

Proposed Conditions of Consent – 22 April 2009

Note 1: All water and discharge permits are sought for a duration of 35 years.

Note 2: The lapsing date sought for the purposes of section 125 is ten years in relation to all consents.

Note 3: All changes post-September 2008 are tracked and highlighted (pages 29, 30 and 50-54). Agreed changes are highlighted green, and late changes not yet agreed are highlighted yellow.

The following Priority Conditions are proposed to replace conditions 1 to 3 of what is currently application CRC021091. For clarity, these changes have not been tracked into the proposed consent conditions, as the conditions are currently attached to an application number (for administrative purposes) and as will be suggested, a new number may need to be issued should the take application be "split" from the current joint applicant.

Proposed Flow/Priority Conditions

[ACWT – new consent number] – To take water from the Rakaia River

- The rate at which water is taken from the Rakaia River, at or about map reference NZMS 260 K36:064-382 shall not exceed 40 cubic metres per second

Provided that the maximum rate at which water shall be taken:

a) under this consent and any granted under application [CPWT] by the Central Plains Water Trust to take water from the true left (north) bank of the Rakaia River at about map reference NZMS 260 K36:078-387 shall not exceed 40 cubic metres per second.

b) under this consent and any other consent through the intake structure at or about map reference NZMS 260 K36:064-382 shall not exceed 40 cubic metres per second.

- Whenever the average flow for the 24 hour period ending at noon on any one day (expressed in cubic metres per second) in the Rakaia River, as estimated by the Canterbury Regional Council from measurements at either the Gorge Recorder Site (at or about map reference NZMS 260 K35:015-424) or the recorder site at Fighting Hill (at or about map reference NZMS 260 K35:997-437) falls below the following flows (Y m³/s), the taking of water in terms of this permit shall cease

Month	JAN	FEB	MAR	APR	MAY	JUN
Flow (Y m ³ /s)	184.8	168.8	165.8	157.8	155.8	156.8

Month	JUL	AUG	SEP	OCT	NOV	DEC
Flow (Y m ³ /s)	151.8	152.8	150.8	166.8	189.8	199.8

Advisory note: In the event that water in higher priority bands is or becomes available for allocation to other water users, then the minimum flows in this condition will require amendment to recognise the priority rights of the consent holder

- Whenever the average flow for the 24 hour period ending at noon on any one day (expressed as X cubic metres per second) in the Rakaia River, as estimated by the Canterbury Regional Council from measurements at either the Gorge Recorder Site (at or about map reference NZMS 260 K35:015-424) or the recorder site at Fighting Hill (at or about map reference NZMS 260 K35:997-437), exceeds the minimum flow Y contained in condition 2 then the take shall not exceed Z m³/s where

$$Z = (X-Y)/2 \quad \text{and} \quad Z \leq 40 \text{ m}^3/\text{s}$$

Provided that whenever the Canterbury Regional Council, in consultation with the water Users Group representing all water users who are subject to the same minimum flow restriction, has

determined upon a water sharing regime which restricts abstraction from the Rakaia River to an alternative regime to that specified in condition 2, then the taking of water in accordance with that determination shall be deemed to comply with this condition.

4. In the event that application CRC054384 or CRC062685 has priority to be heard over this consent and consent is granted to either CRC054384 or CRC062685 then:
 - a. Y shall increase by the rate of take under CRC054384 or CRC062685 which is determined to have priority over this consent (plus any additional amount required to comply with clause 7(4) of the Water Conservation Order (Rakaia River) 1988); and
 - b. the rate at which water is able to be taken from the Rakaia River under condition 1 and the maximum Z value in condition 3 shall decrease by the rate of take under CRC054384 or CRC062685 which is determined to have priority over this consent.

CRC021091 – To take water from the Rakaia River

1. (a) Water shall be diverted via a river intake structure to be constructed at or about map reference NZMS 260 K36:050-393.
(b) The maximum rate at which water shall be diverted from the Rakaia River via the intake structure identified in condition (1)(a) under the exercise of any consent, shall not exceed a cumulative total of 42 cubic metres per second;
(c) Water shall be taken via an intake structure to be constructed at or about map reference NZMS 260 K36:064-382.
(d) The maximum rate at which water shall be taken from the Rakaia River via the intake structure identified in condition (1)(c) under the exercise of any consent, shall not exceed a cumulative total of 40 cubic metres per second;
2. In the event consent is granted under application CRC02109 to the consent holder's joint applicant Central Plains Water Trust to take water from the true left (north) side of the Rakaia River at about map reference NZMS 260 K36:078-387 then the combined maximum take from the exercise of condition 1(c) above and the taking of water by Central Plains Water Trust shall not exceed 40 cubic metres per second.
3. In the event that application CRC05233 or application CRC62685 has priority to be heard over this application and consent is granted to either application CRC05233 or CRC62685 which has the effect of reducing the amount of water available for allocation within the terms of clause 7(4) of the National Water Conservation (Rakaia River) Order 1988 the rate that the consent holder shall be entitled to take water shall be reduced so that the total allocation of water from the Rakaia River through the granting of consents to abstract water does not exceed 70 cubic metres per second.
4. (a) The consent holder shall install, operate and maintain a fish screen in accordance with the NIWA publication *Fish Screening: Good Practice Guidelines for Canterbury, October 2007*, NIWA Client Report CHC2007-092 at the entrance to the Highbank canal at approximate map reference NZMS 260 K36:064-382. Water shall be diverted through the fish screen into the canal only when the fish screen is operated in accordance with the following provisions:
 - (i) the fish screen shall cross the full width of the Highbank Canal to prevent fish bypassing the screen into the canal;
 - (ii) the screen material voids shall be no greater than 3 millimeter mesh or 2 millimeter wedgewire;
 - (iii) the screens shall have an approach velocity of no greater than 0.12metres per second;
 - (iv) the sweep velocity across the screens shall exceed the approach velocity;
 - (v) An effective bypass system shall be maintained at all times that water is diverted into the scheme, to connect to an active braid of the river;

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Deleted: The maximum rate at which water shall be taken shall not exceed 40 cubic metres per second.

- (b) each fish screen shall be inspected at a frequency no greater than 48 hours, or 24 hours when the Rakaia River flows exceed 300 cubic metres per second as estimated by Environment Canterbury at the Rakaia Gorge recorder site (at or about map reference NZMS 260 K:35: 015-424) or the recorder site at Fighting Hill (at or about map reference NZMS 260 K35:997-437);
- (c) in the event that a screen is damage so as to be rendered less effective at excluding fish from the canal, the consent holder shall repair or replace the screen immediately, or shall shut down the screen such that water ceases to pass through it. In the event that a screen is shut down, it shall not be reopened until such time as it complies in full with the provisions of condition 4(a) of this consent;
- (d) All incidence of screen shut down shall be recorded by the consent holder and reported to Fish and Game New Zealand within four hours. These records of screen failure shall be forwarded to the Canterbury Regional Council to the attention of the Compliance and Enforcement Manager, at the end of each irrigation season, or upon request.
- (e) The design plans for the fish screen shall be certified by a suitably qualified and experienced chartered engineer with experience in the design and operation of fish screens and / or a fisheries biologist with recognised experience in fisheries research to confirm that the design, function and operation of the screen is in accordance with the guidelines detailed in condition 4(a).
- (f) Prior to commencement of construction:
 - (i) the consent holder shall provide to the Canterbury Regional Council:
 - (a) the certified design plans showing the screen slot size, sweep velocity, approach velocity, and a by-pass which returns fish to an actively flowing braid of the Rakaia River;
 - (b) a report from the certifying engineer / fisheries biologist which certifies and explains how the certified design and operation of the screen demonstrates compliance with the guidelines detailed in condition 4(a).
 - (ii) the Canterbury Regional Council shall certify the design plans within 20 working days of receipt of those plans. The Certifier's report shall not be unreasonably withheld, and shall be forwarded to the consent holder and copied to the North Canterbury Fish and Game Council.

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 <#>the fish screen shall cross the full width of the Highbank Canal to prevent fish bypassing the screen into the canal; ¶
 <#>the consent holder shall install and maintain screens with a mesh aperture size of no greater than five millimeters;¶
 <#>the consent holder shall install and maintain screens of a mesh aperture size of no greater than 3.8 millimeters between 1 August and 15 November each year;¶

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- 5. (a) The consent holder shall install a flow measuring device that has an international accreditation, New Zealand or equivalent calibration endorsement; to continuously measure the flow of water at the point of take to no less than an accuracy of plus or minus ten percent.
- (b) The measuring device shall, as far as practicable, be installed at a site likely to retain a stable rating. The measuring device shall be installed in accordance with ISO1100/1-1981 established standards by a competent/qualified person.
- (c) A site inspection of the measuring site shall be carried out at least once every month for the duration of this consent.
- (d) Water flows shall be recorded by electronic means, at not greater than fifteen minute intervals, in a tamper-proof recording device such as a data-logger, kept for that purpose. The recorded data shall not be changed or deleted by any person, unless twelve months have passed since the date of the recording.
- (e) The measuring and recording devices shall be available for inspection at all times by the Canterbury Regional Council.
- (f) All data from the recording device described in clause 5(a), shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, on request, and shall be accessible and available for downloading at all times by the Canterbury Regional Council.
- (g) Within one month of the commencement of this consent, or the installation of a new measuring or recording device, and at five-yearly intervals thereafter, and at any other time when requested by the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, signed by a suitably qualified person certifying the accuracy of the measuring and recording devices installed in accordance with clause 5(a), and also certifying that data from the recording device described in clause 5(d) can be readily accessed in accordance with clause 5(f).

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6. The Canterbury Regional Council may, on any of the last five working days of the month of issue of CRC021091, serve notice of its intention to review the conditions of this consent for the purpose of dealing with any adverse effect on the environment, which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage.
7. The lapsing date for the purposes of section 125 shall be XXXX.

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CRC072640 – To discharge up to 40 cubic metres of water and sediment to the Rakaia River at or about map reference K36:087-358; to discharge up to 40 cubic metres of water and sediment to the Highbank Power Station Tailrace at or about map reference K36:079-364; to discharge up to 40 cubic metres of water and sediment to the Rakaia River at or about map reference L36:158-280; to discharge up to 40 cubic metres per second of water and sediment to the Rakaia River at or about map reference NZMS 260 K36:058-394

- 1) This consent is subject to the general conditions listed in Schedule 1: General Conditions.
- 2)
 - (a) Water shall only be discharged to the Rakaia River from the formed Highbank Power Station Tailrace at map reference NZMS 260 K36:083-360, or via the Barrhill Power Station Tailrace at approximate map reference NZMS 260 L36: 158-280.
 - (b) Water shall only be discharged to the Highbank Power Station tailrace at map reference NZMS 260 K36:078-364 at a total combined rate (which includes any discharge or diversion of water authorised under CRC072636 and CRC073863) not exceeding 40 cubic metres per second.
 - (c) All water discharged to the Rakaia River shall be to an active channel of the River, or to a channel connecting directly to an active channel of the Rakaia River.
 - (d) The consent holder shall discharge water from the Highbank Power Station tailrace, and/ or from the Barrhill Power Station tailrace to the Rakaia River at a rate not exceeding 40 cubic metres per second.
 - (e) Water may only be discharged from the formed Highbank Power Station tailrace at a rate not exceeding 17 cubic metres per second except in an emergency situation where the discharge shall not exceed 40 cubic metres per second.
 - (i) Discharge from the emergency spillway to the unformed Highbank tailrace shall only occur in emergency situations and, together with other discharges authorised by this consent, shall not exceed 40 m³/s combined flow.
 - (ii) The Consent Holder shall record all occasions where emergency discharges of scheme water occur, and the circumstances and duration of those discharges. These records shall be made available to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, on request.
 - (iii) The emergency discharge shall not cause erosion of the bed or banks of the Highbank Power Station Tailrace. In the event of any erosion occurring to the bed or banks of the Rakaia River or any other watercourse, as a result of the discharge, the consent holder shall be responsible for rectifying the situation as soon as practicable.
 - (f) There shall be no significant adverse effect on aquatic life as a result of the discharge.
 - (g) Where any discharge from the emergency spillway to the unformed Highbank tailrace results in any geomorphological modification (including to the salmon bypass channel) that leads to an increased incidence of salmon entrainment in the tailrace, the consent holder shall re-grade or reinstate the channels to mitigate the increased incidence of salmon entrainment.
 - (h) For the purpose of condition (2)(g) the consent holder shall monitor the performance of the Highbank Power Station formed tailrace and salmon barrier no less than weekly after there is an overflow or emergency discharge during the salmon migration

season, being 1 December to 31 May. A report detailing the incidents of the manual reinstatement of the salmon bypass or lower tailrace following such reinstatements, where required, shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, by 31 May each year. These reports are also to be simultaneously served on TrustPower Ltd.

- 3) For the purpose of determining compliance with condition (2)(b) the consent holder shall:
- (a) Measure and record the rate of the discharge of water from the Highbank canal into the Highbank Power Station tailrace at the point of discharge at no greater than 60 second intervals while the discharge occurs.
 - (b) Measure and record the rate of the discharge of water from the Highbank Power Station tailrace into the Terrace canal at the point of discharge at no greater than 60 second intervals while the discharge occurs.
 - (c) In the event that any instantaneous recorded flow rate under Condition (3)(a) exceeds the maximum flow rate in condition (2)(b), the consent holder shall ensure that the subsequent 1 hour average flow rate complies with the maximum flow rate in Condition (2)(b).
- 4) The discharge shall not cause erosion of the bed or banks of:
- (a) The Highbank Power Station Tailrace; and / or
 - (b) Any active channel, or any channel connecting directly to an active channel of the Rakaia River.
- 5) The discharge, after reasonable mixing shall not give rise to the following effects:
- (a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended material;
 - (b) any conspicuous change in colour or visual clarity;
 - (c) any emission of objectionable odour;
 - (d) the rendering of fresh water unsuitable for consumption by farm animals.

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The consent holder shall monitor the performance of the Highbank Power Station tailrace salmon barrier on a no less than weekly basis whenever the consent holder is discharging water to the Highbank tailrace for that period of the entire salmon migration season, being 1 December to 31 May. A report detailing the incidents of the salmon barrier screens popping, the manual reinstatement following each incident, and any incidents of maintaining the connection of the fish bypass channel to the Rakaia River shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, by 31 May each year. These reports are also to be simultaneously served on TrustPower Ltd.

- 6) The salmon barrier shall be inspected weekly and the Consent Holder shall undertake any necessary cleaning and maintenance works within seven days of that inspection, unless urgent maintenance or repair work is required in which case that shall take place as soon as possible.
- The consent holder shall be responsible for:
- (a) any re-grading and reinstatement of the unformed lower Highbank tailrace including any re-connection to an active branch of the Rakaia River; and
 - (b) any modifications to the salmon screen and / or salmon bypass channel necessary to give effect to this consent, or as advised by Environment Canterbury in response to any issues raised as a consequence of the consent holders monitoring responses in relation to the above, and as pursuant to s.128 of the Resource Management Act.
- 7) That the consent holder shall erect warning signs at any known riverbed access points within one

kilometre downstream of the Highbank tailrace salmon barrier, the Highbank Canal emergency overflow, at the Lowes Cutting Access of the Barrhill Hydro-electric Power Station warning of the possibility of sudden rises in river waters at any time.

- 8) An audible warning shall sound immediately preceding the commencement of any discharge from either the Highbank or the Barrhill Power Station tailrace.
- 9) The consent holder shall ensure that the braid of the Rakaia River diverted to connect with the Highbank tailrace fish bypass channel from the Highbank tailrace salmon barrier is maintained in good working order at all times to ensure migrating fish will be able to move upstream.
- 10) A record shall be kept of the incidence of salmon entrained in the bypass channel and the North Canterbury Fish and Game Council shall be notified on each occasion that Condition 9 below is triggered. Records of salmon entrapment shall be forwarded to Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, at the end of by 31 June each year, or as requested. This report is also to be simultaneously served on TrustPower Ltd.
- 11) There shall be no significant adverse effect on aquatic life as a result of the discharge.
- 12) The consent holder shall be responsible for any re-grading and reinstatement of the salmon bypass channel including any re-connection to an active braid of the Rakaia River.

SLUICING DISCHARGES

- 13) The rate at which water and sediment is discharged to the Rakaia River from the sluice channel at or about map reference NZMS 260 K36: 058-394 shall not exceed 40 cubic metres per second.
- 14) The discharge of water and sediment via the sluice channel shall commence no earlier than 1:00pm daily, only when the flow in the Rakaia River is at or above 300 cubic metres per second as estimated by the Canterbury Regional Council from measurements at either the gorge recorder site (at or about map reference NZMS 260 K35:015-424) or the recorder site at Fighting Hill (at or about map reference NZMS 260 K35:997-437).
- 15) The discharge of water and sediment via the sluice channel shall be gradually reduced to allow time for fish to find their way back to a flowing braid of the Rakaia River.
- 16) When sluicing ceases, a visual inspection of the sluice race shall be carried out to determine whether fish have become trapped in the sluice channel. In the event that fish have become trapped as a result of the sluicing event the flushing of sediment shall not resume until:
 - (a) A solution to the entrapment of fish has been found and implemented;
 - (b) A written report outlining the solution has been provided to the Canterbury Regional Council and the North Canterbury Fish and Game Council;
 - (c) The necessary steps have been undertaken to enact that solution;

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- 17) A record shall be kept of the incidence of fish entrapment, and the North Canterbury Fish and Game Council shall be notified. Records of fish entrapment (if any) shall be forwarded to Canterbury Regional council at the end of each irrigation season, or on their request.
- 18) Fish that have become entrapped in either the discharge channel or the sluice channel shall, as far as is practicable, be salvaged by the consent holder or persons acting for them, and released into an active channel of the Rakaia River.

ADMINISTRATION

- 19) The consent holder shall ensure that all personnel working on the site are made aware of and have access to the contents of this consent document and Schedule 1: General Conditions, and all Plans associated with these documents.
- 20) The Canterbury Regional Council may, once per year during construction and commissioning, and then five yearly thereafter, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage.
- 21) The lapsing date for the purposes of section 125 shall be XXXX.

CRC072638 – To discharge water and sediment to the Rakaia River at a maximum rate of 2 cubic metres per second from the fish bypass.

- 1) This consent is subject to the general conditions listed in Schedule 1: General Conditions.
- 2)
 - (a) Water and sediment shall only be discharged from the fish bypass channel at approximate map reference NZMS 260 K36: 085-360 to the Rakaia River at a rate not exceeding 2.0 cubic metres per second.
 - (b) All fish bypass water discharged to the Rakaia River shall be to an active channel of the River, or to a channel connecting directly to an active channel of the Rakaia River.
- 3) For the purpose of determining compliance with condition (2) the consent holder shall:
 - (a) Measure and record the rate of the discharge of water at the point of discharge to the bypass channel at no greater than 30 minute intervals while the discharge occurs.
 - (b) In the event that any instantaneous recorded flow rate exceeds the maximum flow rate in condition (2), the consent holder shall ensure that the subsequent 1 hour average flow rate complies with the maximum flow rate in Condition (2).
- 4) The discharge shall not cause erosion of the bed or banks of the active channel, or any channel connecting directly to an active channel of the Rakaia River.
- 5) The discharge, after reasonable mixing shall not give rise to the following effects:
 - (a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended material;

- (b) any conspicuous change in colour or visual clarity;
- (c) any emission of objectionable odour;
- (d) the rendering of fresh water unsuitable for consumption by farm animals.

6) The consent holder shall ensure that the braid of the Rakaia River diverted to connect with the fish bypass channel is maintained in good working order at all times as is adequate to ensure migrating fish are able to return to a main braid of the river.

7) At all times when this consent is being exercised, a minimum water depth of 0.3 metres shall be maintained over the entire length of the fish bypass channel to provide for fish passage into a flowing braid of the Rakaia River.

8) The discharge of water and sediment via the fish bypass channel shall be gradually reduced to allow time or fish to find their way back to a flowing braid of the Rakaia River.

ADMINISTRATION

9) The consent holder shall ensure that all personnel working on the site are made aware of and have access to the contents of this consent document and Schedule 1: General Conditions, and all Plans associated with these documents.

10) The Canterbury Regional Council may, once per year during construction and commissioning, and then five yearly thereafter, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage.

11) The lapsing date for the purposes of section 125 shall be XXXX.

CRC072639 – To discharge in emergency situations, water and sediment, at a maximum rate of 40 cubic metres per second to the Rakaia River upstream of Highbank Power Station, at approximate map reference NZMS 260 K36: 079-365.

- 1) This consent is subject to the general conditions listed in Schedule 1: General Conditions.
- 2) Water may only be discharged at a total combined rate not exceeding 40 cubic metres per second from the Rakaia Terrace Hydro Scheme's emergency spillway located on the Highbank Canal between approximate map references NZMS 260 K36: 075-370 and K36:075-368.
- 3) The discharge shall only be water and sediment from the Rakaia Terrace Hydro Scheme, settling pond and canal system.
- 4) The Consent Holder shall record all occasions where emergency discharges of scheme water occur, and the circumstances and duration of those discharges. These records shall be made available to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement

Manager, on request.

- 5) The discharge shall not cause erosion of the bed or banks of the Rakaia River within a distance of 1km downstream of the Highbank Canal emergency discharge point.
- 6) In the event of any erosion occurring to the bed or banks of the Rakaia River within 1km downstream of the Highbank Canal emergency discharge point as a result of the discharge, the consent holder shall be responsible for rectifying the situation as soon as practicable.

PUBLIC SAFETY

- 7)
 - (a) Warning signs shall be erected at any known fishing spots and river access points within one kilometer downstream of the proposed emergency discharge point.
 - (b) An audible warning shall be given at the commencement of the discharge process.

ADMINISTRATION

- 8) The consent holder shall ensure that all personnel working on the site are made aware of and have access to the contents of this consent document and Schedule 1: General Conditions, and all Plans associated with these two documents.
- 9) The Canterbury Regional Council may, once per year during construction and commissioning, and then five yearly thereafter, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage.
- 10) The lapsing date for the purposes of section 125 shall be XXXX.

CRC072641 - To discharge cross-drainage water and sediment into unnamed streams, between at or about map references between K36:061-386 and L36:152-280.

- 1) This consent is subject to the general conditions listed in Schedule 1: General Conditions.
- 2)
 - (a) The discharge shall only be stormwater and sediment from cross-drainage associated with the Rakaia Terrace Hydro Scheme between approximate map references NZMS 260 K36:061-386 and K36:152-280.
 - (b) The discharge of stormwater shall be undertaken in accordance with the sediment and erosion control plan which forms a part of Schedule 1: General Conditions.

DEFINITIONS

- 3) For the purposes of this consent:
 - (a) From hereon in the Erosion and Sediment Control Guidelines are the Environment Canterbury's Erosion and Sediment Control Guidelines for the Canterbury Region, Report No. R06/23, February 2007.
 - (b) Stabilisation: providing adequate measures, vegetative and/or structural that will protect exposed soil to prevent erosion.

- 4) The stormwater system shall be designed and constructed with sufficient capacity to dispose of all stormwater events up to and including a ten year one hour duration rainfall event at this locality.

ADMINISTRATION

- 5) Prior to the commencement of works, the consent holder shall ensure that all personnel working on the site are made aware of and have access to the contents of this consent document and Schedule 1: General Conditions, and all Plans associated with these two documents.
- 6) The Canterbury Regional Council may, once per year during construction and commissioning, and then five yearly thereafter, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage.
- 7) The lapsing date for the purposes of section 125 shall be XXXX.

CRC073864 - To discharge stormwater (water containing contaminants) onto or into land, in circumstances where it may enter water, and into the Rakaia River from all construction areas associated with the construction of the Rakaia Terrace Hydro Scheme between at or about map references K36:050-393 and L36:158-280

- 1) This consent is subject to the general conditions listed in Schedule 1: General Conditions.
- 2)
 - (a) The discharge, other than as is covered by CRC072641 shall only be stormwater associated with the construction of the scheme between approximate map references NZMS 260 K36:050-363 and L36:154-281.
 - (b) The discharge of stormwater during construction and scheme maintenance, other than as is covered by CRC072641 shall only be to land unless the provisions of condition (2)(c) are met.
 - (c) The discharge of stormwater during construction and scheme maintenance, other than as is covered by CRC072641 to land in circumstances where it may enter water, or to water shall only occur following treatment adequate to remove suspended solids, such that after reasonable mixing, the provisions of Clause 9(2) of the National Water Conservation Order (Rakaia) 1988 are met in full.
 - (d) The discharge of stormwater shall be in accordance with the sediment and erosion control plan which forms a part of Schedule 1: general conditions.
 - (e) For the avoidance of doubt, and notwithstanding any condition of this consent, there shall be no discharge of stormwater directly into, or onto land where it may enter, the existing Highbank Power Station Tailrace.
- 3) For the purposes of this consent:
 - (a) The Erosion and Sediment Control Guidelines refer to Environment Canterbury's Erosion and Sediment Control Guidelines for the Canterbury Region, Report No. R06/23, February 2007.
 - (b) Stabilisation: providing adequate measures, vegetative and/or structural that will protect exposed soil to prevent erosion
- 4)
 - (a) Prior to bulk earthworks commencing for each stage of construction, the consent holder shall submit to the Canterbury Regional Council, Attention RMA Enforcement & Compliance Manager a certificate signed by an appropriately qualified and experienced registered professional engineer to certify that the appropriate erosion and sediment control measures have been constructed in accordance with the Erosion and Sediment Control Plan required under Schedule 1.

- (b) Certified controls shall include but not be limited to, appropriate diversion channels, sediment fences, decanting earth bunds, the sediment retention pond and site exit point.
 - (c) The certification for these measures for each construction phase shall be supplied to the Canterbury Regional Council, Attention RMA Enforcement & Compliance Manager immediately upon completion of construction of those measures.
- 5) All exposed surfaces including swales shall be stabilized to prevent erosion once earthworks are complete or if the exposed area is not to be earth worked for a period of 14 days or more. Stabilisation shall be achieved in accordance with the Canterbury Regional Council's Sediment and Erosion Control Guidelines.
 - 6) All haul road or vehicle track stormwater shall be disposed of to a soak pit preceded by no less than 20 metres of grassed swale underlain by no less than 150 millimeters of topsoil.

ADMINISTRATION

- 8) Prior to the commencement of works, the consent holder shall ensure that all personnel working on the site are made aware of and have access to the contents of this consent document and Schedule 1: General Conditions, and all Plans associated with these two documents.
- 9) The Canterbury Regional Council may, once per year during construction and commissioning, and then five yearly thereafter, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage.
- 10) The lapsing date for the purposes of section 125 shall be XXXX.

CRC073862 - To discharge contaminants, being principally dust, to air from construction activities associated with the construction of the intake structure, settling pond, canals, head pond storage and power stations and any other construction and maintenance activities associated with the Rakaia Terrace Hydro Scheme between at or about map references K36:030-400 and L36:158-280

- 1) This consent is subject to the general conditions listed in Schedule 1: General Conditions.
- 2)
 - (a) The discharge to air shall only be fugitive dust from the construction of The Rakaia Terrace Hydro Scheme and associated infrastructure between map references NZMS 260 K36:030-400 and NZMS 260 L36:158-280.
 - (b) The fugitive dust shall only be from construction activities, unconsolidated surfaces and stockpiled material.
- 3) The discharge of dust shall not be offensive or objectionable, beyond the boundary of the site on which this consent is exercised.
- 4) The consent holder shall take all practicable measures to minimise dust discharges, including but not limited to the following:
 - (a) Water sprayed on to all potentially dusty surfaces, including unsealed surfaces traversed by vehicles and bulk material stockpiles using water cart and sprays.
 - (b) Water sprayed on to bulk material screening operations.

- 5) The holder of this consent shall maintain a record of surface water abstracted and used for dust suppression purposes and make this record available to the Canterbury Regional Council on request.
- 6) The site shall be maintained in a condition free of litter and other waste material that may be wind blown from the site.
- 7) A record of all complaints relating to fugitive dust shall be maintained, and shall include:
 - (a) The location where the dust was detected by the complainant;
 - (b) The date and time when the dust was detected;
 - (c) A description of the wind speed and wind direction when the dust was detected by the complainant;
 - (d) The most likely cause of the dust detected; and
 - (e) Any corrective action undertaken by the consent holder, to avoid, remedy, or mitigate the dust detected by the complainant.
 This record shall be provided to the Canterbury Regional Council Attention: RMA Compliance and Enforcement Manager, on request.
- 8) The discharge of contaminants to air from the site shall not create any dust hazard or nuisance to the Benmore – Haywards A transmission line managed by Transpower New Zealand Limited.
- 9) The discharge of contaminants to air from the site, including but not limited to the use of the haulage route, shall not create any dust hazard or nuisance to the operation of Highbank Hydroelectric Power Station, including the switchyard.

ADMINISTRATION

- 10) The consent holder shall ensure that all personnel working on the site are made aware of and have access to the contents of this consent document and Schedule 1: General Conditions, and all Plans associated with these two documents.
- 11) The Canterbury Regional Council may, once per year during construction and commissioning, and then five yearly thereafter, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage.
- 12) The lapsing date for the purposes of section 125 shall be XXXX.

CRC072648 - To excavate and disturb land, deposit material and remove vegetation in the Riparian Margin of the Rakaia River

- 1) This consent is subject to the general conditions listed in Schedule 1: General Conditions.
- 2) The works shall be limited to those required to excavate and disturb land, deposit material and remove plant vegetation in the riparian margin of the Rakaia River to construct and maintain the Rakaia Terrace Hydro-Electricity Scheme, between map references NZMS 260 K36:050-393 and NZMS 260 L36: 158-280.
- 3) Earthworks shall not be undertaken in a manner likely to cause erosion of, or instability to, the banks or bed of any watercourse.

- 4) All erosion and sediment control shall be carried out in accordance with the Erosion and Sediment Control Management Plan submitted in accordance with Schedule 1: General Conditions.
- 5) No cut or cleared vegetation, debris, or excavated material shall be placed in a position such that it may enter surface water.
- 6)
 - (a) Any gravel, sand or other natural material excavated during construction of new channels and stored on the riverbed shall not be piled higher than 0.5 metres above the level of the immediately adjacent riverbed.
 - (b) Banks constructed to divert water shall not exceed 1.5 metres in height above the level of the riverbed.
- 7) All practicable steps shall be undertaken to ensure that the works do not deflect floodwaters into the bank or berm of any watercourse.
- 8) Works shall not increase the potential for flooding on surrounding land.
- 9) Works shall not decrease the flood carrying capacity of the Rakaia River.
- 10) If excavation within the bed of the Rakaia River is not to occur within seven days following the last working at the site, then the following shall occur:
 - (a) All deposits of gravel, sand and other natural material including reject material shall be leveled to the natural bed level;
 - (b) The excavation area shall be reshaped and formed to a state consistent with the surrounding natural river bed
- 11) All practicable measures shall be undertaken to prevent the discharge of sediment arising from the works, entering flowing water.
- 13) Prior to any mechanical works being carried out in the period 1 August to 1 February, the consent holder shall ensure that:
 - (a) A suitably qualified and independent person inspects the proposed area of works, no earlier than eight working days prior to any works being carried out, and locates any bird breeding sites of riverbed nesting species listed in Appendix A; and
 - (b) The person carrying out the inspection prepares a written report that identifies all the located riverbed bird breeding or nesting sites and provides copies of that report to the consent holder and the Canterbury Regional Council; and
 - (c) The name and qualifications of the person carrying out the inspection are provided to the Canterbury Regional Council with the report; and
 - (d) Any person carrying out works authorised by this consent are informed of any riverbed bird breeding or nesting sites located.
- 14) No works shall be undertaken within 100m from any riverbed birds listed in Schedule 1 to this consent nesting or rearing their young on the riverbed or margins.
- 15) Works shall not take place in an active river braid during the period 1 May to 30 September, except in the case that:
 - (a) The river braid is dry; or
 - (b) The applicant has prior to works, undertaken to consult with The Department of Conservation, Fish and Game, and The Canterbury Regional Council, to identify and

wherever possible avoid any ecologically sensitive areas of the river; and

- (c) A suitably qualified person has inspected the area of proposed work and has provided a written report stating that any adverse effects of the works on the river's ecology (such as fish passage, redds and spawning sportsfish) shall be minor. A copy of the report shall be forwarded to Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, and the Regional Engineer, no less than ten working days prior to commencement of the works. Works shall not proceed until the report has been approved by the Canterbury Regional Council.
- 16) Condition 15 is not applicable to re-instatement works carried out within two weeks following floods, or maintenance works other than those involving the movement of heavy machinery across the riverbed.
 - 17) All practicable measures shall be undertaken to minimise adverse effects on property, amenity values, wildlife, vegetation, and ecological values.
 - 18) No person may excavate or otherwise interfere with any land:
 - (a) At a depth greater than 300 millimetres within 6 metres of the outer edge of the visible foundations of any tower supporting any conductor; or
 - (b) At a depth greater than 3 metres, between 6 metres and 12 metres of the outer edge of the visible foundation of any tower supporting any conductor; or
 - (c) In such a way as to create an unstable batter.

ADMINISTRATION

- 19) The consent holder shall ensure that all personnel working on the site are made aware of and have access to the contents of this consent document and Schedule 1: General Conditions, and all Plans associated with these documents.
- 20) The Canterbury Regional Council may, once per year during construction and commissioning, and then five yearly thereafter, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage.
- 21) The lapsing date for the purposes of section 125 shall be XXXX.

CRC072646 - To use land to construct and maintain a storage settling pond, the Highbank and Terrace Canals, a head storage pond, and drainage structures and associated bed excavation and disturbance in, on, under or over the beds of unnamed streams along the route of the Highbank and Terrace Canals.

- 1) This consent is subject to the general conditions listed in Schedule 1: General Conditions.
- 2) The works shall be limited to the construction and maintenance of infrastructure to divert, impound and convey water in a settling pond, canals, a head storage pond and tail race canals between map references NZMS 260 K36:050-393 and NZMS 260 L36: 158-280.
- 3) Works in unnamed streams crossing the canal alignment shall be limited to those required to place pipes, culverts siphons and erosion protection structures within and over existing streams or drainage channels along the route of the canal for the purposes of maintaining naturally occurring land drainage under the canal alignment.

- 4) All erosion and sediment control shall be carried out in accordance with the Erosion and Sediment Control Management Plan in compliance with Schedule 1: General Conditions.
- 5) Works shall not cause erosion of the bed or banks of the Rakaia River, or the TrustPower Highbank Power Station tailrace canal.
- 6) In the event of any erosion occurring to the bed or banks of any watercourse that is attributable to the works, the consent holder shall be responsible for rectifying the situation as soon as practicable.
- 7) The works and associated structures shall not have any adverse effects on the flood carrying capacity of the unnamed drainage channels or watercourses crossed.
- 8) In the event of any damage to the culverts and crossings attributable to the exercise of this consent, the consent holder shall be responsible for maintaining the flood carrying capacity of the unnamed drainage channels and artificial watercourse and take all practicable measures to minimise erosion until such time as the damage is rectified.
- 9) All practicable measures shall be undertaken to prevent the discharge of sediment arising from the works, entering flowing water. No sediment shall enter the Highbank Power Station Tailrace from any of the works.
- 10) Prior to any mechanical works being carried out in the period 1 August to 1 February, the consent holder shall ensure that:
 - (a) A suitably qualified and independent person inspects the proposed area of works, no earlier than eight working days prior to any works being carried out, and locates any bird breeding sites of riverbed nesting species listed in Appendix A; and
 - (b) The person carrying out the inspection prepares a written report that identifies all the located bird breeding or nesting sites and provides copies of that report to the consent holder and the Canterbury Regional Council; and
 - (c) The name and qualifications of the person carrying out the inspection are provided to the Canterbury Regional Council with the report; and
 - (d) Any person carrying out works authorised by this consent are informed of any riverbed bird breeding or nesting sites located.
- 11) No works shall be undertaken within 100m from any riverbed birds listed in Schedule 1 to this consent nesting or rearing their young on the riverbed or margins.
- 12) All practicable measures shall be undertaken to minimise adverse effects on property, amenity values, wildlife, vegetation, and ecological values.
- 13) Works shall not take place in an active riverbraid during the period 1 May to 30 September, except in the case that:
 - (a) the riverbed is dry; or
 - (b) the applicant has, prior to the works, undertaken to consult with The Department of Conservation, Fish and Game, and the Canterbury Regional Council, to identify and wherever possible provide for avoidance of any ecologically sensitive area of the river; and
 - (c) A suitably qualified person has inspected the area of proposed work and has provided a written report stating that any adverse effects of the works on the ecology of the river shall be minor. A copy of the report shall be forwarded to the Canterbury Regional Council attention RMA Compliance and Enforcement Manager, and the Regional Engineer no less than ten working days prior to the commencement of works. Works shall not proceed until the report has been accepted and certified by the Canterbury Regional Council.
- 14) Condition (13) is not applicable to reinstatement works carried out within two weeks following floods,

or maintenance works other than those involving the movement of heavy machinery across the riverbed.

- 15) Any structures forming part of the scheme shall not be located within 12 metres of the closest visible edge of any high voltage transmission line support structure foundation.
- 16)
 - (a) All machinery and mobile plant operated in association with the scheme shall maintain a minimum clearance distance of four metres from the Benmore-Haywards A transmission line conductors at all times.
 - (b) All machinery and mobile plant operated in association with the scheme shall maintain a minimum clearance distance of four metres from the Benmore-Haywards A transmission line conductors at all times.
- 17) No fences or conductive material shall be located within five metres of the outer edge of the visible foundations of any transmission tower.
- 18) No person may excavate or otherwise interfere with any land:
 - (a) At a depth greater than 300 millimetres within 6 metres of the outer edge of the visible foundations of any tower supporting any conductor; or
 - (b) At a depth greater than 3 metres, between 6 metres and 12 metres of the outer edge of the visible foundation of any tower supporting any conductor; or
 - (c) In such a way as to create an unstable batter.
- 19)
 - (a) All new structures associated with the scheme except at or below ground structures associated with the invert canal shall be setback by a horizontal distance of at least 12 metres either side (total of 24 metres) from the centre line of the Benmore-Haywards A transmission line.
 - (b) Prior to construction, the consent holder shall submit to the Canterbury Regional Council, and forward a copy of the same to Transpower, a report from a suitably qualified electrical engineer confirming that any structure associated with the scheme complies with the minimum safe distances from the Benmore-Haywards A line as specified in Table 3 of the NZECP 34:2001
 - (c) No structure and/or site works shall be located to preclude existing 4-wheel drive access to the existing transmission line support structures
 - (d) Excavated or other material must not be deposited under or near the Benmore - Haywards A line so as to reduce the vertical distance from the ground to the conductors to a distance less than:
 - 8.0 metres vertically, across or along driveways or on any other land traversable by vehicles;
 - 6.5 metres vertically, on any land not traversable by vehicles due to inaccessibility;
 - and,
 - 5.0 metres in any distance other than vertical on all land
 - (e) To ensure that the Benmore - Haywards A transmission line (namely Tower 522) is protected from any adverse effects as a result of the construction and operation of the scheme, the Consent Holder shall, to the satisfaction of the Canterbury Regional Council: RMA Compliance and Enforcement Manager:
 - (i) Undertake to consult with Transpower New Zealand to identify and avoid, remedy or mitigate any potential adverse effects as a result of the construction and operation of the scheme;
 - (ii) Provide an independent engineering analysis to certify that the final design and location of the proposed diversion channel and any other relevant structure associated with the scheme does not generate potential adverse effects on the transmission line and Tower 522; and,
 - (iii) Provide an independent engineering analysis to certify the acceptability of any

alteration to the NZCEP 34:2001 minimum safe distance requirements and (to the extent relevant) to certify that any water flow will not affect and/or undermine the integrity of the structural supports.

- 20) (a) Within four months of construction works commencing, the consent holder shall develop and prepare, in consultation with TrustPower Ltd a management range for any tailrace discharge to maintain Highbank Power Station tail water levels within a range agreed by TrustPower Limited. The agreement, cosigned by both the consent holder and TrustPower Limited, is to be forwarded to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager. If agreement is not reached within four months of construction works commencing, then construction works within 300m of the Highbank Power Station must cease.
- (b) The discharge range as identified in Condition 20(a) as above is to be included within the detailed design of the Scheme and its associated operation, and will remain an enforceable condition for the duration of consent.
- (c) The consent holder shall, prior to commissioning of the scheme, provide a report to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager and TrustPower Ltd setting out the requirements of Condition 20(b) as above.
- (d) Monitoring of tail water levels of the Highbank Power Station are to be recorded on a continuous basis for the term of this consent. This monitoring is to demonstrate compliance with Condition 20(a) and (b) above, and is to be made available to TrustPower Ltd within five working days of its request. Annual monitoring reports are to be forwarded to Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, by 31 May each year, or as requested. These reports are also to be simultaneously served on TrustPower Ltd.
- 21) In respect of all works associated with the scheme, including sediment associated with the 'Sediment Disposal Area', the consent holder shall ensure that:
- (a) For all works, sediment shall only be flushed from the scheme settlement ponds on the Rakaia River when the flow in the river, as estimated by Canterbury Regional Council from measurements at either the gorge recorder site or the recorder site at Fighting Hill, is greater than 300 m³/s.
- (b) For sediment deposits associated with the 'Sediment Disposal Area' where there are geomorphological modifications to either:
- i. The lower tailrace channel of the Highbank Power Station; and / or
 - ii. The Fish bypass channel from the tailrace
- That lead to an increase the incidence of salmon entrapment, the channels are to be re-graded or reinstated in response to any issues raised as a consequence of the above.
- For the purpose of (ii) the consent holder shall monitor the performance of the tailrace and salmon barrier on a no less than weekly basis no less than 5 working days after there is a flood, or fresh for that period of the entire salmon migration season, being 1 December to 31 May. A report detailing the incidents of the manual reinstatement of the Salmon Bypass or Lower Tailrace following such reinstatements, where required, shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, by 31 May each year. These reports are also to be simultaneously served on TrustPower Ltd.
- (c) Works within 20m of, or within, the river bed shall not result in an increase in turbidity or reduction in clarity of the river flow which, in the opinion of a suitably qualified expert engaged by the consent authority but paid for by the consent holder, hinders the upstream passage of salmon in the Highbank salmon bypass channel.

ADMINISTRATION

- 21) The consent holder shall ensure that all personnel working on the site are made aware of and have access to the contents of this consent document and Schedule 1: General Conditions, and all Plans

associated with these two documents.

- 22) The Canterbury Regional Council may, once per year during construction and commissioning, and then five yearly thereafter, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage.
- 23) The lapsing date for the purposes of section 125 shall be XXXX.

CRC072644 - To place and maintain an intake structure on the bed of the Rakaia River, including associated bed excavation and disturbance, deposition of material, planting of plants, disturbance and removal of plants and habitat, and the reclamation or drainage of the riverbed, at the location of the Water Intake.

- 1) This consent is subject to the general conditions listed in Schedule 1: General Conditions.
- 2) The works shall be limited to:
 - (c) Those in-river works reasonably necessary to construct the river intake structure in accordance with the concept design plans contained in the application, identified as drawing C020 dated 12 November 2007;
 - (d) The clearance of vegetation only as is reasonably necessary to facilitate the construction and maintenance of the intake structure;
 - (e) The temporary drainage of the riverbed only as is necessary to enable the construction of the intake structure;
 - (f) The deposition of construction material and / or natural material as may be necessary to reinstate the riverbed to a level and position approximately in accordance with the existing position of the riverbed and adjacent river banks as exist at the time this consent is issued.
- 3) The works carried out in accordance with Condition (2) shall be located between map references NZMS 260 K36:046-393 and NZMS 260 K36:051-392.
- 4) All practicable measures shall be undertaken to ensure that works do not deflect floodwaters into the banks of the Rakaia River or any other watercourse.
- 5) Works shall not cause erosion of the bed and banks of the watercourse.
- 6) All practicable measures shall be undertaken to minimise vehicles and machinery entering the Rakaia River.
- 7) Works shall not increase the potential for flooding on surrounding land.
- 8) Works shall not decrease the flood carrying capacity of The Rakaia River.
- 9)
 - (a) Any gravel, sand or other natural material excavated during construction of new channels shall not be piled on the riverbed higher than 1.5 metres above the level of the adjacent riverbed;
 - (b) Banks constructed to divert water shall not exceed 0.5 metres in height above the level of the riverbed.

- 10) Works shall not take place in an active river braid during the period 1 May to 30 September, except in the case that:
 - (a) The river braid is dry; or
 - (b) The applicant has prior to the works, undertaken to consult with The Department of Conservation, Fish and Game, and The Canterbury Regional Council, to identify and wherever possible provide for avoidance of any ecologically sensitive areas of the river; and
 - (c) A suitably qualified person has inspected the area of proposed work and has provided a written report stating that any adverse effects of the works on the river's ecology (such as fish passage, redds and spawning sportsfish) shall be minor. A copy of the report shall be forwarded to Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, and the Regional Engineer, no less than ten working days prior to commencement of the works. Works shall not proceed until the report has been approved by the Canterbury Regional Council.
- 11) Condition 10 is not applicable to re-instatement works carried out within two weeks following floods, or maintenance works other than those involving the movement of heavy machinery across the riverbed
- 12) Prior to any mechanical works being carried out in the period 1 August to 1 February, the consent holder shall ensure that:
 - (a) A suitably qualified and independent person inspects the proposed area of works, no earlier than eight working days prior to any works being carried out, and locates any bird breeding sites of riverbed nesting species listed in Appendix A; and
 - (b) The person carrying out the inspection prepares a written report that identifies all the located riverbed bird breeding or nesting sites and provides copies of that report to the consent holder and the Canterbury Regional Council; and
 - (c) The name and qualifications of the person carrying out the inspection are provided to the Canterbury Regional Council with the report; and
 - (d) Any person carrying out works authorised by this consent are informed of any riverbed bird breeding or nesting sites located.
- 13) No works shall be undertaken within 100m from any riverbed birds listed in Schedule 1 to this consent nesting or rearing their young on the riverbed or margins.
- 14) The Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, shall be notified not less than 48 hours prior to the commencement of works.
- 15) The works shall not prevent the passage of fish, or cause the stranding of fish in pools or channels.

ADMINISTRATION

- 16) The consent holder shall ensure that all personnel working on the site are made aware of and have access to the contents of this consent document and Schedule 1: General Conditions, and all Plans associated with these two documents.
- 17) The Canterbury Regional Council may, once per year during construction and commissioning, and then five yearly thereafter, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the consent and which it is

appropriate to deal with at a later stage.

- 18) The lapsing date for the purposes of section 125 shall be XXXX.

CRC072643 – To excavate and disturb the bed of the Rakaia River to maintain existing riverbank protection structures, to facilitate the diversion of water and sediment, including deposition of material, planting of plants, disturbance and removal of plants and habitat and the reclamation or drainage of the riverbed, between map references NZMS 260 K36: 030-400 and NZMS 260 K36:070-382, and to disturb the bed of the Rakaia River to facilitate the discharge of water and to form channels, at or about map references NZMS 260 K36: 079-365, NZMS 260 K36:087-358 and NZMS 260 L36: 158-280 being the sites of the emergency discharge, the Highbank Power Station tailrace discharge and the Barrhill Power Station Discharge.

- 1) This consent is subject to the general conditions listed in Schedule 1: General Conditions.
- 2) The works shall be limited to:
 - (a) Those works reasonably necessary to maintain the position of the existing southern riverbank along the alignment of the Rakaia Terrace Hydro Scheme, including replacing or repairing existing river protection structures;
 - (b) The clearance of vegetation only as is reasonably necessary to facilitate the replacement or repairs of existing river protection structures.
 - (c) The temporary drainage of the riverbed only as is necessary to enable works to proceed to replace or repair existing river protection structures;
 - (d) The deposition of construction material and / or natural material as may be necessary to replace or repair existing river protection structures.
 - (e) The disturbance of the riverbed as is reasonably necessary to form channels and facilitate the discharge of water and sediment from the scheme to an active river braid at or about NZMS 260 K36: 079-365, NZMS 260 K36:087-358 and NZMS 260 L36: 158-280 being the sites of the emergency discharge, the Highbank Power Station tailrace discharge and the Barrhill Power Station Discharge.
 - (f) The diversion of water to the river intake structure.
- 3) The diversion works carried out in accordance with Conditions (2)(a) to (e) shall be located between map references NZMS 260 K36:030-400 and NZMS 260 L36: 158-280.
- 4) All practicable measures shall be undertaken to ensure that works do not deflect floodwaters into the banks of the Rakaia River or any other watercourse.
- 5) Works shall not cause erosion of the bed and banks of the watercourse.
- 6) All practicable measures shall be undertaken to minimise vehicles and machinery entering the Rakaia River.
- 7) Works shall not increase the potential for flooding on surrounding land.
- 8)
 - (a) Works and any planting undertaken shall not decrease the flood carrying capacity of the Rakaia River or encroach into any active channel.
 - (b) In-river works and planting shall not reduce or prevent the ability of existing river channels to be navigated by watercraft, or obstruct the passage of aquatic fauna.

- 9) Works shall not cause the riverbank to advance beyond the position of the river bank as exists at the issue of this consent.
- 10) (a) Works undertaken in accordance with condition (2)(f) shall not occur upstream of map reference NZMS 260 K36:030-400 or downstream of map reference NZMS 260 K36:050-393;
- (b) Bunds formed to divert water shall not exceed 0.5 metres in height above the immediately adjacent level of the riverbed;
- (c) Vehicles and machinery entering the riverbed to undertake works authorised by this consent shall remain in the riverbed no longer than is necessary to complete the works, or for a period of 12 hours, whichever is the lesser;
- (d) Any gravel, sand or other natural material excavated during construction of new channels shall not be piled on the riverbed higher than 1.5 metres above the level of the adjacent riverbed.
- 11) Except in the event of an emergency where the physical infrastructure of the Rakaia Terrace Hydro Scheme or existing TrustPower infrastructure is at immediate risk, works shall not take place in an active river braid during the period 1 May to 30 September, except in the case that:
- (a) The river braid is dry; or
- (b) The applicant has prior to the works, undertaken to consult with The Department of Conservation, Fish and Game, and The Canterbury Regional Council, to identify and wherever possible provide for avoidance of any ecologically sensitive areas of the river; and
- (c) A suitably qualified person has inspected the area of proposed work and has provided a written report stating that any adverse effects of the works on the river's ecology (such as fish passage, redds and spawning sportsfish) shall be minor. A copy of the report shall be forwarded to Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, and the Regional Engineer, no less than ten working days prior to commencement of the works. Works shall not proceed until the report has been approved by the Canterbury Regional Council.
- 12) Condition 10 is not applicable to re-instatement works carried out within two weeks following floods, or maintenance works.
- 13) Prior to any mechanical works being carried out in the period 1 August to 1 February, the consent holder shall ensure that:
- (a) A suitably qualified and independent person inspects the proposed area of works, no earlier than eight working days prior to any works being carried out, and locates any bird breeding sites of riverbed nesting species listed in Appendix A of schedule 1 to this consent; and
- (b) The person carrying out the inspection prepares a written report that identifies all the located riverbed bird breeding or nesting sites and provides copies of that report to the consent holder and the Canterbury Regional Council; and
- (c) The name and qualifications of the person carrying out the inspection are provided to the Canterbury Regional Council with the report; and
- (d) Any person carrying out works authorised by this consent are informed of any riverbed bird breeding or nesting sites located.
- 14) No works shall be undertaken within 100m from any riverbed birds listed in Schedule 1 to this consent nesting or rearing their young on the riverbed or margins.
- 15) The Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, shall be notified not less than 48 hours prior to the commencement of works.

Deleted: other than those involving the movement of heavy machinery across the riverbed

- 16) The works shall not prevent the passage of fish, or cause the stranding of fish in pools or channels. In respect of all works associated with the scheme, including sediment associated with the 'Sediment Disposal Area', the consent holder shall ensure that:
- (a) For all works, sediment shall only be flushed from the scheme settlement ponds on the Rakaia River when the flow in the river, as estimated by Canterbury Regional Council from measurements at either the gorge recorder site or the recorder site at Fighting Hill, is greater than 300 m³/s.
 - (b) For sediment deposits associated with the 'Sediment Disposal Area' where there are geomorphological modifications to either:
 - i. The lower tailrace channel of the Highbank Power Station; and / or
 - ii. The salmon bypass channel from the tailraceThat lead to an increase the incidence of salmon entrapment, the channels are re-graded or reinstated in response to any issues raised as a consequence of the above.

For the purpose of (16)(b)(ii) the consent holder shall monitor the performance of the tailrace and salmon barrier on a no less than weekly basis no less than 5 working days after there is a flood, or fresh for that period of the entire salmon migration season, being 1 December to 31 May. A report detailing the incidents of the manual reinstatement of the Salmon Bypass or Lower Tailrace following such reinstatements, where required, shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, by 31 May each year. These reports are also to be simultaneously served on TrustPower Ltd.

Works within 20m of, or within, the river bed shall not result in an increase in turbidity or reduction in clarity of the river flow which, in the opinion of a suitably qualified expert engaged by the consent authority but paid for by the consent holder, hinders the upstream passage of salmon in the Highbank salmon bypass channel.

ADMINISTRATION

- 17) The consent holder shall ensure that all personnel working on the site are made aware of and have access to the contents of this consent document and Schedule 1: General Conditions, and all Plans associated with these two documents.
- 18) The Canterbury Regional Council may, once per year during construction and commissioning, and then five yearly thereafter, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage.
- 19) The lapsing date for the purposes of section 125 shall be XXXX.

CRC072647 – To place and maintain river bank protection structures in the bed and banks of the Rakaia River, including associated riverbed disturbance between approximate map references NZMS 260 K36: 068-378 and NZMS 260 K36: 096-350.

- 1) This consent is subject to the general conditions listed in Schedule 1: General Conditions.
- 2) The works shall be limited to:
 - (a) Those works reasonably necessary to maintain the position of the existing southern riverbank along the alignment of the Rakaia Terrace Hydro Scheme, including replacing or

- repairing existing river protection structures;
- (b) The clearance of vegetation only as is reasonably necessary to facilitate the replacement or repairs of existing river protection structures.
 - (c) The temporary drainage of the riverbed only as is necessary to enable works to proceed to replace or repair existing river protection structures;
 - (d) The deposition of construction material and / or natural material as may be necessary to replace or repair existing river protection structures.
 - (e) The disturbance of the riverbed as is reasonably necessary to form channels and facilitate the discharge of water and sediment from the scheme to an active river braid at or about NZMS 260 K36: 079-365, NZMS 260 K36:087-358 and NZMS 260 L36: 158-280 being the sites of the emergency discharge, the Highbank Power Station tailrace discharge and the Barrhill Power Station Discharge.
- 3) The works carried out in accordance with Condition (2) shall be located between map references NZMS 260 K36:046-393 and NZMS 260 L36: 158-280.
 - 4) All practicable measures shall be undertaken to ensure that works do not deflect floodwaters into the banks of the Rakaia River or any other watercourse.
 - 5) Works shall not cause erosion of the bed and banks of the watercourse.
 - 6) All practicable measures shall be undertaken to minimise vehicles and machinery entering the Rakaia River.
 - 7) Works shall not increase the potential for flooding on surrounding land.
 - 8)
 - (a) Works and any planting undertaken shall not decrease the flood carrying capacity of the Rakaia River or encroach into any active channel.
 - (b) In-river works and planting shall not reduce or prevent the ability of existing river channels to be navigated by watercraft, or obstruct the passage of aquatic fauna.
 - 9) Works shall not cause the riverbank to advance beyond the position of the river bank as exists at the issue of this consent.
 - 10)
 - (a) Any gravel, sand or other natural material excavated during construction of new channels shall not be piled on the riverbed higher than 1.5 metres above the level of the adjacent riverbed;
 - (b) Banks constructed to divert water shall not exceed 0.5 metres in height above the level of the riverbed.
 - 11) Except in the event of an emergency where the physical infrastructure of the Rakaia Terrace Hydro Scheme or existing TrustPower infrastructure is at immediate risk, works shall not take place in an active river braid during the period 1 May to 30 September, except in the case that:
 - (d) The river braid is dry; or
 - (e) The applicant has prior to the works, undertaken to consult with The Department of Conservation, Fish and Game, and The Canterbury Regional Council, to identify and wherever possible provide for avoidance of any ecologically sensitive areas of the river; and
 - (f) A suitably qualified person has inspected the area of proposed work and has provided a written report stating that any adverse effects of the works on the river's ecology (such as fish passage, redds and spawning sportsfish) shall be minor. A copy of the report shall be forwarded to Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, and the Regional Engineer, no less than ten working days prior to commencement

of the works. Works shall not proceed until the report has been approved by the Canterbury Regional Council.

- 12) Condition 10 is not applicable to re-instatement works carried out within two weeks following floods, or maintenance works other than those involving the movement of heavy machinery across the riverbed
- 13) Prior to any mechanical works being carried out in the period 1 August to 1 February, the consent holder shall ensure that:
 - (a) A suitably qualified and independent person inspects the proposed area of works, no earlier than eight working days prior to any works being carried out, and locates any bird breeding sites of riverbed nesting species listed in Appendix A; and
 - (b) The person carrying out the inspection prepares a written report that identifies all the located riverbed bird breeding or nesting sites and provides copies of that report to the consent holder and the Canterbury Regional Council; and
 - (c) The name and qualifications of the person carrying out the inspection are provided to the Canterbury Regional Council with the report; and
 - (d) Any person carrying out works authorised by this consent are informed of any riverbed bird breeding or nesting sites located.
- 14) No works shall be undertaken within 100m from any riverbed birds listed in Schedule 1 to this consent nesting or rearing their young on the riverbed or margins.
- 15) The Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, shall be notified not less than 48 hours prior to the commencement of works.
- 16) The works shall not prevent the passage of fish, or cause the stranding of fish in pools or channels. In respect of all works associated with the scheme, including sediment associated with the 'Sediment Disposal Area', the consent holder shall ensure that:
 - (a) For all works, sediment shall only be discharged via sluicing from the scheme settlement ponds on the Rakaia River when the flow in the river, as estimated by Canterbury Regional Council from measurements at either the gorge recorder site or the recorder site at Fighting Hill, is greater than 300 m³/s.
 - (b) For sediment deposits associated with the 'Sediment Disposal Area' where there are geomorphological modifications to either:
 - iii. the lower tailrace channel of the Highbank Power Station; and / or
 - iv. the salmon bypass channel from the tailracethat lead to an increase the incidence of salmon entrapment, the channels shall be re-graded or reinstated in response to any issues raised as a consequence of the above.

For the purpose of (ii) the consent holder shall monitor the performance of the tailrace and salmon barrier on a no less than weekly basis no less than 5 working days after there is a flood, or fresh for that period of the entire salmon migration season, being 1 December to 31 May. A report detailing the incidents of the manual reinstatement of the Salmon Bypass or Lower Tailrace following such reinstatements, where required, shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, by 31 May each year. These reports are also to be simultaneously served on TrustPower Ltd.

Works within 20m of, or within, the river bed shall not result in an increase in turbidity or reduction in clarity of the river flow which, in the opinion of a suitably qualified expert engaged by the consent authority but paid for by the consent holder, hinders the upstream passage of salmon in the Highbank salmon bypass channel.

ADMINISTRATION

- 17) The consent holder shall ensure that all personnel working on the site are made aware of and have access to the contents of this consent document and Schedule 1: General Conditions, and all Plans associated with these two documents.
- 18) The Canterbury Regional Council may, once per year during construction and commissioning, and then five yearly thereafter, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage.
- 19) The lapsing date for the purposes of section 125 shall be XXXX.

CRC072636 – To divert surface water up to 42 cubic metres per second from the Rakaia River via an intake structure at approximate map reference NZMS 260 K36:057-393, into a settling pond, and to divert up to 40 cubic metres per second from the settling pond into the Highbank Canal, into the Highbank Power Station tailrace at approximate map reference NZMS 260 K36:083-360, into the Terrace Canal and into the Barrhill Power Station; and

CRC073863 - To dam and convey water in a settling pond at or about map reference NZMS 260 K36:057-391, in the Highbank Canal, in the Highbank Power Station tailrace at approximate map reference NZMS 260 K36:083-360, in the Terrace Canal and in a head pond at or about map reference NZMS 260 K36:152-280.

(The following set of conditions apply to CRC072636 and CRC072863)

- 1) This consent is subject to the general conditions listed in Schedule 1: General Conditions.

DIVERT WATER

- 2) The rate at which water is diverted via an intake structure and conveyed into a settling pond, into the Highbank Canal, into the Highbank Power Station tailrace, into the Terrace Canal and then into a head pond shall not exceed 40 cubic metres per second.
- 3) The diversion and conveyance of water shall only occur when water is being taken in accordance with consent CRC021091.
- 4) There shall be no significant effect on the passage of fish or to aquatic life as a result of the exercise of this consent.
- 5) (a) The consent holder shall install, operate and maintain a fish screen in accordance with the NIWA publication *Fish Screening: Good Practice Guidelines for Canterbury, October 2007*, NIWA Client Report CHC2007-092 at the entrance to the Highbank canal at approximate map reference NZMS 260 K36:064-382. Water shall be diverted through the fish screen into the canal only when the fish screen is operated in accordance with the following provisions:
 - (i) the fish screen shall cross the full width of the Highbank Canal to prevent fish

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- bypassing the screen into the canal;
- (ii) the screen material void size shall be no greater than 3 millimeter mesh or 2 millimeter wedgewire;
- (iii) the screens shall have an approach velocity of no greater than 0.12metres per second;
- (iv) the sweep velocity across the screens shall exceed the approach velocity;
- (v) An effective bypass system shall be maintained at all times that water is diverted into the scheme, to connect to an active braid of the river;
- (b) Water shall be diverted through the fish screen into the canal only when the fish screen is operated in accordance with the following provisions:
- (c) the fish screen shall cross the full width of the Highbank Canal to prevent fish bypassing the screen into the canal;
- (d) the consent holder shall maintain screens at all times that the scheme is operating;
- (e) each fish screen shall be inspected at a frequency no greater than 48 hours, or 24 hours when the Rakaia River flows exceed 300 cubic metres per second as estimated by Environment Canterbury at the Rakaia Gorge recorder site (at or about map reference NZMS 260 K:35: 015-424) or the recorder site at Fighting Hill (at or about map reference NZMS 260 K35:997-437);
- (f) in the event that a screen is damage so as to be rendered less effective at excluding fish from the canal, the consent holder shall repair or replace the screen immediately, or shall shut down the screen such that water ceases to pass through it. In the event that a screen is shut down, it shall not be reopened until such time as it complies in full with the provisions of condition (5)(a) of this consent;
- (g) All incidence of screen shut down shall be recorded by the consent holder and reported to Fish and Game New Zealand within four hours. These records of screen failure shall be forwarded to the Canterbury Regional Council to the attention of the Compliance and Enforcement Manager, at the end of each irrigation season, or upon request.
- (h) The design plans for the fish screen shall be certified by a suitably qualified and experienced chartered engineer with experience in the design and operation of fish screens and / or a fisheries biologist with recognised experience in fisheries research to confirm that the design, function and operation of the screen is in accordance with the guidelines detailed in condition 5(a).
- (i) Prior to commencement of construction:
 - (i) the consent holder shall provide to the Canterbury Regional Council:
 - (a) the certified design plans showing the screen slot size, sweep velocity, approach velocity, and a by-pass which returns fish to an actively flowing braid of the Rakaia River;
 - (b) a report from the certifying engineer / fisheries biologist which certifies and explains how the certified design and operation of the screen demonstrates compliance with the guidelines detailed in condition 5(a).
- (k) The Canterbury Regional Council shall certify the design plans within 20 working days of receipt of those plans. The Certifier's report shall not be unreasonably withheld, and shall be forwarded to the consent holder and copied to the North Canterbury Fish and Game Council.

- 6) The consent holder shall within six months of the first exercise of this consent:
- (a) Install a water measuring device that has an international accreditation, New Zealand or equivalent calibration endorsement, to continuously measure the rate of water diverted to within an accuracy of plus or minus five percent, at a location that will ensure the total diversion of water is measured;
 - (b) The rate shall be recorded by electronic means, at not greater than fifteen minute intervals, in a tamper-proof recording device such as a data-logger, kept for that purpose. The recorded data shall not be changed or deleted by any person, unless twelve months have passed since the date of recording;
 - (c) The measuring and recording devices shall be available for inspection at all times by the Canterbury Regional Council;
 - (d) All data from the recording device described in clause (a), shall be provided to the Canterbury

Regional Council, Attention: RMA Compliance and Enforcement Manager, on request, and shall be accessible and available for downloading at all times by the Canterbury Regional Council.

- (e) Within one month of the commencement of this consent, or the installation of a new measuring or recording device, and at five-yearly intervals thereafter, and at any other time when requested by Canterbury Regional Council, the consent holder shall provide a certificate to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, signed by a suitably qualified person certifying the accuracy of the measuring and recording devices installed in accordance with clause (a), and also certifying that data from the recording device described in clause (b) can be readily accessed in accordance with clause (d);
- (f) Ensure that the water meter is installed, maintained and operated throughout the duration of the consent in accordance with the manufacturer's instructions;
- (g) Take all practicable measures to ensure that the water meter is fully functional at all times;
- (h) The hours and rate at which water is diverted shall be measured to within an accuracy of plus or minus five percent and recorded daily in a log kept for that purpose, and a copy of the records provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, before 31 July each year or at any other time as requested in writing by the Canterbury Regional Council.

DAM CONSTRUCTION

- 7) Upon completion of the intake, settling pond, Highbank Canal, Terrace Canal and head pond and before first filling, the person responsible for the design and construction shall certify the scheme as safe and ready for operation. A copy of the certification document shall be forwarded to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager.

A construction report shall be prepared by the person responsible for the design and construction of the intake, settling pond, Highbank Canal, Terrace Canal and head pond, and a copy of which shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within one month of the construction of the intake, settling pond, Highbank Canal, Terrace Canal and head pond.

OPERATION AND MAINTENANCE

- 8) The consent holder shall ensure that the settling pond, canal system and head pond is inspected comprehensively by, or under the supervision of, a chartered professional engineer, yearly for the first three years and then once every five years after that. A copy of the inspection report shall be forwarded to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within one month of the inspection.
- 9) (a) The person responsible for the design and construction of the intake, settling pond, Highbank Canal, Terrace Canal and head pond shall be present during first filling and shall record any faults observed.
(b) The consent holder shall immediately remedy any faults recorded during first filling.
(c) A report shall be prepared detailing any faults observed and the remedial action taken, a copy of which shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within one month of first filling.
- 10) (a) The consent holder shall ensure that a chartered professional engineer inspects the intake, settling pond, Highbank Canal, Terrace Canal and head pond system within five days of first filling.
(b) The chartered professional engineer shall record any faults or findings that could potentially lead to failure of the intake, settling pond, Highbank Canal, Terrace Canal and head pond

- system, and recommend the appropriate remedial works. A report of these findings and recommended remedial actions shall be prepared and a copy of which shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within one month of the inspection.
- (c) The consent holder shall immediately undertake any remedial works or corrective actions recommended by the engineer and notify the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within one week of completion.
- 11) The details and findings of any inspections and maintenance works shall be recorded in a logbook kept for that purpose. A copy of the logbook shall be forwarded to Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, once per year.
- 12) In the event of any evidence of erosion, seepage, cracking, settlement, slipping or other embankment deformation the consent holder shall, immediately:
- (a) report the event to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager; and
- (b) consult a chartered professional engineer who shall be requested to take responsibility for:
- (i) The inspection of the intake, settling pond, Highbank Canal, Terrace Canal and head pond system;
- (ii) The identification of remedial action required;
- (iii) The recording of the details of the inspection, reasons for the fault and remedial action required, in a report, a copy of which shall be forwarded to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within one month of the inspection.
- (c) undertake any remedial works or corrective action recommended by the engineer, and notify the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within one week of completion.
- 13) In the event of failure of the intake, settling pond, Highbank Canal, Terrace Canal and head pond system, the consent holder shall immediately contact a chartered professional engineer who shall complete a report detailing the cause of failure and the action taken. A copy of this report shall be forwarded to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within one month of the event.

ADMINISTRATION

- 14) The consent holder shall ensure that all personnel working on the site are made aware of and have access to the contents of this consent document and Schedule 1: General Conditions, and all Plans associated with these two documents.
- 15) The Canterbury Regional Council may, once per year during construction and commissioning, and then five yearly thereafter, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage.
- 16) The lapsing date for the purposes of section 125 shall be XXXX.

CRC072637 - To use surface water, at a maximum rate of 40 cubic metres per second from the Rakaia River, for hydro-electricity generation.

- 1) This consent is subject to the general conditions listed in Schedule 1: General Conditions.
- 2) Water diverted shall be used for hydro-electricity generation purposes only between approximate map references NZMS 260 K36:068-375 and NZMS 260 K36:078-364, and at or about map reference NZMS 260 L36:154-281.

ADMINISTRATION

- 3) The Canterbury Regional Council may, once per year, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage.
- 4) The lapsing date for the purposes of section 125 shall be XXXX.

CRC072642 – To discharge material excavated from the storage / settling pond and deposited on the bed of the Rakaia River, being an area adjacent to the storage / settling pond, in a manner that may enter water, between approximate map references NZMS 260 K36: 058-396 and NZMS 260 K36: 068-387.

CRC072649 – To use land to place material (principally sediments) containing water excavated from the storage/settling pond onto the bed of the Rakaia River, between approximate map references NZMS 260 K36: 058-396 and NZMS 260 K36: 068-387 being an area adjacent to the settling pond.

(The following set of conditions apply to CRC072642 and CRC072649)

- 1) This consent is subject to the general conditions listed in Schedule 1: General Conditions.
- 2) The works shall be limited to the placement of sediment, and sediment containing water that is excavated from the Rakaia Terrace Hydro Scheme settling pond.
- 3) The works carried out in accordance with Condition (2) shall be located between map references NZMS 260 K36:058-396 and NZMS 260 K36:068-387 **and shall be limited to a total cumulative area no greater than two (2) hectares.**
- 4) All practicable measures shall be undertaken to ensure that works do not deflect floodwaters into the banks of the Rakaia River or any other watercourse, causing erosion, or damage to any flood control structure, or vegetation.
- 5) No vehicles or machinery shall enter any actively flowing part of the Rakaia River.
- 6) Works shall not increase the potential for flooding on surrounding land, decrease the flood carrying capacity of the Rakaia River, or directly result in permanent changes to the position of the main river channels.

In respect of all works associated with the scheme, including sediment associated with the 'Sediment Disposal Area', the consent holder shall ensure that:

- (a) For sediment deposits associated with the 'Sediment Disposal Area' where there are geomorphological modifications to either:

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- i. The lower tailrace channel of the Highbank Power Station; and / or
- ii. The Fish bypass channel from the tailrace

That lead to an increase the incidence of salmon entrapment, the channels are re-graded or reinstated in response to any issues raised as a consequence of the above.

For the purpose of (ii) the consent holder shall monitor the performance of the tailrace and salmon barrier on a no less than weekly basis no less than 5 working days after there is a flood, or fresh for that period of the entire salmon migration season, being 1 December to 31 May. A report detailing the incidents of the manual reinstatement of the Salmon Bypass or Lower Tailrace following such reinstatements, where required, shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, by 31 May each year. These reports are also to be simultaneously served on TrustPower Ltd.

- (b) Works within 20m of, or within, the river bed shall not result in an increase in turbidity or reduction in clarity of the river flow which, in the opinion of a suitably qualified expert engaged by the consent authority but paid for by the consent holder, hinders the upstream passage of salmon in the Highbank salmon bypass channel.
- 7) Works shall not cause the riverbank to advance beyond the position of the river bank as exists at the issue of this consent. The navigable braid of the river shall not be reduced as a result of the material deposited.
 - 8) The material excavated from the settling pond shall not be deposited on the riverbed to a height greater than 0.5 metres above the existing level of the adjacent riverbed at the time of deposit.
 - 9) The material excavated from the settling pond shall be placed only on the gravel river flats within the disposal area indicated, avoiding vegetated areas, and in a location that avoids mobilisation of the sediment in flows less than 300 cubic metres per second as estimated by the Canterbury Regional Council from measurements at either the Rakaia Gorge recorder site (at or about map reference NZMS 260 K35:015-424) or the recorder site at Fighting Hill (at or about map reference NZMS 260 K35:997-437).
 - 10) Prior to any mechanical works being carried out in the period 1 August to 1 February, the consent holder shall ensure that:
 - (a) A suitably qualified and independent person inspects the proposed area of works, no earlier than eight working days prior to any works being carried out, and locates any bird breeding sites of riverbed nesting species listed in Appendix A; and
 - (b) The person carrying out the inspection prepares a written report that identifies all the located riverbed bird breeding or nesting sites and provides copies of that report to the consent holder and the Canterbury Regional Council; and
 - (c) The name and qualifications of the person carrying out the inspection are provided to the Canterbury Regional Council with the report; and
 - (d) Any person carrying out works authorised by this consent are informed of any riverbed bird breeding or nesting sites located.
 - 11) No works shall be undertaken within 100m from any riverbed birds listed in Schedule 1 to this consent nesting or rearing their young on the riverbed or margins.
 - 12) The Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, shall be notified not less than 48 hours prior to the commencement of works.
 - 13) The consent holder shall monitor the effect of sediment discharge / disposal to the Rakaia River on the

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abundance and diversity of fish species for a period of no less than 3 years prior to, and five years following the anniversary of the commissioning of the scheme to:

- (a) determine the species diversity and abundance of fish at no less than two sites, one site being located between the Rakaia Gorge and the scheme intake structure, and the other located downstream of the Barrhill Power Station tailrace.
- (14) The consent holder shall, in conjunction with the Canterbury Regional Council establish a suitably qualified and experienced independent review panel comprising three members to:
- (a) review the monitoring programme proposed by the consent holder;
 - (b) advise any adjustments to the proposed programme;
 - (c) review the results of the monitoring programme and forward a report on that review to the Canterbury Regional Council Compliance Manager;
 - (d) recommend to the Canterbury Regional Council Compliance Manager any mitigation measures that should be instigated as a result of the findings of the monitoring programme;
 - (e) At the end of the monitoring programme required by condition (13), the review panel shall review the results from the entire monitoring period and recommend to the Canterbury Regional Council Compliance Manager the ongoing level of monitoring required (if any).
- 15) The works shall not prevent the passage of fish within river channels, or cause the stranding of fish in pools or channels.

ADMINISTRATION

- 16) The consent holder shall ensure that all personnel working on the site are made aware of and have access to the contents of this consent document and Schedule 1: General Conditions, and all Plans associated with the application.
- 17) The Canterbury Regional Council may, once per year during construction and commissioning, and then five yearly thereafter, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage.
- (18) The lapsing date for the purposes of section 125 shall be XXXX.

CRC072645 – To place and maintain fish barrier structures on the bed of the Rakaia River, including associated riverbed disturbance at the fish bypass and at the points of discharge along the project corridor, at approximate map reference NZMS 260 K36: 065-385, NZMS 260 K36:087-358 and NZMS 260 L36: 158-280.

- 1) This consent is subject to the general conditions listed in Schedule 1: General Conditions.
- (2) Prior to the commencement of operational discharges from the Rakaia Terrace Hydro Scheme, the consent holder shall construct, place and maintain barrier structures at approximate map references NZMS 260 K36:065-385, NZMS 260 K36:087-358 and NZMS 260 L36:158-280:
 - (a) Each barrier structure shall effectively exclude mature migrating salmon from entering the tailrace or discharge canal, and shall be designed, constructed and maintained in accordance with the recommendations of a suitably qualified aquatic ecologist, and a chartered professional engineer;
 - (b) The consent holder shall form and maintain a bypass channel that ensures that salmon attracted to the Highbank Power Station salmon barrier are able to return to a main flowing channel of the Rakaia River.
 - (c) Within three years of the commencement of this consent the consent holder shall

provide the Canterbury Regional Council Compliance Manager with a report, prepared by a suitably qualified person, detailing the extent to which the systems referred to in condition (2) are meeting the objectives of this condition.

- (3) All practicable measures shall be undertaken to ensure that construction and maintenance works are undertaken in dry conditions, and that the structures will not deflect floodwaters into the banks of the Rakaia River or any other watercourse, causing erosion or damage to any flood control structure, or flood control vegetation.
- (4) No vehicles or machinery shall enter any active flow of the Rakaia River other than when crossing a braid.
- (5) Prior to any mechanised works being carried out in the period 1 August to 1 February, the consent holder shall ensure that:
 - (a) A suitably qualified and independent person inspects the proposed area of works, no earlier than eight working days prior to any works being carried out, and locates any bird breeding sites of riverbed nesting species listed in Appendix A; and
 - (b) The person carrying out the inspection prepares a written report that identifies all the located riverbed bird breeding or nesting sites and provides copies of that report to the consent holder and the Canterbury Regional Council; and
 - (c) The name and qualifications of the person carrying out the inspection are provided to the Canterbury Regional Council with the report; and
 - (d) Any person carrying out works authorised by this consent are informed of any riverbed bird breeding or nesting sites located.
- (6) No works shall be undertaken within 100m from any riverbed birds listed in Schedule 1 to this consent nesting or rearing their young on the riverbed or margins.
- (7) The Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, shall be notified not less than 48 hours prior to the commencement of works.
- (7) The works shall not prevent the passage of fish within natural river braids, or cause the stranding of fish in pools or channels.
- (9) The consent holder shall ensure that the braid of the Rakaia River diverted to connect with the bypass channel from the Highbank tailrace salmon barrier (under consent CRC011249) is maintained in good working order at all times to ensure migrating salmon are able to move upstream.
- (10) A record shall be kept of the incidence of fish entrained and the North Canterbury Fish and Game Council shall be notified on each occasion that Condition (9) is triggered. Records of fish entrapment shall be forwarded to Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, at the end of by 31 June each year, or as requested. This report is also to be simultaneously served on TrustPower Ltd.
- (11) In the event that the consent holder or persons acting for them observes a minimum of 50 adult salmon that have become entrained in the Highbank Power Station tailrace channel or the Highbank emergency spillway above the salmon barrier, the consent holder or persons acting for them shall, as far as is practicable, be responsible for salvage, and release into an active channel of the Rakaia River.
- (12) Monitoring of salmon entrainment shall be undertaken not less than weekly:
 - (a) every year for the three years following the commencement of the scheme; and thereafter
 - (b) for one migration season every four years post commissioning of the scheme for the term of this

consent, for the entirety of the Salmon migrating season, being 1 December to 31 May.

- (13) This monitoring referred to in Condition (12) is to determine whether there is an adverse effect on salmon entrainment in the Highbank Power Station tailrace channel as a result of the discharge that is more than minor. These annual monitoring reports are to be forwarded to Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, by 30 June each year, or as requested. The report on any incidents of entrainment of salmon in the Highbank tailrace shall be simultaneously served on TrustPower Ltd.
- (14) The consent holder shall monitor the performance of the Highbank Power Station Tailrace salmon barrier and associated by pass channel not less than weekly at all times when the consent holder is discharging water to the Highbank tailrace for the period of the entire salmon migration season, being 1 December to 31 May. A report detailing the performance or incidents of the salmon barriers popping shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, by 30 June each year. The report is to be simultaneously served on TrustPower Ltd.
- (15) The Highbank Power Station salmon barrier shall be inspected no less than weekly and the Consent Holder shall undertake any repairs, cleaning and/or maintenance works necessary to maintain the integrity and function of the barrier within seven days of that inspection, unless urgent maintenance or repair work is required in which case that shall take place as soon as possible.
- (16) The Highbank Canal fish screen shall be inspected no less than weekly and the Consent Holder shall undertake any repairs, cleaning and/or maintenance works necessary to maintain the integrity and function of the screen within seven days of that inspection, unless urgent maintenance or repair work is required in which case that shall take place as soon as possible.
- (17) The consent holder shall be responsible for:
- (a) any re-grading and reinstatement of the unformed lower Highbank tailrace including any re-connection to an active branch of the Rakaia River; and
 - (b) any modifications to the Highbank Power Station salmon barrier and / or the associated fish bypass channel necessary to give effect to this consent, or as advised by Environment Canterbury in response to any issues raised as a consequence of the consent holders monitoring responses in relation to the above, and as pursuant to s.128 of the Resource Management Act.
- (18) Prior to construction works being completed on the Highbank Canal auxiliary spillway, the consent holder shall ensure that the bypass flow enters the unformed tailrace as close to the Highbank salmon barrier as possible. Any works necessary to achieve this shall be undertaken and be concluded in a period that does not coincide with the salmon migration season, being that period between 1 December and 31 May.
- (19) The Canterbury Regional Council may, once per year during construction and commissioning, and then five yearly thereafter, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage.

Schedule 1: General Conditions

SCOPE

- (1) A chartered professional engineer shall be responsible for the design and construction of the scheme. The chartered professional engineer shall prepare a design report. A copy of the design report shall be forwarded to Canterbury Regional Council, attention RMA Compliance and Enforcement Manager, no less than one month prior to commencement of the construction of *each scheme component*. This design report shall include, but not be limited to the following:
- (a) Final details of the location and layout of the scheme. This shall include a New Zealand Map Grid Reference with a minimum of four digits, locating the site where each activity related to the construction and maintenance of the scheme shall be undertaken.
 - (b) Final details of the geometry of the scheme and related structures.
 - (c) Final details of the engineering design of the scheme.
 - (d) Final details of the operation of the scheme.
 - (e) Confirmation, signed by the chartered professional engineer, that the scheme has been designed according to engineering standards and practices for a structure of this nature.
 - (f) A schedule of inspections to be undertaken under the supervision of the chartered professional engineer during the construction process. Work may not proceed until these inspections have been carried out and written authorisation provided by the chartered professional engineer.
 - (g) A schedule of routine inspections that shall be undertaken by the consent holder during the operational life of the scheme. Routine inspections shall be undertaken at least annually.
 - (h) A schedule of comprehensive inspections that shall be undertaken by a chartered professional engineer during the operational life of the scheme.
 - (i) Details of routine maintenance work that shall be undertaken by the consent holder during the operational life of the scheme.

A copy of the design report shall be forwarded to Canterbury Regional Council, attention RMA Compliance and Enforcement Manager, no less than one month prior to commencement of construction.

Works shall not proceed until the report has been certified by the Canterbury Regional Council.

MANAGEMENT PLANS

2. Prior to the commencement of works the consent holder shall prepare a Construction Phase Management Plan to which all works shall be subject. For works within 300 metres of the BEN-HAY A transmission line or the TrustPower Highbank Power Station and switchyard, the plan shall be prepared in consultation with Transpower NZ Ltd and TrustPower Ltd. This Plan, along with any formal comments from either TrustPower Ltd or Transpower in relation to any aspects of disagreement, is to be forwarded to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, and TrustPower Ltd. Works shall not proceed until the Plan has been certified by the Regional Council. The plan shall include, but not be limited to, the following:
- (a) the phases in which work shall be undertaken for the purposes of constructing and maintaining the scheme;
 - (b) the timing and duration for each phase, including the working hours in which works shall be undertaken.

- (c) the disturbed area in square metres, including location, area and volume of earthworks and area and location of land clearance associated with each phase of the construction.
- (d) Confirmation from TrustPower Ltd that it will not be operating the Highbank Power Station during the period of time within which the construction works on, in, or adjacent to the Highbank tailrace are to occur.
- (e) Confirmation from the consent holder that the construction and maintenance of bridges and roads on TrustPower land, and the provision of permanent access to the fish screen, located NZMS 260 K36:080-360, will accommodate 30 tonne excavator and transporter combination.

All works shall be undertaken in accordance with the Construction Phase Management Plan.

EROSION AND SEDIMENT CONTROL MANAGEMENT PLAN

- 3
- (a) The consent holder shall prepare an Erosion and Sediment Control Management Plan in accordance with the Canterbury Regional Council, 2007 "Erosion and Sediment Control Guidelines for the Canterbury Region" Report No. R06/23 ("CRC06/23"), for the purpose of ensuring that the best practicable sedimentation and erosion control measures are implemented during any site disturbance. The Erosion and Sediment Control Management Plan shall comply with all the requirements of Condition (3)(e) below.
 - (b) The Erosion and Sediment Control Management Plan shall be submitted to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, no less than 20 working days prior to any earthworks or vegetation removal authorised by this consent commencing, for certification that the Erosion and Sediment Control Management Plan meets all the requirements of Condition (3)(a) of this Schedule.
 - (c) The consent holder may, at any time after receiving this certification, request amendments to The Erosion and Sediment Control Management Plan by submitting the amendments in writing to Canterbury Regional Council: Attention: RMA Compliance and Enforcement Manager, for certification that The Erosion and Sediment Control Management Plan, with those amendments, continues to meet all the requirements of Condition (3)(a) of this Schedule.
 - (d) No earthworks or vegetation clearance shall commence or be undertaken other than in full compliance with the latest version of The Erosion and Sediment Control Management Plan that has been certified by or on behalf of the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, in terms of Condition (3)(b) above as meeting all the requirements of Condition (3)(e) of this consent, for the stage or stages of works to be undertaken.
 - (e) The Erosion and Sediment Control Management Plan shall set out clearly the sediment and erosion control measures that are to be implemented for each phase of the works authorised by this consent. Those measures shall consist of but not be limited to the following:
 - (i) Clean water diversion channels for a 5% Annual Exceedance Probability Event;
 - (ii) Decanting earth bunds or sediment ponds;
 - (iii) Silt fencing;
 - (iv) Soakage pits;
 - (v) Infiltration basins;
 - (vi) Swales.
 - (f) The Erosion and Sediment Control Management Plan shall include but not be limited to:
 - (i) A locality map;

- (ii) Contour information at suitable intervals;
 - (iii) Detailed drawings showing the type and location of erosion and sediment control measures, on-site catchment boundaries, and off-site sources of run-off;
 - (iv) Drawings and specifications of all designated erosion and sediment control measures with supporting calculations;
 - (v) Location of the works, and cut and fill operations;
 - (vi) Culvert designs and associated erosion protection;
 - (vii) The management of stormwater during and following construction;
 - (viii) The management of stormwater during operation of the scheme;
 - (ix) A programme for managing exposed areas including progressive stabilisation considerations;
 - (x) The inspection and maintenance of erosion and sediment control measures;
 - (xi) Details of when the erosion and sediment control measures are to be established and decommissioned; and
 - (xii) Measures to ensure that there is no tracking of mud or earth onto the surrounding road network, including the provision of shaker ramps and/or wheel washes where appropriate.
- (g) Prior to the commencement of any phase of any of the works authorised by this consent, a certificate signed by the person responsible for designing the system or other person accepted by the Canterbury Regional Council as being competent to provide such certification, shall be submitted to Canterbury Regional Council to certify that the erosion and sediment control systems for that stage are constructed and installed in accordance with Condition (3)(a). No such works shall proceed prior to this certification being provided to and approved by The Canterbury Regional Council.

DUST MANAGEMENT PLAN

4. Prior to the commencement of works, the consent holder shall develop and prepare, in consultation with Transpower New Zealand Limited, TrustPower Limited and affected residential dwellings (between chainage 4250m and 15000m), a Dust Management Plan to which all works shall be subject. A copy of the Dust Management Plan shall be forwarded to all affected parties. This Plan, along with any formal comments from any party in relation to any aspects of disagreement, is to be forwarded to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager. Works shall not proceed until a certificate signed by a suitably qualified and experienced person, who is approved in writing by the Canterbury Regional Council Enforcement and Compliance manager, has been submitted to and approved by the Regional Council. The certificate shall certify that the Dust Management Plan contains acceptable methodologies for the following:
- (a) Define actions to be taken to ensure compliance with all conditions of this consent;
 - (b) Define actions in response to any incident that may impact on the environment;
 - (c) Identification of the contractor's staff member responsible for each action;
 - (d) Details of the steps to be taken to correct any element of non-compliance;

- (e) Provision to amend the plan during the period of this consent as appropriate to improve management and contingency procedures.
- (f) Standards for the monitoring of dust nuisance within the Highbank power station and switchyard;
- (g) Requirements of weekly inspections of the Highbank power station by the consent holder during any construction activities, including any haulage activities, within 300m of the Highbank Power Station or switchyard;
- (h) Procedures for managing dust nuisance from haulage traffic and unsealed haulage routes within 300m of affected residential dwellings between chainage 4250m and 15000m, and the Highbank power station and switchyards; and
- (i) Procedures for final inspections and resultant internal and external cleaning to the Highbank Power Station to remove any dust residue from either construction works, or from wind blown material up to 24 months post the commissioning of the Scheme as a consequence of the Scheme, including but not limited to wind blown dust from areas where re-vegetation has not yet established.

All works shall be undertaken in accordance with the Dust Management Plan.

- 5. A copy of the current Dust Management Plan shall be kept in the consent holder's office on site at all times. A copy of any revisions of the Plan shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, with a copy to Transpower New Zealand Limited and TrustPower Ltd and the affected parties identified in this condition, within ten days of each revision being completed.

IN-RIVER MANAGEMENT PLAN

- 6. In-river works shall not proceed until:
 - a) A certificate has been provided by a suitably qualified and experienced person, and the certifier shall have been approved in writing by the Canterbury Regional Council, Enforcement and Compliance Manager. The certificate shall certify that the In River Management Plan contains the following:
 - (i) A description of site operation in relation to its impact on the environment;
 - (ii) the duration of the works in flowing water;
 - (iii) a detailed plan illustrating the proposed regions of river bed and bank disturbance. This plan should include the areas (in square metres) for each region;
 - (iv) the actions to be undertaken to ensure compliance with all conditions of this consent;
 - (v) provisions to amend the In-River Management Plan during the duration of this consent as appropriate in order to improve management and contingency procedures.
 - (b) The In-River Management Plan has been submitted to the Canterbury Regional Council, Attention: Enforcement and Compliance Manager for certification.
 - (c) The consent holder may, at any time after receiving this certificate, request amendments to the In-River Management Plan by submitting the amendments in writing to the Canterbury Regional Council, Attention RMA Compliance and Enforcement Manager, for certification that the Plan with those amendments continues to meet all the requirements of this condition.
- 7. One month prior to the commissioning of works, the consent holder shall prepare and forward an Emergency Action Plan to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, for certification.

OPERATION AND MAINTENANCE

- 8. All construction works shall be carried out in accordance with the design plans submitted for compliance with Condition (1), the Construction Phase Management Plan submitted for compliance with Condition (2) and the Erosion and Sediment Control Management Plan submitted for compliance with Condition (3).

9. At least one month prior to the commissioning the scheme, the consent holder shall provide to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, as-built drawings, specifications and other information, signed and approved by a Chartered Professional Engineer, to the satisfaction of the Council, to determine the nature and standard of construction.
10. Upon completion of the scheme, and before first filling, the chartered professional engineer shall certify the scheme as safe and ready for operation. A copy of the certification document shall be forwarded to the Canterbury Regional Council, Attention RMA Compliance and Enforcement Manager, prior to commissioning. The scheme shall not be filled until this certification has been provided to and approved by the Canterbury Regional Council.
11.
 - (a) A schedule of works shall be submitted to the Canterbury Regional Council, to the attention of the River Engineering Section and the RMA Compliance & Enforcement Manager, in January and July each year outlining proposed works to be undertaken in the following 6 months.
 - (b) A schedule of works shall be submitted to the Canterbury Regional Council, to the attention of the River Engineering Section and the RMA Compliance & Enforcement Manager, in January and July each year outlining actual works that have been undertaken in the previous 6 months.
12. The consent holder shall ensure that vegetation clearance shall be limited as far as practicable, and that disturbed riparian areas within 20 metres of the riverbank not occupied by infrastructure, grassed or required for maintenance access, shall be re-planted with appropriate native species at a distance of 1500 millimetres centres within the first planting season following completion of works in that area. The plant mix shall contain but not be limited to *Cordyline australis* (Cabbage Trees), and shall not preclude the use willow species for bank stabilisation. Prior to planting the plant mix shall be approved by a registered Landscape Architect. Approval shall be forwarded to the Canterbury Regional Council, Attention RMA Compliance and Enforcement Manager, at least 10 days prior to planting.

NOXIOUS WEEDS

13. ~~The consent holder shall ensure that all vehicles that access or work within the riverbed or on private land not under the authority or ownership of the consent holder for the construction and / or ongoing maintenance of the scheme and access road, shall be washed down or otherwise cleaned prior to accessing the riverbed such that the distribution and / or establishment of pest plant seeds and species as identified below is avoided:~~

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 - (a) All plants listed in Schedule BLR1 of the Canterbury Regional Council's Proposed Natural Resources Regional Plan, Chapter 6: Beds and margins of Lakes and Rivers.
14. In the event of the pest plants listed in Condition (13(a)) establishing on the riverbed or riparian margins as a result of the construction works or maintenance of the scheme, the consent holder shall be responsible for ensuring the removal or eradication of those species that are attributable to works undertaken in exercising this consent from the affected riverbed.
15. In the event of the pest plants listed in Condition (13(a)) establishing as a consequence of works undertaken in exercising this consent, and on land under the ownership, control or responsibility of the consent holder following the completion of construction works, the consent holder shall be responsible for ensuring the removal or eradication of those species within the affected area.
16. To prevent the spread of Didymo or any other aquatic pest, the consent holder shall ensure that activities authorised by this consent are undertaken in accordance with the relevant Biosecurity New Zealand's hygiene procedures.

Note: The most current version of these procedures can be accessed from the Biosecurity New Zealand website <http://www.biosecurity.govt.nz> or Environment Canterbury Customer Services.

17. The consent holder shall take all appropriate steps to prevent the distribution both downstream and downwind of the site, of exotic weed species already present at the site attributable to works undertaken in exercising this consent.

HAZARDOUS SUBSTANCES

18. The consent holder shall ensure that:
- (a) All practicable measures shall be undertaken to prevent oil and fuel leaks from vehicles and machinery.
 - (b) There shall be no storage of fuel or refuelling of vehicles and machinery within 20 metres of any water body or stream or river bed.
19. The consent holder shall maintain a current inventory of all hazardous substances stored on the site, and a copy of the inventory shall be made available to the Canterbury Regional Council and Ashburton District Council or emergency services upon request.
20. In the event of a spill of a hazardous substance within the site, the consent holder shall:
- (a) Take all practicable measures to prevent the hazardous substance being further discharged into land or water; and
 - (b) Collect and remove the hazardous substance and any contaminated material immediately.
21. In the event of a spill of a hazardous substance on site, the consent holder or contracted agent shall record and provide to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, and to the Ashburton District Council within 24 hours of the spill:
- (a) The date, time, location and volume of the spill;
 - (b) The substance spilled;
 - (c) Measures taken to prevent the spill substance being discharged into land or water; and
 - (d) The cause of the spill and measures that will be taken to prevent a reoccurrence and the timeframes for such measures.
22. Any contaminated material removed from the site under Condition 20 shall be disposed of at an appropriate facility and the consent holder shall provide the Canterbury Regional Council with written confirmation of such disposal within 10 working days of the disposal.
23. The consent holder shall maintain on site at all times, measures to prevent spills entering land or water including:
- (a) Spill kits to contain or absorb any spilled hazardous substance;
 - (b) Signs to identify the location of spill kits;
 - (c) Written procedures in a clearly visible location that are to be undertaken to contain, remove and dispose of any spilled hazardous substance.

ACCIDENTAL DISCOVERY

24. In the event of any disturbance of Koiwi Tangata (human bones) or taonga (treasured artefacts), the consent holder shall immediately:
- (a) Advise the Canterbury Regional Council of the disturbance;

- (b) Advise the Upoko Runanga of Arowhenua and Ngai Tahu, or their representative, of the disturbance.
- (c) Cease earthmoving operations in the affected area until the area containing the Koiwi Tangata or taonga has been clearly demarcated, and Kaumatua and archaeologists have certified that it is appropriate for earthmoving to recommence.

25. In the event of accidental discovery of archaeological remains, the following steps shall be taken:

- (a) All activity affecting the immediate area shall cease and the Regional Archaeologist of the New Zealand Historic Places Trust shall be contacted;
- (b) The site shall be secured to ensure that the remains are not further disturbed;
- (c) Further works affecting the remains will not commence until either:
 - (i) the Regional Archaeologist of the New Zealand Historic Places Trust has confirmed in writing that the archaeological provisions of the Historic Places Act 1993 do not apply;
 - (ii) Or the requirements of the archaeological provisions of the Historic Places Act 1993 have been met, and if required, and archaeological authority has been granted by the New Zealand Historic Places Trust.
 - (iii) If human remains / koiwi tangata are located, in addition to the above steps, the Runanga representative for the area and the New Zealand Police must be contacted.

BOND

26. Prior to the commencement of any earthworks for each stage of development the consent holder or developer shall enter into an enforceable agreement with the Canterbury Regional Council and bond pursuant to section 108(2)(b) and 108A of the Resource Management Act 1991 for the performance of the Site Construction conditions in relation to that stage of development.

27. The agreement referred to in condition (26) shall provide for:

- (a) a guarantor acceptable to the Canterbury Regional Council to bind itself to pay for the carrying out and completion of the obligations of the consent holder under the bond and conditions of this consent in the event of any breach of conditions or occurrence of any adverse environmental effect requiring remedy; or
- (b) a bank bond acceptable to the Canterbury Regional Council to secure the performance of the obligations of the consent holder under the bond and conditions of this consent in the event of any default by the consent holder or any occurrence of any adverse effect requiring remedy; or
- (c) a cash bond based on \$15,000.00 per hectare of disturbed land in the stages of development covered by the bond to be delivered up to Canterbury Regional Council for use by the Consent Authority in the event of any breach or failure to perform with the conditions for all consents which refer to the General Conditions or any occurrence of an adverse environmental effect requiring mitigation or remedy, that the consent holder fails to remedy and providing that the liability of the consent holder shall not be limited to the amount of the bond.

28. All costs of, and incidental to, the preparation of documentation to meet Condition (26) shall be met by the consent holder.

29. Any bond provided under Condition (26) may be varied, cancelled or renewed at any time by agreement between the consent holder and the Canterbury Regional Council.

TELECOM NEW ZEALAND

30. Prior to construction and for the purpose of ensuring that Telecom New Zealand Limited (Telecom) operations and associated infrastructure are protected from adverse effects from the construction and operation of the Rakaia Terrace Hydro Scheme, the consent holder shall:

- (a) consult with Telecom with the aim to identify and to avoid, remedy or mitigate adverse effects from the construction of the Rakaia Terrace Hydro Scheme on Telecom infrastructure and services;
- (b) specifically, the consultation should aim to identify and evaluate in conjunction with Telecom the extent and possible avoidance, mitigation or remediation (in accordance with the Electricity Act 1992 and Electricity Regulations 1997 and any subsequent amendments to them) of any resultant induction hazard and/or Earth Potential Rise (EPR) hazard;
- (c) forward to the Environmental Services Manager, Ashburton District Council, and copy to Telecom, a report detailing the consultation undertaken with Telecom, and the identification and evaluation of the matters set out in conditions (a) and (b) above. The report shall include a description of measures recommended to be taken by the consent holder to avoid, remedy or mitigate any significant adverse effects on Telecom infrastructure and operations from the construction or operation of the scheme.

Advice Notes:

All activities associated with the proposal must comply with the New Zealand Code of Practice for Electrical Safety Distances NZECP34 at all times. Specifically the attention of the consent holder and their agents is brought to pages 17 to 19 (Excavations or construction near electrical line supports and approach distances for mobile plant) of this code.

All land use activities, including earthworks associated with the hydro scheme must comply with the New Zealand Code of Practice for Electrical Safe Distances (NZECP 34:2001).

All trees and vegetation planted on site must comply with the Electricity (Hazards from Trees) Regulations 2003.

Prior to construction, for the purpose of ensuring that TrustPower (TPL) operations are protected from the adverse effects from the construction and operation of the ACWT scheme, the consent holder will seek any necessary consents required to construct and make operational a potable water supply well in a location clear of the influence or interference from any works undertaken by the consent holder in giving effect to infrastructure associated with this scheme. The purpose of this well will be to replace the function of well K36/0578 for the purpose of supplying the Highbank Power Station with potable water to the same or better quality and quantity as currently provided. Prior to decommissioning K36/0578 this replacement, along with the associated water permit and conveyance infrastructure are to be transferred to TPL ownership.

Annexure A: List of bird species referred to in Schedule 1: General Conditions

South Island Pied Oystercatcher	NZ Scaup
Black Stilt	Black-billed Gull
Pied Stilt	Red-billed Gull
Wrybill	Caspian Tern
Banded Dotterel	White-fronted Tern
Black-fronted Dotterel	Black-fronted Tern

Spur-winged Plover
Paradise Shelduck
Grey Duck
NZ Shoveler
Grey Teal

White-winged Black Tern
Australasian Bittern
Marsh Crake
Spotless Crake
Cormorant/shag colonies

Ashburton District Council – Conditions of Consent, 19 September 2008.

1. The development shall proceed in accordance with the information submitted and plans lodged, and entered into Council records as [CONSENT NUMBERS], dated..... and plan [PLAN NUMBER] dated [PLAN DATE].

Landscape Management Plan

2. The Consent holder shall undertake rehabilitation of the land surface, topsoil, drainage and vegetation in all ~~areas disturbed in the construction and / or maintenance of the Rakaia Terrace Hydro Scheme to achieve the following~~ objectives:

- (a) To reinstate vegetation cover on previously vegetated areas disturbed ~~by construction or maintenance~~ activities, where those areas do not contain components of scheme infrastructure or permanent accessways;
- (b) To visually integrate finished structures, landforms and vegetation into the surrounding landscape so that as far as possible they appear to be naturally occurring features or features which are already present in the immediate area. In particular the settling pond embankments and any excess cut stockpiles are to be shaped as naturalised landforms;
- (c) To ensure short and long term stability of disturbed land areas and their surrounding areas particularly on the terrace edges.
- (d) To minimise the loss of existing vegetation where possible, most notably riparian vegetation located on the edge of the river terrace;
- (e) To compensate for the loss of any native vegetation which is removed during construction.

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3. A ~~Landscape Management Plan shall be prepared and maintained by the Consent Holder, and all works undertaken by the consent holder or their agents shall be subject to, and comply with the provisions of the Landscape Management Plan.~~ The Landscape Management Plan shall:

- (a) ~~___~~ detail how the above objectives are to be achieved:

(b) incorporate the proposed concept planting plan and mitigation measures contained in the evidence entitled *Statement of Evidence of David Compton-Moen – Landscape and Visual Impact Assessment*, and in particular the mitigation measures contained in Section 9, and Figures 6.1 to 6.3 included in that evidence dated 16 September 2008;

Deleted: Appendix A and B of the report entitled *Rakaia Terrace Hydro Scheme Addendum to Terrestrial Ecology Assessment, August 2008*

(c) The Landscape Management Plan shall be prepared and maintained for the duration of the construction period and a 24 month maintenance period following completion of all plantings required under the conditions of this consent. The Plan shall be submitted to the Environmental Services Manager of the Ashburton District Council at least one month prior to construction commencing.

(d) The Landscape Management Plan shall be prepared, implemented and maintained in conjunction with, and in a manner that is consistent with the Terrestrial Ecology Management Plan required under this consent.

4. The Landscape Management Plan shall, include the following:

- (a) Details of all landforms, finishing, layouts, soiling, planting and grassing, roads, tracks, structures and maintenance programmes proposed for the scheme;
- (b) Methods for monitoring the success of re-vegetation plantings for at least 24 months following the planting;
- (c) Rehabilitation procedures that will maximise the blending of the private haul roads, canal and pond embankments and other proposed structures and in particular the intake, within the adjacent landscapes;
- (d) Identify how the consent holder intends to:
 - (i) Naturalise the location and shape of any possible excess cut stockpile areas;
 - (ii) Reinstatement all disturbed ground surfaces;
 - (iii) Complete all such works at the earliest opportunity, but no later than 1 season following completion of works.

5. The Landscape Management Plan shall be reviewed not less than annually and the revised Plan shall be submitted to the Council within one month of the review being completed.

6. The Landscape Management Plan may be amended, as the Consent Holder considers appropriate, during the period of this consent. Any amendments to the Plan must be submitted and approved by the Consent Authority prior to the amended works being undertaken. Where the Consent Authority considers amendments are warranted to ensure continued compliance with the conditions of this consent and these are notified to the Consent Holder, the Consent Holder shall respond to the request in writing within one month of receiving the request, with either amendments to the Plan or an explanation as to why the requested amendments have not been made.

Roading and Bridges

7. (a) The consent holder shall build a bridge on Happy Valley Road over the canal as a single-lane bridge built to provide for light vehicles up to 3500kg and with safety barriers and hand rails.
- i. The bridge shall be designed and constructed in accordance with the requirements for lightly trafficked rural bridges as defined in Appendix D of the Transit New Zealand Bridge Manual;
 - ii. The access ramps to the bridge shall not be steeper than a gradient of 1:8;
 - iii. The surface of the access ramps are to be built to an all weather standard, but the surface is not required to be sealed;
 - iv. The access ramps are to be constructed to a standard acceptable to the Ashburton District Council;
 - v. The bridge is to be vested in the name of the Ashburton District Council at the completion of the maintenance period and issue of the maintenance certificate;
 - vi. The bridge shall require a building consent;
 - vii. The bridge may be fitted with a gate at one or both ends. This gate shall not be locked;
 - viii. The new bridge will be subject to a 12 month maintenance period from date of completion. All maintenance and repair work required in this period shall be carried out by the Consent

Holder. At the end of the maintenance period the bridge shall be inspected with a representative of the Council in attendance, and any additional work required shall be carried out by the Consent Holder. Once this work is complete, a maintenance certificate shall be provided by the Consent Holder to the Council.

(b) The consent holder shall build a bridge on the formed road at Lowes Cutting over the canal as a single-lane bridge to provide for vehicles to no less than a Class I standard, including safety barriers and hand rails, and in accordance with the Transit New Zealand Bridge Manual.

- i. The access ramps to the bridge shall not be steeper than a gradient of 1:8;
- ii. The surface of the access ramps are to be built to an all weather standard, but the surface is not required to be sealed;
- iii. The bridge is to be vested in the name of the Ashburton District Council at the completion of the maintenance period and issue of the maintenance certificate;
- iv. The bridge shall require a building consent;
- v. The new bridge will be subject to a 12 month maintenance period from date of completion. All maintenance and repair work required in this period shall be carried out by the Consent Holder. At the end of the maintenance period the bridge shall be inspected with a representative of the Council in attendance, and any additional work required shall be carried out by the Consent Holder. Once this work is complete, a maintenance certificate shall be provided by the Consent Holder to the Council.

8. The consent holder shall build a single-lane bridge adjacent to the Highbank Power Station and Switchyard over the tailwater canal, built to the following specifications:

- a. The bridge shall be designed and constructed in accordance with the requirements for lightly trafficked rural bridges as defined in Appendix D of the Transit New Zealand Bridge Manual, notwithstanding the application of that manual, minimum standards shall accommodate:
 - i. A transporter loaded with a 30 tonne excavator; and
 - ii. A minimum carriageway width of 4.0m.
- b. Any access ramps to the bridge shall not be steeper than a gradient of 1:8;
- c. The surface of the access ramps are to be built to an all weather standard, but the surface is not required to be sealed;
- d. The access ramps are to be constructed to a standard acceptable to the Ashburton District Council;
- e. The bridge shall require a building consent;
- f. The bridge may be fitted with a gate at one or both ends. This gate shall not be locked;
- g. The new bridge will be subject to a 12 month maintenance period from date of completion. All maintenance and repair work required in this period shall be carried out by the consent holder. The consent holder shall be responsible for ongoing maintenance of this bridge for the term of this consent.

9. The consent holder shall take the best practicable option to avoid the deposit of debris onto public roads during the construction period. The consent holder shall be responsible for the maintenance of Barkers Road from the intersection with Rakaia River Road to its terminus at the northern end for the duration of the construction period, except for any maintenance, repairs or reconstruction of the road arising from unusual or extreme weather events.

10. The consent holder shall nominate an experienced road maintenance contractor to carry out maintenance and restoration work, the appointment of which shall be approved by the Operations Manager of the Ashburton District Council before any work commences.

11. The consent holder shall ensure that Barkers Road from the intersection with Rakaia River Road to its terminus at the northern end is at cessation of construction activities restored to a standard that is consistent with or exceeds the condition recorded prior to the commencement of this consent.

12. The consent holder shall ensure that Happy Valley Road (legal Road) and Lowes Cutting Road are at cessation of construction activities restored to a standard that is consistent with or exceeds the condition recorded prior to the commencement of this consent.

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13. The consent holder shall ensure that existing operational routes utilised to access the Highbank HEPS, switchyards and associated tailrace and fish bypass channel by construction and haulage traffic is at cessation of construction activities restored to a standard that is consistent with or exceeds the condition recorded prior to the commencement of this consent.

Rehabilitation Requirements

14. Rehabilitation shall include the removal of debris, stockpiles and buildings as follows:
 - (a) The Consent holder shall remove all stockpiles other than rock stockpiled for the purpose of maintaining erosion protection works;
 - (b) The Consent holder shall remove all construction debris within six months of all construction being completed;
 - (c) Within six months of completion of commissioning of the scheme, the Consent holder shall remove all temporary buildings, plant and equipment (whether attached to the land or not) associated with the exercise of these consents.

Landscape Reinstatement

15. The reinstatement of all works areas and landscaping shall be completed within one season (12 months) of the finishing of construction in that area.
16. In the event of rehabilitation plantings for any area not becoming successfully established, they will be replanted and maintained until successful.
17. The consent holder shall only plant species above the lower fish screen that do not create significant branch or leaf litter that may enter the scheme canal.

Accidental Discovery Protocol

18. In the event of any disturbance of Koiwi Tangata (human bones) or taonga (treasured artefacts), the consent holder shall immediately:
 - (a) Advise the Canterbury Regional Council of the disturbance;
 - (b) Advise the Upoko Runanga of Arowhenua and Ngai Tahu, or their representative, of the disturbance;
 - (c) Cease earthmoving operations in the affected area until the area containing the Koiwi Tangata or taonga has been clearly demarcated, and Kaumatua and archaeologists have certified that it is appropriate for earthmoving to recommence.
19. In the event of accidental discovery of archaeological remains, the following steps shall be taken:
 - (a) All activity affecting the immediate area shall cease and the Regional Archaeologist of the New Zealand Historic Places Trust shall be contacted;
 - (b) The site shall be secured to ensure that the remains are not further disturbed;
 - (c) Further works affecting the remains will not commence until either:
 - (i) the Regional Archaeologist of the New Zealand Historic Places Trust has confirmed in writing that the archaeological provisions of the Historic Places Act 1993 do not apply;

- (ii) Or the requirements of the archaeological provisions of the Historic Places Act 1993 have been met, and if required, and archaeological authority has been granted by the New Zealand Historic Places Trust.
- (iii) If human remains / koiwi tangata are located, in addition to the above steps, the Runanga representative for the area and the New Zealand Police must be contacted.

Dust Mitigation

- 20. To mitigate dust movement within and beyond the site the consent holder shall limit the removal of existing shelter planting to those trees necessary to permit construction and operation of the scheme.

National Grid

- 21. All new trees/vegetation (in excess of 2 metres in height at maturity) and all new structures associated with the scheme other than below-ground structures associated with the invert canal, shall be setback by a horizontal distance of at least 12 metres either side (total of 24 metres) from the center line of the Benmore-Haywards A transmission line.
- 22. Prior to construction, the consent holder shall submit to the Environmental Services Manager of Ashburton District Council, and forward a copy of the same to Transpower, a report from a suitably qualified electrical engineer confirming that any structure associated with the scheme complies with the minimum safe distances from the Benmore – Haywards A line as specified in Table 3 of the NZEP 34:2001.
- 23. No structures shall be located within 12 metres of the closest visible edge of any high voltage transmission line support structure foundation.
- 24. All machinery and mobile plant operated in association with the scheme shall maintain a minimum clearance distance of 4 metres from the Benmore – Haywards A transmission line conductors at all times.
- 25. No structures, site works and/or vegetation shall be located to preclude existing 4-wheel drive vehicle access to the existing transmission line support structures.
- 26. No fences of conductive materials shall be located within 5 metres of the outer edge of the visible foundations of any transmission line tower.
- 27. In the case of any tower supporting any conductor, no person may excavate or otherwise interfere with any land:
 - a. at a depth greater than 300mm within 6 metres of the outer edge of the visible foundations of the tower; or
 - b. at a depth greater than 3 metres, between 6 metres and 12 metres of the visible foundation of the tower; or
 - c. in such a way as to create an unstable batter.
- 28. Excavated or other material must not be deposited under or near the Benmore – Haywards A line so as to reduce the vertical distance from the ground to the conductors to a distance less than:
 - a. 8.0 metres vertically: across or along driveways or on any other land traversable by vehicles;
 - b. 6.5 metres vertically, on any land not traversable by vehicles due to inaccessibility; and
 - c. 5.0 metres in any distance other than vertical on all land.
- 29. Once construction is completed, no dust nuisance shall be generated either within or outside the boundaries of the site.
- 30. To ensure that the Benmore – Hayward A transmission line (namely tower 522) is protected from any potential adverse effects as a result of the construction and operation of the scheme, the Consent Holder shall, to the satisfaction of the Environmental Services Manager of Ashburton District Council:
 - (a) Undertake to consult with Transpower New Zealand to identify and avoid, remedy or mitigate any potential adverse effects as a result of the construction and operation of the scheme; and

- (b) Provide an independent engineering analysis to certify that the final design and location of the proposed diversion channel and any other relevant structure associated with the scheme does not generate potential adverse effect on the transmission line and Tower 522; and
- (c) Provide an independent engineering analysis to certify the acceptability of any alteration to the NZECP 34:2001 minimum safe distance requirements and (to the extent relevant) to certify that any water flow will not affect and/or undermine the integrity of the structural supports.

Construction Noise and Vibration Management Plan (CNMP)

31. The consent holder will produce and comply with a **Construction Noise and Vibration Management Plan (CNMP)**, specifying those procedures to be followed by the consent holder, or parties under its control with respect to the construction works or related activities of the Rakaia Terrace Hydro Scheme. The plan shall describe the best practicable option (BPO) in accordance with Section 16 of the Resource Management Act, and shall be reviewed, either: not less than annually; or at the request of the Council based upon the receipt of a complaint inferring non-compliance related to construction noise or vibration. No work within 300m of the Highbank Power Station structures and switchyard shall commence until the CNMP has been developed in consultation with the Ashburton District Council to ensure compliance with all other conditions of this consent.
32. The consent holder shall commission an independent appropriately certified Noise and Vibration Engineer to review the CNMP as outlined in Condition (31), and specifically to ensure appropriate standards, management techniques and monitoring intervals are in place to ensure that the stability of the Highbank Power Station structures and switchyard are maintained in accordance with the requirements of Condition (37).
33. This Management Plan, including any amendments as a consequence of Condition (31) shall be submitted to the District Council's consents manager at least one month prior to commencement of construction of the Rakaia Terrace Hydro Scheme. A copy of this plan shall be simultaneously be provided to TrustPower Ltd and to all affected landowners within 500m of the construction zone. This Plan shall be prepared and executed by a suitably qualified person and shall provide details as to the construction programme, and methods for the management of noise and vibration.
34. This Management Plan shall include provision for Independent certification, monitoring and technical review procedure to outline the consent holder's responsibility to undertake vibration checks and deformation surveys of the Highbank Power Station structures and switchyard before, during and no less than 24 months post the commissioning of the scheme.
35. This Management Plan shall provide relevant standards and reciprocal procedures for the cessation of construction activities, should monitoring in relation to the Highbank Power Station structures and switchyard record any change in datum measures.
36. The consent holder shall not undertake any works closer than 30m measured from any part of the Highbank Power Station structures. To ensure compliance with this condition, the consent holder shall, at their cost, construct a secure temporary construction fence demarcating this distance, including any necessary access gates required by the operator of the Highbank Power Station structures and switchyard. The temporary construction fence shall be in placed prior to any works occurring within 300m of the Highbank Power Station structures and switchyard. The consent holder shall be responsible for the removal of this temporary fence, at their cost, within three months of commissioning of the scheme.
37. The Construction Noise and Vibration Management Plan shall as a minimum address the following matters:
 - (i). Construction sequence;
 - (ii). Machinery and equipment to be used;
 - (iii). Hours of operation, including times and days when construction work would occur;
 - (iv). The design of noise mitigation measures such as temporary barriers or enclosures;

- (v). Construction noise limits, minimum buffer distances and attenuation measures for specific activities and areas in order to comply with New Zealand Standard 6803P:1984 "The Measurement and Assessment of Noise from Construction"; Deleted: and Deleted: the
- (vi). Details of vibration testing of equipment to confirm that the vibration standards set out in German Standard DIN4150 or a more stringent standard, or as recommended pursuant to (xi) as below, are not exceeded. In the event that other machinery is to be used, vibration testing is to occur prior to works commencing to ensure that the vibration standards will be met;
- (vii). Development of alternative strategies where full compliance with NZS6803: 1999 and German Standard DIN4150 or a more stringent standard may not be achieved, including consultation with residents and other occupiers to achieve acceptable outcomes;
- (viii). Detailed methods for monitoring and reporting on construction noise and vibration throughout the process, including the location of vibration and noise monitoring for construction activities that are adjacent to occupied dwellings;
- (ix). Noise and vibration complaint procedures and response procedures/times.
- (x). Requirement for continuous monitoring of vibration when any construction works are being conducted within 300m of the Highbank Power Station structures and switchyard, or monitoring intervals as otherwise recommended by the independent expert commissioned.
- (xi). Identify particular vibration limits within 300m of the Highbank Power Station structures and switchyard, in conjunction with the requirements as a consequence of the displacement and deformation survey pursuant to Condition (43), which requires construction to cease immediately and not restart until the consent holder is satisfied that the vibration will not exceed the stated levels. For the avoidance of doubt given the sensitivity of the Highbank HEPS structures these vibration limits are expected to be more stringent than those specified in German Standard DIN4150.
- (xii). All works undertaken by the consent holder or their agents shall be subject to, and comply with the provisions of the Construction Noise and Vibration Management Plan

Civil Engineering & Dam Safety

- 38. The scheme be designed to the standards recommended in the NZSOLD Dam Safety Guidelines and/or any new standards defined for dams under the Building Act.
- 39. The consent holder shall commission an independent appropriately certified Rivers Engineer to undertake an assessment to ensure that the river protection for the scheme is maintained at no less than the current standards both during construction activities and post commissioning. The Rivers Engineer shall, no less than 24 months post commissioning, undertake a further investigation confirming that the works have appropriate river protection, or recommending further river protection works that will need to be undertaken by the consent holder.
- 40. The design and quality assurance process for the scheme should be in accordance with Condition (38) and (39) as above.
- 41. Construction of the scheme should be carried out by Contractors with suitable qualifications and experience, as defined by the NZSOLD Dam Safety Guidelines.
- 42. The consent authority may at any time commission an independent audit of the design and construction of the scheme to confirm accordance with the recommendations of the NZSOLD Dam Safety Guidelines. The consent holder shall meet the costs of any such audit.
- 43. The consent authority may at any time commission an independent audit of the design and construction of the scheme to confirm accordance with the recommendations of the NZSOLD Dam Safety Guidelines. The consent holder shall meet the costs of any such audit.
- 44. Prior to detailed design, the consent authority may at any time commission an independent audit of the updated dam break assessment to confirm the Potential Impact Category of various parts of the scheme, as defined in the NZSOLD Dam Safety Guidelines. The consent holder shall meet the costs of any such audit.

45. Comprehensive safety reviews for the scheme should be carried out at intervals of five years following the completion of commissioning, to a scope that meets the recommendations of the NZSOLD Dam Safety Guidelines.

Displacement and Deformation Survey

46. The consent holder is to commission an independent expert, in consultation with TrustPower Ltd, to undertake a condition survey of the existing Highbank Power Station structures and switchyard. All costs of the survey shall be met by the consent holder. This survey should include:
- (a) A precise survey of the Highbank Power Station structures internal geometry at a minimum of four cross-sections; and
 - (b) Set up and monitoring of displacement monitoring pins, or extensometers across selected cross sections within the Highbank Power Station structures.
 - (c) Reported recommendations as to the consent holder's responsibilities to cease construction activity should any change in the datum measures occur either directly or indirectly, as a result of construction activities carried out exercising this consent.
 - (d) The report containing these investigations shall be provided to the consent authority, and TrustPower Ltd no less than 3 months prior to the commencement of any construction activities within 300m of the Highbank Power Station structures and switchyard.

Public Safety Design Plan

47. The consent holder shall provide to the Ashburton District Council and TrustPower Ltd a detailed plan and report as to how those infrastructural elements of the scheme as accessible from the private road operated by TrustPower Ltd are to be managed to restrict public access for reasons of safe operation of the Rakaia Terrace Hydro Scheme, in particular the Highbank Canal, TrustPower bridge and tailrace. This plan is to be certified by the Ashburton District Council and is to be implemented prior to the Commissioning of the scheme.
48. The consent holder shall insert 15km/h road signs at the property boundary with TrustPower Ltd's land to provide identification of speed restrictions for construction haulage and construction traffic using construction routes within the TrustPower Ltd site.

Construction Phase Management Plan

49. Prior to the commencement of works within 300m of the BEN-HAY A transmission line or the TrustPower Highbank Power Station and switchyard, the consent holder shall develop and prepare, in consultation with Transpower NZ Ltd and TrustPower Ltd, a Construction Phase Management Plan to which all works shall be subject. This Plan, along with any formal comments from either TrustPower or Transpower in relation to any aspects of disagreement, is to be forwarded to the Ashburton District Council, Attention: RMA Compliance and Enforcement Manager, and TrustPower Ltd. Works shall not proceed until the Plan has been certified by the Regional Council. All works undertaken by the consent holder or their agents shall be subject to, and comply with the provisions of the Construction Phase Management Plan, which shall include, but not be limited to, the following:

- (a) the phases in which work shall be undertaken for the purposes of constructing and maintaining the scheme;
- (b) the timing and duration for each phase, including the working hours in which works shall be undertaken.
- (c) the disturbed area in square metres, associated with each phase of the construction.

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- (d) Confirmation from TrustPower Ltd that it will not be operating the Highbank HEPS during the period of time within which the construction works on, in, or adjacent to the Highbank tailrace are to occur.
- (e) Confirmation from the consent holder that the construction and maintenance of bridges and roads, and the provision of permanent access to the Highbank salmon barrier located NZMS 260 K36:080-360, will be to a standard that will accommodate a 30 tonne excavator and transporter combination. This bridge shall also include appropriate safety barriers and handrails adequate to provide for the safety of bridge users.

Terrestrial Ecology Management Plan

50. All works undertaken by the consent holder or their agents downstream of the Highbank Power Station between chainage 3500 and 11500 shall be subject to and comply with the provisions of the Terrestrial Ecology Management Plan certified by the Ashburton District Council.
51. The Terrestrial Ecology Management Plan shall be prepared to best achieve the following objectives within the areas shown on the Terrestrial Ecology Management Plan maps attached to this consent:
- (f) Avoid the loss of or disturbance to indigenous vegetation and habitats beyond the boundary of the construction zone as defined in the Construction Management Plan.
 - (g) Maintain the abundance of threatened and uncommon plants, in particular *Meliccytus aff. flexuosus* and *Meliccytus alpinus* "Blondin" identified within the canal alignment through propagation from seeds and cuttings and translocation of plants from within the canal alignment and / or construction footprint (whichever is the greater in extent).
 - (h) Mitigate through appropriate methods the loss of indigenous vegetation and habitats destroyed, removed or disturbed, during construction of the Terrace Canal.
 - (i) Mitigate for the loss of indigenous vegetation-landform associations destroyed, removed or disturbed during construction.
 - (j) Ensure the successful establishment and long term viability of proposed mitigation plantings.
 - (k) Minimise the potential for lizards and large ground-dwelling invertebrates to be significantly affected by construction.
52. No construction works downstream of the Highbank Power Station shall commence until the Terrestrial Ecology Management Plan is certified by the Manager of Planning and Regulatory Services, Ashburton District Council as being adequate to:
- (a) achieve the objectives of the Ecological Management Plan in full, as set out in condition (61); and
 - (b) ensure consistency with all other relevant conditions of consent LUC07/0030.
53. The Terrestrial Ecology Management Plan shall be maintained as current at all times by the Consent Holder. The consent holder may, at any time following certification, request amendments to the Terrestrial Ecology Management Plan by submitting the amendments in writing to the Manager of Planning and Regulatory Services, Ashburton District Council no less than 20 working days prior to the changes taking effect, for certification that the proposed amendments achieve the management plan objectives identified in condition (61).
54. The Terrestrial Ecology Management Plan shall be reviewed annually. Each Terrestrial Ecology Management Plan review shall incorporate all monitoring results obtained during that monitoring period as specified within the Terrestrial Ecology Management Plan. A copy of each annual Terrestrial Ecology Management Plan review shall be forwarded to the Regulatory Manager of the Ashburton District Council within one calendar month of its completion.
55. The Terrestrial Ecology Management Plan shall be prepared, implemented and maintained in conjunction with, and in a manner that is consistent with the Landscape Management Plan required under this consent.
56. The consent holder shall be responsible for meeting the reasonable costs incurred by the Ashburton District Council in receiving and certifying the management plans and reviews referred to in this consent.

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57. Prior to commencing construction between chainage 3500 and 11500 the consent holder shall provide the Ashburton District Council with legal descriptions and protection mechanisms or covenants to be applied to all ecological re-vegetation areas identified on the Terrestrial Ecology Management Plan Planting Plans Sheets 1 and 2, attached to this consent.

BONDS

Performance Bond

58. The Consent Holder shall provide and maintain in favour of the Consent Authority a bond or bonds to secure the completion of rehabilitation and in accordance with the Landscape Management Plan and Terrestrial Ecology Management Plan.

59. The Consent Holder shall not exercise these consents until the bond, or bonds, have been executed by the Consent Holder and guarantor and deposited with the Consent Authority.

60. Unless the bond is a cash bond to the consent authority, the performance of the conditions of the bond shall be guaranteed by a guarantor acceptable to the consent authorities. The guarantor shall bind itself to pay for undertaking and completion of any condition in the event of any default.

61. If the consent holder is unable at any time to arrange a guarantor for the quantum as mined in accordance with Conditions 64 and 65 the Consent holder will provide a cash bond or bonds for the quantum within 60 days of the date of the renewal specified in Condition 6.6.

62. The bond shall be in a form acceptable to the Consent Authority.

63. The Consent Holder shall provide the bond or bonds for the quantum determined in accordance with Bond Conditions 64 and 65 for a minimum term of three years, such term to be renewed for a minimum of a further three-year term (or such other term as the parties may agree) on a yearly basis commencing on the first anniversary of the date that the first bond is executed by the Consent Holder and guarantor and deposited with the Consent Authority.

64. The amount (quantum) of the bond may be varied from time to time, but at any given time shall be sufficient to cover the estimated costs at that time (including any contingency) of compliance with all conditions, including (but not limited to):

- i. Eco-sourcing native vegetation for ecological revegetation areas
- ii. Management of threatened and uncommon Melicytus spp
- iii. Planting in ecological revegetation areas including protection and enhancement of two kowhai woodlands at Lowes Cutting.
- iv. Animal pest control
- v. Plant pest control
- vi. Irrigation
- vii. Collection and translocation of lizards
- viii. Site control Measures
- ix. Legal Protection of ecological revegetation areas
- x. Rehabilitation by re-contouring, spreading sub-soils and topsoil, re-vegetation and weed control until disturbed areas have been re-established with suitable vegetation.
- iii. Stabilisation of earthworks and landforms.
- iv. Maintenance and monitoring of all revegetated and enhanced areas.

65. The initial bond quantum shall be set at the 80% level of confidence for the estimated costs determined by a suitably qualified specialist acceptable to the Consent Authorities in accordance with Bond Condition 59, based on the first Annual Work Plan and probabilistic calculations using the Monte Carlo simulation technique. Thereafter, the same specialist, or an alternate specialist acceptable to the Consent Authority, shall review and prepare a report for the parties on the bond quantum at yearly intervals based on the same methodology, but

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 <#>To compensate for the loss of indigenous vegetation removed, destroyed or transplanted during the construction of the Rakaia Terrace Hydro Scheme.
 <#>To minimise the quantity of indigenous vegetation and habitat removed, destroyed or disturbed during the scheme construction phase.
 <#>To minimise the potential for reptiles and large ground dwelling invertebrates to be significantly affected by the scheme construction phase.

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using the Annual Work Plan for the coming year. If the reviewed bond quantum is higher than the current bond quantum, then the bond quantum shall be increased accordingly within 30 days of the parties receiving the report, unless the Consent Holder invokes Bond Condition 66.

66. Should the Consent Holder not agree with the bond quantum determined in accordance with Bond Condition 6.7, then the matter shall be referred to arbitration in accordance with the provisions of the Arbitration Act 1996. Arbitration shall be commenced by written notice ("notice of arbitration") by the Consent Holder to the Consent Authority advising that the amount of the bond is disputed, such notice to be given within 14 days of the Consent Holder receiving the report referred to in Bond Condition 6.8. If the parties cannot agree upon an arbitrator within 7 days of the notice of arbitration, then an arbitrator shall be appointed by the President of the Institution of Professional Engineers of New Zealand. Such arbitrator shall give an award in writing to the parties within 30 days after his or her appointment (the "date of arbitration decision"), unless the parties agree that the date of arbitration decision shall be extended. The Consent Holder shall bear the full and reasonable costs of the parties in connection with this arbitration. In all other respects, the provisions of the Arbitration Act 1996 shall apply. Pending the outcome of that arbitration, and subject, the current bond shall continue in force. The bond quantum shall be adjusted in accordance with the arbitration decision.

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67. If the decision of the arbitrator is not made available by the date of arbitration decision specified in the bond report prepared in accordance with Bond Condition 65 then the amount of the bond shall be the quantum specified in the bond report prepared in accordance with Condition 65 until such time as the arbitrator does give a decision in writing to the parties. At that time, the amount of the bond shall then be adjusted in accordance with the arbitration decision.

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68. The bond shall remain in place for a period of 12 months once rehabilitation works are complete and the scheme commissioned. Rehabilitation is not complete until the closure criteria are met.

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69. The provisions of Section 109 shall apply to any bond, or bonds, required pursuant to the above.

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70. The Consent Holder shall meet the costs of providing any bond, or bonds, including the costs of the bond and any substitute bond.

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TELECOM NEW ZEALAND

71. Prior to construction and for the purpose of ensuring that Telecom New Zealand Limited (Telecom) operations and associated infrastructure are protected from adverse effects from the construction and operation of the Rakaia Terrace Hydro Scheme, the consent holder shall:

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- (a) consult with Telecom with the aim to identify and to avoid, remedy or mitigate adverse effects from the construction of the Rakaia Terrace Hydro Scheme on Telecom infrastructure and services;
- (b) specifically, the consultation should aim to identify and evaluate in conjunction with Telecom the extent and possible avoidance, mitigation or remediation (in accordance with the Electricity Act 1992 and Electricity Regulations 1997 and any subsequent amendments to them) of any resultant induction hazard and/or Earth Potential Rise (EPR) hazard;
- (c) forward to the Environmental Services Manager, Ashburton District Council, and copy to Telecom, a report detailing the consultation undertaken with Telecom, and the identification and evaluation of the matters set out in conditions (a) and (b) above. The report shall include a description of measures recommended to be taken by the consent holder to avoid, remedy or mitigate any significant adverse effects on Telecom infrastructure and operations from the construction or operation of the scheme.

Review of Conditions

72. Pursuant to Section 128(1) of the Act, the Consent Authority may review any of the conditions of these consents by serving notice either:

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- (a) Within a period of two months of the date of commencement of these consents; or
- (b) Within a period of three months commencing on each anniversary of the date of issue of these consents for any of the following purposes:
 - i. To deal with any adverse effects on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; or
 - ii. To require the consent holder to adopt the best practicable option to mitigate any adverse effect upon the environment; or
 - iii. To deal with any other adverse effect on the environment on which the exercise of the consent may have any influence;
 - iv. To deal with inaccuracies contained in the consent application that materially influenced the decision made on the application and is such that it is necessary to apply more appropriate conditions.

Advice Notes:

- The Council will require payment of its administrative charges in relation to monitoring, as authorised by the provisions of section 36 of the Resource Management Act 1991 as contained in the Ashburton District Council's Schedule of Fees.
- All land use activities, including earthworks associated with the hydro scheme must comply with the New Zealand Code of Practice for Electrical Safe Distances (NZECP 34:2001).
- All trees and vegetation planted on site must comply with the Electricity (Hazards from Trees) Regulations 2003.
- The Environment Canterbury resource consents shall include requirements for a Dust Management Plan.

The Consent holder shall undertake all works downstream of the Highbank Power Station to achieve an outcome generally in accordance with the following objectives:

- To compensate for the loss of indigenous vegetation removed, destroyed or transplanted during the construction of the Rakaia Terrace Hydro Scheme;
- To minimise the quantity of indigenous vegetation and habitat removed, destroyed or disturbed during the scheme construction phase;
- To minimise the potential for reptiles and large ground dwelling invertebrates to be significantly affected by the scheme construction phase;
- To minimise the potential for reductions of abundance and diversity or any threatened plant species affected by the scheme construction phase;
- To ensure the successful establishment and long term viability of the proposed mitigation plantings.

A Terrestrial Ecology Management Plan shall be prepared and maintained by the Consent Holder. The Plan shall:

- (a) detail how the Terrestrial Ecology Management Plan objectives are to be achieved;
- (b) incorporate as a minimum the proposed concept planting plan and mitigation measures contained in the report entitled *Rakaia Terrace Hydro Scheme Addendum to Terrestrial Ecology Assessment, August 2008*;
- (c) The Terrestrial Ecology Management Plan shall be forwarded to the Manager of Planning and Regulatory Services at the Ashburton District Council for certification. Upon certification, all works carried out in the construction and maintenance of the Rakaia Terrace Hydro Scheme shall be carried out subject to the provisions of the Plan.
- (d) The Terrestrial Ecology Management Plan shall be prepared and maintained for the duration of the construction period and a 24 month maintenance period following completion of all plantings required under the conditions of this consent. The Plan shall be submitted to the Environmental Services Manager of the Ashburton District Council for certification at least one month prior to the commencement of propagation activities.

The Terrestrial Ecology Management Plan shall, include details on the following:

- Methods for monitoring the success of re-vegetation plantings for at least 24 months following the planting;
- The site control measures to be applied to minimise damage and / or loss of plant species as a result of works;
- The methods to be used by the consent holder to:
 - Collect, transplant, or propagate indigenous plant species from within the construction footprint of the scheme downstream from the Highbank Power Station. The collection of propagules from the threatened plants and other indigenous vegetation as specified in the proposed planting plan applicable to the Terrace Canal construction zone shall be undertaken at least 12 months prior to the disturbance of the terrace area;
 - Collect, maintain and distribute topsoil, humus and woody vegetation removed in the construction of the canal which is to be used as part of the rehabilitation works;
 - Maintain the abundance and diversity of threatened plant species in the immediate area of the scheme through propagation and transplanting of formally classified threatened species;
 - Plant, sow or otherwise vegetate all aspects of the scheme where appropriate, including the rehabilitation plantings proposed in the Planting Plan attached as Appendix A to the report entitled *Rakaia Terrace Hydro Scheme Addendum to Terrestrial Ecology Assessment, August 2008*, or its successor;
 - Measures to protect and maintain all plantings until suitably established and independent, including weed control and irrigation where necessary;
 - Measures to protect all plantings from grazing or other damage from stock or predators.

The Terrestrial Ecology Management Plan shall be reviewed not less than annually and the revised Plan shall be submitted to the Council within one month of the review being completed.

Prior to the commencement of works, a comprehensive survey of native vegetation located within the construction area of the scheme (including associated internal haul roads, staging and stockpile areas if any), between CH3500 and CH11500m as shown on the scheme plans lodged with the Ashburton District Council. This survey shall be adequate to identify and locate any threatened indigenous plant species, and shall be undertaken by a suitably qualified and experienced party.

The consent holder shall ensure that no vegetation outside the designated construction zone is damaged, removed or destroyed. No nails or fixings shall be driven into vegetation outside of the construction zone, and no materials or machinery shall be stored under the crown of trees which are to be retained.

The Terrestrial Ecology Management Plan may be amended, as the Consent Holder considers appropriate, during the period of this consent. Any amendments to the Plan must be submitted and approved by the Consent Authority prior to the amended works being undertaken. Where the Consent Authority considers amendments are warranted to ensure continued compliance with the conditions of this consent and these are notified to the Consent Holder, the Consent Holder shall respond to the request in writing within one month of receiving the request, with either amendments to the Plan or an explanation as to why the requested amendments have not been made.