Memorandum

Date	13 November 2019
Matter	Combined Waitaki Power Scheme Reconsenting Project
To	Environment Canterbury
Copy	Jeff Page (Meridian Energy Ltd), and Elinor Watson and Phil Mitchell (Genesis Energy Ltd)
From	Stephen Christensen (for Meridian Energy Ltd) and David Allen (for Genesis Energy Ltd)
Subject	The Existing Environment

Introduction

1. The purpose of this memorandum is to assess what constitutes the existing environment for the purposes of section 104(1)(a) of the RMA, in the context of reconsenting the operation of the Combined Waitaki Power Scheme (**CWPS**).[1] This understanding is needed to allow effects assessments of the CWPS to be undertaken, and ultimately to assist the preparation of applications for replacement resource consents for the various component parts of the CWPS.

2. The core regional resource consents required to operate the CWPS (**core consents**) are due to expire on 30 April 2025. Replacement consents need to be obtained by Meridian Energy Ltd and Genesis Energy Ltd as the owners and operators of the various water management and generation assets that comprise the CWPS.

3. The core consents are a combination of section 14 RMA water permits and section 15 RMA discharge permits and provide for the main water movement through the CWPS.

4. The regional rules that apply to the core consents are contained in the Waitaki Catchment Water Allocation Regional Plan (which addresses section 14 RMA matters) (**WAP**) and the Canterbury Land and Water Regional Plan (which addresses section 15 RMA matters) (**CLWRP**). Under both plans, the activities for which replacement consents must be sought are controlled activities.[2] The CLWRP rule is supported by a policy[3] that states that in recognition of their national benefits, inter alia, existing hydro-electricity generation schemes and their associated water takes, uses, damming, diversion and discharges are to be considered part of the existing environment.

Executive summary

5. In summary, we consider the position is:

   (a) The existing environment for assessment purposes is the current state of the environment, including existing environmental processes. The existing structures and associated water takes, uses, diversions, damming and discharges form part of that environment.

   (b) This is implicit in the formulation of the controlled activity rules in both the WAP and CLWRP.

   (c) Even if the two controlled activity rules were absent, including the existing structures and associated water activities as part of the existing environment is consistent with the approaches taken in *Ngāti Rangi* and *Alexandra*. To exclude these aspects from the existing environment would be unrealistic, and an alternative 'without' environment would be artificial and fanciful.

[1] The CWPS consists of the Tekapo Power Scheme (TPS) owned by Genesis Energy and the Waitaki Power Scheme (WPS) owned by Meridian Energy. Geographically, the TPS extends from Lake Tekapo to Tekapo B Power Station. The WPS extends from Lake Pūkaki to the Waitaki Dam and Power Station.
[2] Rule 15A in the WAP and Rule 5.125A in the CLWRP.
[3] Policy 4.51 in the CLWRP.

(d) The inclusion of the existing CWPS within the existing environment does not mean that the effects of the way water is moved through the system cannot be considered as part of the replacement consent process.

(e) The activities for which replacement consents are required are likely to come within the controlled activity rules in both the WAP and CLWRP. Both controlled activity rules are clear that the effects of the scheme are able to be considered, and appropriate conditions imposed to mitigate adverse effects.

(f) The limitation on this is where what is applied for conforms to the allocations and flow and level regimes established by the regional plan. In this case the conditions that may be imposed cannot alter those allocations, flows and levels.

(g) In a practical sense, when describing the existing environment Meridian Energy and Genesis Energy will need to identify those aspects of the environment that are caused or influenced by the CWPS as distinct from those aspects that are the product of other (including natural) processes and activities. To the extent that the effects of the CWPS can be considered negative, it will be open to the decision-maker, within the matters over which the respective rules reserve control, to consider what measures by way of mitigation, offset or compensation may be appropriate to address those effects. That might be a continuation of the existing suite of measures, or it might include some new or different measures. The qualification to that will be that conditions cannot alter allocation, or environmental flows and levels where these are established in the WAP.

Discussion

Existing environment case law

6. Section 104(1)(a) of the RMA prescribes that a consent authority must take into account the actual and potential effects on the environment of allowing the activities to which the application for consent relates. The starting point for determining the scale of effects is ascertaining the existing environment against which the actual and potential effects of the activities must be assessed.

7. Prior to *Ngāti Rangi*, there was previously conflicting Environment Court authority regarding what constitutes the existing environment in the context of regional consents. Before addressing the High Court's findings in *Ngāti Rangi*, we set out a couple of previously differing Environment Court positions referenced in the decision.

8. In *Marr* v *Bay of Plenty Regional Council*[4] the Environment Court considered whether the effects of discharges from the Tasman Mill under existing consents that were sought to be renewed could be taken into account. The Court held that the existing environment must take into account the effects which have already occurred from lawful discharges.[5]

9. By contrast, in *Port Gore Marine Farms* v *Marlborough District Council*,[6] the Environment Court observed that it must imagine the existing environment for the purposes of section 104(1)(a) of the RMA, as if the three mussel farms (for which renewal was sought) were not actually there thereby treating the application as if it were for a new activity, not the renewal of an existing activity.[7]

10. The Environment Court decisions of *Marr* and *Port Gore* were both considered by the Environment Court in New Zealand Energy Ltd v Manawatu-Whanganui Regional Council.[8] The case involved the reconsenting of existing hydro-electricity activities in respect of the Raetihi power scheme (a small scheme generating 1.75GWh per annum).

11. The Environment Court held that under standard circumstances when renewing consents for water take the existing environment must be determined as the environment that might exist if the existing activity to which the consents relate was discontinued.[9] In these circumstances, the existing environment would

[4] [2010] NZEnvC 347 (**Marr**).
[5] *Marr* at [62].
[6] [2012] NZEnvC 72 (***Port Gore***).
[7] *Port Gore* at [140].
[8] [2016] NZEnvC 59.
[9] New Zealand Energy Ltd at [47] and [48].

be described as if the activities for which consent were being sought were absent. The effects of the activity would then be assessed against that 'without the activity' environment.[10]

12. Despite this acknowledgement of the standard expectation for such consents, the Environment Court in *New Zealand Energy Ltd* considered that the particular circumstances of the case warranted a contrary approach. The Court included the scheme as it currently operated as part of the existing environment.

Ngāti Rangi

13. *Ngāti Rangi* was a successful appeal of the Environment Court's decision in *New Zealand Energy Ltd*. The decision has provided some clarity to the law regarding what constitutes the existing environment for the purposes of section 104(1)(a) of the RMA in the context of regional consents.

14. A key issue on appeal in *Ngāti Rangi* was whether the Environment Court, when assessing the possible environmental effects of the proposed consents, was required to have regard to the existing scheme, or assess the environment as it existed prior to the scheme's construction.

15. The High Court overruled the Environment Court decision, finding that it had erred in its approach by failing to assess the environment as if the consented activities did not exist.[11] Instead, the Court considered that the correct approach was that taken in *Port Gore*.

16. The High Court determined that the particular circumstances of the case meant it was feasible to exclude the currently operating Raetihi scheme from the existing environment as the river could be assessed immediately upstream, in order to disregard the water take scheme. On this basis, there was no need for the Court to depart from the approach in *Port Gore* and the Court was able to assess the range of environmental effects caused by the scheme against what was effectively what the receiving environment was pre-scheme.

17. At [68] the High Court stated (emphasis added):

> *In my view, the controlled activity rule is more appropriately applied when the effects on the existing environment are considered without weighing the existing consents in the balance.* ***To analyse the existing environment as excluding the scheme as it currently operates in these circumstances is also feasible. The Makotuku River can be assessed immediately upstream of the NZEL take in order to disregard the current scheme****.*

18. In support of its finding that the Environment Court should have used a 'without' version of the existing environment, the High Court cited with approval the following extract from page 610 of the text Environmental and Resource Management Law:[12]

> *Accordingly, the existing environment cannot include, in the context of a renewal application, the effects caused by the activities for which the renewal consents are sought, unless it would be fanciful or unrealistic to assess the existing environment as though those structures authorised by the consent being renewed did not exist…"*

19. By citing this extract, the High Court implicitly acknowledged that there may be exceptions to the approach in *Port Gore* where it would be *"fanciful or unrealistic"* to assess the existing environment as if the structures authorised by the consents being renewed (and the effects that flow from those structures) did not exist. In these cases, the structures and relevant effects of those structures should form part of the existing environment.

20. While it was cited in the judgment, the *"fanciful or unrealistic"* 'test' was not elaborated on or explained further by the High Court, so its application remains unclear.

---

[10] A simple hypothetical example illustrates the point. Community water supplies are a discretionary activity. An existing community water supply is drawn from a river via a simple pump system. The take is subject to restrictions in terms of rate of abstraction, maximum daily volume, and minimum residual flow downstream of the point of take. When applying for a new water permit, the applicant is required to describe the river environment as it would be if the take was suspended, and all the water that is currently abstracted was to remain in the river. The effects of allowing the take to continue as applied for are then assessed against this description of the environment. In order to undertake the description of the environment assuming the take was not present, the applicant uses water meter data to 'add' the abstracted water back to the river, and its ecological consultants use a mixture of measurements, modelling and expert judgment to describe what the river environment would be like if the take was suspended.

[11] *Ngāti Rangi* at [64].

[12] Derek Nolan (ed) *Environmental and Resource Management Law* (5th ed, LexisNexis, Wellington, 2015).

21. A separate issue in *Ngāti Rangi* was the High Court's consideration of the controlled activity status. At [63] the High Court stated:

> *The effect of not following the approach adopted by the Environment Court in Port Gore Marine Farms Ltd v Marlborough District Council when assessing the environmental impacts of a proposed consent is to lock in hydro-electricity water takes and flow rates for so long as the controlled activity status is retained thereby preventing adverse effects being avoided or mitigated.*

22. In our opinion, this conflates two separate matters - the controlled activity status and the existing environment assessment under section 104(1)(a) of the RMA.

23. Where a controlled activity is under consideration, the decision-maker is limited in two ways:

    (a) Consent must be granted;[13] and

    (b) Conditions can only be imposed in relation to matters over which control is reserved in a national environmental standard, regulation, plan or proposed plan.[14]

24. In that regard, whether or not hydro-electricity water takes and flow rates are 'locked in' for so long as the controlled activity status is retained depends not on the way the existing environment is described, but on the nature of the control reserved through the relevant rule in the plan. The question of whether (and to what extent) conditions can be imposed to avoid or mitigate particular adverse effects also relies on the provisions in the relevant controlled activity rule(s).

Alexandra

25. The Environment Court decision in Alexandra District Flood Action Society Inc. and others v Otago Regional Council [15] provides further justification for the proposition that Port Gore may not be appropriate in all cases. Alexandra predates Ngāti Rangi and was not referenced in either the Environment Court [16] or High Court decisions.

26. In *Alexandra*, the Environment Court considered various appeals against aspects of a decision by the Otago Regional Council to grant new resource consents for the existing Clutha River hydro scheme owned and operated by Contact Energy Ltd (**Clutha Scheme**). The Clutha Scheme comprises a control structure at the outlet of Lake Hawea and two major downstream mainstem dams with associated artificial lakes.[17]

27. Unlike the small Raetihi scheme considered in *Ngāti Rangi*, the Clutha Scheme affects New Zealand's highest-volume river. The Clutha Scheme, along with the CWPS, Manapouri and Waikato/Tongariro schemes account for 90+% of New Zealand's hydro generation, with Lake Hawea providing an important source of hydro storage. The Clutha Scheme is linked to the National Grid.

28. In its decision, the Environment Court considered the appropriate way to formulate the existing environment against which to assess the effects of the ongoing operation of the Clutha Scheme. The Court reviewed other cases in which similar issues had arisen and made a number of relevant observations.

29. The Court noted that *"…each case turns on its facts and there is no invariable principle as to how to describe the 'environment' "*.[18]

30. In *Alexandra*, the Court was invited to consider two different approaches to establishing the existing environment against which the effects of the consents being sought could be assessed. The first scenario was the 'Armageddon' scenario. That scenario involved assuming that the physical structures of the Clutha Scheme remained in place, but that they operated differently - or indeed were not actively

[13] Section 104A(a) of the RMA.
[14] Section 104A(b) of the RMA.
[15] C102/2005, Environment Court decision dated 21 July 2005 (***Alexandra***).
[16] However, as Judge Jackson was the presiding Judge in respect of both *Port Gore* and *Alexandra* the lack of any reference indicates that he considered there was such a difference in facts that reference to *Alexandra* was not relevant.
[17] Clyde Dam and Lake Dunstan; Roxburgh Dam and Lake Roxburgh.
[18] *Alexandra* at [66].

operated at all - with the sluice gates set to 'open'. As the Court colourfully described it, the Armageddon scenario involved, *"…opening the sluice gates at the Hawea control structure and on the Clyde and Roxburgh dams and letting the years of accumulated sediment rip down the Clutha River"*.[19]

31. The Court considered that the Armageddon scenario was not appropriate as a description of the existing environment in respect of the replacement consents for four reasons:[20]

    (a) Contact Energy was not applying for consents to open the sluice gates and manage the dams in the way the Armageddon scenario contemplated, and it was difficult to imagine when such a scenario would be applied for;

    (b) The cessation or decommissioning of a scheme such as the Clutha Scheme would normally be managed by conditions, but in this case the existing (expired) water permits contained no such conditions. In other words, the existing authorisations did not contemplate the cessation of the activities they authorised;

    (c) The dam structures would still exist under the Armageddon scenario, and would still dam and divert water even with the sluice gates set to 'open', and resource consents would be required to authorise this; and

    (d) Opening the sluices might be precluded by the general duty to avoid, remedy or mitigate adverse effects under section 17 of the RMA.

32. The alternative scenario was described as the 'Eden' scenario. The Eden scenario involved imagining, *"...the return of the waters, bed (and possibly the margins) of the Clutha River to their pre-human state, or at least to their state before the dams were built".*[21]

33. The Court was not attracted to this scenario either and said at [52]:

> *Given the immense importance of the Clutha hydro-electric scheme (of which more later) we cannot, with respect, perceive that scenario as a realistic one in these proceedings.*

34. The Court instead found that the current state of the environment [22] should be the reference point, saying:[23]

> *We hold that in these proceedings we are generally to consider the environment as it was during the hearings, but allowing for seasonal variations as they come and go.*

35. In Alexandra, the Court was clear that using the current state of the environment as the starting point, including recognition of the impact the activities for which replacement consents were being sought were having, did not mean that those effects were unable to be addressed. To illustrate the point the Court used the concept of a property lease to draw an analogy. The Court stated:[24]

> *"Renewing" a resource consent is like obtaining a lease where there is no right or renewal. The tenant, like the applicant for renewal of water permits, in effect has to ask for a new lease. If the landlord considers that the conditions of the last lease were disadvantageous to the landlord because they allowed the tenant to leave sand and stones on the landlord's land and/or to cause flooding on a neighbour's land then the landlord can write into the new lease a condition controlling these matters and even add a condition that past sediment be removed.*

[19] Ibid at [51].
[20] Ibid at [53].
[21] Ibid at [52].
[22] The term 'current state of the environment' is used as shorthand to describe the physical status quo in order to differentiate that from the 'existing environment' which may, depending on the circumstances, imply a departure from the current state of the environment, particularly where the effects of an existing activity for which replacement consents are being sought needs to be assumed to be absent.
[23] *Alexandra* at [69].
[24] Ibid at [67].

36. The Court went on to say:[25]

> *A regional council may look at "past effects" of the former activity and (subject to reasonableness, efficiency and other tests we come to later) add conditions to control future adverse effects, and in some cases to clean up the effects of past activities by the consent-holder which were not covered before. It should go without saying that the latter conditions will be scrutinised very carefully by the Environment Court to make sure they are efficient, and pass the Newbury tests as to validity (which we come to later).*

37. In *Alexandra*, we therefore see:

    (a) It was realistic to imagine an 'environment' against which to assess the effects of the Clutha Scheme which assumed either that the scheme did not exist, or that it physically existed but was set to 'open' and left unmanaged.

    (b) Rather, the realistic 'environment' was one which reflected the current state of the environment.

    (c) That did mean that all the effects of the activity that contributed to the current state of the environment were deemed to be acceptable.

    (d) Rather, it was open to the decision-maker to consider the extent to which the current state of the environment was a product of the exercise of the previous authorisations, and to determine whether that state of affairs should be allowed to continue, or whether some different controls or conditions were needed.

Application of the case law to the CWPS

38. We consider the CWPS to be more like the Clutha Scheme than the Raetihi scheme when considering the existing environment.[26] The CWPS is broadly analogous to the Clutha Scheme (as in, the existing environment in respect of a long-established and very large-scale hydro scheme). Alexandra is therefore a helpful guide to the Environment Court's thinking as to how it might assess the existing environment in respect of the CWPS, including what that will mean in terms of imposing conditions, particularly for controlled activities.

39. Applying the terminology used by the High Court in *Ngāti Rangi*, we consider it would be both fanciful and unrealistic to assess the existing environment as if the CWPS was not in place and was not operational. This is because:

    (a) It is not feasible to exclude the CWPS and its operation from the existing environment. This is because the environment has adapted to, and been so extensively modified by, the CWPS to such an extent that it is not realistic, nor feasible, to even begin to describe and enumerate the environment prior to the commencement of the CWPS over 50 years[27] ago.

    (b) the CWPS is deeply embedded in the environment, and the physical and hydrological modifications made by large parts of the CWPS are effectively permanent and irreversible. Many of those changes are highly valued additions to the pre-CWPS environment (e.g. the amenity values associated with the artificial lakes Ruataniwha, Benmore, Aviemore and Waitaki and the hydro canals). Their loss would likely require separate resource consents.

    (c) If it were not for the operation of the CWPS over the past 50+ years, these new physical structures and development of the land would not have occurred, communities would not have been created (and grown) and the wider natural, physical and social environment of the area, district and region would not exist in its current form. These matters are, in all practical terms, irreversible.

[25] Ibid at [68].
[26] The CWPS generates 7690GWh per annum, compared to the Raetihi scheme which generates 1.75GWh per annum.
[27] The Waitaki Dam was first commissioned in 1935. Other parts of the CWPS were constructed between 1950 and 1980. The three Ohau stations were the last to be commissioned in the mid-1980s

(d) The existence and use of the dam structures are permitted,[28] and inevitably result in the damming, diversion and discharge of water. Without very significant physical alterations (which would require a large number of resource consents) the impacts on the movement of water will continue and must form part of the existing environment. Neither Meridian Energy nor Genesis Energy intend to apply for the consents that would be required before any major alterations to the structures and the way they impact on water could take place.

(e) The expiring consents for the CWPS do not contemplate the scheme being decommissioned. There are no conditions directed to that outcome, and the expectation implicit in the existing consents is that that the CWPS will continue beyond their expiry. Similarly, there is no expectation in the statutory planning instruments of anything other than the continuation of the CWPS.

40. Our analysis is supported by a further extract from the Environmental and Resource Management Law text (from which the Ngāti Rangi 'test' was first referenced),[29] which specifically refers to the reconsenting of the CWPS as an example of where the *"fanciful or unrealistic"* exception may apply. Paragraph 8.43 provides that:[30]

> *It is not appropriate to consider an historical position and to ignore subsequent changes to the environment which are, in all practical terms, irreversible. For example, it is **unrealistic** to assume that the hydro dams on the Waitaki River will ever be decommissioned and the river referred to its "natural" state without those dams and without the large lakes that have formed behind several of those dams.*

41. In our opinion, the reconsenting of the CWPS also satisfies the importance and significance 'test' in *Alexandra*.

42. If the Clutha Scheme is of immense importance, then the CWPS must be at least as important as that, given the relative energy contributions of the two schemes. The CWPS is a major source of renewable electricity for New Zealand and provides approximately 57% of New Zealand's total hydro-electrical storage and approximately one fifth of New Zealand's total power generation. Its contribution to New Zealand's electricity network is vital and is not substitutable.

43. In the present context, with increasing emphasis on planning for climate change effects and the importance of renewable electricity, all reputable projections are suggesting that New Zealand's electricity demand is going to significantly increase over the next several decades.[31] With no new major hydro-electricity operations planned in the near future, the national importance of the CWPS and other existing renewable schemes can only increase.

44. It is also important to note that it will still be open to the decision-maker to consider the extent to which any additional controls or restrictions may be required via conditions (as provided for in the relevant rules), to mitigate adverse effects of the reconsented activities.

45. As addressed above, the core section 14 water and section 15 discharge activities that comprise the CWPS are controlled activities under both the CLWRP and WAP. Where operative environmental flow and level regimes have been established through the WAP flows and levels are not matters over which control is reserved.

46. Where an allocation to hydro generation has been established, the controlled activity rule in the WAP has the effect of 'locking in' those matters for so long as that rule remains in place.[32] This 'locking in' is a

---

[28] Rule 5.158 of the CLWRP provides, "*The use and maintenance of a lawfully established dam that existed on 1 November 2013 is a permitted activity*".
[29] Referred to above at para 18.
[30] Derek Nolan (ed) *Environmental and resource management law* (online ed, LexisNexis) at [8.43].
[31] Transpower, the Ministry of Business, Innovation and Employment and the Productivity Commission all predict increases in New Zealand's electricity demand between 2018 and 2050. In addition, the National Policy Statement for Renewable Electricity Regeneration recognises the importance of renewable energy in helping New Zealand achieve the government's target of 90% of electricity from renewable sources by 2025, and 100% by 2035.
[32] Rule 15A of the WAP includes as a matter of control "*Any mitigation measures to address adverse effects (including effects on Ngāi Tahu culture, traditions, customary uses and relationships with land and water), except for changes or alterations to environmental flow and level regimes, minimum lake levels, annual allocation to activities, or the provision of flows into the Lower Waitaki River, set by this Plan*".

function of the controlled activity rule and is not a consequence of the way the existing environment is described.

47. Rule 15A in the WAP is clear that the decision-maker has the ability to impose a wide range of conditions that mitigate adverse effects, with the limitation that changes to environmental flows and levels established in the WAP are not permissible. This rule enables the decision-maker to consider additional controls and measures to mitigate any non-fanciful adverse effects of the reconsented activities contemplated by the rule.

[redacted]	[redacted]
Stephen Christensen	**David Allen**
Counsel for Meridian Energy Limited	Counsel for Genesis Energy Limited

Environment Canterbury
Regional Council
Kaunihera Taiao ki Waitaha

Customer Services
P. 03 353 9007 or 0800 324 636

PO Box 345
Christchurch 8140

P. 03 365 3828
F. 03 365 3194
E. ecinfo@ecan.govt.nz

www.ecan.govt.nz

28 February 2020

Meridian Energy Limited
287 to 293 Durham Street
Christchurch 8031
PO Box 2146
Christchurch 8140

Attention Jeff Page Environmental Strategy Manager

By email - Jeff.Page@MeridianEnergy.co.nz

Dear Jeff

Re: Existing environment for reconsenting the Combined Waitaki Power Scheme

Thank you for the memorandum you provided dated 10 December 2019 (the Memorandum) setting out the legal advice obtained on behalf of Meridian Energy Limited and Genesis Energy Limited in relation to the concept of *existing environment* for the reconsenting of the Waitaki Power Scheme.

You requested that Environment Canterbury review that legal advice and confirm whether or not it agrees with the interpretation of the law set out in the opinion.

You had referred in an earlier email of 8 August 2019, to the topic of *existing environment* being a matter of legal submissions before the Environment Court in recent hearings on the Southland Water and Land Regional Plan (pSWLRP). At that time no decision on that matter had been made. An interim decision was later released on 20 December 2019[1].

On 29 January 2020 you provided further advice on the point of whether that interim judgment gave cause to change any aspect of your opinion. Your advice was that the interpretation of the law, as set out in the Memorandum, has not changed as a consequence of interim decision on the pSWLRP. I have reviewed that decision and agree that it does not change the current case law on the issue of *existing environment*.

Response to your opinion
We have considered your opinion on how to interpret the *existing environment* and agree with the application of the law to the reconsenting of the Combined Waitaki Power Scheme as set out in the opinion, in light of the current law and planning regime.

Yours sincerely

[redacted]

Marie Dysart
Solicitor
Environment Canterbury

[1] *Aratiatia Livestock Limited* v *Southland Regional Council* ([2019] NZEncC 208) interim decision ENV -2018-CHC-029.