RECREATION TECHNICAL REPORT – DEPARTMENT OF CONSERVATION

Re: Waitaha Hydro Scheme: Technical Advice to inform S51 and S53 reports – November2025

This report is based on information provided in the following documents and input from District staff familiar with the site.

- Recreation Assessment by Ian Wightwick on 2014 Waitaha Hydro Concession application.
- Appendix 28 of West Power Application; Assessment of Environmental Effects Recreation, June 2025
- Appendix 9 Natural Character, Landscape and Visual Amenity Effects report prepared by James Bentley, Boffa Miskell (24 March 2014)
- Waitaha Hydro Project Substantive FTAA application

Executive Summary

1. **As it currently stands, the Waitaha Hydro Scheme proposal and the measures proposed to avoid, remedy and mitigate effects on recreation values do so to a degree but there remains significant effect on those recreation values. The measures offered do not address the fundamental loss of natural character, solitude, and remoteness that underpin the valley and objectives of Backcountry-Remote Zone.**

2. This advice is provided from the perspective of the land manager and reflects the intention of the experience as defined in the West Coast Te Tai o Poutini Conservation Management Strategy (CMS). It does not seek to represent the views of recreation users.

3. Westpower proposes a 16–20 MW run-of-river hydro scheme in the Waitaha River, within the Waitaha Forest Conservation Area—a Backcountry–Remote Zone under the West Coast Te Tai o Poutini Conservation Management Strategy (CMS). The scheme includes a low weir and intake, water-conveyance tunnel, vehicle access tunnel, Power Station, switchyard and tailrace, access roads, transmission lines, construction yards, signage, and monitoring stations—all requiring ongoing maintenance.

4. The Public Conservation land within the Waitaha Valley is low-use but high-value recreation setting, offering solitude, natural beauty and character, and challenging terrain. It supports a range of activities, including internationally significant extreme kayaking in Morgan Gorge, numerous remote tramping opportunities including to the iconic Ivory Lake Hut - a benchmark for remote wilderness experiences, and emerging canyoning experiences in Whirling Water. Hunting, hot springs, angling, and jet boating also contribute to the valley's recreational values.

5. The headwaters and wider catchment encompass the upper Waitaha River basin (including Windhover Gorge and upstream to Ivory Lake) and the spurs that connect the valley to surrounding alpine tops. These features provide access to numerous tramping routes across

adjacent valleys and ranges, offering opportunities for remote and demanding multi-day alpine traverses.

6. The proposal introduces temporary construction effects and permanent infrastructure and activity levels that conflict with CMS objectives for Backcountry–Remote zones, which prioritise natural character, solitude, and minimal mechanisation.

7. Effects will be greatest during the first three to four year construction phase, when construction noise and human activity, especially at the Headworks and Power Station site, will be incompatible with the experiences associated with a remote recreation setting at and around the construction sites. **The net effect of construction on recreational values will be a significant intrusion and disrupt all back country recreational users.**

8. During operation, tramping, hunting, and canyoning remain possible, but hydro infrastructure and flow regulation over 2.5km of river—plus visible monitoring stations and ongoing maintenance activities—will permanently erode naturalness and solitude. For most visitors to Kiwi Flat, the transformation from a wild, free-flowing river to a regulated system represents a high effect on the recreation setting. Effects diminish upstream, though perceptual changes persist for those continuing into the Upper Valley, including visual effects from 4m monitoring stations at Scamper Torrent and Moonbeam Hut. In addition, ongoing maintenance—particularly helicopter use and machinery noise—will continue for the life of the scheme, further eroding natural quiet and solitude. The sense of entering or exiting a backcountry setting will be delayed or truncated, and without effective mitigation.

9. From a recreation perspective, the proposed scheme introduces permanent infrastructure and activity levels that conflict with CMS objectives for a Backcountry–Remote Zone. Kayaking in Morgan Gorge would be significantly diminished despite mitigation or compensation, and other recreation values—particularly tramping, hunting, and visits to Kiwi Flat—would be adversely affected by infrastructure and reduced river flow. No clear recreational gains, such as improved public access, have been identified. While mitigation measures include design adaptations, minor track realignment, and user group engagement**, the combined residual effects on the recreation setting remain high for the life of the scheme.**

10. I disagree that the one-off $25,000 contribution toward track and hut maintenance represents meaningful mitigation. This amount is inadequate given the scale and duration of adverse effects and does nothing to address the permanent loss of naturalness, which is central to the recreation experience and cannot be offset by financial contributions. It is also unclear who would receive this payment, adding uncertainty to its effectiveness as compensation. The applicant has not explained the rationale for this compensation or how it has been calculated.

11. Reinstating the track on the true left of the Waitaha River and a higher level of compensation is recommended to address unmitigated effects. The Department estimates that a ‘one-off’ payment for the loss of recreation value (hiking) in the valley from the

potential hydro scheme is in the order of $315,000 or within a range of $252,000 to $378,000[1]. Alternatively, it could be in the order of $16,000 p.a. over a 20-year period.

12. The compensation could be used for contributing to visitor experiences in the area (or wider conservation land), to replace the value lost due to the loss of water flow and intrusion of construction. This funding should be paid directly to the Department as land manager, which would allocate and apply it as necessary to address recreation infrastructure needs. Instead of the alternative track proposed by Westpower, for practical reasons it would be preferable that the original track along the true left of the river is reinstated and maintained for the life of the project.

13. To mitigate the effects of the new transmission lines from the Power Station site to the substation, the condition agreed for the 2014 Hydro scheme application should be included: *The Concessionaire must avoid erecting any transmission tower at the switchyard and bury the transmission lines for no less than 200m downstream of the powerhouse.*

14. l do not entirely agree with Mr Greenaway's assessments of adverse effects of the proposal on recreational opportunities and recreational values. I have set out my assessment of the various effects. I consider that some of the adverse effects would be 'significant' using the five point[2] scale adopted by Mr Greenaway (page 79 of his report), whereas Mr Greenaway assesses these as "high" or "very high".

15. The **Recreation Effects Summary** below is not a like-for-like replication of Table 1 in Mr Greenaway's Recreation Report. Mr Greenaway's table assessed effects primarily at regional and local scales for specific recreation activities, using broad groupings. In contrast, I found it more helpful to provide greater detail by evaluating effects on visitor groups and focusing on visitor experience outcomes. This approach applies the same five-point effects scale offered by Mr Greenaway but emphasizes alignment with Backcountry–Remote zone characteristics defined by the CMS. It approach was adopted because there is no nationally accepted methodology for determining the significance of recreational values in New Zealand, and a

[1] The rationale behind this number and its calculation is set out in Appendix 2.

[2] I agree with the definitions used to identify scale of effects in Mr Greenaway's Recreation Report for Westpower and I use the following definitions (page 79 of that report):

1) Nil – no adverse effects in the recreation setting.
2) A 'low' effect refers to a small change in the recreation setting, but where the original recreational activities can continue and many participants may be unaware of a change in the setting.
3) A 'moderate' effect refers to an activity opportunity where a shift in the recreation setting may modify the characteristics of an activity – such as the frequency it may be undertaken, the location of the favoured sites, and some of the activity's qualities – but the activity setting retains most or many of its original values and the activity may continue to be pursued and enjoyed.
4) A 'high' effect represents a setting where the opportunity remains, but there are important and unavoidable adverse effects on the scale of opportunity retained or the values which contribute to the quality and availability of the existing experience.
5) A 'significant' effect refers to an activity opportunity or setting characteristic that is removed or severely constrained (to be rarely available), and/or where a basic management categorisation of a setting is altered (such as from a backcountry setting to a front country setting), or where a component of development proposal is incompatible with the management categorisation

more granular analysis better reflects how visitors experience the setting. Appendix 1 provides a summary of key areas of agreement and disagreement with Mr Greenaway's assessments, along with recommended improvements to mitigation and compensation

Recreation Effects* Summary – Waitaha Hydro Scheme

Recreation Value / User Type	Effect Type	Description of effect	Effect	Duration	Westpower suggested Mitigation	Residual Effect
All Users	Noise (during construction)	Construction noises including Helicopter, vehicles, blasting, drilling activities various equipment, diggers, cranes etc noise disrupting natural quiet	Significant	3-4 years (construction phase)	Track rerouting, footprint minimization, online updates	Significant during construction phase
All Users	Noise (during annual Maintenance)	Possible maintenance noise sources: Helicopter operations Vehicles, and diggers (noise can carry for kilometres) Intermittent use of emergency generator at the powerhouse Warning sirens throughout the valley if testing is required.	High	Ongoing (annual and as required)	One-off financial contribution to hut/track maintenance	High to significant if helicopter/ diggers involved
All Users	Noise (duration of the scheme outside of annual maintenance)	Periodic maintenance especially following flood events helicopter use, regular vehicle use, use of generators digger use after floods.	High to moderate depending on the frequency and duration	intermittent	One-off financial contribution to hut/track maintenance	High to moderate depending on the frequency and duration
All Users – leading up to and around Kiwi Flat	Visual (during construction)	Construction activity including Helicopter, vehicles, blasting, drilling activities various equipment, diggers, cranes etc scaring to the landscape	High to significant	3-4 years (construction phase)	Track rerouting, footprint minimization, online updates	Significant during construction phase
All Users leading up to and around Kiwi Flat	Visual (ongoing)	Hazard signage, infrastructure, transmission lines, access road, machinery, vehicle and personnel in	High	Long-term	Possible track reroute and maintenance, One-	High

Recreation Value / User Type	Effect Type	Description of effect	Effect	Duration	Westpower suggested Mitigation	Residual Effect
		backcountry/natural setting. 4m Weather and river monitoring station.			off financial contribution to hut/track maintenance	
All Users	Public Safety	Hazards from construction/maintenance activities, sudden river flow changes	Significant	Ongoing	River Safety Risk Report, sirens, safety measures	Moderate
Trampers/campers (Kiwi Flat to Power Station)	Visual & Noise	Infrastructure, personnel and machinery in remote backcountry location	Significant	Long-term	General infrastructure design	High
Trampers/campers (Kiwi Flat to Power Station)	Loss of Naturalness	Altered aural and visual character, especially near swingbridge	Significant	Long-term	General infrastructure design	High
Trampers (Upstream – Moonbeam Hut, Ivory Lake)	Loss of Naturalness and visual	Altered aural and visual character, x3 4M weather stations at Scamper Torrent Hut and Moonbeam Hut	Moderate	Long-term	None specified	Moderate
Kayakers – upper Waitaha Gorge and Kiwi Flat reach	Loss of Naturalness	Altered character of the river and the sense of wildness and spontaneity that defines the activity.	High	Long-term	WWNZ agreement	High
Kayakers - Morgan Gorge **(international**	Flow Availability	Drop from 15.5% to 2.5%, portage required, safety risks	Significant	Ongoing	Bypass valve, siren, 4 no-take days, safe portage.	Significant

Recreation Value / User Type	Effect Type	Description of effect	Effect	Duration	Westpower suggested Mitigation	Residual Effect
and non WWNZ[3] (members)						
Kayakers WWNZ Members	Flow Availability	Same as above	High	Ongoing	Financial compensation ($15,000)	Neutral
Hot Spring Users	River Ambience	Reduced naturalness - permanent loss of wild river setting Sudden changes in river flow	Moderate	Long-term	None specified	Moderate
Canyoning Groups	Visual/Perceptual	Infrastructure visible from above scheme area. Including monitoring station at Scamper Torrent Hut	Moderate	Long-term	Infrastructure design	Moderate
Other Water Recreation (Below Powerhouse)	Angling, Jet Boating, Whitebaiting	Increased Helicopter, vehicle, noise disrupting natural quiet	Low to Moderate	Long term	None specified	Low to Moderate
Considering all effects combined, the change to the recreation experience remains significant during construction phase (3-4 years) and High for the lifetime of the scheme.						

[3] White Water New Zealand (WWNZ)

Background

16. This report assesses the effects on recreational matters associated with the current (2025 FastTrack) for the Waitaha hydro scheme proposal. It evaluates both Recreation Opportunities—the physical ability to undertake activities such as kayaking and tramping—and Recreation Values, which relate to the quality of the experience, including perceptions of naturalness, solitude, and remoteness. Particular attention is given to proposed mitigation measures, conditions and compensation. Advice and input from District Office staff who are deeply experienced with the site have been included.

17. The focus of this report is from the perspective of the land manager, and assesses the effects of the proposal and how the proposed scheme aligns with the Conservation Management Strategy (CMS) objectives for Backcountry–Remote zones. It does not represent the views of all recreation users but reflects our understanding of the things that are important to those using the site and DOC's commitment to maintaining the experience in line with that and as described in CMS.

Summary of Scheme

18. The proposed Waitaha Hydro Scheme is a run-of-the-river hydroelectric project located 60 km south of Hokitika on the West Coast. It involves constructing a low weir and intake structure at the top of Morgan Gorge to divert up to 23 m^3/s of water into a pressurised tunnel leading to a powerhouse below the gorge. A minimum residual flow of 3.5 m^3/s will be maintained in the Waitaha River immediately downstream of the intake. The diversion will affect a 2.5–2.6 km section of the river, including Morgan Gorge, with water returned to the mainstem near Alpha Creek via a tailrace.

19. Key infrastructure and components include:

- Headworks: Low weir and intake structures and access road to the riverbed above Morgan Gorge.
- Pressurised tunnel and desander: Conveying water to the powerhouse.
- Powerhouse and tailrace: Returning water to the river.
- Ancillary works: Access roads, transmission line, construction yards, spoil disposal sites, and a new substation for network connection.
- Additional features: Public safety signage, weather and river flow monitoring stations, and warning sirens at the headworks and powerhouse for hazard management.
- Construction will require staging areas and temporary infrastructure to support these activities
- There is a construction phase of 3-4 years then ongoing operation phase proposed for 49 years including maintenance of the intake and water take from 2.5km of the Waitaha river.

- Located in the Waitaha Forest Conservation Area, zoned as backcountry-remote under DOC's West Coast *Te Tai o Poutini* Conservation Management Strategy.

Current context on Recreation

20. The Department of Conservation maintains a marked route[4] on the true right (west bank) of the Waitaha River to the top of Morgan Gorge, crossing the river on swing bridge at this point and continuing on the true left to Kiwi Flat Hut (6 bunks). Travel time from the road end to Kiwi Flat is approximately 2.5–4 hours.
21. Under a management agreement with the Department, the Permolat Trust maintains marked routes from Kiwi Flat to Moonbeam Hut and Top Waitaha Hut (both 6 bunks), as well as routes from the Waitaha River to Country Stream Hut (6 bunks) and Scamper Torrent Hut (4 bunks).
22. From Country Stream Hut, trampers can access Smyth Hut (6 bunks) in the adjacent Wanganui River catchment via the Smyth Range. From Top Waitaha Hut, foot access continues to Ivory Lake Hut[5] (6 bunks). Access to Ivory Lake is challenging due to its remoteness and the rough lower stretches of the Waitaha Valley, a difficulty compounded since DOC ceased maintaining mid- and upper-valley tracks in the 1990s. Fit and experienced trampers typically require 2–3 days to travel from the Waitaha road end to Ivory Lake.
23. From Ivory Lake, trampers can access the Tuke and Mikonui Valleys, which form part of a popular circuit, and the Whitcombe Valley. Scamper Torrent Hut provides access for a traverse of Mt Durward and the Smyth Range, looping back to Moonbeam or Kiwi Flat via Headlong or Clearview Spurs. The Wanganui Valley can also be reached from Scamper Torrent via Karnback or Terra Quinn
24. The Waitaha Valley is recognised as a regionally significant backcountry setting, offering a distinctive combination of accessible remoteness, challenging terrain, and unique features such as Morgan Gorge and nationally significant and internationally recognized Ivory Lake Hut. Importantly, the Waitaha is part of a much larger network of backcountry opportunities across the West Coast, which collectively provides a wide range of tramping, hunting, and advanced internationally significant kayaking experiences. This means that alternative destinations exist; however, the Waitaha's particular mix of landscape diversity, extreme whitewater, and iconic alpine environments makes it a special and highly valued component of that regional network.

[4] For clarity, definition and standards for 'route' and 'tracks' etc on conservation estate are set in the NZ Track Standards. SNZ HB 8630:2004 Tracks and outdoor visitor structures.

[5] Nationally significant and internationally recognized. "Hike to the Best Backcountry Hut In the World", Rachel Zurer, Backpacker Magazine, March 2025.

Summary of Recreation Use and Facilities – Waitaha Valley

25. Estimated Annual Use: Approximately 400[6]
    - ~300 trampers, canyoners, and day visitors
    - ~50 hunters
    - <50 kayakers

Activity	Use Level	Notes
Kayaking	Very low (<50/year)	Morgan Gorge is Class VI[7]; extreme difficulty. Flow reduction from 15.5% to 2.5% availability[8].
Tramping	Low (~300/year)	Kiwi Flat, Ivory Lake and Scamper Torrent are key destinations for the tramping community. Increasing use post-2020.
Canyoning	Emerging (21 users in 2024)	Whirling Water is described as 'possibly the most famous canyon in NZ.'[9] Individuals and teams must have excellent proficiency at a wide range of advanced canyoning techniques.[10]
Hunting	Moderate (~50/year)	Focus on red deer, chamois, and thar (Helicopters can be used at times)
Hot Springs	Low	Niche destination near Morgan Gorge; difficult access.
Angling	Low	Occurs downstream of the scheme.
Jet Boating	Very low	Limited to lower river
Whitebaiting	Low	Occurs downstream; 10 registered stands reported.

West Coast Te Tai o Poutini Conservation Management Strategy (CMS)

26. The statutory planning document most relevant to the Panel's consideration of the proposed Waitaha Hydro Scheme is the West Coast Te Tai o Poutini Conservation Management Strategy (CMS), which is aligned to the Conservation General Policy 2005.

    1. Conservation Management Strategy (CMS) - Zoning
    The proposed hydro scheme is located in a Backcountry–Remote Zone within the Hokitika Place.
    This zone is intended to provide access to extensive natural settings with minimal infrastructure, low visitor numbers, and high levels of solitude and challenge. The CMS requires that natural character, remoteness, and quiet be maintained, and for activities occurring on or within the beds of rivers or lakes, the natural character of the setting must be preserved.

    2. Recreation Objectives and Policies
    The CMS outlines objectives to:

[6] Numbers vary but the Department accepts and for consistency will use numbers presented in Mr Greenaway's report: Appendix 28 Recreation Report on the proposed Waitaha Hydro Scheme
[7] Class IV: Difficult rapids requiring a series of controlled moves, cross-current and spinning in confused water. Scouting often necessary and a reliable roll is mandatory. Class V: Very difficult, long and violent rapids. Nearly always must be scouted. Definite risks in the event of a mishap. Requires a series of controlled, precise, 'must make' moves to navigate successfully. Class VI: Extreme, very dangerous and only for experts. Close inspection is mandatory and all possible safety precautions should be taken.
[8] Appendix 28 Recreation Report on the proposed Waitaha Hydro Scheme
[9] KiwiCanyons.org; Dan Clearwater *Whirling Water v6a6V*** June 2024
[10] KiwiCanyons.org; Dan Clearwater *Whirling Water v6a6V*** June 2024

- Provide a range of recreational opportunities while protecting natural, historical, and cultural heritage.
- Avoid or minimize conflicts between different user groups.
- Safeguard natural quiet, light, and remoteness through zoning and restrictions on mechanised access.
- Apply a precautionary approach where adverse effects are uncertain.
- Policies include:
- Using the Recreation Opportunity Spectrum (ROS) to guide facility development.
- Ensuring new activities complement existing opportunities and maintain zone integrity.
- Monitoring physical and social effects, visitor numbers, and satisfaction.
- Engaging with local communities and recreation groups to align expectations and support active use.

RECREATION EFFECTS ANALYSIS

Loss of Naturalness and Visitor Effects Overview

27. Low recreational use reflects the Backcountry–Remote management intent and is not a measure of low value. The Waitaha Valley's primary recreation values are high-quality whitewater and backcountry–remote characteristics, with low use further influenced by difficult access, including the need to cross private land at the valley entrance. Despite this, the valley remains an important part of the wider West Coast backcountry–remote recreation network. From the point where visitors leave their vehicles at the car park, the experience of entering a remote backcountry setting is expected to change. The sense of entering or exiting a backcountry setting will be delayed or truncated, and without effective mitigation.

28. I agree with Mr Greenaway that the greatest visitor effects will occur during the 3–4 year construction period. Recreational users are likely to experience restricted access and very high disruption from noise, blasting, machinery, and visual intrusion. While mitigation measures such as track rerouting, minimising the construction footprint, and providing online updates are proposed, these do not fully address the effects. Scarring of the landscape from the vehicle access tunnel, installation of powerlines, and access roads will result in high visitor effects along the track below the powerhouse and at Kiwi Flat will continue for the lifetime of the scheme

29. I note that Mr Greenaway has assessed some construction effects as "significant" in his report, but these are not consistently recorded in his summary table. They appear as

"significant" in paragraph F.57 on page 85 and "very high" in paragraph 3.6 on page 15, which requires clarification. **I agree the construction effects are significant.**

30. During operation, the physical presence of permanent infrastructure—including access roads (10–15m wide), weir, tunnel portal, powerhouse, transmission lines, tailrace, rock protection, bridges, culverts, and weather stations—will erode natural characteristics and compromise expectations of solitude and quiet for all users. This industrial-scale modification occurs within a zone currently managed for Backcountry–Remote values. Industrial signage near the powerhouse and weir will further diminish the sense of naturalness and solitude, particularly around Kiwi Flat (see detail below), even when no activity is taking place.

31. While some visitors may have an interest in viewing hydro schemes, this is likely to provide only a very small benefit due to the remote location and challenging access. Other hydro schemes that attract public interest are typically much larger and situated in more accessible areas. https://docnz-my.sharepoint.com/personal/ssidley_doc_govt_nz1/_layouts/15/Doc.aspx?sourcedoc={612E05F7-0B8F-46A8-A48B-3E657621C166}&file=Waitaha Application Technical Report Recreation.docx&action=default&mobileredirect=true&nav=eyJoIjoiMTY5MDUyMDUzOSJ9

32. I do not agree that effects beyond Morgan Gorge would be merely perceptual . The placement of 4m weather monitoring stations at Waitaha Gorge, Moonbeam Hut, and Scamper Torrent introduces additional infrastructure into remote backcountry areas, detracting from the sense of remoteness and wilderness values. These elements do not appear to have been considered Greenaway assessment.

Figure 11: Example of rainfall and river level monitoring equipment

33. Although improvements to design—such as subdued colour palettes and vegetation screening—are acknowledged, these measures do not overcome the fundamental change introduced by the scheme. The alignment of the access road and transmission line may avoid mature trees, but the infrastructure will remain visible to visitors entering the valley,

particularly as visitors enter the backcountry setting and for those visiting Kiwi Flat. The power scheme infrastructure and ongoing activity associated with maintenance will also compromise the visitor experience for the life of the scheme.

34. I also disagree with Mr Greenaway's assessment that the effect of the single-circuit 66 kV overhead transmission line would be negligible. Supported by 18.5 m concrete poles and an associated 10–15 m access road, this line will extend above the forest canopy and be clearly visible to visitors travelling into and out of the valley (more detail below). Both elements will compromise the backcountry experience and conflict with CMS objectives to maintain natural character, solitude, and minimal mechanised intrusion.

35. The Kiwi Flat area and the wider Waitaha catchment above Douglas Creek is a backcountry–remote recreation setting with "very high, near pristine levels of natural character.[11]" The West Coast Conservation Management Strategy (CMS) identifies the Waitaha Valley as a Backcountry–Remote Zone, intended to provide access to natural settings with minimal infrastructure, low visitor numbers, and high levels of solitude and challenge. The CMS discourages developments that compromise these values, requires new activities to complement existing opportunities and maintain zone integrity, and specifies that for activities on or within the beds of rivers or lakes, the natural character of the setting must be maintained.

36. The proposed hydro scheme introduces permanent infrastructure and mechanised activity that are inconsistent with these objectives. The loss of naturalness—through altered flow regimes, visual and auditory intrusion, and increased human presence—affects the core recreational values of the area.

37. For many users, the appeal of the Waitaha lies not just in the activities it supports, but in the feeling of being in a wild, unmodified environment. This sense of naturalness is central to the recreational experience and cannot be mitigated through design changes or compensated financially. Physical scarring from access roads and transmission lines creates long-term visual effects, while noise and changes to the aural environment—such as helicopter use and machinery—further erode natural quiet. **Overall, the change to the recreation experience is significant during construction phase (3-4 years) and remains High for the lifetime of the scheme.**

Activity-Specific Recreation Impact Analysis

Kayaking

38. Mitigations/conditions/compensation proposed by Westpower includes:[12]
    - Safe portage design at the weir.

[11] Bentley, James (2025) Waitaha Hydro Scheme assessment of environmental effects: landscape (Landscape Report)

[12] As stated in Waitaha Hydro Project Substantive FTAA application. DOC has not seen a copy of the agreement.

- $15K per year to WWNZ as compensation.
- Within 3 months of generation start, offer 4 no-take days for kayaking along the abstraction reach.
- If a no-take day is cancelled:
  - Consult WWNZ to reschedule within the same 12-month period.
  - If rescheduling is not practicable, pay $5,000 (excl. GST) per cancelled day (max $20,000 per WWNZ declines a no-take day:
- Pay $5,000 (excl. GST) per declined day (max $20,000 per Nov–Feb period)

Analysis:

39. I recognise the work undertaken with Whitewater New Zealand (WWNZ) to address kayaking access and safety requirements associated with the proposed scheme and acknowledge that WWNZ has stated their position on the application is neutral. Initial design concepts included a kayaking chute over the weir; however, following consultation, the approach has been revised. The final design provides for kayakers to exit the river upstream of the intake, portage over the intake structure, and re-enter at a designated launch point immediately downstream. In addition, Westpower will make real-time weather and river flow information available on its website to assist kayakers in planning their trips.

40. These measures reflect an effort to reduce the effect on kayaking, particularly for WWNZ members. However, the core issue—a reduction in flow availability from 15.5% to 2.5%—remains unresolved. While the no-take days and portage design offer some flexibility, they do not restore the natural flow regime or the spontaneity that characterises high-value whitewater experiences. This loss of naturalness—specifically, the replacement of a wild, free-flowing river with a controlled and regulated system—undermines the experiential quality of kayaking in Morgan Gorge and is fundamentally inconsistent with CMS objectives, which seek to maintain natural character and unmodified river systems in Backcountry–Remote zones. **The effect level is assessed as High—the opportunity remains, but key experiential values are severely compromised.**

41. While I acknowledge that kayaking opportunities in the upper Waitaha Gorge and Kiwi Flat reach will remain technically available, I do not agree that the overall effect on kayaking should be considered low to moderate. The proposed scheme introduces a dramatic change at Morgan Gorge—the centrepiece of the Waitaha kayaking experience—where the river will be regulated and permanent infrastructure installed. This fundamentally alters the character of the river and the sense of wildness and spontaneity that defines the activity. The reduction in flow combined with the perceptual impact of a controlled river system, means the wider kayaking experience is severely compromised even if upstream sections remain accessible. For many users, the Waitaha is valued as a continuous, unmodified river journey; breaking that experience with industrial structures and regulated flows **represents a high residual effect, not a low to moderate one** in the upper Waitaha Gorge and Kiwi Flat Reach.

42. Likewise, I do not agree with Mr Greenaway's assessment that the 'West Coast kayaking scene is likely to be low with mitigations in place.' While the agreement with Whitewater New Zealand provides financial compensation for its members, this does not reduce the

adverse effects to a low level. For many users—particularly those outside the compensation arrangement—the opportunity is not simply diminished but substantially altered. In addition, if the proposed no-take days are not implemented, the opportunity for kayaking within Morgan Gorge could be effectively lost. **The residual effect is assessed as *High*: the activity remains technically possible, but key experiential values and realistic availability are severely compromised**.

43. **Improvements to suggested mitigations/conditions/compensation–**

- Consider appropriate compensation suggested in discussion on compensation below to cover effects not covered by WWNZ agreement.

Tramping

44. Mitigations/conditions/compensation proposed by Westpower:

- One-off $25,000 payment toward maintaining existing tracks and huts (recipient to be confirmed).
- Potential construction of an alternative tramping-standard track on the true right of the river (subject to DOC approval) to move trampers away from the power station.
- Design choices, vegetation screening, restoration work following construction.

Analysis:

45. Overall, the mitigation proposed and the amount of compensation offered will not overcome the high degree of unmitigated adverse effects. The one-off payment neither reflects the scale nor duration of the residual adverse effects on trampers nor addresses the core effects on recreation values. Visual, noise, and perceptual changes from permanent infrastructure—and the loss of naturalness and solitude—remain unresolved. These outcomes are fundamentally inconsistent with CMS objectives for a Backcountry–Remote Zone, which require maintaining natural character, minimal mechanised access, and low facility provision. The proposal fails to avoid or meaningfully minimise these effects, and the compensation proposed is not considered effective**.**

46. Westpower proposes visual mitigation from the Power Station site and associate infrastructure through subdued colour palettes and vegetation screening and aims to avoid mature trees in road and transmission line alignment. While these design choices may reduce visual prominence, they do not fully address the experiential effects of permanent infrastructure in a previously undeveloped landscape.

47. The alternative track proposed by Westpower and identified as mitigation in the Greenaway [15-19] and Bently reports [58], does not effectively reduce exposure to the Power Station Site. District staff confirm that, although the alternative route would divert trampers before they reach the switchyard and tailrace and slightly increase their distance from the Power Station Site, the structure and associated infrastructure would remain visible from the track above the site. In addition, the alternative route adds approximately 30 minutes of travel up

a steep, muddy slope, making an already difficult section of the track heading into or leaving Kiwi Flat even more challenging.

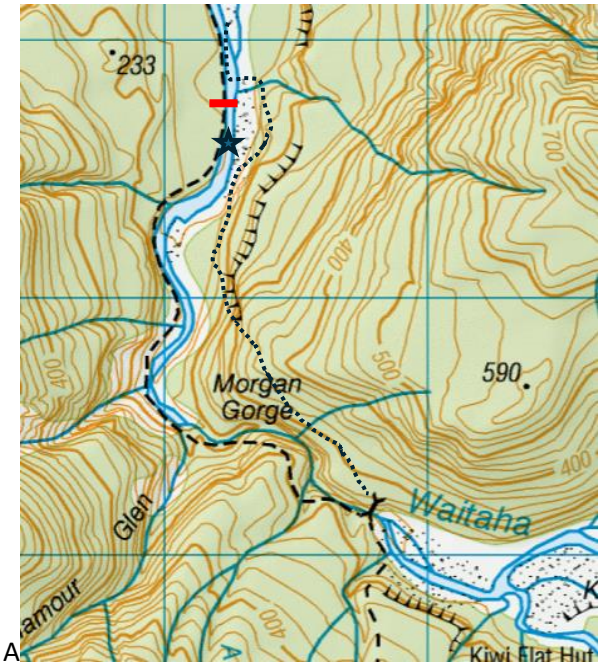
48. Given that the effect cannot be avoided, a more practical solution—developed in consultation with the District Office—is for Westpower to reinstate and maintain the original track to Kiwi Flat on the true left of the river for the life of the scheme. Trampers could utilise the access road from MacGregor Creek to Alpha Creek, where a new bridge could be constructed downstream of Power Station Site. By crossing the Waitaha River at Alpha Creek, much of the infrastructure around the Power Station Site would be avoided.

49. Reinstating the track on the true left of the river would avoid the need for trampers to ascend the steep ridge to the terrace on the current track, which involves chains and ladders. The greater distance from the Power Station Site, combined with a low-profile design and vegetation screening, would further reduce visual and noise effects for those using the true left track. While trampers would still encounter the access road and views of the Power Station Site, the impact would be lessened by providing a potentially shorter route that allows quicker access to more remote areas—making this a more appropriate mitigation. Reinstating the track on the true left also creates the possibility of removing the swing bridge at Morgan Gorge, which currently overlooks the proposed weir and intake structures, thereby reducing visual impacts at Kiwi Flat.

50. Additionally, as part of the 2014 application, Westpower agreed to seek public access arrangements across private land at the start of the valley. Westpower has now confirmed that negotiations with landowners were unsuccessful and that the vehicle access road constructed for the scheme will not be available for public use.

51. In consultation with the District Office, I suggest there are still opportunities to improve access to the area. While this will not remove the effect of the change to Backcountry–Remote zone, it would provide a tangible benefit. One option is to relocate the car park to public land closer to the Doughboy, reducing walking time. Upgrading the track around the Doughboy to shorten travel time and improve accessibility, and moving the gravel section away from the river to reduce flood damage risk, would further enhance visitor experience. These improvements could be achieved with minimal impact on private landowners.

A



Suggested bridge across Waitaha River at Alpha Creek

Indicative location of powerstation.

Original track on true left

Existing track

52. Following the hearings for the 2014 application, Westpower agreed to a condition requiring that no transmission tower be erected at the switchyard and that transmission lines be buried for a minimum of 200 metres downstream of the powerhouse. This mitigation is not offered in current proposal. I consider that requiring this through a condition would reduce visual intrusion and avoid visitors having to travel in close proximity to overhead power lines when approaching the powerhouse site.

53. I agree with Mr Greenaway that within the abstraction reach and at Kiwi Flat, the change to the Backcountry–Remote characteristics of the setting (the recreation values) due to the placement of structures will be high after mitigation as it imposes a fundamental change (Table 1 Scheme Effects and mitigations Summary). **The effect level is high – the opportunity remains, but key experiential values such as naturalness and solitude are significantly compromised**.

54. I disagree with the assessment that effects on trampers in the Upper Waitaha Valley will be low–moderate or negligible for those traversing only the top of the catchment. While physical effects reduce further upstream, all visitors will experience a noticeable change from the time they leave the road end, as the presence of hydro infrastructure alters the sense of naturalness and remoteness. Although these effects diminish with distance, the awareness of a modified environment persists. In addition, visitors may encounter weather stations in the upper valley, and occasional helicopter activity during annual maintenance could further affect perceptions of remoteness and solitude. **The effect in Upper Waitaha Valley is assessed as moderate – the activity opportunities continue, but the setting where the infrastructure is located, is noticeably altered.**

55. The proposed $25,000 contribution toward track and hut maintenance is positive in principle; however, it is insufficient to meaningfully compensate for the high level of effects on recreation users for the duration of the project. This payment does not address the broader and enduring effects of the scheme—such as visual intrusion, noise, and perceptual

changes from permanent infrastructure like the power station, access road, signs, weather stations and transmission lines—nor the loss of solitude caused by increased mechanised activity. These effects are particularly significant in a Backcountry–Remote Zone, where the CMS seeks to preserve low facility provision, infrequent encounters, and minimal mechanised access. Furthermore, it remains unclear who would receive this payment, adding uncertainty to its effectiveness as a mitigation measure.

56. **Overall, I consider that the residual effect level on trampers is high** – the opportunity for recreation remains, but key experiential values are severely compromised, and the fundamental character of the setting is altered.

57. **Improvements to suggested mitigations/conditions/compensation–**

- I consider a one-off payment of $315,000 or $16,000 p.a. over a 20-year period for the maintenance of tracks and huts a more appropriate level of compensation. This funding should be paid directly to the Department, which would allocate and apply it as appropriate to address recreation infrastructure needs.
- As soon as practicable following construction, Westpower should reinstate and maintain for the life of the project, the original track on the true left of the river, including the establishment of bridge across Alpha Creek, rather than permanently establishing an alternative route around the powerhouse site.
- Work with the Department to identify and implement improved access opportunities.
- As agreed in previous application process, avoid erecting any transmission tower at the switchyard and bury the transmission lines for no less than 200m downstream of the powerhouse.

Kiwi Flat – Recreation Setting Effect

58. Mitigations/conditions/compensation proposed by Westpower

- General infrastructure design and flow management.

Analysis:

59. Kiwi Flat is a central feature of the recreational experience in the lower Upper Waitaha Valley, serving as a base for trampers, hunters, and canyoners. The entrance to Morgan Gorge—where the swing bridge crosses directly above the proposed weir site—is a key visual and experiential element of this setting. The introduction of hydro infrastructure, including the weir and associated flow changes, would alter the visual and aural character of the area, particularly around the swing bridge and adjacent river flats. As presented in the application and recreation report "Within the abstraction reach and at Kiwi Flat, the change to the backcountry-remote characteristics of the setting (the recreation values) due to the placement of structures will be high after mitigation – more so at Morgan Gorge and Kiwi

Flat where the weir structures are visible and visitors have the potential to be affected by maintenance activities."[13]

60. Most visitors to Kiwi Flat remain within the immediate area, with relatively few continuing further up the valley. For these users, the transformation of the river from a wild, uncontrolled system to one featuring hydro infrastructure and regulated flows would compromise the expected Backcountry–Remote zone.

61. Although design measures aim to reduce visual intrusion, the weir and tunnel would still be clearly identifiable. Regular maintenance, proposed during summer months when visitor numbers are highest, will involve diggers and river works, creating a high visual and auditory impact for the duration of the scheme. In addition, the perceptual effect of knowing the environment has been modified will further diminish the sense of naturalness and remoteness DOC must manage this area for its natural values, which include natural character, solitude, and minimal infrastructure.

62. The proposed scheme introduces permanent change to the setting near Morgan Gorge and Kiwi Flat, with effects extending up to 1 km upstream. **Despite the mitigations proposed there would still be high effect on the recreation setting.** Beyond this zone, physical effects reduce, although perceptual changes may persist for visitors continuing further into the valley.

63. **Improvements to suggested mitigations/conditions/compensation–**

- Limit intensity and frequency and timing of ongoing maintenance activities.
- Consider appropriate compensation suggested above.

Effect on Other Recreational Activities

Analysis:

64. I do not agree with the Greenaway assessment that effects on recreation values above Kiwi Flat are minimal. All visitors must pass through the construction zone, experiencing direct noise, machinery, and visual intrusion. These effects extend well into the upper valley, where frequent helicopter operations and the presence of monitoring stations at Scamper Torrent and Moonbeam Hut further erode naturalness and solitude for trampers, hunters, and canyoning groups.

65. Additionally the placement of weather stations and associated infrastructure introduces permanent elements into a remote, largely unmodified setting. While physical access for tramping and hunting remains unchanged, the presence of these structures modifies the visual and perceptual qualities of the area. Access to locations such as the Upper Waitaha Valley and Scamper Torrent Hut is challenging, requiring multiple days of tramping through steep, rough terrain. Visitors expect to encounter basic facilities such as huts—often a

[13] Appendix 28 Recreation Report on the proposed Waitaha Hydro Scheme pg24

welcome relief after demanding routes—but do not anticipate large, mechanised structures in these environments. The introduction of weather stations in such settings represents a noticeable departure from the expected backcountry character. **The effect level is Moderate – the activity opportunities continue, but the setting is noticeably altered.**

66. Similarly, effects on hunters are comparable to those experienced by trampers who value the remote and largely unmodified character of this location. Increased mechanised activity and visual intrusion reduce the qualities of solitude and naturalness that underpin the experience. It is my understanding that lighting will be required at the intake site and Power Station site during the tunnelling phase of construction as this will be a 24/7 operation. . Additionally, a 15m lighting tower and bunded transformer will be in place and utilized following construction. Lights will have an ongoing effect on hunters as lighting will are likely to be seen from Macgregor Creek, from the terrace above the power station and from Kiwi Flat. This would have an effect on hunting as early morning and evening are primer hunting opportunities. **The effect on hunters is consider similar to that of trampers – High, the opportunity remains, but key experiential remoteness values are significantly compromised.**

67. I also disagree with the conclusion in the Recreation Report that downstream activities such as angling and whitebaiting are unaffected. While physical access and activity feasibility are retained, visual changes from transmission lines, access roads, and increased vehicle activity during construction and maintenance introduce perceptual effects. **The effect level is Low to Moderate – the setting is altered, but the core activity remains largely unaffected**.

68. Hot spring users may experience a reduced sense of natural ambiance due to altered river flows and increased surrounding activity. While physical access to the pools remains unchanged, the perceptual impact of flow regulation and nearby infrastructure diminishes the natural character of the setting. **Effect level is Moderate – the activity remains feasible, but its remote and natural qualities are noticeably reduced.**

69. **Improvements to suggested mitigations/conditions/compensation –**
    - Consider appropriate compensation suggested in discussion on compensation.

Public Safety

70. The proposed Waitaha Hydro Scheme introduces operational and structural risks that are not consistent with what is contemplated for safety in a Backcountry–Remote Zone, as outlined in the Conservation Management Strategy (CMS). The CMS emphasizes safeguarding public safety and maintaining natural character in settings managed for solitude and minimal mechanisation.

71. I note a specific advice is being developed to consider health and safety implications. These are the safety issues I would expect to be addressed as they relate to visitors and safety/access to the power station.

72. **Key Safety Concerns**

- **Sudden Flow Changes**
  Emergency shutdowns, start-up/stop procedures, and sediment flushing can cause abrupt flow increases of up to 23 m^3/s in Morgan Gorge. Hydro modelling indicates that while the highest-risk scenario (full load rejection) would occur during low flows when kayakers are typically absent, there remains a low but uncertain risk of rapid flow changes during other events. Unplanned outages are estimated at up to 10 times annually, lasting approximately 30 minutes.
- **Weir Hazards**
  The weir at the entrance to Morgan Gorge introduces a potential entrapment risk if not properly designed. Safe kayak passage and foot access for portage and rescue are essential. Mr Greenaway's report specifies design in consultation with Whitewater NZ and certification by an engineer and river safety expert.
- **Temporary Construction Phase Risks**
  Helicopter operations, blasting, and heavy machinery pose temporary but significant hazards for trampers, hunters, and kayakers. Recommended measures include track realignment prior to construction, online hazard notifications, and signage to manage these risks.
  Effect Level is High – short-term but unavoidable safety risks during construction.
- **Emergency Response Challenges**
  The remote location and presence of hydro infrastructure would complicate rescue operations. DOC advises maintaining safe foot access tracks for emergency response and kayak portage.

CMS Consistency Summary

73. Assessment of Consistency with the West Coast Te Tai Poutini Conservation Management Strategy (CMS)
    The proposed Waitaha Hydro Scheme is located within the Backcountry–Remote Zone of the Hokitika Place. This zone is intended to provide opportunities for solitude, challenge, and natural quiet in largely unmodified settings.

74. The proposal introduces significant industrial infrastructure (weir, tunnel, powerhouse, access road) and alters the natural flow regime of the Waitaha River. These changes will substantially reduce the natural character and remoteness values that the CMS seeks to protect. While tramping and hunting opportunities will remain, their quality will be diminished by the presence of hydro structures.

75. Kayaking opportunities, particularly in Morgan Gorge and the downstream reach, will be severely constrained, with analysis indicating an effective loss of realistic kayaking days. This conflicts with CMS objectives to maintain the integrity of recreational zones and protect high-value backcountry experiences.

76. Mitigation measures proposed—such as an alternative track, weir design consultation, real-time flow data, and four no-take days annually—reduce but do not eliminate adverse effects. These effects will remain high and largely inconsistent with CMS intent.

CMS Objectives vs Compliance

CMS Objective / Policy	Compliance Assessment
Protect natural, historical, and cultural heritage from adverse impacts	Design measures (subdued colours, vegetation screening) acknowledge intent, but permanent infrastructure and flow changes compromise natural character. Cultural impacts require separate assessment.
Maintain natural quiet, remoteness, and integrity of recreational experiences	Objective not achieved – industrial presence, vehicle, digger, helicopter use, and altered flows significantly reduce remoteness and natural quiet.
Provide a range of recreational opportunities without diminishing qualities	Objective not achieved for kayaking – opportunities severely constrained; tramping and hunting remain feasible but with diminished experiential quality.
Avoid or minimise conflicts and adverse effects	Mitigation measures (track realignment, no-take days) reduce some effects, but high residual impacts remain and core experiential values are not preserved.
Apply precautionary approach where effects are uncertain	Intent acknowledged, but uncertainty persists and precautionary principle not fully applied.
Safeguard solitude and natural values through zoning framework	Objective not achieved – Backcountry–Remote zone integrity compromised by industrial development and unexpected infrastructure.

Conclusion

77. Overall, the proposal is largely inconsistent with CMS objectives, and residual effects on recreation values remain high and long-term.

78. The proposed Waitaha Hydro Scheme would introduce permanent infrastructure and mechanised activity into a Backcountry–Remote Zone managed for its natural character, solitude, and minimal development. While mitigation measures such as track realignment, subdued and mitigated design elements, and engagement with user groups address some concerns, they do not resolve the fundamental loss of naturalness and remoteness that underpin the recreation experience in the Waitaha Valley.

79. Construction will result in significant disruption for an estimated 3–4 years, and ongoing operation will create enduring visual, aural, and perceptual effects, particularly around Kiwi Flat and Morgan Gorge. Kayaking opportunities in Morgan Gorge will be constrained regardless of the compensation package agreed with Whitewater NZ, as the reduction in

natural flow and introduction of hydro infrastructure permanently alters the character of the river. Other activities such as tramping, hunting, and canyoning will remain feasible but with diminished experiential quality.

Appendix 1 Summary of agreement and disagreement

This table summarises key areas of agreement and disagreement with Mr Greenaway's assessments, along with recommended improvements to mitigation and compensation.

Topic / Issue	Greenaway Assessment	Sidley Assessment	Recommended Improvement
Construction Phase Effects	Greatest visitor effects during 3–4 year construction; disruption high	Agree with Greenaway: Construction effects are significant despite mitigation	NA
Kiwi Flat & Abstraction Reach	Change to Backcountry–Remote characteristics will be high after mitigation	Agree: High residual effect even after mitigation	Reinstate true left track with bridge to reduce exposure
Significance of Effects	Rates some as 'high' or 'very high'	Disagree: Some should be significant, not just 'high'	Increase compensation to reflect scale/duration; pay directly to DOC
$25,000 Compensation	Notes payment as mitigation	Disagree: Inadequate and unclear; does not adequately address effects	As above, increase compensation to reflect scale/duration; pay directly to DOC
Alternative Track Proposal	Supports alternative route	Disagree: Ineffective; adds difficulty	Reinstate and maintain original true left track (including bridge) for life of project
Effects Beyond Morgan Gorge	Perceptual only	Disagree: Effects remain noticeable throughout valley	NA
Kayaking Impact	Overall effect low to moderate	Disagree: Residual effect high; loss of natural flow and spontaneity	As above, Increase compensation to reflect scale/duration; pay directly to DOC
Upper Waitaha Tramping	Low–moderate or negligible	Disagree: Effect is moderate	Reinstate true left track; improve access near Doughboy

Topic / Issue	Greenaway Assessment	Sidley Assessment	Recommended Improvement
Downstream Activities	Minimal effect	Disagree: Low to moderate effect due to perceptual changes	Improve access near Doughboy
Transmission Lines	Negligible effect	Disagree: Highly visible; conflicts with CMS	Bury transmission lines for at least 200m downstream of powerhouse. Reinstate true left track; improve access near Doughboy
Weather Stations	Not considered	Disagree: Adds infrastructure in remote areas	Minimise visual impact through design and placement
CMS Consistency	Notes inconsistency but focuses on activity retention	Disagree: Proposal largely inconsistent with CMS objectives	Strengthen conditions to maintain Backcountry–Remote integrity

Appendix 2 Calculation of loss of recreation value

The methodology to calculate the loss of recreation value is based on the Net Present Value of the value of the huts and tracks to hikers over a 20-year period. Twenty years is considered appropriate given the likely long-term presence of a hydro scheme if approved.

The value of the huts is a fee users will pay to stay in them over night. The value of the use of the tracks is estimated using the Time Valuation Method (revealed preference) using the time hikers spend hiking on the tracks. The underlying principle is that the time and money people spend to access or enjoy a resource reflects its value to them and is referred to as the opportunity cost of time.

A key assumption is that the hydro scheme would not reduce the visitation, but only the value of the experience once there. However, this is tested through sensitivity analysis and provides a range with the estimate. The assumptions are set out later in this appendix.

The loss of value was estimated at $315,000[14] (within a range of $252,000 to $378,000) over a 20-year period. A range in the value (+/-20%) reflects that assumptions are required to undertake this analysis.

The calculation was based on bednight data from huts in the valley (refer below) and time visitors would spend hiking the tracks to these huts. There are 'daywalkers' that hike to Kiwi Flat Hut (first hut encountered and the most used hut) but do not stay there; these visitor numbers were estimated using the estimate (30% of visitors to Kiwi Flat Hut) in the Recreation Report prepared by Rob Greenaway (June 2025). The Department's analysis arrived at 133 (102 bednights and 31 daywalkers) visits to Kiwi Flat Hut in the base year (2025). This is different to the 300 visits estimated in the Recreation Report.

The bednights are forecast to grow over time as shown in the historic data in Figure 1. The approach used for this was to take the average value and forecast its growth by a weighted average of domestic population growth and international visitor growth (refer Figure 2).

[14] Note: While 2% is considered the appropriate discount rate, Treasury requires testing the calculation at 8%, at this discount the loss in value would be $186,000. The use of 8% is not considered appropriate in this case as recreation opportunities provided by the Department are not for 'commercial' purposes and the analysis is not a comparative investment analysis.

Hut Bednights

Hut name	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 (est)	Average
Ivory Lake Hut	12		22		33				56			37				62	32
Top Waitaha Hut	18				15			89				66				127	47
Moon Beam Hut	37		23		14								56			61	33
Kiwi Flat Hut (KFH)	43	58	123		56	58	107	98	97	60	55	116	194	156	201	254	102
Scamper Torrent Hut	35		31				17				15				48	49	29

Figure 1 Historic bednights in the Waitaha Valley huts.

Hut Bednight forecast

Hut name	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Kiwi Flat Hut (KFH)	102	104	106	108	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126
Moon Beam Hut	33	34	35	36	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
Top Waitaha Hut	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67
Ivory Lake Hut	32	33	34	35	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
Scamper Torrent Hut	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29

Figure 2 Forecast of bednight growth for the Waitaha Valley huts.

The annual value estimated is set out in Figure 3. The assumptions used are set out below. It is noted that there is no loss of value for either health benefits or Gross Domestic Product associated with recreation as these factors would not be expected to be impacted by the hydro scheme unless it resulted in the reduction of visits (this was incorporated in the value loss range provided).

	Compensating Value calculation																				
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Recreation Value (1) - huts	$440	$446	$455	$465	$473	$477	$479	$484	$488	$490	$494	$498	$502	$504	$508	$512	$514	$518	$523	$525	$529
Recreation Value (2) - time	$16,256	$16,799	$17,175	$17,445	$17,820	$17,960	$18,207	$18,347	$18,487	$18,734	$18,874	$19,014	$19,155	$19,401	$19,541	$19,682	$19,928	$20,068	$20,209	$20,455	$20,595
Health value*		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
GDP value*		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total	**$16,696**	**$17,246**	**$17,629**	**$17,909**	**$18,293**	**$18,438**	**$18,686**	**$18,831**	**$18,975**	**$19,223**	**$19,368**	**$19,512**	**$19,657**	**$19,905**	**$20,049**	**$20,194**	**$20,442**	**$20,587**	**$20,731**	**$20,979**	**$21,124**

*included health value only for NZ visitors (10%) and GDP value for international visitors (10%). CBAx October 2024 values plus 2024Q4-2025Q3 CPI inflation applied for health values assuming 1% probability of impact. For per international visitor spending MBIE data used for West Coast and for GDP share Infomet

Figure 3 Estimated annual loss of recreation value for Waitaha Valley.

Assumptions

- Discount Rate = 2%. TSY non-commercial discount rate (also required to test at 8%).
- Adult users are 100%, youth (<18yrs) are negligible on this trip.

- Domestic users are 80% based Recreation Report (Greenaway, June 2025).
- User numbers as percentage of bednights is 100%. To break out the individuals contributing to the bednights if required.
- Value of hut use pp (hut user fee) is $10. Accounts for value of sheltering overnight. This is based on a price review undertaken in 2024 (yet to be implemented).
- Hiker value per hour on track is $31 (TSY CBx NZ hourly wage at FY24 and inflation adjusted to for FY25).
- The hydro scheme does not reduce the amount of visitation (Greenaway, June 2025, concluded the impact on West Coast recreation will be low).
- The current track/path into the valley and Kiwi Flat Hut remains the same.
- No inflation over the analysis period.
- Number of daywalkers to Kiwi Flat (as % of Kiwi Flat Hut bednights) is 30% and daywalkers do not venture above Kiwi Flat.
- Trampers time on the track (source: Remote Huts website)

Return time to:	**Hours**
Road end to Kiwi Flat Hut	8
KFH to Moon Beam Hut	10
MBH to Top Waitaha Hut	22
TWH to Ivory Lake Hut	5
KFH to Scamper Torrent Hut	6

- Reduction in value from the hydro Scheme

  Road end to Kiwi Flat Hut is 42%. Based on impact of reduced river flow to the landscape. This represents the % loss in number of days of preferred flow(loss%=((57-9)/57) and assumes 50% perceive a loss from the reduced flow.

  Hikes to Moon Beam, Top Waitaha, Ivory Lake, Scamper Torrent Huts is 5%. Small amount overall reduction carried into other track sections.

- Sensitivity analysis factors used to determine the +/-20% range.
    - Visitor impact (reduction in visitation)
    - Value (perception) impact
    - Value (time-$) impact.