

From: [Will Nicolson](#)
To: [Tony Jack](#); [Natasha Pritchard](#)
Subject: RE: Pioneer Energy Limited -18.004 - Revised (revised) audit report on amenity values
Date: Tuesday, 21 September 2021 2:57:46 p.m.
Attachments: [Onslow amenity audit screenshots 21-09-2021.docx](#)

Hi both,

Thanks Tony for providing your comments again on the audit. I've very quickly just screen shotted those parts of the audit report that we originally commented on and pasted them into a Word doc, in case that makes them more palatable to your software. May be a double up of info as a result - see attached.

Re: RMA s42. My understanding is that this only provides exclusion of info from public disclosure where it would either cause offence to iwi or is a trade secret/would undermine a party's commercial standing. I don't think we can tick either of these boxes, therefore if s35(5)(g) truly trumps LGOIMA then we won't be able to provide the recreation assessment. That's a shame, but not much more we can do by the sounds of it.

Regards,
Will

-----Original Message-----

From: Tony Jack <tony.jack@pioneerenergy.co.nz>
Sent: Tuesday, 21 September 2021 2:13 PM
To: Natasha Pritchard <natasha.pritchard@orc.govt.nz>; Will Nicolson <will@landpro.co.nz>
Subject: RE: Pioneer Energy Limited -18.004 - Revised (revised) audit report on amenity values

I have requested the report from the Onslow Battery project and expect a response this week.

It is certainly my understanding that for it to be provided there would need to be some assurance that it not be made public.

I do struggle to comprehend how a few 4wds and dirtbikes can be affected by a minor change to the operations of a lake to even warrant being considered. I am pretty shure they are not amphibious

Tony Jack
Development Engineer

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-----Original Message-----

From: Natasha Pritchard <natasha.pritchard@orc.govt.nz>
Sent: Tuesday, 21 September 2021 1:57 PM
To: Tony Jack <tony.jack@pioneerenergy.co.nz>; Will Nicolson <will@landpro.co.nz>
Subject: RE: Pioneer Energy Limited -18.004 - Revised (revised) audit report on amenity values

Hi Tony,

Thank you for the prompt response.

We are seeking to clearly understanding the implications of the proposed change on how the lake behaves recognising the operational levers. We recognise and appreciate this requires a level of technical expertise in this field and our questioning has been to provide clarity on our understanding where we are not experts. We

note that this understanding is one that interested parties and decision makers are also likely to seek. We are hoping to resolve this now so that there can be confidence around the impacts of the change and to enable the effects of the proposed change to be accurately identified and assessed.

I have forwarded your comments onto Dr Booth and I will await her revised report. If you could confirm whether you are likely to seek to have the Recreation report included as part of the application as soon as you are able to that would be appreciated (i.e. whether you will provide some documentation around s42 of the RMA). If such a document were part of the application this would be relevant for Dr Booth to consider before she finalises her audit report.

Kind regards,
Natasha

-----Original Message-----

From: Tony Jack <tony.jack@pioneerenergy.co.nz>

Sent: Tuesday, 21 September 2021 12:08 p.m.

To: Natasha Pritchard <natasha.pritchard@orc.govt.nz>; Will Nicolson <will@landpro.co.nz>

Subject: RE: Pioneer Energy Limited -18.004 - Revised (revised) audit report on amenity values

Hi Natasha

I have made comments on the word document.

I am concerned that there appears that have been a significant amount of time in reviews, correspondence and corrections due to an inability to grasp basic concepts

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-----Original Message-----

From: Natasha Pritchard <natasha.pritchard@orc.govt.nz>

Sent: Tuesday, 21 September 2021 10:36 AM

To: Will Nicolson <will@landpro.co.nz>

Cc: Tony Jack <tony.jack@pioneerenergy.co.nz>

Subject: Pioneer Energy Limited -18.004 - Revised (revised) audit report on amenity values

Hi Will/Tony,

Dr Booth has reviewed your comments on her technical audit. We reiterate that the intent of your review was to confirm our technical understanding of the effects on the operating regime as a result of the proposed change. There were a number of comments that were a little difficult to understand (due to the challenges with marking up a pdf). There were also triangle inserts but no obvious comments in the [Effects of the lake from the proposed change/rate of drop of lake level] section. Are you able to confirm whether there are any comments associated with those inserts? Dr Booth has updated her review based on her further understanding of the proposal and implications that the proposed change will have on the operating regime. She has marked her changes up in red in the attached Word document and added questions in yellow highlights. Are you able to track change any responses so we can have clarity about the applicant's technical understanding of the effects of the proposed change. As noted above and to ensure future clarity for all, your comments are not determinative will be taken into consideration by Dr Booth (along with consideration of all the information we have been provided to date about the proposal). Dr Booth will formalise and finalise her technical opinion on effects based on her audit of the application. This will then be evaluated and considered by myself in my assessment of environmental effects for the s95 report.

In terms of the recreational review document and the ability for it to be publicly excluded if were lodged as part of the application, I have been advised that LGOIMA is subject to any other enactment that authorises or requires official information to be made available. Under s35(5)(g) of the RMA, Council is required to make available "records of all applications for resource consents received by it". However, s42 of the RMA can provide protection of sensitive information. For Council to consider the issue under s42, can you please provide a supporting document that outlines the relevant parts of s42 that apply and provide reasons that support the recreation document being considered sensitive information and publicly excluded in accordance with the provisions in s42 of the RMA.

Let me know if you have any questions regarding the above.

Ka mihi,
Natasha

-----Original Message-----

From: Will Nicolson <will@landpro.co.nz>
Sent: Monday, 20 September 2021 2:57 p.m.
To: Natasha Pritchard <natasha.pritchard@orc.govt.nz>
Subject: RE: Pioneer Energy Limited -18.004 - Revised (revised) audit report on amenity values

Sounds good, thanks for the update Natasha.

-----Original Message-----

From: Natasha Pritchard <natasha.pritchard@orc.govt.nz>
Sent: Monday, 20 September 2021 2:30 PM
To: Will Nicolson <will@landpro.co.nz>
Subject: RE: Pioneer Energy Limited -18.004 - Revised (revised) audit report on amenity values

Hi Will,

A quick note to let you know we are exploring this to see if there is an ability for this report to be lodged and considered in the consent process on a publicly excluded basis. I agree that it would be helpful supporting documentation for the application.

In terms of a more general update, Dr Booth is reviewing your comments on her audit report today and is planning on preparing an updated version that recognises the comments. We have a few clarification questions about some of the comments (which may be a result of the challenges of making track changes on the pdf). I will send it through when I receive it.

I'll hopefully get back to you on the above two points shortly.

Thanks,
Natasha

-----Original Message-----

From: Will Nicolson <will@landpro.co.nz>
Sent: Thursday, 16 September 2021 3:49 p.m.
To: Natasha Pritchard <natasha.pritchard@orc.govt.nz>
Subject: RE: Pioneer Energy Limited -18.004 - Revised (revised) audit report on amenity values

Hi Natasha,

Realise you're away till Monday so no worries if you don't get to this till then. To keep things brief, we may have access to a recently completed recreational assessment at Lake Onslow as part of the battery project. I think that this could supplement what we've already provided on this topic very nicely, however it would only be provided under the condition that it wasn't made public.

Is there a way for us to provide it to you for application assessment purposes without it being accessible via public information request? Section 7(2)(c) of LGOIMA seems relevant in this instance: "protect information

which is subject to an obligation of confidence". There would possibly be some complications on how you could comment on/reference parts of that assessment if it wasn't officially public, however I suspect it would still be beneficial to your assessment.

Thoughts?

Thanks,
Will

-----Original Message-----

From: Will Nicolson
Sent: Wednesday, 15 September 2021 8:49 PM
To: Natasha Pritchard <natasha.pritchard@orc.govt.nz>
Subject: RE: Pioneer Energy Limited -18.004 - Revised (revised) audit report on amenity values

Sounds good, thanks Natasha

-----Original Message-----

From: Natasha Pritchard <natasha.pritchard@orc.govt.nz>
Sent: Wednesday, 15 September 2021 5:41 PM
To: Will Nicolson <will@landpro.co.nz>
Cc: Tony Jack <tony.jack@pioneerenergy.co.nz>
Subject: RE: Pioneer Energy Limited -18.004 - Revised (revised) audit report on amenity values

Hi Will/Tony,

Thank you for the clarification. I have forwarded onto Dr Booth for her consideration.

I have sought advice from my Manager on a timeframe for the legal review and will update you once I hear from her.

Kind regards,
Natasha

-----Original Message-----

From: Will Nicolson <will@landpro.co.nz>
Sent: Wednesday, 15 September 2021 4:59 p.m.
To: Natasha Pritchard <natasha.pritchard@orc.govt.nz>
Cc: Tony Jack <tony.jack@pioneerenergy.co.nz>
Subject: RE: Pioneer Energy Limited -18.004 - Revised (revised) audit report on amenity values

Hi Natasha,

Tony and I have provided some feedback on Section 1.5 and Q5 of the audit report, and a response to one of the auditor's comment on mahika kai gathering assessment in the same report.

Regards,
Will

Will Nicolson
Scientist/Resource Management Planner

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-----Original Message-----

From: Natasha Pritchard <natasha.pritchard@orc.govt.nz>

Sent: Wednesday, 15 September 2021 12:50 PM

To: Tony Jack <tony.jack@pioneerenergy.co.nz>; Will Nicolson <will@landpro.co.nz>

Subject: Pioneer Energy Limited -18.004 - Revised (revised) audit report on amenity values

Hi Will and Tony,

Please find attached the revised recreation audit report from Dr Booth that I have received this morning. Before I finalise my recommendation and send it off for peer review/legal review, I would like to give you the opportunity to review this report and provide any additional information.

I am particularly interested in the applicant confirming the statements at the beginning of the report (section 1.5) as these are the basis for considering the effects. They generally align with my understanding. If these are incorrect or do not accurately reflect the activity and effects, can you please advise. If you can explain the reasons for any corrections that would be helpful.

I note from previous correspondence that you are not proposing to provide any further information relating to the Recreation Report and the effects on the activity of mahika kai gathering prior to a notification decision being made. However, please advise whether you would like to comment/provide more data in relation to the last two points of Q.5.

Kā mihi,
Natasha

Natasha Pritchard
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Details about the proposed change

- The proposed change is to increase the drawdown rate of Lake Onslow from 0.2 m per 7-days to 0.4 m per 7-days (from 1.2 mm/hr to 2.4 mm/hr on average).
- This change is sought by the Applicant to provide more flexibility to react to relatively short periods of high electricity demand.
- The current restriction of lake level drawdown means that at lake levels lower than about 1m below the dam crest the Applicant is unable to take the consented maximum flow. **Flow at a SUSTAINED RATE** lower levels is effectively restricted to much lower rates of take.
- The proposed change will allow more water to be **lower SUSTAINED rate** as the lake level lowers. The current consent effectively restricts the **amount of water that can be released in** late summer. **over a 7 day period in**
- More specifically, the consented maximum discharge from **Total volume** is. The Applicant states that the consented drawdown rate of 0.2 m/week does not allow the maximum take of 6 cumecs to be exercised, restricting the maximum rate of take to approx 3.5 cumecs.
- However, the Applicant states it is unlikely to ever fully utilise the 6 cumecs maximum discharge rate. This is because of other parameters of the operational regime.
- First, that downstream generation infrastructure in the Teviot River has a maximum take of 6 cumecs and there is significant natural inflow (approx. 1/3 of the total Teviot River catchment) between the Onslow dam and the first generation unit at Horseshoe Bend. Therefore, it is unlikely that the full 6 cumecs discharge from Lake Onslow will be fully exercised as this would result in spill at Horseshoe Bend and wasted generation potential.
- Second, that if the higher outflow (6 cumecs) was to be exercised for part of a 7-day period, then a reduced flow may be required for the remainder of that period so as not to exceed the maximum weekly drawdown limit. How this plays out depends upon the volume available at a given depth, with available volume being a function of the lake area and the 7-day limit.
- For this reason, when discussing lake level reduction scenarios associated with outflows from Lake Onslow at various depths (see later), the Applicant refers to maximum average outflows over the 7-day period.
- In summary, the Applicant has stated that while 0.4 m/week is being sought, it is unlikely that this drawdown rate would ever be fully achieved. It is more likely that an increased drawdown rate of around 0.25 m/week (0.05 m above what is currently consented) would be utilised, in order to respond to electricity market demand. **However at very low lake levels the proposed drawdown limit may be approached**

Timing and frequency of use of the proposed change

- The Applicant anticipates utilising the larger drawdown rate in late summer/autumn (March to June). This period typically has low lake levels.
- The Applicant expects to use the greater drawdown rate approximately twice in a 5 year period, although no restrictions on the frequency of use are proposed within the consent.
- There is uncertainty on when the greater drawdown rate will be required because it is a function of market demand and low rainfall years.

Effects on the lake from the proposed change

Lake operating range:

- There is no change to the lake's operating range.
- The Applicant advises that the usual operative range is 2.5 m, with lows (ie. close to 5 m below the crest) experienced about once a decade.
- The lake's minimum operating level remains unchanged at 5 m below the crest of the dam.

Rate of drop of lake level:

- The Applicant states that at the maximum rate of outflow from the dam (6 cumecs), the rate at which the lake level drops will not change – ie. the maximum instantaneous drawdown rate remains the same as at present.
- The length of time that the lake will continue to drop will be longer.
- As explained above, the outflows are calculated as a maximum average outflow over the 7-day period.
- Actual lake levels are therefore masked within the averaging process across the 7-day period. It is feasible that the lake level could drop quickly during an initial release period and then reduce; this is dependent on the interplay of outflow and lake volume.
- As the level of the lake lowers, the speed (rate) of drop increases.
- The rate of drop has been quantified by the Applicant through the use of scenarios which assume no inflow (nil rainfall) and the maximum consented outflow (6 cumecs), ie. they are conservative estimates. For example: when the lake is 2 m below full, the maximum instantaneous drawdown rate (ie. the maximum speed of lake level drop) is 69.6 mm/2.38 mm/hour. At this rate, it would take 5.75 days to lower the lake 0.4 m.
- I note that if the lake level was closer to its consented minimum (5 m below the dam crest), the speed of drop would be faster than the scenario above.

This has been incorrectly quoted

Fluctuations in lake level:

- The Applicant states that the proposed increased drawdown rate does not directly equate to more fluctuations in lake level. It is simply that water could be used more quickly on occasion.
- The lake will still need to be recharged (via rainfall) and this will limit how often the faster drawdown can be applied.

This remains unchanged from the current consent limits

Sustained low lake levels:

- The proposed change may mean that lake levels remain lower for longer than at present if rainfall does not eventuate to refill the lake.

Effects on the shoreline/mudflats from the proposed change

- Exposure of the lake bed as the lake level lowers is dependent on the contour of the terrain. Shallow areas will expose a greater area of lake bed surface, with water receding more quickly, compared with steeper areas.
- Approximately 80 percent of the Lake Onslow shoreline is very shallow so a small change in depth produces a relatively large change in shoreline.
- Much of the southern shore, and a smaller section of the northern shore, is gently sloping and therefore has significant amounts of lake bed exposed as the lake level drops.
- Because the minimum operating level of the lake does not change, the proposed change is not expected to expose any more lakeshore than at present.
- But the lower level lake shoreline may be dry in late summer for longer than at present. This is dependent on rainfall which refills the lake.

Gathering mahika kai	Yes. Clarification of the presence and importance of the activity of gathering mahika kai is warranted.
Visual amenity	No. I consider upon recreational related mahika kai

If it was warranted then it stands to reason that this would have been a requirement from either ORC or iwi as part of the 2005/06 consent replacement process. The mahika kai assessments undertaken as part of that application process still apply to this proposal, particularly given that drawdown does not appear to have been raised as an issue in 2005 as part of a detailed CIA.

Q3	If granted, are there any specific additional conditions that you recommend should be included in the consent or recommended changes to the conditions to be varied and the proposed conditions including in the amendment document?
<p>It is difficult to make recommendations in the absence of an adequate amenity assessment, however two areas appear to warrant examination:</p> <ol style="list-style-type: none"> 1. Provide warnings to users about the risk of lake level drop. I note that signage “to warn the public of safety and navigation risks associated with the lake” is an existing requirement (consent no. 2001.475), which may be considered adequate. 2. Expand the monitoring regime to include key amenity values (I note that the Applicant and AES both identify this opportunity). 	

Q4	Have the aesthetic values associated with Lake Onslow and the Teviot River been appropriately identified and appropriately assessed?
<p>While there has been no technical assessment of visual amenity value, I do not believe this warrants further investigation; this aspect of amenity is likely to be less affected than other amenity values.</p>	

Q5	Have the recreational values and effects on them associated with Lake Onslow and the Teviot River been appropriately identified and appropriately assessed, including effects on public access?
<p>No.</p> <p>Identification of recreation values:</p> <ul style="list-style-type: none"> • Angling on Lake Onslow is of regional significance and, as such, warrants attention. Anglers fish from the whole lake shoreline and all of the lake trolling. All of the lake is considered ‘high use’. • Other recreational activities have limited assessment, albeit their significance appears to be lower. <p>Assessment of effects:</p> <ul style="list-style-type: none"> • From the (incomplete) material provided, I conclude that the most material potential effects upon recreation are related to water-based activities and associated with access, without which recreational activity cannot take place. 	

- I am particularly interested in the Applicant's responses with respect to the short term rate of change of lake level. The short term rate of change will remain the same as under present consent conditions and therefore the risk of boat stranding is unchanged.
- The Applicant addresses this point. The proposed change is therefore, this is the time of the day when lake levels are low. Areas with the potential for the greatest adverse effect from the proposed change are those areas with the potential for the greatest adverse effect from the proposed change.
- I am particularly concerned about boaties being stranded. Given the nature of the terrain, boat stranding could be life threatening and I note it already occurs on the lake. Most anglers use boats.
- The point is made that Lake Onslow already has known shallow spots where care has to be taken at any lake level to avoid running aground on a mud flat. Local knowledge is required to safely navigate the lake at all lake levels at present.
- Also that the boat ramp (the only lake launching site) will remain usable at all lake levels under the proposed change.
- The Applicant states there is no increase in the risk of boat stranding because the rate of drop in lake level is very slow and gradual.
- More specifically, the Applicant has calculated an hourly maximum drawdown rate of 2.38mm/hour (when the lake is 2 m below the crest) and states that this isn't going to strand anybody. Over the course of a fishing day (say 14 hours) the drop would be 33.33 mm.
- Given the greatest potential for impact is when the lake is lowest (ie. lower than 2 m below the crest), the hourly maximum drawdown rate will be larger. Whether that increase is material is not clear: data have not been supplied and local knowledge of the lake may be required to interpret whether it would be significant for boating.
- I conclude that the potential for higher stranding risk appears slight for mid-range lake levels on the basis of the Applicant's figures of lake level drop when the lake is 2 m below the crest of the dam. I remain concerned that at the lowest lake levels, the drop may adversely impact boaties.

Q6 Have the overall amenity values been adequately assessed? Do you concur with the assessment?

- In summary, I find that:
1. The Applicant has not adequately assessed the potential impacts of the proposed change upon those values.
 2. The interim recreation assessment does not adequately assess the potential impacts of the proposed change upon those values.
 3. The amenity values with greatest potential for impact from the proposed change appear to be:
 - a. Angling, because it is the main activity undertaken in the area, is of regional significance, and potential impacts will be most felt by water-based activities.
 - b. Angling access in particular, especially whether there is any increase in the risk of boat stranding. This potential health and safety issue is critical given the risk to life that may result.
 4. At the stated rates of lake level drop provided by the Applicant, I concur with the Applicant that the increase in the risk of boat stranding from the proposed change is minimal for mid-range lake levels (2 m below the crest). However, I cannot assess the risk for the

It must be noted that the average maximum drawdown over the 7 days is theoretically 2.38mm/hr but at 2m below crest the short term drawdown rate is in fact up to 2.87mm, based on an outflow of 6m³/s. Regardless, the short term drawdown is unchanged by the proposed variation as explained in various correspondence and by the auditor in Section 1.5 above. To use the example of 14 hours, the maximum possible drawdown over that period currently is 40.18mm. The proposed variation will not increase that.