

CRC COMMENTS ON APPENDIX 2: CONSENT CONDITIONS

CONSENT HOLDER: Genesis Energy Limited

CONSENT TYPE: Water Permit

CONSENT NUMBER: CRC254907

CONSENT DURATION 35 years

Formatted: Font: Bold

Formatted: Font: Not Bold

- 0. The activities authorised by this resource consent comprise:
 - a. The damming of the Takapō River via the Lake Takapō Control Structure (Gate 16) to control and manage the levels of Lake Takapō;
 - b. The taking, diverting, and using of water from Lake Takapō via the Tekapo Intake Structure for the generation of electricity, and ancillary purposes, at the Tekapo A and B Power Stations;
 - c. The damming of the Takapō River at the Lake George Scott Weir to control and maintain the water levels in Lake George Scott; and
 - d. The taking and diversion of water from the Takapō River via the Tekapo Canal Control Structure (Gate 17) and using this water for the generation of electricity, and ancillary purposes, at the Tekapo B Power Station.

Advice note: the activities described above do not constitute consent conditions that can be changed, cancelled or reviewed under sections 127 or 128 of the Resource Management Act 1991.

- 1. The activities authorised by this resource consent are located at:

Legal Description

Tekapo Power Scheme – Lot 1 DP 421602, Lot 1 DP 562455, Lot 1 DP 439605, Section 2 SO 567261, Lot 2 DP 364538, Lot 1 DP 407182, Lot 2 DP 407182, Section 1 SO 331257, Section 1 SO 20293, Section 1 SO 394353, Section 2 SO 394353.

Map References

Structure	New Zealand Transverse Mercator Coordinate	
	Easting	Northing
Tekapo Control Structure (Gate 16)	1398034	5124317
Tekapo Intake Structure	1397200	5124969
Lake Tekapo Stilling Well	1397431	5124893
Tekapo A Power Station	1396441	5123467

Structure	New Zealand Transverse Mercator Coordinate	
	Easting	Northing
Lake George Scott Weir	1396531	5123259
Tekapo Canal Control Structure (Gate 17)	1396526	5123315
Tekapo A Tailrace	1396436	5123403
Tekapo Canal (Upstream)	1396434	5123398
Tekapo Canal (Downstream)	1378199	5111027

Note: Where structure names described above are referred to in the consent conditions, then the specific map coordinates for those structures are those described above and are not included in the specific consent condition.

GENERAL CONDITIONS

- The Consent Holder must ensure that the damming, taking, diversion, and use of water authorised by this resource consent are carried out in accordance with the following conditions and with the conditions set out in Schedule One, which form a part of this resource consent. Where there is a difference or apparent conflict between interpreting the conditions of this resource consent and the conditions in Schedule One, the specific conditions in this resource consent prevail.

DIVERSION AND WATER TAKE CONDITIONS

- Provided the combined rate of divert, take, and use does not exceed 130 cubic metres of water per second, the consent holder may:
 - Divert, take, and use up to 130 cubic metres of water per second from Lake Takapō via the Tekapo Intake Structure for hydro-electricity generation purposes.
 - Divert, take, and use up to 130 cubic metres of water per second from the Takapō River via the Tekapo Canal Control Structure (Gate 17) for hydro-electricity generation purposes.
- The maximum volume of water that may be taken for the Tekapo Power Scheme must not exceed that necessary to provide for the annual allocation to activities specified in the table attached as Appendix 1, which forms part of this consent.
- Except as provided for in Conditions 06 and 7 below, the consent holder may, at any time, take or divert water from Lake Takapō for the purpose of hydro-electricity generation, when the lake level exceeds the following minimum operating levels:

Period	Lake Level (metres above mean sea level)
April to September (inclusive)	702.1
October to March (inclusive)	704.1

Commented [SB1]: Please refer to discussion in cover letter

Advice note: all lake levels specified in the conditions of this resource consent are relative to Lyttelton 1937 datum.

6. When the aggregate storage for New Zealand or the South Island is below the relevant System Operator Contingent Storage Release Boundary trigger level under the Security of Supply Forecasting and Information Policy (as approved under Part 7 of the Electricity Industry Participation Code 2010), or any subsequent equivalent regulatory arrangement that enables the consent holder to access contingent storage in specified circumstances, the consent holder may take or divert water from Lake Takapō for hydro-electricity generation purposes below the minimum operating lake levels specified in Condition 5, to a minimum lake level of 701.8 metres above mean sea level. Written notice of the reduction in lake level and its expected duration must be given to the Chief Executive (or delegated nominee) Canterbury Regional Council, Te Rūnanga o Arowhenua, Te Rūnanga o Waihao, and Te Rūnanga o Moeraki:
 - a. Prior to the reduction in lake level; and
 - b. Within one working day of reducing below the lake level specified in Condition 5.
7. Other than as provided for in Condition ~~06~~, if the Lake Takapō lake level is below 704.1 metres above mean sea level on 30 September, the consent holder may continue to take or divert water from Lake Takapō for hydro-electricity generation purposes on and after 1 October provided the Lake Takapō 24-hour rolling average lake level does not decrease further.
8. If the lake level has been reduced in accordance with Condition ~~06~~ or is below 704.1 metres above mean sea level in accordance with Condition 7, the consent holder must take all reasonable measures to restore Lake Takapō to the consented minimum lake level under Condition 5 as soon as practicable, after consideration of such matters including (but not limited to):
 - a. Electricity generation levels required to maintain security of electricity supply in New Zealand;
 - b. Operational matters, such as maintaining flows, minimum water levels, and water quality through the scheme; and
 - c. Present and predicted lake inflows.
9. If the lake level has been reduced in accordance with Condition ~~06~~ or is below 704.1 metres above mean sea level in accordance with Condition 7, the consent holder must:

- a. Advise, in writing, the Chief Executive (or delegated nominee) Canterbury Regional Council, Te Rūnanga o Arowhenua, Te Rūnanga o Waihao, and Te Rūnanga o Moeraki weekly of:
 - i. The progress towards, and the expected timetable for, restoring Lake Takapō to the consented minimum lake level under Condition 5;
 - ii. The strategies adopted to restore Lake Takapō to the consented minimum lake level; and
 - iii. The lake level at the end of each reporting week.
 - b. No later than eight weeks following the completion of each activation of Condition ~~06~~ or 7, the consent holder must provide, in writing, the Chief Executive (or delegated nominee) Canterbury Regional Council, Te Rūnanga o Arowhenua, Te Rūnanga o Waihao, and Te Rūnanga o Moeraki with the following information:
 - i. The date and time at which Takapō / Lake Tekapo was lowered below the consented minimum lake level under Condition 5;
 - ii. The levels at which Takapō / Lake Tekapo was managed over the duration of the activation;
 - iii. The duration of the activation;
 - iv. The length of time following completion of the activation for Lake Takapō to be restored to the consented minimum lake level under Condition 5; and
 - v. A written description of the circumstances leading to activation.
10. If the consent holder has managed the lake level in accordance with Conditions ~~06~~ and/or 7 in the previous 12 months, the Canterbury Regional Council may review Conditions 8 and/or 9 of this resource consent by giving notice of its intention to do so in accordance with section 128 of the Resource Management Act 1991. Such notice may be given at any time within six months following the receipt of the information required in Condition 9 for the purpose of amending or adding conditions to ensure that adverse effects of the management of the lake levels under Condition 5 are appropriately managed.

MONITORING CONDITIONS

11. The consent holder must install and operate a monitoring device or system to enable compliance with the flow rate(s) specified in Condition 3 to be assessed, based on a 30-minute moving average. The monitoring device or system must:
- a. Measure and record flow rate at the locations and with the accuracy specified in the table below;
 - b. Be connected to a system which collects and stores the data continuously;
-

- c. Record the flow rate at each location specified in the table below at a frequency not greater than every five minutes; and
- d. Be verified using the method, accuracy, and at the frequency identified for each location listed in the table below.

Location	Compliance Determination Frequency	Measured Accuracy	Verification Method	Verification Accuracy	Verification Frequency
Tekapo A Power Station	30-minute moving average	± 5%	Winter Kennedy data set	± 5%	Annually
			Open channel	± 10%	Five yearly
Tekapo Canal Control Structure (Gate 17)	30-minute moving average	± 10%	Open channel	± 10%	Annually

Advice Note: Tekapo A Power Station is considered a pipe flow; however, the five yearly validation will be via open channel method measured to within an accuracy of ± 10% of the actual flow.

Advice Note: Gate 17 is considered an open channel measurement device due to the means of validation being an open channel method. Gate 17 operates in both a closed orifice and open channel 'free flow' manner.

Advice Note: For the avoidance of doubt, Condition 3 requires that the total flow taken between Tekapo A and Gate 17 must not be more than 130 cubic metres per second.

- 12. The consent holder must install and operate a monitoring device or system to measure the Lake Takapō water level at the Lake Tekapo Stilling Well. The monitoring device or system must:
 - a. Use a sensor with a resolution of no more than ±3 millimetres accuracy;
 - b. Be connected to a system which collects and stores the data continuously;
 - c. Record the water level at the Lake Tekapo Stilling Well at a frequency not greater than every five minutes; and
 - d. Be verified every three months using a physical lake level measurement at the Lake Tekapo Stilling Well.
- 13. Compliance with the minimum operating lake levels specified in Condition 5 and the maximum control and minimum lake levels specified in Condition 1 of Schedule One, must be determined as a 60-minute moving average in relation to mean sea level.
- 14. The consent holder must provide the flow rate or volume and water level data recorded for each day in accordance with Conditions 11 and 12 to the Chief Executive (or

Commented [SB2]: CRC Resource Management Technical Lead, Mr Stephen Hay has had discussions with Genesis and agrees the inclusion of 'or volume' is appropriate because we are requesting submission of flow data for the open channel sites and volume data for the piped penstock sites. This ensures that some of the sensors which provide volume data rather than rate does not create compliance issues.

delegated nominee) Canterbury Regional Council electronically, in a format acceptable to the Council, no later than the end of the following day.

MISCELLANEOUS

15. The consent holder must ensure that compliance with Conditions 1 to 14 is maintained at all times, except where an alternative operating regime is necessary in order to maintain the structural integrity and safety of any of the Tekapo Power Scheme or Waitaki Power Scheme infrastructure, or public safety.
16. Where an alternative operating regime is necessary, as provided for in Condition 15, the consent holder must take all reasonably practicable steps to comply with Conditions 3 to 12 and the conditions in Schedule One and to safely return the Tekapo Power Scheme to normal operation.
17. Where control of the Tekapo Power Scheme cannot be returned to normal operation within two hours, the consent holder must:
 - a. Notify the Chief Executive (or delegated nominee) Canterbury Regional Council, Te Rūnanga o Arowhenua, Te Rūnanga o Waihao, and Te Rūnanga o Moeraki as soon as practicable; and
 - b. Within two working days of the circumstances identified in this condition occurring at the Tekapo Power Scheme, provide a timetable for returning to normal operation as soon as practicable if that has not already occurred within two working days.

CONSENT HOLDER: Genesis Energy Limited
CONSENT TYPE: Discharge Permit
CONSENT DURATION: 35 years

0. The activities authorised by this resource consent comprise:
- a. The discharge of water and associated contaminants into Lake Pūkaki from the Tekapo B Power Station;
 - b. The discharge of water and associated contaminants into the Takapō River from the Lake Takapō Control Structure (Gate 16) for the purposes of high flow management, to bypass Tekapo A Power Station, for Lake George Scott Water level maintenance, maintenance activities, and/or for recreational release purposes; and
 - c. The discharge of water and associated contaminants into the Takapō River from the Lake George Scott Weir for maintenance activities and high flow management.
 - d. Duration of consent: 35 years from the date of commencement of this resource consent.

Advice note: the activities described above do not constitute consent conditions that can be changed, cancelled or reviewed under sections 127 or 128 of the Resource Management Act 1991.

1. The activities authorised by this resource consent are located at:

Legal Description

Tekapo Power Scheme – Lot 1 DP 421602, Lot 1 DP 562455, Lot 1 DP 439605, Section 2 SO 567261, Lot 2 DP 364538, Lot 1 DP 407182, Lot 2 DP 407182, Section 1 SO 331257, Section 1 SO 20293, Section 1 SO 394353, Section 2 SO 394353.

Map References

Structure	New Zealand Transverse Mercator Coordinate	
	Easting	Northing
Tekapo Control Structure (Gate 16)	1398034	5124317
Lake George Scott Weir	1396531	5123259
Tekapo B Power Station	1376945	5110725
Tekapo B Tailrace	1376919	5110714

Note: Where structure names described above are referred to in the consent conditions, then the specific map coordinates for those structures are those described above and are not included in the specific consent condition.

2. The Consent Holder must ensure that the discharge of water and associated contaminants authorised by this resource consent is carried out in accordance with the following conditions and the conditions set out in Schedule One, which form a part of this resource consent. Where there is a difference or apparent conflict between interpreting the conditions of this resource consent and the conditions in Schedule One, the specific conditions in this resource consent prevail.
3. The discharge of water from the Tekapo B Tailrace to Lake Pukaki must not exceed 130 cubic metres per second.
4. The consent holder may discharge water to the Takapō River via the Tekapo Control Structure (Gate 16).
5. The consent holder may discharge water into the Takapō River via the Lake George Scott Weir.
6. The consent holder must install and operate a monitoring device or system to measure discharge rates, based on a 30-minute moving average. The monitoring device or system must:
 - a. Measure and record discharge flow rate at the locations and with the accuracy specified in the table below;
 - b. Be connected to a system which collects and stores the data continuously;
 - c. Record the discharge rate at each location identified in the table below at a frequency not greater than every five minutes; and
 - d. Be verified using the method, accuracy and at the frequency identified for each location listed in the table below.

Location	Compliance Determination Frequency	Primary Measurement	Measurement Accuracy	Verification Method	Verification Accuracy	Verification Frequency
Tekapo Control Structure (Gate 16)	30-minute moving average	Two-dimensional flow rating (Inputs: Lake Takapō level and Gate 17 position)	± 10%	Open channel	± 10%	Annually
Lake George Scott Weir	30-minute moving average	Stage to flow rating	± 10%	Open channel	± 10%	Annually
Tekapo B Power Station	30-minute moving average	Penstock flow sensors	± 5%	Two-dimensional rating table	± 5%	Annually
				Open channel	± 10%	Five yearly

Advice note: Lake George Scott Weir verification is subject to being able to measure due to intermittent flow durations.

7. The consent holder must provide the flow and water level data recorded for each day in accordance with Condition 6 to the Chief Executive (or delegated nominee) Canterbury Regional Council electronically, in a format acceptable to the Council, no later than the end of the following day.

MISCELLANEOUS

8. The consent holder must ensure that compliance with Conditions 1 to 7 is maintained at all times, except where an alternative operating regime is necessary in order to maintain the structural integrity and safety of any of the Tekapo Power Scheme or Waitaki Power Scheme infrastructure, or public safety.
9. Where an alternative operating regime is necessary, as provided for in Condition 8, the consent holder must take all reasonably practicable steps to comply with Conditions 3 to 7 and the conditions in Schedule One and to safely return the Tekapo Power Scheme to normal operation.
10. Where control of the Tekapo Power Scheme cannot be returned to normal operation within two hours, the consent holder must:
 - a. Notify the Chief Executive (or delegated nominee) Canterbury Regional Council, Te Rūnanga o Arowhenua, Te Rūnanga o Waihao, and Te Rūnanga o Moeraki as soon as practicable; and
 - b. Within two working days of the circumstances identified in this condition occurring at the Tekapo Power Scheme, provide a timetable for returning to normal operation as soon as practicable if that has not already occurred within two working days.

SCHEDULE ONE CONDITIONS

CONSENT HOLDER: Genesis Energy Limited

Resource consents ~~[insert consent numbers~~CRC254907 and CRC254908] for the Tekapo Power Scheme are granted subject to the following general conditions:

Advice Note: For the avoidance of doubt, unless otherwise specified, all cross references to condition numbers in the following conditions refer to those within Schedule One.

MANAGEMENT OF LAKE TAKAPŌ LEVELS

1. Except as provided for by the specific conditions of resource consent ~~[insert water permit consent number]~~, the consent holder may, at any time, operate the Tekapo Power Scheme to manage the level of Lake Takapō / Tekapo, for the purpose of water storage for hydro-electricity generation, between the maximum control lake levels and the minimum lake levels specified in the following two tables, respectively:

- a. Maximum control lake levels:

Period	Lake Level (metres above mean sea level)
March	710.0
April	710.3
May	710.6
June	710.9
July	710.9
August	710.3
September to February (inclusive)	709.7

- b. Minimum lake levels:

Period	Lake Level (metres above mean sea level)
April to September (inclusive)	702.1
October to March (inclusive)	704.1

LAKE TAKAPŌ / TEKAPO HIGH FLOW MANAGEMENT

2. The Consent Holder must, for the duration of this resource consent, hold a Lake Takapō High Flow Management Plan (“HFMP”), prepared by a suitably qualified and experienced person(s). The Tekapo Power Scheme must be operated in accordance with the HFMP when the levels of Lake Takapō exceed the maximum control lake levels specified in Condition 1(a).

3. The purpose of the HFMP, required to be prepared in accordance with Condition 2, is to document how the flows via structures controlled by the Consent Holder, being the Tekapo Intake Structure and the Tekapo Control Structure (Gate 16), the Lake George Scott Weir, and Gate 17 to the Tekapo Canal, will be managed to:
 - a. Safely return Lake Takapō to the maximum control lake level required by Condition 1(a) as soon as is practicable, in the event that these maximum control lake levels are exceeded; and
 - b. Protect the integrity of the Tekapo Power Scheme structures during periods when inflows to the lake raise the lake level above the maximum control lake levels specified in Condition 1(a).
 4. As a minimum, the HFMP must include and address the following specific matters:
 - a. How the requirements of Conditions 10 and 11 will be implemented to reduce lake levels and to protect the integrity of the Tekapo Power Scheme structures;
 - b. The minimum combined total discharge flow from Lake Takapō via the Tekapo Intake Structure and the Tekapo Control Structure (Gate 16) that will be maintained to reduce lake levels to the maximum control lake level specified in Condition 1(a);
 - c. The rate at which the combined rates of flow to the Tekapo A Power Station (via the Tekapo Intake Structure) and to the Takapō River (via Gate 16) will be adjusted to meet the flows identified in (a) and (b) above;
 - d. The design flow for Gate 16, Gate 17, and the Lake George Scott Weir;
 - e. How Gate 17 will be operated during events where the water level in Lake Takapō exceeds the maximum control lake level specified in Condition 1(a);
 - f. Management of flows from the Lake George Scott Weir; and
 - g. Notification procedures, including parties to be notified, when the HFMP is being implemented.
 5. The updated HFMP prepared in accordance with Conditions 3 and 4 must be:
 - a. Prepared following consultation with the Canterbury Regional Council, the Mackenzie District Council, and the operators of the Waitaki Power Scheme;
 - b. Provided to the Chief Executive (or delegated nominee) Canterbury Regional Council within six months of the date of commencement of this resource consent for certification that all the matters in Condition 4 have been addressed;
 - c. Accompanied by any comments from the Canterbury Regional Council, the Mackenzie District Council, and the operators of the Waitaki Power Scheme that were not adopted, with reasons why; and
-

- d. Can be immediately implemented by the Consent Holder from the date that it is provided to the Council, until otherwise advised by the Council under Condition 8.

Advice Note: The Consent Holder provided a 'Draft' of the HFMP with the application. This condition requires the Draft to be updated and submitted for certification.

6. The HFMP certified under Condition 5:

- a. May be reviewed and amended by the Consent Holder at any time as necessary for the purpose of improving the efficacy of the HFMP in achieving its purpose as specified in Condition 3; and
- b. Must be reviewed by a suitably qualified and experienced person(s) and amended (if this is considered necessary or appropriate) by the Consent Holder at intervals of not more than ten years .

7. Any review of the HFMP undertaken in accordance with condition 6 must be:

- a. Prepared following consultation with the Canterbury Regional Council, the Mackenzie District Council, and the operators of the Waitaki Power Scheme;
- b. Provided to the Chief Executive (or delegated nominee) Canterbury Regional Council within six months of the date of amendment of the HFMP for certification that all the matters in Condition 4 have been addressed;
- c. Accompanied by any comments from the Canterbury Regional Council, the Mackenzie District Council, and the operators of the Waitaki Power Scheme that were not adopted, with reasons why; and
- d. Can be immediately implemented by the Consent Holder from the date that it is provided to the Council, until otherwise advised by the Council under Condition 8.

8. If the consent holder is advised by the Canterbury Regional Council that it will not certify the HFMP provided to it under Condition 5, or any amendments to the HFMP provided under Condition 7, the consent holder must:

- a. Continue to implement the HFMP prepared under Conditions 3 and 4 while considering any reasons and recommendations provided by the Canterbury Regional Council; or
- b. In respect of any amendment to the HFMP prepared under Condition 6, continue to implement the previously certified HFMP while considering any reasons and recommendations provided by the Canterbury Regional Council; and
- c. Make appropriate amendments to the HFMP where relevant to address the matters identified by the Canterbury Regional Council; and

- d. Following consultation with the Canterbury Regional Council, the Mackenzie District Council, and the operators of the Waitaki Power Scheme, resubmit the updated or amended HFMP to the Chief Executive (or delegated nominee) Canterbury Regional Council for certification that all the matters in Condition 4 have been addressed. Where any reasons and recommendations provided by the Canterbury Regional Council are not addressed in the updated or amended HFMP, reasons for not addressing those matters must be included in the resubmitted HFMP.
9. When the level of Lake Takapō exceeds a maximum control lake level specified in Condition 1(a) during the relevant period, the consent holder must operate the Tekapo Power Scheme in accordance with the latest certified version of the HFMP so as to safely return the level of the lake to the maximum control lake level specified in Condition 1(a) (or lower) for the relevant period as soon as is practicable.
10. The consent holder must use reasonable endeavours to operate Gate 16 and Gate 17 to reduce fluctuations in flow from the Lake George Scott Weir. If the Gate 17 discharge is altered while there is a flow from the Lake George Scott Weir to the Takapō River, then the Gate 16 and Gate 17 operations must be managed in accordance with conditions 11 to 14 below.
11. For the purpose of implementing the HFMP, the following requirements apply:
- a. The initial discharge rate to the Takapō River from the Lake George Scott Weir must not exceed 20 cubic metres per second for a period of not less than six hours;
 - b. The next discharge rate step from the Lake George Scott Weir to the Takapō River must not exceed 45 cubic metres per second and must not be increased for at least three hours;
 - c. Unless lake levels are 0.4 metres or more above the maximum control lake level specified in Condition 1(a), further increases in discharge rate from the Lake George Scott Weir to the Takapō River must ensure that:
 - i. The maximum increase in discharge rate must not exceed 20 cubic metres per second; and
 - ii. There must be at least one hour between discharge rate changes.
 - d. When Gate 16 is being progressively closed, and discharge is occurring from the Lake George Scott Weir at a rate at or below 20 cubic metres per second, the following minimum discharge rates from the Weir must be maintained to simulate natural recession of the Takapō / Tekapo River:

Step One: 20 cubic metres per second for 24 hours;

Step Two: 12 cubic metres per second for 24 hours;

Step Three: 5 cubic metres per second for 24 hours;

Step Four: 2 cubic metres per second for 48 hours; and

Step Five: cease discharge from Lake George Scott Weir.

- e. If the initial spill flow is between 10 and 20 cubic metres per second, the recession rules from the next step in Condition 11(d) below that spill flow apply.

12. If Gate 16 is in use in a manner that results in a discharge from the Lake George Scott Weir, the discharge rate from the Weir must be reduced at a maximum rate of up to 20 cubic metres per second per hour until the flow from the Weir reaches 20 cubic metres per second.

13. Any discharge from the Lake George Scott Weir less than 10 cubic metres per second for less than 90 minutes in duration will not be deemed to trigger the recession rules in condition 11. For the avoidance of doubt this does not preclude notification and potential sports fish salvage in accordance with the Sports Fish Salvage Management Plan under condition 15.

14. If Gate 16 is in operation or flows from the Lake George Scott Weir occur when Lake Takapō / Tekapo is below the maximum control lake level specified in condition 1(a), then Gate 16 and the Lake George Scott Weir must be managed in accordance with conditions 10 to 12.

SPORTS FISH SALVAGE MEASURES

15. The Consent Holder must prepare and implement a Sports Fish Salvage Management Plan (“**FSMP**”) for the Tekapo Power Scheme following consultation with the Central South Island Fish and Game Council. The FSMP must be submitted to the Chief Executive (or delegated nominee) Canterbury Regional Council within six months of the date of commencement of resource consents CRC254907 and CRC254908. ~~insert consent numbers~~.

16. The purpose of the FSMP required by Condition 15 is to describe the action(s) the Consent Holder will undertake to reduce sports fish mortality when one or more of the events in Condition 17(a), (b), or (c) apply. The FSMP must include:

- a. Definitions of:
 - i. Extended Flow Events involving flow releases from Gate 16 or spill flows over the Lake George Scott Weir at defined rates and for defined periods of time;
 - ii. Significant Stranding Events, where recorded observations by the Central South Island Fish and Game Council or the Consent Holder on regular

inspection duties identify more than a defined number of stranded sports fish within the Gate 16 stilling basin, the Upper Takapō River near the Canoe Course or the Lake George Scott Weir stilling basin, or within 1.6 kilometres downstream of the Lake George Scott Weir.

- b. Protocol(s) for undertaking the sports fish salvage process, including ensuring that sports fish are not relocated to areas where sports fish are currently excluded;
- c. Communications protocol between the consent holder and Central South Island Fish and Game Council to inform of significant stranding events of sports fish, monitoring, and reporting;
- d. Timeframes for sports fish salvage to take place after Significant Stranding Events;
- e. Reporting provisions for sports fish salvage success including alive, dead, and remaining fish;
- f. Health and safety requirements and communications for any person undertaking sports fish salvage; and
- g. Provision for specific appendices to be included for sports fish salvage in the event that the Tekapo A draft tube and/or Tekapo Canal are to be dewatered.

Advice note: additional resource consents may be required for dewatering of the Tekapo A draft tube and/or Tekapo Canal.

Advice note: where native fish are identified and it is practicable to do so, native fish should be relocated to an appropriate area.

17. The Consent Holder must implement the FSMP upon any of the following occurring:

- a. An Extended Flow Event; and
- b. A Significant Stranding Event at:
 - i. Gate 16 stilling Basin;
 - ii. Upper Takapō River Area 1 to Canoe Course;
 - iii. George Scott Weir stilling Basin; and
 - iv. Lower Takapō / Tekapo River, Area 6 (and as shown in Schedule 2 of the FSMP); or
- c. When the Tekapo A draft tube and/or Tekapo Canal are dewatered.

18. If the consent holder intends to dewater either the Tekapo A draft tube and/or Tekapo Canal, then the Consent Holder must, following consultation with Central South Island Fish and Game Council, prepare a specific sports fish salvage plan for the dewatering activity. That plan, and any comments from Central South Island Fish and Game Council not adopted, with reasons why, must become an appendix to the FSMP and be provided to

Commented [SB3]: This links to a specific detail in the FSMP while the rest of the FSMP conditions sets what that management plan should include. If these locations are to be included then a location plan which forms a part of the consent would be beneficial. Alternatively the FSMP should be issued with the consent.

the Chief Executive (or delegated nominee) Canterbury Regional Council for information within 20 working days of finalisation of the updated FSMP.

Advice note: additional resource consents may be required for dewatering of the Tekapo A draft tube and/or Tekapo Canal.

19. The Consent Holder must, following consultation with Central South Island Fish and Game Council, review the effectiveness of the FSMP in achieving the requirements of Condition 16 at intervals of not more than five years.
20. The Consent Holder must provide a copy of the FSMP, and any revised FSMP prepared following the review undertaken in accordance with Condition 19, and any specific sports fish salvage plan prepared in accordance with Condition 18 to the Chief Executive (or delegated nominee) Canterbury Regional Council within 20 working days of finalisation of the relevant FSMP.
21. The Consent Holder must, at all times, comply with the latest version of the FSMP, including any appended specific sports fish salvage plan(s) prepared under Condition 18, as provided to the Chief Executive (or delegated nominee) Canterbury Regional Council.

RECREATIONAL RELEASES

22. Subject to Condition 23, the Consent Holder must, at the request of Whitewater New Zealand Incorporated and the Tekapo Whitewater Trust, provide up to 4,820 cubic metres per second-hours to the Upper Takapō River, between Gate 16 and Lake George Scott, annually between 1 July and the following 30 June for in-river recreational purposes including, without limitation, white water canoeing, kayaking, rafting, sledging, and boarding.
 23. The Consent Holder's obligation to provide any particular requested recreational release required by Condition 22 must not apply when any of the following applies:
 - a. Mechanical or system failures;
 - b. Maintenance, repairs, or upgrades of the Tekapo Power Scheme;
 - c. Extreme weather or other natural hazard events;
 - d. Compliance with statutory requirements, including health and safety, and with the conditions of the Tekapo Consents, including maintaining lake levels;
 - e. Operational demands within the electricity system such as requirements or restrictions on generation including, but not limited to, Islanding as required by the National Grid operator; or
 - f. Requirements to meet security of supply if the aggregate storage for New Zealand or the South Island is below the relevant trigger level specified in System Operator policy.
-

However, the Consent Holder must use reasonable endeavours to supply water at a mutually agreed date within the relevant year.

ENVIRONMENTAL COMPENSATION

24. The consent holder must ensure an integrated Indigenous Biodiversity Enhancement Programme (“**IBEP**”) is undertaken from the commencement of resource consents replacing existing Combined Waitaki Power Scheme resource consents. The objective of the IBEP is to improve the:

- a. Condition;
 - b. Resilience;
 - c. Indigenous biodiversity;
 - d. Ecological processes; and
 - e. Other values
- of
- f. The braided rivers including their braid plains and margins;
 - g. Lake margins and deltas; and
 - h. Wetland and springs associated with lakes and braided rivers
- within the Waitaki Catchment.

Advice note: the IBEP may be undertaken in conjunction with any other generator within the Combined Waitaki Power Scheme.

Advice note: nothing in the IBEP may require the consent holder to alter the existing operation of the Tekapo Power Scheme.

25. The consent holder's contribution to the IBEP must have a minimum annual value of \$287,500, CPI (all groups) adjusted from 1 July 2025.

26. In accordance with the objective of the IBEP as set out in Condition 24 the IBEP will:

- a) Focus work primarily, but not exclusively, on those waterbodies directly affected by the Waitaki or Tekapo power schemes;
- b) Incorporate the values, interests, and aspirations as expressed by the Waitaki Rūnanga; and
- c) Foster increased understanding of such areas and their biodiversity through research and development.

IMPLEMENTATION OF THE INDIGENOUS BIODIVERSITY ENHANCEMENT PROGRAMME

27. At all times there must be a strategic plan that sets out how conditions 24 and 26 are to be achieved (“**Strategic Plan**”) over a 10-year planning horizon (“**Strategic Plan Period**”). The initial Strategic Plan will cover intended actions to implement the IBEP over the first 10-year period of this consent and must be prepared and a copy supplied to the Canterbury Regional Council within six months of the date of commencement of this consent.
28. The Strategic Plan must be reviewed and confirmed or replaced, and a copy provided to the Canterbury Regional Council not more than ten years following preparation of the initial Strategic Plan and not more than every ten years thereafter. All reviews of the Strategic Plan must be provided to the Canterbury Regional Council prior to the commencement of the period to which the Strategic Plan relates.
29. The Strategic Plan must:
- a. Be prepared by a suitably qualified and experienced person(s); and
 - b. Be prepared in consultation with Te Rūnanga o Arowhenua, Te Rūnanga o Moeraki, Te Rūnanga o Waihao, and the Department of Conservation; and
 - c. Identify the priorities for achieving the objective of the IBEP over the Strategic Plan Period; and
 - d. Identify the outcomes and key implementation milestones to be achieved over the Strategic Plan Period in accordance with the priorities; and
 - e. Identify the monitoring that will be used to demonstrate the achievement of the milestones and progress towards outcomes that are set out in the Strategic Plan over the Strategic Plan Period; and
 - f. Identify the governance, management, and delivery arrangements for the IBEP over the Strategic Plan Period.
30. For each Strategic Plan prepared, prior to its finalisation, the consent holder must:
- a. Provide a copy of a draft Strategic Plan to the Chief Executive (or delegated nominee) Canterbury Regional Council; and
 - b. Provide an opportunity, not less than 10 working days from receiving the Draft Strategic Plan, for the Chief Executive (or delegated nominee) Canterbury Regional Council to provide comments to the consent holder on the content of the Draft Strategic Plan.
31. A report must be provided to the Chief Executive (or delegated nominee) Canterbury Regional Council within six months of the completion of each Strategic Plan implementation period. The report must:
- a. Be prepared by a suitably qualified and experienced independent person(s); and

- b. Identify whether the key milestones and outcomes set out in the Strategic Plan were achieved; and
- c. Identify whether the monitoring undertaken was appropriate for demonstrating whether the milestones and outcomes in the Strategic Plan were achieved; and
- d. Identify if any milestones or outcomes were not achieved and, if so, the causes of non-achievement and any matters that should be revised in the next Strategic Plan; and
- e. Identify progress towards the outcomes identified in the Strategic Plan.

32. The initial Strategic Plan must include (without limitation) a focus on the following:

- a. Takapō Catchment:
 - i. Restoration of key representative sites on the river, other waterbodies, and connected environs within the braid plain;
 - ii. Wetland enhancement;
 - iii. Island creation;
 - iv. Management of the pressures on connected environs within the braid plain (e.g. animal pests and weeds); and
 - v. Restoration of two bay areas on Lake Takapō;
- b. Pūkaki, Upper and Lower Ōhau River catchments: Representative sites with animal pests and weed management in lower river reaches focused on threatened species hotspots and areas of terrestrial braid plain; and
- c. Lower Waitaki River Catchment: Restoration of braid plains and side streams, wetland enhancement, island creation, management of the pressures on connected environs within the braid plain (i.e. animal pests and weeds); and
- d. Identification and prioritisation of research to address identified knowledge gaps.

33. To implement the Strategic Plan, an Annual Plan must be developed and implemented. The Annual Plan is to:

- a. Be prepared by one or more suitably qualified experts; and
- b. Identify the specific actions and outputs that are to be the focus for the forthcoming year covered by the Plan, consistent with the Strategic Plan.

34. A copy of each Annual Plan must be provided to the Canterbury Regional Council prior to the implementation period for that Annual Plan.

35. A report must be provided to the Chief Executive (or delegated nominee) Canterbury Regional Council, within three months of the end of each Annual Plan implementation period. The report must:

- a. Be prepared by one or more suitably qualified experts, and
- b. Identify the actions and outcomes that were undertaken over the previous Annual Plan period, and
 - i. If any actions and outcomes were not achieved, identify the causes of non-achievement, and
 - ii. If similar actions and outcomes are to be undertaken in future, identify what matters should be revised, and
- c. Identify progress towards achievement of the Strategic Plan.

36. A copy of each Strategic Plan (Condition 27), report on each Strategic Plan (Condition 31), Annual Plan (Condition 33) and report on the Annual Plan (Condition 35) must be provided to Te Rūnanga o Arowhenua, Te Rūnanga o Moeraki, Te Rūnanga o Waihao, the Canterbury Regional Council and the Department of Conservation.

LAKESHORE EROSION MANAGEMENT PLAN

37. The consent holder must prepare and implement a Lakeshore Erosion Management Plan for Lake Takapō following consultation with Te Rūnanga o Arowhenua, Te Rūnanga o Moeraki, and Te Rūnanga o Waihao. The purpose of the Lakeshore Erosion Management Plan is to provide a methodology to identify, avoid, and/or mitigate lakeshore erosion hazards resulting from the operation of the Tekapo Power Scheme through monitoring and assessment of shoreline changes.

38. In order to achieve the purpose set out in Condition 37, the Lakeshore Erosion Management Plan must, as a minimum, include the following matters:

- a. The erosion monitoring locations along Lake Takapō / Tekapo including those areas identified in Figures 1 and 2 of the document "Tekapo Power Scheme re-consenting: Lakeshore geomorphology and processes Existing environment and future effects", 2022, prepared by Shore Processes and Management Ltd which show the projected effects on the physical lakeshore environment of the continued operation of the scheme under the existing operating regime and which may require consideration of management options within the duration of resource consents ~~insert consent numbers~~ [CRC254907](#) and [CRC254908](#);
- b. The frequency of monitoring, including following significant storm events;
- c. The lake level record and an assessment of the potential effects on the lakeshore geomorphology since the last inspection;

- d. A method for assessment of the wave environment since the last inspection;
- e. A method for assessment of shore change;
- f. A method for identification and quantification of the extent and magnitude of change;
- g. How effects attributable to the Tekapo Power Scheme will be determined;
- h. A method for identification of and timeframe for implementation of remedial options that may be required, noting that the nature of any remedial options required will depend on the location and specific erosion effect identified; and
- i. Provision for, and timing of, reporting on monitoring undertaken in accordance with the Lake Shore Erosion Management Plan and on the actions required in response to that monitoring.

Advice note: resource consents [\[insert consent numbers\] CRC254907 and CRC254908](#) do not authorise any remediation works which may require resource consent.

39. Within six months of the commencement of resource consents [\[insert consent numbers\] CRC254907 and CRC254908](#), the consent holder must submit the Lakeshore Erosion Management Plan to the Chief Executive (or delegated nominee) Canterbury Regional Council for certification that the matters in Condition 38(a) to (i) have been addressed.

ANNUAL REPORTING

40. The consent holder must prepare an Annual Report which covers the period of 1 July to the following 30 June for the activities authorised by resource consents [\[insert consent numbers\] CRC254907 and CRC254908](#) and forward that report to the Chief Executive (or delegated nominee) Canterbury Regional Council by 30 September of each year. As a minimum the Annual Report must:

- a. Summarise the data (including flow) collected in accordance with Conditions 11 and 12 of resource consent [\[insert consent number\] CRC254907](#), Condition 6 of resource consent [CRC254908 \[insert consent number\]](#), and provide archive quality data, corrected to account for calibration/rating changes, maintenance, and/or to remove erroneous data, collected in accordance with those conditions;
- b. Provide flow verification evidence using the methods defined in Conditions 11 and 12 of resource consent [\[insert consent number\] CRC254907](#) and Condition 6 of resource consent [\[insert consent number\] CRC254908](#), including, but not limited to, the following:
 - i. A description of the locations where verification data were collected;

- ii. A description of the methodology used for verification of data records for each location for which records were collected;
 - iii. Any change in instrumentation or calibration of the measurement devices or systems used;
 - iv. Records of physical Lake Takapō water level measurements;
 - v. Flow gauging records; and
 - vi. Summary statistics including stage/gate-position to flow rating(s);
- c. Critically analyse the information collected in accordance with the conditions of resource consents ~~[insert consent numbers]~~ [CRC254907 and CRC254908](#), in terms of compliance and potential or actual adverse environmental effects;
- d. Compare data with previously collected and reported results and identify and comment on any emerging trends;
- e. Critically evaluate the performance of the procedures and physical mechanisms in place to avoid and/or minimise any adverse effects associated with the exercise of resource consents ~~[insert consent numbers]~~ [CRC254907 and CRC254908](#), identify any improvements undertaken, and make recommendations on any additional improvements needed with respect to procedures or mechanisms relating to the exercise of resource consents ~~[insert consent numbers]~~ [CRC254907 and CRC254908](#);
- f. Include the work actions undertaken and the outcomes achieved during the previous year under the Annual Plan prepared in accordance with Condition 33, including:
- i. If any actions and outcomes were not achieved, identifying the causes of non-achievement;
 - ii. If similar actions and outcomes are to be undertaken in future, identify what matters should be revised; and
 - iii. Identifying progress towards achievement of the Strategic Plan identified in Condition 27;
- g. Comment on management of any high flow events during the year that involved implementation of the HFMP required under Condition 5, including any matters where management of such events could be improved;
- h. Summarise any events where water is released for recreational purposes during the reporting year;

- i. Comment on the results of any monitoring undertaken in accordance with condition 37 and any actions required in response to that monitoring; and
- j. Provide a summary of any maintenance and changes or upgrades to monitoring equipment used that may affect the quality or accuracy of the records collected undertaken during the reporting period.

MANAGEMENT PLANS

41. The Consent Holder must, at all times, operate and maintain the Tekapo Power Scheme in accordance with all management plans required in accordance with Conditions 5, 15, and 37 submitted to, and if required, certified by the Canterbury Regional Council as part of the conditions of resource consents ~~[insert consent numbers]~~ CRC254907 and CRC254908.

REVIEW

42. Subject to conditions 43 and 44, ~~the~~ the Canterbury Regional Council may, once per year, on any of the last five working days of March or September, serve notice on the consent holder of its intention to review the conditions of resource consents ~~[insert consent numbers]~~ CRC254907 and CRC254908 pursuant to section 128(1) of the Resource Management Act 1991 for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of the consent(s) and which it is appropriate to deal with at a later stage.

43. At any time during the years 2032, 2039, 2046 and 2053, the Canterbury Regional Council may, following service of notice on the Consent Holder, commence a review of the conditions of resource consents ~~[insert consent numbers]~~ CRC254907 and CRC254908 pursuant to section 128(1) of the Resource Management Act 1991 for the following purposes:

- (a) To review the adequacy of monitoring required to be undertaken by the consent holder and, if necessary, to address any inadequacy by way of further or amended monitoring conditions; or
- (b) To review the appropriateness of any diversion, take rate, and/or take volume specified within resource consent CRC254907 ~~[insert water permit consent number]~~ to deal with any adverse effect on the environment which may arise from the exercise of the resource consent; or
- (c) To review the appropriateness of any discharge rate and/or volume specified within resource consent CRC254908 ~~[insert discharge permit consent number]~~ to deal with any adverse effect on the environment which may arise from the exercise of resource consent CRC254908 ~~[insert discharge permit consent number]~~; or

Commented [SB4]: We understand that this general review clause shouldn't be used to address matters raised in conditions (42) and (44). The Panel may wish to consider the relationship between condition (42) and subsequent review conditions.

(d) To review the appropriateness of any conditions in Schedule One to give effect to the management plans required by Conditions 5, 15, and 37 in Schedule One.

44. The Canterbury Regional Council may, following service of notice on the consent holder, commence a review of Conditions 24 to 36 in Schedule One within six months of the delivery to the Chief Executive (or delegated nominee) Canterbury Regional Council of each Strategic Plan review report required by Condition 31 in Schedule One. As part of this review the Canterbury Regional Council may amend or add conditions to ensure that the IBEP remains effective and appropriate to achieve its objective over the duration of resource consents *[insert consent numbers]*.

Appendix 1: Water Quantities – Annual Volumes for ActivitiesNote: units = millions of m³ per year.

		Town and Community water supplies	Industrial and commercial activities (outside municipal or town supply areas)	Tourism and recreational facilities	Agricultural and horticultural activities	Mahinga kai	Any other activities	Hydro-electricity generation
i.	Upstream of Takapō / Lake Tekapo outlet	1.6	NIL	0.6	275 ^A , except that: a. no more than 8 can be taken upstream of Takapō / Lake Tekapo outlet. b. no more than 8 can be taken upstream of Lake Pūkaki outlet. c. no more than 12 can be taken upstream of Lake Ōhau outlet.		NIL	All other inflows
ii.	Upstream of Lake Pūkaki outlet	2.2	0.1	0.6			NIL	All other inflows
iii.	Upstream of Lake Ōhau outlet	1.6	NIL	0.6			NIL	All other inflows except the flows that must be provided into the Ōhau River pursuant to the environmental flow regime
iv.	Upstream of Waitaki Dam but not upstream of the outlets of the glacial lakes ^B	16	6.3	9.5			6.3	All other inflows
v.	Downstream of Waitaki Dam but upstream of Black Point	3	1	2	200	315	16	All other flows except the flows that must remain in the rivers, pursuant to the environmental flow regimes
vi.	Downstream of Waitaki dam but downstream of Black Point	19	8.5	4.3	1100		112 plus an allocation of 32 reserved for the augmentation of Wainono Lagoon.	

A. While the consents to operate the Waitaki power scheme remain in force, the Upper Catchment is already fully allocated to a holder of those consents and other existing consent holders.

B. For the purposes of Rule 6 of the Waitaki Catchment Water Allocation Regional Plan (2016), the annual volumes for taking, using or diverting water from the canals leading from the glacial lakes, and those from the Ahuriri catchment, are considered downstream of the lake outlets and are covered in row iv of this table.