

Submission: Mokihinui River Hydro Power Scheme

Submitter contact details

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Applicant details

Name of applicant: Meridian Energy Limited

Application numbers:

West Coast Regional Council consent applications: Consents RC07150/1 - RC07150/26.

Buller District Council consent applications: RC07/180-A - RC07/180-H

Details of applications: Construction, operation and maintenance of a hydroelectric power scheme on the Mokihinui River. Construction, operation and maintenance of transmission corridors between dam site and Cedar Creek, Waimangaroa Valley.

The submission

I make the following submission in opposition to the application. I wish the consenting authorities to make the following decision: decline all applications.

I wish to be heard in support of my submission.

The reasons for making the submission

My reasons for opposing the proposed hydroelectric power scheme are:

1. The Mokihinui River is recognized as being of high significance to a variety of use groups and has a long history of significant usage among these use groups.
2. The proposed scheme will permanently alter and severely diminish the values preserved by the current natural state of the river and other effected environs. The Mokihinui River is recognized as being of high significance for its natural heritage values, identified as one of the top six rivers in New Zealand.
3. The proposed scheme contravenes objects and policies of the Conservation Act 1987 and Resource Management Act 1991, the integrity of which needs to be preserved to uphold the purpose and intent of the legislation, and to protect the rights of all New Zealanders.
4. There are no alternative rivers in the West Coast region, offering the same combination of isolation, landscape, recreation, biodiversity, history, amenity, geomorphology and cultural use, and very few in New Zealand.

5. The applicants report on the impact of the Hydro Power scheme (including transmission corridors) and proposed mitigation measures contains potentially misleading statements.

Further details are below:

1. **The Mokihinui River is recognized as being of high significance to various use groups and has a long history of significant usage among these use groups.**
2. *Whitebaiting*: The West Coast of New Zealand's South Island is one of the world's most famous whitebaiting destinations. The Whitebait species and the habitat they depend on is unique to 2-3 other countries around the world. Observations outlining whitebaiters' catches diminishing over the last 50 years are important to acknowledge, threatening the sustainability of the whitebait species and annual spring harvest. This can be explained by drainage of wetlands (breeding grounds), contaminants in rivers and increased rate of harvest. Every remaining river in a relatively unmodified state needs to be preserved. The proposed dam and vastly reduced flow rate will decrease habitat size and quality and adversely affect the sustainability of the whitebait population. The lower Mokihinui has been used for 'Whitebaiting' as far back as feeding hungry gold miners in the 1860's, without noting Maori participation in this activity may reach as far back as 1300 AD. A local Maori civilization that dates back this far is relatively close at the Heaphy River, around a 2-3 day walk to the Mokihinui River.
3. *Kayakers and rafters*: The West Coast of New Zealand's South Island is one of the world's most famous whitewater destinations. It offers a large range of reliable grade 3 to 6 whitewater, of which the majority is in the grade 4 to 5 range, and suitable only for very experienced and well-equipped paddlers or professionally guided rafting trips. In general these rivers are cold, steep and difficult to access. Upon reaching the coastal plain, most West Coast rivers are braided. The Mokihinui River is unique in the West Coast region. No other river provides the same combination of features, which make it a perfect training and development environment for paddlers progressing from 'whitewater' to the more demanding requirements of 'backcountry whitewater' in isolated places. The Mokihinui gorge section has been regularly paddled since the early 1970's, along with the more grueling Upper Mokihinui section, which is less popular due to the higher skills level, required.
4. *Poutini Maori*: The spiritual and cultural values of Poutini Maori need to be preserved. As evidenced by the following Whakatauki, "*From the source to the mouth of the sea all things are joined together as one*". In other words, all components of the river catchment are interconnected and any damage to one of those components will impact on the entire catchment or riverine system. In general, the relationship of tangata whenua with their ancestral lands, waters, waahi tapu sites and other taonga will be diminished. Thus, their ability to exercise kaitiakitanga will also be more difficult. The lower reaches section of the Mokihinui River was regularly used prior to colonization, as documented by Thomas Brunner's 1846 accounts noticing the river was used for transportation and as a mahika kai site. Species gathered may include estuarine shellfish, Pateke (Brown Teal), Patiki (flounder), Inaka (whitebait), Tuna (shortfin and longfin eels), kanakana (lamprey), Grayling (now extinct) amongst others. Several of these species are classified as threatened by DOC. Since colonization, customary use of the river has diminished, however arguably the 1996 Ngai Tahu Claim Settlement Act has only just begun to repair the relationship between Kati Waewae (local papitipu runaka) and

their natural resources.

5. *Fishing*: The Mokihinui River including the lower reaches, the gorge and the upper 'alpine' reaches offer significant opportunities for trout fishing. Particularly brown trout are abundant in this catchment, and the current high quality of the water and ecosystem contributes to the quality of this fishery. The proposal would diminish recreational fishing values.
6. *Other use groups*: The lower reaches, the middle 'gorge' region and upper reaches are also used for various other recreation activities in and around the river. Bird watching, hunting, tramping, swimming, jet boating, kahawai fishing, eeling and picnicking. Such resource users and their reliance for continued operations on the river needs to be preserved. The opportunity to freely participate in these activities and the cultural values associated with these past-time's, also need to be preserved.
7. All of the activities mentioned above are important for their recreational and amenity value in providing for the wellbeing of New Zealanders.
8. **The proposed scheme will permanently alter and severely diminish the values preserved by the current natural state of the river and other effected environs. The Mokihinui River is recognized as being of high significance for its natural heritage values, identified as one of the top six rivers in New Zealand.**
9. The Mokihinui River is very unique in that few rivers in New Zealand can rival the natural heritage values present on this river. The damming of the river, and land used to create the infrastructure of the 85m by 300m dam will have adverse impacts by the clear felling of native forest and associate impacts. The construction impacts will be significant. 80-85 m high and 300 m wide is a significant amount of machinery, clearing of adjacent land and access roads created. In addition, the visual impact will be significant. Full restoration is problematic, as it will take the incumbent species age they were before removal to return to their original state, and in the meantime, there are adverse effects to dependant wildlife and plants, amongst others. The flooding of 330 HA of podocarp lowland forest will have adverse impacts from the loss of species and associated impacts. In addition, one of the tributaries of the Mokihinui River will be inundated with water. The river and riparian margins, which are unique for habitat and native species and the rivers free flowing, natural state is required for the overall hydrologic functioning of a river, which will also be adversely affected by the dam. The lower section of the Mokihinui River, with flow changing from 100 cumec's to approximately 16 cumec's will destroy baseline integrity of the river unable to be mitigated. The built structure of the dam and transmission corridors will have adverse landscape and visual impacts.

The following specific values explain the adverse impacts of the construction, operation and maintenance of the proposal.

10. *Historic values*: For centuries, West Coast's people and communities have used their rivers to provide for their social, economic and cultural wellbeing. Chadderton, Brown, and Stephens, 2004 report 'Identifying freshwater ecosystems of national importance for biodiversity – discussion document' identified the Mokihinui as one of the top 6 rivers in New Zealand for its natural heritage

values. This is evidenced in the wide range of heritage values associated with rivers: from the use of the Mokihinui gorge for gold mining (the early remnants of which are still visible) to the spiritual and cultural relationship Poutini Maori have had with the lower reaches of the river to the existing walking track based on the original pack track used by gold miners. Historic value is also attached to the various recreational activities that the river has been used for, as well as the natural environment, which is representative of New Zealand prior to European colonization. This will not be operational in its natural state after the dam, affecting opportunities for walking based recreation including tramping, bird watching, hunting and picnicking. This is an important access route for those that cannot afford the helicopter access into the Mokihinui Forks area.

11. *District identity*: The West Coast is a region of mountains, rainfall, rivers and scenic beauty. These features, combined with the processes of uplift and erosion, have resulted in a landscape of unique character. West Coast rivers are characterized by having steep gorges. The loss of this gorge will be the loss of a unique New Zealand River. This contributes to Buller District identity and West Coast regional identity, important to their constituent members as evidenced in representative planning document (District Plan and Regional Policy Statement respectively). This identity is valued in terms of the Buller District and West Coast being a tourist destination, with tourism identified by the local community as one industry that can sustain the wellbeing of the resident population.
12. *Whitebait and native fish species*: Related to district identity is whitebait. Habitat for the lifecycle of whitebait, juvenile and adult, will be adversely affected. The inherent ecosystem and natural values are diminished as well as the annual migration of people to this river to harvest the juvenile whitebait species each spring. Maintaining the natural flow between the season start and end date, whilst it may have good intentions, providing for the lifecycle of whitebait, thus their future sustainability, requires an all-year round approach. The damming of the gorge area will destroy the natural habitat of the 12 native fish species. The natural integrity of the river provides for movement throughout the catchment, without barriers. Such freedom of access and movement is very hard to imitate with man-made fish races to by pass the dam it self. The Giant Kokopu, one of five whitebait species has been acknowledged as a threatened species. Much of the Mokihinui's water bodies has a high diversity of species and habitats
13. *Indigenous bird species*: There are a large number bird and plant species that have threatened status that inhabit Mokihinui water bodies. The resultant 14 km lake and 330 hectares of lowland forest will adversely affect land-based ecosystems as well as incumbent freshwater ecosystems, including their habitats. Species particularly significant are Kaka, Whio, Ngarara and Pekapeka. The life supporting capacity of the Mokihinui River needs to be maintained or even enhanced to support these native bird species amongst other invertebrates and species in the ecosystem. Native bird species will lose habitat resulting in loss of species.
14. *Mahika kai*: habitat for mahika kai species is adversely affected, thus the opportunities for local runaka and tribal members to engage in traditional activities.
15. *Landscape and amenity values*: The transmission line would traverse 29 km southwards across the Stockton Plateau to a new substation to be located at Cedar Creek in the upper Waimangaroa

valley. The construction will have adverse impacts on natural vegetation (and its association impact on biodiversity) as well as presenting an eyesore to recreational users of the area, decreasing amenity value. Significant geological formations are visible from Mokihinui gorge including impressive Granite formations and Precambrian greywackes and argillites, **which** will be flooded and no longer in visual existence.

16. *Recreation:* The Buller District is well endowed with scenic and historic attractions and has significant land and water-based recreation assets. The existing character of the natural environment is isolated and relatively difficult to access. This is a significant aspect of amenity for recreational users of this area (trampers, hunters, kayakers, rafters) and as such needs to be preserved.
17. *Tourism:* The proposed transmission lines will cross a significant touristic area of Charming Creek, Ngakawau and Denniston. Parts of the transmission corridor are significant skylines that provide immense amenity value to residents and tourists. In addition, the transmission corridor adjacent to the Mokihinui River also detracts from the landscape values of the river. The Mokihinui River, one of the Buller District's large areas of natural land also provides an extensive resource for low impact recreation for New Zealanders living in the District and from other parts of the country. Overseas backpackers are also visiting remote parts of the District. The benefit of this type of recreational tourism is that it is less intensive than mainstream tourism and needs little infrastructure to support it. The natural "untouched" character of much of the Mokihinui River represents a significant tourist asset. Tourism as an activity, particularly nature-based tourism, is recognized as having significant growth potential for the Buller District.
18. **The proposed scheme contravenes a number of Acts of legislation including the Conservation Act 1987, the integrity of which needs to be preserved to uphold the purpose and intent of the legislation and protect the rights of all New Zealanders.**
19. The use of DOC land for the construction, operation and maintenance of the Hydro Power Scheme has significant adverse effects. DOC recognizes this land as significant indigenous vegetation and significant habitats of indigenous fauna and flora. The dam will have irreversible impacts on these animal and plant species, unable to be mitigated. Concessions would need to be granted by DOC to clear large areas of native podocarp forest and drown over 330 ha of bush does not align with the provisions of the Conservation Act 1987 to preserve conservation, heritage and historic values. The powers that the Conservation Act gives DOC is to protect and preserve conservation, heritage and historic values, and failing to do so presents not only the obvious destruction to the river, biodiversity and elimination of native species but also the destruction of the purpose and intent of the Act itself, and the duty to advocate these matters on behalf of all New Zealanders. In addition, the withholding of vital information by Meridian Energy Limited namely the Landcare Research technical report 'Calculating Biodiversity offsets for the Mokihinui Hydro proposal', also poses questions and confusion about the probable impacts relevant to the Conservation Estate and heritage values.

- 20. There are no alternative rivers in the West Coast region, offering the same combination of isolation, wildness, natural heritage, recreation, cultural use, pristine landscape views, indigenous biodiversity values, and few across New Zealand.**
21. The Mokihinui River is one of few rivers on the West Coast and across New Zealand that is relatively unmodified, Many rivers have been modified being used as travel routes, intensive mining, forestry, clear felling and seasonal habitation of river beds and riparian areas for grazing. With increasing human pressure upon the environment, often hardest felt by rivers with the Dairying boom, the environmental wellbeing needs to be strongly acknowledged as something that cannot be taken for granted now, as it has been in the past, for its ability to provide the uniqueness and irreplaceable values and experiences of the Mokihinui River.
- 22. The applicants report on the impact of the scheme and proposed mitigation measures on the river resource as well as the transmission lines contains potentially misleading statements.**
23. Meridian states the Mokihinui is needed to secure supply of energy to the West Coast population, to alleviate transmission losses 'of up to 50 % from the Waitaki Power station'. Between 310 and 360 gigawatt hours (GWh) per year would be generated and Meridian states 'this output would provide the capacity to meet the current and immediate future needs of the South Island's West Coast electricity demand and provide security of supply to the region.' The principle of informed decision-making needs to be acknowledged here. Firstly, no improvement of transmission lines is mentioned. Secondly, the Arnold Hydro Power Scheme or the Mt. Rochfort Hydro Power Scheme is not mentioned. This would suggest that there would be a net export of power from the West Coast region with all three in commission. If this is a question of energy management, this is far more complex than Meridian makes it out to be; there are other means of securing supply of electricity for a population, not to mention what can be done on the demand side for energy management planning.
24. The use of technical reports to document the impact and mitigation of these impacts as part of the application should be carefully considered. The use of 'technical reports' may undermine the importance of these components of the proposal and relegate these to technical issues that can be solved through science and/or mitigation, rather than challenging the source of these impacts which is the existence of the dam or otherwise and the design, scale and magnitude of the dam.
25. Rationalizing the loss of the recreational opportunities on this river by suggesting these same opportunities can be found on other rivers is not correct. For kayaking alone, the Mokihinui River provides most kayakers with their first 'backcountry, helicopter' river because the grade suits moderate levels of ability at a Grade 3+/ 4 flow. Where as, most other West Coast rivers present higher levels of difficulty, which paddlers can normally only access after having considerable experience of rivers such as the Mokihinui. This would leave a large gap in the ladder that kayakers use when they arrive on the West Coast, wanting to progress their skills in order to experience an array of West Coast whitewater.
26. The catch and carry system suggested to mitigate the plugging of the pathway of migratory native and introduced fish species is not completely suitable. This will not be able to fully replicate the free

flowing path of the river, and has the potential to disrupt the natural migration up and down the river of a variety of fish species, including the five species of whitebait, the threatened long finned eel, the brown trout along with other native fish species. For some time now, a variety of observations have been made that native species have massively declined. The Grayling has been extinct for nearly a century now and once upon a time; whitebaiters had so much they would feed it to their chickens or use as manure. This might be explained by some 80 % of original wetlands being drained for agriculture, the use of rivers to drain away by-products from various mining operations and the degradation of rivers across New Zealand due to increased potassium, nitrogen and effluent from increasing demand for NZ dairy products abroad.

27. At present, instream water quality in the Mokihinui is generally high, largely due to high dilution of contaminants entering the river systems and the high levels of flushing which occurs during periods of flood. The river in its current state is reliant on the continual purging of contaminants and sediment via frequent flooding. This is from the alpine regions of the river, down to the mouth at its exit into the ocean. The dam will severely diminish the ability of the hydrology of the river to continue this process. Relatedly, the damming of the river and lake area behind the dam will result in sediment aggradations, change in the chemistry of the water, with the potential to harbor algae and water weeds that will accelerate change away from being a self-sustaining ecosystem and requiring intervention as is a reality on other man-made lakes. Thus, the quality of the lake as a mitigation measure demonstrated by the Meridian application for the loss of the river is in fact very low in quality.
28. The proposal also places emphasis on the resultant lake as providing for the recreational opportunities lost from the river. This has high potential to increase conflict among users of the lake, or other areas above or below the lake, as there is less diversity of opportunities. Not only between different recreational activities, but also within an activity, as there is a smaller river resource available for recreation, (For example kayaking, fishing) resulting in greater pressure and competition for the same resource. Similarly, for recreation dependant on specie populations, a dammed river will diminish the ability of the habitat to provide for the sustainability of whitebait, eel and trout species, and there will be the same demand if not greater for dwindling fish populations. Even if opportunities to recreate still exist on the river per se, the quality of these opportunities is very low.

Conclusion

29. Flooding large areas of land, dramatic reduction of flow below the dam and the drowning of the natural river will have adverse and irreversible environmental impacts. The natural heritage values are unique and irreplaceable. The proposed use of land and water for the purposes of construction, operation and maintenance of the damming and transmission lines as required by the Mokihinui Hydro Power Scheme is not suitable or appropriate to uphold the integrity of matters important to the contexts of the river use groups, Natural Heritage Values, Conservation Act 1987 and other legislation and informed and accurate decision making. Therefore, all applications for resource consent should be declined.