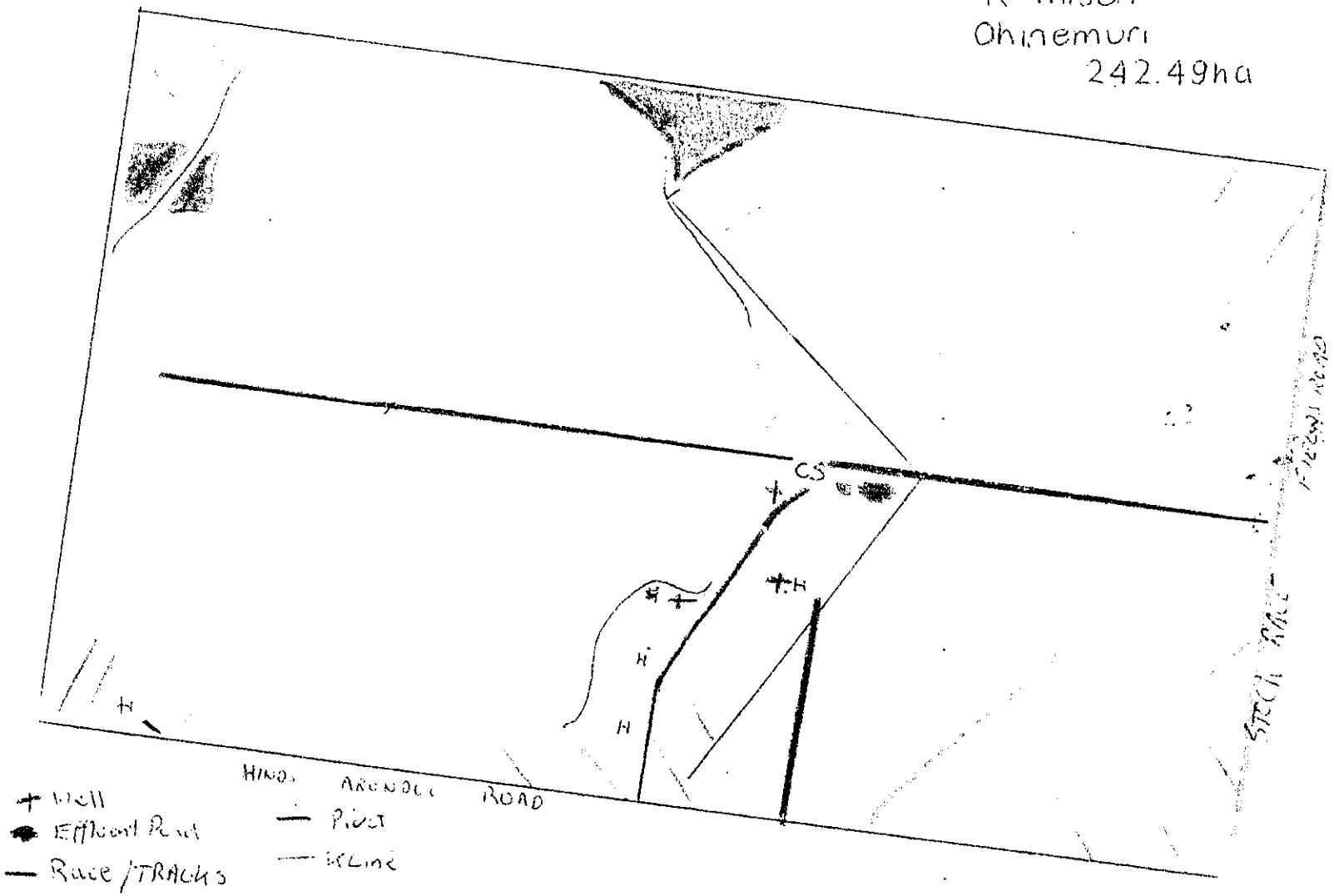
Farm Map

Include if present		**Other optional features for map**
• Irrigated area by irrigation type • Effluent Area/s • Land Management Units • Property boundary • Bores/wells • Stock water races • Rivers, streams, lakes, drains, ponds, wetlands • Riparian areas and water body fencing	• Raceways, tracks, crossings, bridges, culverts and underpasses • Stock feeding, handling & standoff areas • Silage pits • Significant indigenous biodiversity sites as identified in District Plan • Covenanted Areas, High value areas • Offal / refuse disposal pits • Fertiliser storage • Chemical storage	• Shelter Belts, Plantations • Septic Tank/s & soakage area • Winter Crop Areas • Areas under Development • Buildings

Insert farm map here **– to be prepared in farmer workshops**

Two farm maps are shown below as examples:

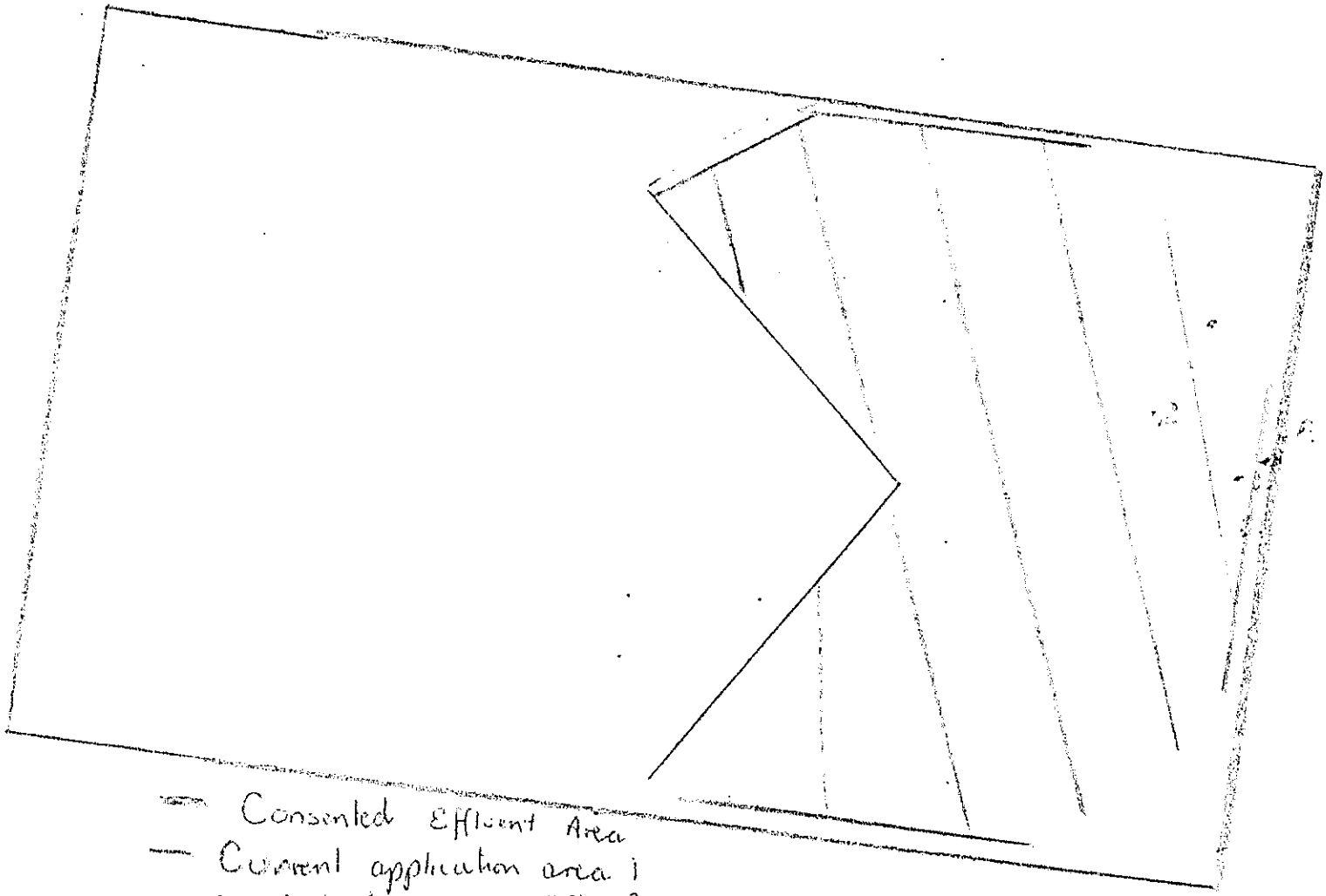
R Wilson
Ohinemuri
242.49ha



Agricultural Consulting Services
102 Heenans Road, RD 8, Ashburton
T: 03 3036208
E: office@agconsulting.co.nz

Legend
fences
buildings
power poles
hydrants

Drawn By
File: ACS 001
Date.



Agricultural Consulting Services
102 Heenans Road, RD 8, Ashburton
T: 03 3036208
E: office@agconsulting.co.nz

Legend

fences
buildings
power poles
hydrants

Drawn By:
File: ACS 001
Date

Land Management Units and Assessment of Farm's Risks to Water Quality *(As associated with major farming activities)*

We recognise that understanding differences in the way parts of our property respond to different management practices is an important step in achieving our production goals, as well as recognising and understanding the environmental risks associated with these practices. A land management unit is a homogeneous block of land that responds in a similar way under similar management

The Land Management Unit table below is completed using the same areas and descriptions as the Nutrient Budget blocks. If the property has just one land management unit/block, then complete only the Key Risks to Water Quality section.

LAND MANAGEMENT UNIT / BLOCK A - Name:							
Block Description:							
Area (ha)							
Soil type							
Current use							
Irrigation	Pivot	Gun	Roto	Kline	Sprinkler	Other (specify) -	None
Contour	Flat	Rolling	Mod steep	Steep	Very Steep	Other (specify)	
Other							

Key Risks to Water Quality - Block A (or Whole Farm):

1 INEFFICIENT WATER USE – water losses

Farm water quality risk description		Risk management by good management practices		Objective
☐	Inefficient water use	☐	Water is applied efficiently – soil moisture monitoring	3.2
☐	Water ponding	☐	Irrigation waste water – runoff and bywash is minimised	3.3
☐	Water losses to groundwater	☐	Maintenance – leakage avoided, efficient operation	3.4
☐	Excessive runoff, losses to surface water	☐	New irrigation systems – INZ CoP and design standards, accredited designers	3.5
☐	Water losses/drainage to other properties	☐	Staff training – operation, maintenance, management of irrigation system	3.6

2 NUTRIENT LOSSES – runoff & leaching

Farm water quality risk description		Risk management by good management practices		Objective
☐	N and P losses through **runoff** with poor irrigation, fertiliser and stock management practices	☐	Nutrient Budgeting and Nutrient Management Planning – minimise losses	4.1
		☐	Nutrient application – minimise losses	4.2
		☐	Soil loss minimisation	4.3
☐	N and P losses through **leaching** with poor irrigation, fertiliser and stock management practices	☐	Collected animal effluent – best practice spreading and disposal	5.1
		☐	Soil loss minimisation	6.2

3 WATERWAY SEDIMENTATION & CONTAMINATION – stock damage & soil loss

Farm water quality risk description	Risk management by good management practices	Objective

☐	Stock damage to waterways causing sedimentation and contamination	☐	Stock exclusion from waterways	6.1
☐	Soil loss causing sedimentation of waterways	☐	Soil loss minimisation	6.2

4 DEGRADATION OF WATERWAYS HABITAT & WATER QUALITY

	Farm water quality risk description		Risk management by good management practices	Objective
☐	Degradation of waterways – habitat and water quality	☐	Protection of waterways through riparian planting	6.3

5 OTHER

	Farm water quality risk description		Risk management by good management practices	Objective
☐		☐		
☐		☐		

OR - Alternative Environmental Risk Table to be completed for each Land Management Unit/Block

Environmental Topic	Environmental risks /strengths	Management practices to reduce risks
Waterway / Wetland		See Waterway Management Section
Native species / habitat		See Biodiversity Management Section
Stock		See Waterway Management Section
Collected Effluent		N/A
Runoff (water, soil, P)		See Waterway Management Section
Soil erosion (water /wind)		See Soil Management and Irrigation Management sections
Contour		N/A
Flooding		N/A
N-leaching		See Nutrient Management section
Construction of irrigation system		N/A
Catchment issues		

LAND MANAGEMENT UNIT / BLOCK B - Name:							
Block Description:							
Area (ha)							
Soil type							
Current use							
Irrigation	Pivot	Gun	Roto	Kline	Sprinkler	Other (specify) -	None
Contour	Flat	Rolling	Mod steep	Steep	Very Steep	Other (specify)	
Other							

Key Risks to Water Quality - Block B:				
1 INEFFICIENT WATER USE – water losses				
Farm water quality risk description		**Risk management by good management practices**		**Objective**
☐	Inefficient water use	☐	Water is applied efficiently – soil moisture monitoring	3.2
☐	Water ponding	☐	Irrigation waste water – runoff and bywash is minimised	3.3
☐	Water losses to groundwater	☐	Maintenance – leakage avoided, efficient operation	3.4
☐	Excessive runoff, losses to surface water	☐	New irrigation systems – INZ CoP and design standards, accredited designers	3.5
☐	Water losses/drainage to other properties	☐	Staff training – operation, maintenance, management of irrigation system	3.6
2 NUTRIENT LOSSES – runoff & leaching				
Farm water quality risk description		**Risk management by good management practices**		**Objective**
☐	N and P losses through **runoff** with poor irrigation, fertiliser and stock management practices	☐	Nutrient Budgeting and Nutrient Management Planning – minimise losses	4.1
		☐	Nutrient application – minimise losses	4.2
		☐	Soil loss minimisation	4.3
☐	N and P losses through **leaching** with poor irrigation, fertiliser and stock management practices	☐	Collected animal effluent – best practice spreading and disposal	5.1
		☐	Soil loss minimisation	6.2
3 WATERWAY SEDIMENTATION & CONTAMINATION – stock damage & soil loss				
Farm water quality risk description		**Risk management by good management practices**		**Objective**
☐	Stock damage to waterways causing sedimentation and contamination	☐	Stock exclusion from waterways	6.1
☐	Soil loss causing sedimentation of waterways	☐	Soil loss minimisation	6.2
4 DEGRADATION OF WATERWAYS HABITAT & WATER QUALITY				
Farm water quality risk description		**Risk management by good management practices**		**Objective**
☐	Degradation of waterways – habitat and water quality	☐	Protection of waterways through riparian planting	6.3
5 OTHER				
Farm water quality risk description		**Risk management by good management practices**		**Objective**
☐		☐		
☐		☐		

LAND MANAGEMENT UNIT / BLOCK C - Name:	
Block Description:	
Area (ha)	

Soil type								
Current use								
Irrigation	Pivot	Gun	Roto	Kline	Sprinkler	Other (specify) -		None
Contour	Flat	Rolling	Mod steep	Steep	Very Steep	Other (specify)		
Other								

Key Risks to Water Quality - Block C:

1 INEFFICIENT WATER USE – water losses

Farm water quality risk description		Risk management by good management practices		Objective
☐	Inefficient water use	☐	Water is applied efficiently – soil moisture monitoring	3.2
☐	Water ponding	☐	Irrigation waste water – runoff and bywash is minimised	3.3
☐	Water losses to groundwater	☐	Maintenance – leakage avoided, efficient operation	3.4
☐	Excessive runoff, losses to surface water	☐	New irrigation systems – INZ CoP and design standards, accredited designers	3.5
☐	Water losses/drainage to other properties	☐	Staff training – operation, maintenance, management of irrigation system	3.6

2 NUTRIENT LOSSES – runoff & leaching

Farm water quality risk description		Risk management by good management practices		Objective
☐	N and P losses through runoff with poor irrigation, fertiliser and stock management practices	☐	Nutrient Budgeting and Nutrient Management Planning – minimise losses	4.1
		☐	Nutrient application – minimise losses	4.2
		☐	Soil loss minimisation	4.3
☐	N and P losses through leaching with poor irrigation, fertiliser and stock management practices	☐	Collected animal effluent – best practice spreading and disposal	5.1
		☐	Soil loss minimisation	6.2

3 WATERWAY SEDIMENTATION & CONTAMINATION – stock damage & soil loss

Farm water quality risk description		Risk management by good management practices		Objective
☐	Stock damage to waterways causing sedimentation and contamination	☐	Stock exclusion from waterways	6.1
☐	Soil loss causing sedimentation of waterways	☐	Soil loss minimisation	6.2

4 DEGRADATION OF WATERWAYS HABITAT & WATER QUALITY

Farm water quality risk description		Risk management by good management practices		Objective
☐	Degradation of waterways – habitat and water quality	☐	Protection of waterways through riparian planting	6.3

5 OTHER

Farm water quality risk description		Risk management by good management practices		Objective
☐		☐		
☐		☐		

Soils Map (optional)

3.0 Irrigation Management – Efficient Water Use

Objective: To operate irrigation systems that are capable of applying water efficiently and management that ensures actual use of water is monitored and is efficient.

		Farmer and Property Management Practices and Actions				
		Not Applicable	Good Practice	Minimum Practice		Actions and timeframe
Target 3.1	**Regulatory Compliance** o Compliance with the relevant Canterbury Regional Council regulatory requirements and consent conditions. Compliance with relevant irrigation scheme rules and policies					
3.1.1	ECAN Consents • Ground water consents are current and conditions are met • A current abatement notice issued by regulatory agency regarding irrigation resource consents or irrigation impacts. • Any other consents regarding irrigation – consents are current and conditions are met.	☐ ☐ ☐		☐ ☐		
3.1.2 A	Irrigation Scheme Rules – Ashburton Lyndhurst • Notification by the irrigation scheme of non-compliance with irrigation scheme rules.	☐				
3.1.2 B	Irrigation Scheme Rules – Mayfield Hinds • Notification by the irrigation scheme of non-compliance with irrigation scheme rules.	☐				
3.1.2 C	Irrigation Scheme Rules - Valetta • Notification by the irrigation scheme of non-compliance with irrigation scheme rules.	☐				
3.1.2 D	Irrigation Scheme Rules – Barrhill Chertsey • Notification by the irrigation scheme of non-compliance with irrigation scheme rules.	☐				
Target 3.2	**Water application** Water is applied efficiently at a time, and volume, that meets crop needs and ensures the long term sustainability of production levels					
	General - Soil moisture monitoring o Holes are dug and observation of indicator points undertaken o Considering the use of probes, sensors or an irrigation scheduling service to enhance water use efficiency. o Hand held probe is used	☐ ☐ ☐		☐ ☐ ☐		

	o Permanently installed probes or sensors are used to inform decision making o Irrigation scheduling service is used o Soil moisture levels between field capacity and recharge level 80% of time.	☐	☐			
	o No attempt at soil moisture monitoring, to inform irrigation use is undertaken	☐			☐	
3.2.1 A	**Centre pivot and lateral move systems** o Measuring application rates checked regularly with rain gauge or buckets. o Pivot speed and application rate adjusted according to ET, rainfall and soil moisture status. o Pasture/crop growth and development monitored o Regular checks for excessive runoff and system adjusted if necessary o System closed down if excessive runoff and/or ponding occurs. o Wetted width widened on outer spans on long pivots or on slopes by fitting boom-backs or clipping hoses over truss rods and fitting wide spray sprinklers	☐	☐	☐		
3.2.1 B	**Low pressure systems** o Application rates checked regularly with rain gauge or buckets. o Irrigation system closed down or shifted if excess runoff and/or ponding occur. o Sprinkler lines shut down where effluent spreader irrigation is being applied. o K line movement patterns are consistent run to run and paddock to paddock. (GPS on bike) o Sprinkler line movements follow a pattern map for paddock to paddock rotations o Rotation adjusted according to ET, soil moisture status and rainfall o Irrigator moved every 12 hours to avoid runoff	☐	☐	☐		

	o Sprinkler lines moved across slopes, not up and down, to avoid runoff o Sprinkler lines moved to cover any dry patches that may occur.	☐ ☐	☐ ☐			
3.2.1 C	**Travelling irrigators** o Application rates checked regularly with rain gauge or buckets. o System closed down or shifted if excess runoff and/or ponding occur o Rotation adjusted according to ET, soil moisture status and rainfall	☐ ☐ ☐	☐	☐ ☐		
3.2.1 D	**Borderdyke systems** o Paddocks are monitored and clocks adjusted to soil moisture status, ET, rainfall and length of grass	☐		☐		
	o Monitor indicator points/areas are setup and clocks adjusted accordingly	☐		☐		
Target 3.3	**Irrigation Waste Water** All practicable steps are undertaken to ensure that the volume of water used does not exceed that required for the soil to reach field capacity and that runoff and bywash is minimised.					
3.3.1	o Is there evidence of: o Ponding of irrigation water o Excessive runoff of irrigation water o Excessive losses to ground water o Drainage to other properties o Excessive losses onto non-productive land, including impermeable surfaces and river/stream margins. o Soil moisture monitoring undertaken and results used to ensure spray irrigation volume does not exceed the soil field capacity o Application of water onto non-productive land, including impermeable surfaces and river/stream margins is avoided.	☐ ☐ ☐ ☐ ☐ ☐ ☐		☐ ☐	☐ ☐ ☐ ☐ ☐	

Target 3.4	**Maintenance** o All practicable steps are undertaken to: o Avoid leakage from pipes and structures; o Ensure the irrigation system is operating efficiently

3.4.1	**General maintenance** o An irrigation equipment and maintenance programme is in place.	☐	☐			
	o No maintenance or irrigation system evaluation programme is in place	☐			☐	
	o A regular system evaluation is undertaken by self-assessment or by an accredited evaluator.	☐	☐			
	o Irrigation system maintained to meet industry and scheme standards for best practice irrigation.	☐	☐			
3.4.1 A	**Spray Irrigators** o Regular checks on centre pivot wheels, drive units and fittings and these are maintained as required	☐	☐			
	o Pivot pathway kept clear to avoid damage to irrigator	☐	☐			
	o Pivot main pipes and sprinkler hoses checked and maintained	☐	☐			
	o All hydrants, sprinkler lines, nozzles and saddles maintained in good working order and replaced where necessary	☐	☐			
3.4.1 B	**Border dyke systems** o Gate seals maintained	☐	☐			
	o Sills cleaned	☐	☐			
	o Head races hard grazed	☐	☐			
	o Borders maintained and any holes repaired	☐	☐			
Target 3.5.	**New irrigation systems** New irrigation systems are designed to the Irrigation NZ Code of Practice and Design standards using accredited designers.					
3.5.1	o No new irrigation system established	☐				
	o New irrigation systems are designed to the Irrigation Code of Practice and Design standards using accredited designers.	☐		☐		

Target 3.6	**Staff Training** Staff members who manage and maintain the irrigation system on a daily basis have appropriate training in the operation, maintenance and management of the irrigation system.					
3.6.1	**Staff Training** o On-farm training programme provided covering all	☐		☐		

	relevant aspects of irrigation management including: o The key benefits of irrigation o Management practices to ensure the avoidance of runoff and ponding. o Correct application rates o System maintenance o System monitoring for problem identification o Individual responsibilities and accountability.	☐		☐		
	o No relevant training of people who manage and maintain the irrigation system on a daily basis	☐			☐	

Evidence, Notes, Records					
Irrigation records	☐	Irrigation equipment maintenance records	☐	Staff training programme and records	☐
Soil moisture monitoring records	☐	Application rate testing records	☐	Records of staff induced irrigation incidents and actions taken	☐
Rainfall records	☐	DIY evaluation report, System evaluation report	☐		☐
Soil temperature monitoring records	☐	System design approval	☐		☐
Crop records	☐	System commissioning report	☐		☐

Guidelines

Resources

- Irrigation NZ Knowledge Centre – this offers a 'one stop shop' to help irrigators, irrigation schemes and their service providers find information to achieve optimum irrigation efficiency (performance and profitability). It contains fact sheets, articles, presentations, reports, current research projects, practical irrigation tools, links to other websites, field days and workshops. http://www.irrigationefficiency.co.nz/
- Ritso Society - http://www.ritso.org.nz/reports.html

Tools

- Irrigation NZ – irrigation efficiency tools - http://www.irrigationefficiency.co.nz/practical-tools/DataSearchFormPractical
- ECAN - annual volume calculator - this is an Excel spreadsheet which is intended to enable you to calculate an annual volume for a specific area - http://ecan.govt.nz/services/online-services/tools-calculators/Pages/annual-volume-tool.aspx

4.0 Nutrient and Soil Management

Objective: To maximise nutrient use efficiency while minimising nutrient losses to water in order to meet specified nutrient allowances.

Objective: To maintain or improve the physical and biological condition of soils in order to minimise the movement of sediment, phosphorus and other contaminants to waterways

		Farmer and Property Management Practices and Actions				
		Not Applicable	Good Practice	Minimum Practice		Actions and timetable
Target 4.1	**Nutrient Budgeting and Nutrient Management Planning** Nutrient losses to surface and ground water are minimised through the use of nutrient budgeting and nutrient management planning.					
4.1.1	**Nutrient budgeting and planning** • No nutrient budgets prepared	☐			☐	
	• Regular soil testing is undertaken	☐		☐		
	• Regular soil tests not undertaken				☐	
	• Separate nutrient budgets are prepared for arable and non-arable, effluent and non-effluent areas.	☐		☐		
	• Nutrient budgets take into account all nutrient inputs and outputs.	☐		☐		
	• Deep soil nitrogen testing for arable crops and plant analysis tests undertaken to inform nutrient use.	☐	☐			
	• Nutrient Management Plan to integrate nutrient budget and soil test results into a fertiliser programme	☐	☐			
4.1.2	**Nitrogen management** o Rate determined by: o Soil testing and plant analysis	☐		☐		
	o Nutrient budget results	☐		☐		
	o Assessment of crop and/or pasture requirements	☐		☐		
	o Matching nitrogen applications in proportion to other nutrients	☐		☐		
	o Frequency of fertiliser applications o Lower rates of nitrogen applied to match growth cycle of the crop and/or pasture and soil moisture conditions.	☐	☐			
	o Timing of application o Nitrogen application is matched to times of high plant growth	☐	☐			

	○ Pasture is at least 25mm high (approx 1000kg DM/Ha) before nitrogen is applied. ○ Nitrogen is not applied when the 10cm soil temperature at 9am is less than 6°C and falling. ○ Nitrogen fertiliser is not applied when the ground is saturated and/or when the tile drains are running. ○ Fertiliser use and management measures ○ Nitrogen fertiliser is not applied to severely compacted soils ○ Nitrification inhibitors used on pasture and/or winter feed crops to reduce nitrate losses ○ Rate of application?	☐	☐	☐	[redacted]	
4.1.3	**Phosphate Management** ○ Rate of application determined by: ○ Soil testing and plant analysis ○ Nutrient budget results ○ Assessment of crop and/or pasture requirements ○ Matching phosphate applications in proportion to other nutrients ○ Need for capital or maintenance fertiliser ○ Frequency of application ○ Split applications are used where the single application rate would exceed 100kgP/ha ○ Timing of application ○ Phosphate fertiliser is applied to crops via incorporating/drilling rather than surface broadcasting. ○ Pasture is at least 25mm high (approx 1000kg DM/ha) before P fertiliser is applied ○ P fertiliser is not applied when the soil is saturated. There is no fertiliser discharged when there is water ponding on the surface of the land ○ Fertiliser use and management measures ○ P fertiliser is not applied to severely compacted soils ○ Fertiliser is not discharged directly into or within 10m of the bed of a permanently flowing river, lake, artifical watercourse or within 10m of a wetland boundary or any identified significant biodiversity site unless the	☐	☐	☐	[redacted]	

	equipment used has a current Spreadmark Certificate in which case the setback distance is reduced to 5m for land application. o A vegetation buffer strips of at least 1-2m width is maintained adjacent to all waterways to filter any runoff o Choice of fertiliser o Slow release phosphate fertilisers are used when there is a high risk of runoff.	☐ ☐	☐ ☐		

Target 4.2	Nutrient Application Nutrients are applied where needed to maximise impact and minimise losses to non-target areas.				
4.2.1	o The application equipment used is suitable for the conditions and fertiliser type. o 'Spreadmark' accredited spreading companies are used when using contractors. o Application to 'Spreadmark' standards when self-application. o GPS technology is used for precise application and for a digital record of fertiliser application locations.	 ☐ ☐	 ☐ ☐ ☐	☐	
4.2.2	Aerial Spreading o There is no aerial spreading o The fertiliser is applied by a person who holds a GROWSAFE pilots' Agrichemical Rating Certificate or an AIRCARETM Accreditation.	☐ ☐	 ☐		
	o The flight paths are recorded by an on-board differential Global positioning system and this record is kept for at least 12 months following the application	☐	☐		

Target 4.3	Soil erosion To minimise the incidence of wind and/or water erosion caused as a result of farming practices.				
4.3.1	Wind erosion is avoided through: o using appropriate seedbed preparation particularly avoiding the creation of small aggregates on exposed sites. o minimising the length of time that soils are exposed during soil cultivation o maintaining soil moisture at times of high wind erosion risk	 ☐ ☐ ☐		☐ ☐ ☐	

	o using direct drilling in preference to conventional cultivation	☐	☐			
4.3.2	Water erosion is avoided through: o using direct drilling or minimum tillage techniques in preference to conventional cultivation on sloping land with erodible soils. o using practices to prevent wheel rut erosion including removal of sprinklers at centre pivot wheels or use of half sprinklers o regularly check for erosion from channeled runoff, (i.e. from wheel ruts, tracks etc), and if found immediately take appropriate remedial action o regularly check for signs of tunnel gully erosion. If found take appropriate remedial action.	☐ ☐ ☐	☐	☐ ☐ ☐		

Target 4.4	**Soil health** To optimise soil structure and soil biological activity					
4.4.1	soil types and soil properties are managed accordingly to minimise soil compaction damage: o minimise compaction by vehicles when soils are wet by using designated vehicle tracks o minimise compaction by stock when soils are wet by using safe areas for stock o Use soil aerator as appropriate when soil compaction diagnosed.	☐ ☐	☐ ☐ ☐			
4.4.2	Soil biological activity is improved through: o Conserving soil organic matter by using direct drilling techniques in preference to conventional cultivation. o Incorporating stubble in preference to burning o Maintaining healthy pastures o minimising the use of agrichemicals harmful to beneficial soil organisms.	☐ ☐ ☐	☐ ☐ ☐			
4.4.3	o Fertilisers are used that are within the industry standards for soil nutrient contamination	☐		☐		

Evidence, Notes, Record					
Soil test records	☐	Fertiliser application records including type, rate and area applied	☐	The flight path records by an on-board differential GPS for aerial spreading	☐
Nutrient budget	☐	Nitrogen application rate records	☐	Erosion control or events	☐
Nutrient management plan	☐	Plant analysis	☐	Compaction prevention or events	☐

Guidelines

Resources

- Code of Practice for Nutrient Management http://www.fertiliser.org.nz
- Spreadmark code of practice http://www.fertqual.co.nz
- Fertiliser Use on New Zealand Dairy Farms published by the New Zealand Ferliliser Manufacturers' Research association

Tools

- Overseer www.overseer.org.nz

5.0 Collected Animal Effluent Management

Objective: To manage the risks associated with the operation of the effluent systems to ensure effluent systems are compliant 365 days a year.

		Farmer and Property Management Practices and Actions				
		Not Applicable	Good Practice	Minimum Practice		Actions and timeframe
Target 5.1	**Effluent spreading and disposal** To ensure that all effluent systems are capable of meeting industry & scheme standards for best practice effluent management					
5.1.1	○ No animal effluent system	☐				
	○ All resource consent conditions are complied with.	☐		☐		
	○ Effluent consents are current and conditions are met	☐		☐		
	○ Fully compliant	☐		☐		
	○ Minor non compliance	☐			☐	
	○ Major non compliance	☐			☐	
	○ All other permitted activity and other requirements are met.	☐		☐		
	○ The irrigation system has backflow prevention if water containing animal effluent or other contaminants is applied through the irrigation.	☐		☐		

Evidence, Notes, Records					
Effluent consent	☐	Regional Council compliance monitoring report	☐	Effluent diary	☐
Effluent map	☐		☐		☐

Guidelines and further information

Resources

A guide to managing farm dairy effluent http://www.ecan.govt.nz/publications/Plans/CanterburyEffluentBooklet.pdf

DairyNZ farmfacts: effluent systems: http://www.dairynz.co.nz/page/pageid/2145861327/Effluent_systems

6.0 Waterways, wetlands and riparian management

Objective: To manage wetland and waterway margins to avoid damage to the bed and margins of a water body, avoid direct input of nutrients and to maximise riparian margin nutrient filtering

Objective: To manage wetlands and water bodies so that stock are excluded as far as practicable from water, to avoid damage to the bed and margins of a water body and to avoid the direct input of nutrients, sediment and microbial pathogens.

		Farmer and Property Management Practices and Actions				
		Not Applicable	Good Practice	Minimum Practice		Actions and Timetable
Target 6.1	**Stock Exclusion** To exclude all intensively farmed livestock from all flowing waterways (excluding farm and scheme distribution races which do not discharge into natural waterways)					
6.1.1	o All intensively farmed livestock are excluded from all natural waterways on the property.	☐		☐		
	o Bridges /culverts established for all stock crossings.	☐		☐		
	o Winter feed crops planted in paddocks without wetlands or waterways.	☐	☐			
Target 6.2	**Soil loss** To minimise soil loss and contamination of waterways					
6.2.1	o A wide riparian buffer to provide a filter at low points where there is a risk of runoff from paddocks is established.	☐		☐		

	○ Runoff from stock races and tracks does not flow directly into waterways. Where necessary this runoff is directed to open pasture.	☐		☐		
	○ On sloping land when cultivating a paddock, establish a buffer of uncultivated land beside a stream to filter any runoff. The steeper the paddock the wider the buffer.	☐	☐			
Target 6.3	**Protection of waterways** To protect water quality through riparian planting					
6.3.1	○ Suitable trees and shrubs are planted on waterway margins.	☐	☐			
	○ Tall trees are planted on northerly banks to shade and cool water to enhance stream life and to reduce weed growth	☐	☐			
Evidence, Notes, Records						
Planting / development plan	☐		☐		☐	
	☐		☐		☐	
Guidelines and further information						

7.0 Biodiversity and ecosystem management

Objective: To include biodiversity and ecosystem management as an integral part of farm management.

		Farmer and Property Management Practices and Actions				
		Not Applicable	Good Practice	Minimum Practice		Actions and Timeframes
Target 7.1	**Significant Vegetation and habitat protection** Significant recognised[3] indigenous vegetation and significant habitats of indigenous fauna including wetlands are present and are protected.					
7.1.1	○ No recognised or significant habitats of indigenous vegetation or fauna including wetlands are present.	☐				
	○ Significant recognised indigenous vegetation and/or significant habitats of indigenous fauna including wetlands are present, have been identified and are being protected.	☐		☐		
	○ The area of a recognised significant vegetation or habitat has been reduced	☐			☐	
	○ Stock has access to this area.	☐			☐	

[3] Recognised as significant by either the Ministry for the Environment, Department of Conservation, Regional or District Councils.

Target 7.2	**Biodiversity and habitat protection.** Awareness and understanding of local biodiversity issues is encouraged as well as the protection and enhancement of indigenous vegetation and fauna. Recognition of the potential benefits from establishing exotic vegetation is encouraged e.g. the establishment of shelter belts, fodder crops for bees.					
7.2.1	○ Actions are undertaken for the enhancement of farm biodiversity that support farming operation eg establishment of shelter belts and woodlots. ○ Maintaining and extending existing plantings of native or exotic species	☐ ☐	☐ ☐		[redacted]	
Target 7.3	**New irrigation development** If new irrigation systems have been established consideration has been undertaken where shelterbelts and other plantings are removed for irrigation development, that these are replaced.					
7.3.1	No new irrigation development	☐			[redacted]	
	If new irrigation systems have been established: ○ Consideration has been undertaken where shelter belts and other plantings are removed for irrigation development, that these are replaced where possible with suitable native vegetation plantings particularly in locations that assist to develop a network of native vegetation patches and corridors from the mountains to the sea	☐		☐		
	○ Replacement shelterbelts or plantings are established.	☐	☐			
Target 7.4	**Stock water** Stock water races are maintained and water quality and habitats are protected.					
7.4.1	**Stock water** ○ Stock water races are not present in property or on boundary of property	☐			[redacted]	
	○ Compliance with the Ashburton District Council Bylaws Chapter 15 – Stock water Races.	☐		☐		
	○ Non- compliance with Ashburton District Council Bylaws Chapter 15 – Stock water Races	☐				

Evidence, Notes, Records					
Ecological assessment report	☐	Planting / development plan	☐	Ashburton District Council Bylaws Chapter 15 – Stock water Races Compliance report	☐
	☐		☐		☐

Guidelines and further information

Environment Canterbury Publication and Resources

- Creating and managing wetlands webpage - http://ecan.govt.nz/advice/your-land/land-restoration/wetlands/Pages/Default.aspx

- Living Streams webpage - http://ecan.govt.nz/get-involved/local-projects-community-groups/living-streams/pages/resources.aspx
- *'Wetlands – planting advice and activity calendar'* – http://ecan.govt.nz/publications/General/WetlandsCalendarFlyerE0608.pdf
- *'A companion guide to Managing waterways on Canterbury Farms – Lowland Plains Streams and Drains* - http://ecan.govt.nz/publications/General/LowlandPlains.pdf
- Native biodiversity webpage - http://ecan.govt.nz/advice/your-business/farming/pages/native-bush-biodiversity.aspx
- *'Using native plants in Canterbury'* - http://ecan.govt.nz/publications/General/UsingNativesCanterburyE0472.pdf

Department of Conservation Resources

- Native bush and biodiversity – ECAN webpage - http://ecan.govt.nz/advice/your-business/farming/pages/native-bush-biodiversity.aspx
- *'Native Plant Communities of the Canterbury Plains* (DoC)'- http://www.doc.govt.nz/upload/documents/conservation/native-plants/motukarara-nursery/canterbury-plains-plant-communities-book-(full).pdf

Other Resources

- *'Establishing shelter in Canterbury with nature conservation in mind'* - http://www.lincoln.ac.nz/Documents/1117_1117_sheltercove_s4182.pdf
- A Biodiversity Strategy for the Canterbury Region' Environment Canterbury Report Number: R08/13 ISBN: 978-1-86937-774-8 published February 2008. http://www.ecan.govt.nz/Our+Environment/Land/Biodiversity/

Stockwater Races

- Ashburton District Council – Stockwater Bylaw chapter 15 http://www.ashburtondc.govt.nz/NR/rdonlyres/53E8D014-2E52-4906-A7DF-5284D9A17627/57329/Chapter15STOCKWATER.pdf

Extracts from the above

- Stock water race maintenance - stockwater races and associated equipment shall be maintained and kept in proper repair and condition by the occupier/owner of whose land:

  (a) the stockwater race is located

  (b) is adjacent to a stockwater race that is running along the property boundary located on a road or highway and where that occupier/owner uses that stockwater race

  (c) The occupier/owner shall

  (i) at the most effective frequency and time for water race maintenance, clean and maintain the water race in good order and repair and free from all vegetative growth, obstructions, hedge or tree cuttings, race cleanings or other restriction

  (ii) ensure that any water race bank damaged by cattle, stock or wildlife is promptly and properly repaired.
- All stockwater culverts are to be maintained and kept in proper repair and condition by the occupier/owner at the downstream end of the culvert.
- Protection of water races and water quality - The occupier/owner shall not:

  (a) Allow the pollution of the water in any stockwater race.

  (b) Do anything that will increase or decrease the flow of water in the water race without the consent of the Council.

  (c) Obstruct the flow of water in any water race.

  (d) Remove, displace, alter or interfere with any gauge, dam, reservoir, crossing, culvert, pipe, headworks, gate, building or structure which is part of the stockwater race network.

  (f) Widen or deepen any water race or alter its course without the consent of the Council.

  (g) Allow any horse, cattle or any other animals in their custody to trespass or have access on any water race.

  (h) Wash or cleanse any vehicle, plant, equipment, animal carcass, hide or skin or any other substances in any water race or place or allow to remain any animal alive or dead in any water race or on the bank.

  (i) Place or cause to be placed any substance whatsoever in the water race.

  (j) Obstruct any crossing over the water race.

  (k) Ride, drive or lead any horse, cattle or other animal into or through any water race other than at the appointed crossing points.

(l) Ride or drive any vehicle or machine across or through any water race other than at the appointed crossing points.
(m) Allow any person to bathe in any water race, reservoir or pond.
(n) Allow domesticated ducks, geese or exotic fish access to the water race
(o) Allow the disposal of cuttings or clippings from any plant or hedge to remain in a water race, culvert, channel or the bank adjacent to any water race, culvert or channel.
(p) Plant or sow any tree, shrub, gorse, broom or thorn within two metres of the edge or bank of any water race.
(q) Permit any gorse, broom, tree, plant or other vegetation to spread into or over land reserved or used for the purpose of a water race.