Appendix 7: Landscape technical expert advice

Fast Track Approvals Act 2024 (FTAA) Technical Advice

Date	19/12/2025
To	Jeremy Ecker, Consent Planner
From	Chris Glasson, Senior Consultant Landscape Architect
Project advice provided for	Meridian Energy Limited - Lake Pūkaki Hydro storage and Dam Resilience Works Technical Advice - Landscape
Documents referred to	• 12656630 Substantive Application Final • Appendix N File 1 of 2 - Meridian Lake Pukaki FTC SA Landscape_05112025 • Appendix N File 2 of 2 - Meridian Lake Pukaki SA Graphic Attachments 05112025
Code of Conduct	I confirm that I have read and agree to comply with the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023. This technical report has been prepared in accordance with that Code. In particular, unless I state otherwise, the opinions I express are within my area of expertise, and I have not omitted to consider material facts that might alter or detract from the opinions that I express.

Qualifications

I am a Senior Landscape Architecture Consultant with Glasson Huxtable Ltd. I hold a BA, Diploma in Landscape Architecture and am a Fellow of NZILA.

I spent 7 years at the Department of Land and Survey planning, design and managing landscape projects in national parks and farm parks. Following this, I was the Managing Director of Chris Glasson Landscape Architects, followed by Glasson Huxtable Landscape Architects, for a total of 35 years . During this time, we undertook work throughout New Zealand and overseas.

For much of my working life I have been undertaking projects in the Mackenzie Basin and at Mount Cook, so I am very familiar with the Lake Pukaki location. My involvement in this particular piece of technical work is recorded below in table 1.

Introduction/Summary

I have reviewed the work undertaken by the applicant on the landscape values and effects to enable access to water stored in Lake Pukaki below 518m RL, as part of their normal operation framework for a time period of 3 years until the end of 2028. Meridian also seeks consent for the installation of riprap on the upper stream face of the Pukaki dam and its left and right abutments to provide protection from wave erosion when operating the lake at lower water levels.

Table 1

Expert and date of discussion	Subject	Summary	Matter resolved? Y/N
December 2025	Landscape matters	Reviewing the application and providing advice in relation to my area of expertise	N

National significance of Lake Pukaki

The nationally significant landscape values attributed to Lake Pukaki within the Mackenzie Basin are:

a. The *Canterbury Regional Policy Statement* (CRPS) identifies the entire Mackenzie Basin as an Outstanding Natural Feature and Landscape (ONFL). It has this designation due to its exceptional legibility, aesthetic quality, transient, shared and recognised value, high tangata whenua and historic landscape values.

b. Lake Pukaki forms the fore and midground to Aoraki/Mount Cook, New Zealand's highest peak. This is one of our most iconic views and is recognised on a world-wide basis. This view can be gained from several very accessible viewpoints including:
   - SH8 (3 Carparks).
   - Pukaki Canal's terminal pond.
   - SH80 to Mount Cook including Peter's Lookout.

Other sources

Not only do I have 45 years' experience on projects in the Mackenzie Basin, but others have described and observed the change and effects on this landscape over many years. The most recent has been those of Stephen Brown, Landscape Architect for Meridian in the reconsenting process of the Waitaki Power Scheme.[1]

Mr Brown makes mention of the interplay of Lake Pukaki with the Southern Alps and the Mackenzie Basin and how spectacular it is in terms of landscape values. As well, that the lakes glacial-blue waters and river fan reflects the natural processes that are strongly associated with the lake. He does go on to say, and I concur with these remarks, that significant lake level fluctuations and erosion around its margins, rock armouring at the Pukaki Dam and general deposition elsewhere, diminish its intrinsic naturalness and aesthetic appeal.

Summary of outstanding issues

I have identified a number of outstanding issues with the application in relation to landscape matters, specifically:

a. Today, low lake levels expose large expanses of gravels, collapsed rock embankments, and areas of rock deposition which creates a moderate effect on the character and quality of the naturalness of the landscape.
b. These elements can also add an artificial dimension to the lake margins and affect the geomorphology and habitat values. Such processes impact on the cohesion and aesthetic appeal of the composition.

[1] S. Brown Statement of Evidence, 28 May 2025, Page 13.

c. To exacerbate such landscape effects, further lowering of the lake level to 513m RL will be a concern that may lead to a greater effect.
d. When there are higher lake levels this will result in an increase in natural character values for the lake's shoreline.

Missing information – pre application advice and substantive check

There is no missing information identified with the application in relation to landscape matters.

Agreement with the applicant

For the following matters I concur with the applicant:

a. Methodology: These site visits were made when lake levels (RL) were at 531.37m, 528m and 523m. Landscape effects were noted at various viewpoints especially tourist stops, viewing areas, roads, shorelines, and at the power scheme infrastructure.
b. Landscape effects: The landscape can be average, beneficial, or neutral. The NZILA 7-point scale has been utilised.
c. Context of Lake Pukaki: Lake Pukaki and the Waitaki Power Scheme have been described in an adequate manner.

Benefits of the project

There are no specific benefits to the landscape character and quality with the lowering of the Lake Pukaki to 513 RL.

Outstanding areas of contention and significance of these

The following are areas of contention that I have with the applicant's commentary on landscape and visual matters:

Effects

- There is a need for greater clarity between the landscape and visual effects on the natural character and landscape/amenity from the various locations. This needs to be clearly stated for both matters concluding with the 7-point scale and including attributes as to what contributes to say, "Moderate" or "High" values.
- I don't believe the summary from the viewpoints (pages 19-21) contributes any meaningful conclusions.
- I want to know what effect will occur to the shorelines in terms of loss of natural character and whether it impacts the view as one travels on SH80 or stops at the dam carpark. What will be the effects of the dam when the lake level is 510m RL?

"Working Lake"

- This refers to the applicant's comment on Page 17. While Lake Pukaki has been raised on two occasions, it is a lake that is different things to many people, i.e. recreational, biodiversity, providing uninterrupted views, or being part of an ONFL. Lake Pukaki is part of New Zealand's identity. To call it a "working lake" is a misnomer.

"Utilitarian Landscape Character"

- This is mentioned on page 22 of the applicant's report. This could be disputed given the ONFL status of the Mackenzie Basin landscape. The very components of the Lake Pukaki landscape are far from being utilitarian.

Pukaki Dam

- While the dam will not restrict views, the new material must be integrated into the environment. What will be visible and what will the shape, texture and colour of the new rock riprap be like? Some photos could be included to allay any fears that compatibility will occur.

Exposed lake level

- At 513m (RL) lake level, will that level expose coarser rock, or a muddy texture? No photographic records of the lake level being less than 520m (RL) have been recorded. This would have been useful information.

Significance of these matters

All these matters, contribute to the character and quality of the lakes ONFL status, something that needs to be preserved.

Solutions and/or comments on conditions

No mitigation measures have been proposed by the applicant as solutions to any potential increased effects. I have attempted to propose specific solutions below in table 2:

Table 2: solutions		
	Issue	**Solution**
a	Exposure of shoreline and coarse lake base material.	Grade the wider shoreline to integrate with existing. Import gravel material to match existing if necessary.
b	Eroded embankments.	Battering of potential lake embankments to reduce further erosion.
c	Exposure of tree root system.	Remove root system.
d	Dam rock riprap.	Use same shape, texture and colour of rock to match existing.
e	Loss of biophysical characteristics	Retain areas which have biophysical characteristics.
f	Increase of mudflats.	-
g	Habitat loss.	-
h	Dam construction.	Restrict stockpiling and the construction site to a specific area.
i	What happens post 2028?	?

Conclusion

The overall effect of lowering the lake will be in the fine-grained effects of construction, and not so much when appreciating the majestic and spectacular landscape. However, given the status of the landscape and as a draw card, there is a need to counteract any potential negative effects of lower lake levels with mitigation measures.