

From: [Lindsay Blakie](#)
To: [Cherie Lennon](#)
Cc: [Rick Ramsay](#); [David Sutherland](#)
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited
Date: Friday, 8 December 2023 1:18:40 pm
Attachments: [image001.png](#)
[image017.png](#)
[image018.jpg](#)
[image019.jpg](#)
[image020.jpg](#)
[image021.jpg](#)
[image022.png](#)
[image023.png](#)
[image024.png](#)
[image025.png](#)
[image026.jpg](#)
[image004.jpg](#)
[image006.jpg](#)
[231208 water testing map with water path.png](#)
[image003.jpg](#)

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Hi Cherie

Can you please add these clarifications to your report?

- a. There are 4 locations proposed for water quality sampling (map attached). These are at the proposed intake and down-stream at the Lake Woody Outlet (at headwall of culvert under road – for ease of access, see image 003 attached). MCAS will also sample at two other locations downstream; near the entrance to Peacock Springs at Shipley Drain/Lower Raceway; and, 1.9km downstream at the confluence with the Otukaikino Stream.
- b. When there is low biomass of Salmon in the raceways i.e. <75% the potential DRP level will be low. During this phase sampling of water will be on a fortnight basis. Once the fish start to mature and the stocking reaches 75% of biomass of capacity (i.e. 15 tonne) WQ sampling will be increased to weekly sampling at the four locations. The potential DRP discharged will be calculated via Aquanetics and the Mass Balance system. MCAS will monitor the accumulation of faecal matter and uneaten food in the base of the tanks and adjust the vacuuming cycles to remove build up of material that is the source of DRP at this location. The vacuuming cycle will vary from depending on how many races are in operation and the biomass in each race, but will be at least at a weekly frequency in each race used or cleaned when the depth of material reaches 10mm.
- c. The CO₂ setting in your table below should be set at 15mg/l. Note that at 20mg/l Salmon die and 24mg/L Trout die (international literature) so setting the limit lower than this provides a “cannery in the coalmine” and a buffer for MCAS to act on should there be any issues.
- d. If the WQ levels are exceeded MCAS will assess why the limits are being exceeded and assess how this is to be achieved. A report of the exceedance will be provided to Ecan within 5 working days of an exceedance and the strategy for mitigation provided with the report.
- e. It is noted that MCAS supplies 70% of the 1 million smolt taken onto the MCAS farms in the McKenzie District. So, they can send fish to a number of locations (see condition below) but it may take a few weeks to organise & transport fish to the receiving farms.

Proposed Conditions:

1. Mt Cook Alpine Salmon will test dissolved oxygen and water temperature on a daily basis and once a month will test the concentrations of ammonia, nitrates, CO₂, chlorine, BOD₅, pH and TSS. Results will be provided to Ecan within 10 days of testing. The proposed limits are:
 - a. Ammonia: 0.9mg/L
 - b. Nitrate: 0.7 mg/L
 - c. TSS : 50mg/L
 - d. CO₂ : 15 at 25°C
 - e. Dissolved Oxygen (DO) – 5mg/L (minimum threshold 80% Saturation)
 - f. BOD₅ <2mg/L
 - g. pH between 5-9
2. MCAS will utilise the bore (CRC081610) for the first two raceways stocked.
3. MCAS will utilise both the bore (CRC081610) and the surface take CRCXXXX when additional raceways are stocked.
4. The maximum take from the surface water body is 300L/s and will be monitored and reduced depending on the flow in the stream to ensure the drawdown at the overflow weir next to the intake will be limited to a maximum of 200m of stage depth to maintain a residual flow over the weir to allow fish to pass up or downstream over the weir. Refer to CRCXXXX plan A
5. Surface water taken will be returned to the surface water body approximately 40m downstream of the take. Refer to CRCXXXX plan A
6. Fish screens complying with Schedule 2 will be installed at the proposed inlet in the surface water way. The build-up of vegetation on the screens will be monitored daily and removed as required.
7. Removal of solid waste to be initiated when depth at the outlet of the raceways is 10 mm in depth or at a minimum frequency of 1 cycle per week. Removal will be via pool vacuum and discharge into a banded dewatering bag adjacent to the raceways.
8. Cleaning of raceways and removal of solid waste to be recorded with records available for Ecan inspection.
9. The solid waste dewatering bag will be removed (frequency and timing TBC). The material shall be tested prior to disposal and either be disposed of as clean fill or sent to an approved landfill.
10. MCAS will utilise its Aquanetics programme in conjunction with the Mass Balance equation to monitor DRP discharge from the middle raceway. The WQ sampling will be used to verify the predicted DRP levels.
11. The water quality Monitoring points are shown on CRCXXXX Plan B
12. In the event that WQ testing identifies that a WQ trigger level has been exceeded, MCAS will notify Ecan within 5 working days of the test result. If DRP at confluence exceeds the guideline of .054mg/l MCAS will:
 - a. cease feeding, retest
 - b. prepare a destocking programme to remove smolt from the middle raceways
 - c. Stock to be shifted to any individual Mt Cook salmon farm sites or combination thereof:

Tekapo canal (Tekapo and Lower Tekapo farms Fish Farm Licence FW27) Oahu Canal (brood stock farm FW 129) Oahu B canal (Ruataniwha farm FW 133) Oahu B-C canal (Benmore, Lower Benmore farms FW 071).

Kind Regards

Lindsay Blakie | Partner & Principal Engineer | ☐



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Middle raceway outflow

Lake Woodley outflow

Quarry Entrance

Shipley's drain/Lower raceway outflow

Isaac Construction

McLeans Island Rd

McLeans Island Rd

150m past confluence

Intake
Sampling
Point

This aerial photograph shows a wastewater treatment facility. At the bottom, several rectangular aeration tanks are visible. Red arrows indicate the flow of water: one arrow points down the left side of the tanks, another points up the right side, and a third points right from the bottom left. A long red arrow spans the top of the image, with a yellow box labeled '74m' positioned above it. Two callout boxes with red borders and white text are present: one on the left points to a structure on the far left, and another on the right points to a headwall on the far right. The background consists of green trees and a paved road on the right.

74m

Downstream
Monitoring
Point at
Headwall

From: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Sent: Tuesday, 5 December 2023 8:30 am
To: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Cc: Rick Ramsay <rick.ramsay@alpinesalmon.co.nz>; David Sutherland <david.sutherland@alpinesalmon.co.nz>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Kia ora Lindsay,

I am just pulling together all the information for my Notification Report. Obviously, there have been a few changes while the application has been in process, so I am just wanting to check that I have the correct mitigation proposed.

Mt Cook Alpine Salmon will test dissolved oxygen and water temperature on a daily basis and once a month will test the concentrations of ammonia, nitrates, CO2, chlorine, BOD5, pH and TSS.

Results will be provided to ECan within 10 days of testing.

The proposed limits are:

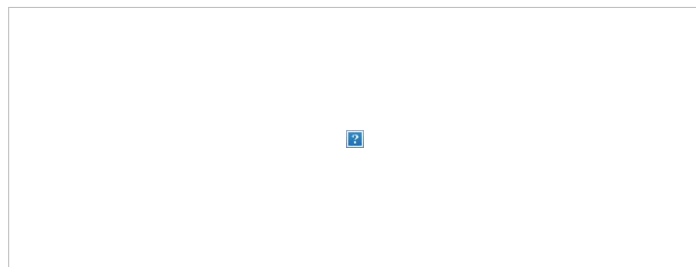
- a. Ammonia: 0.9mg/L
- b. Nitrate: 0.7 mg/L
- c. TSS : 50mg/L
- d. CO2 : **XX** at 25°C – **Could you explain what the XX is?**
- e. Dissolved Oxygen (DO) – 5mg/L (minimum threshold 80% Saturation)
- f. BOD5 <2mg/L
- g. pH between 5-9

Will you monitor for anything else? If so, how often? Noting DRP is missing from above.

What are the actions taken if the above levels are exceeded? I understand MCAS state they will adjust stocking rates, however, is there a cease operation level? Any other mitigation/triggers? *How* will the applicant adjust their stocking rates? I note below you have said “stocking is balancing act and dependant on what is happening in the Tekapo farm, where fish are being moved too, the space available, and the farming strategy at the time” so I’m just wondering how destocking will be achieved if the Tekapo farm doesn’t allow for it? What if there isn’t enough space available?

The Clearwater Waterway Path Report states: “MCAS believes from the results of the study, additional water quality monitoring throughout the waterway rather than having fixed points within the Isaac Quarry should be conducted and is happy for its consent application to be amended accordingly”.

Does this mean you are no longer proposing the following fixed points of monitoring? It’s not clear where, what, and how often the applicant proposes to monitor?



“The races will be cleaned on a weekly basis to remove un-eaten food and other debris that accumulates on the floor of the races. The timing of the cleaning will be staggered so only one race is cleaned per day so as not to overload the dewatering bag, and also logistically there is not sufficient staff on site to clean more than one race per day and complete the other daily tasks”. – S92 response. “The calculations assume that 75% of the faeces that falls on the invert of the races is removed and retained in the dewatering bags. The timing and frequency of the pool vacuuming will be adjusted accordingly to ensure that this is achieved”. – Email 30/11/2023.

How will this be kept track of? I.e., how will the applicant know if they have captured 75%? It was previously stated that logistically only one raceway can be cleaned a day so how can we (CRC) check that the applicant is compliant with the proposed 75% capture condition?

Kind regards,
Cherie.

From: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Sent: Thursday, November 23, 2023 4:18 PM
To: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Cc: Rick Ramsay <rick.ramsay@alpinesalmon.co.nz>; David Sutherland <david.sutherland@alpinesalmon.co.nz>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

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Hi Cherie

MCAS have provided a spreadsheet (attached) that shows the total P discharged (t) as an annual total, weekly totals and daily averages.

The charts show that as the production biomass increases, so does the P discharge. This varies throughout the year.

The Mass Balance is as follows:

P output = (Total feed P + New smolt P) - (Biomass P of harvest/transfers, losses & biomass increase)

The biomass used were taken from the production plans.

This spread sheet calculation covers how often are the fish fed and what quantities. The digestibility and retention percentages were taken from a Cawthron study looking at feed conversion efficiencies for Mt Cook Alpine Salmon fish on Ruataniwha farm.

The calculations assume that 75% of the faeces that falls on the invert of the races is removed and retained in the dewatering bags. The timing and frequency of the pool vacuuming will be adjusted accordingly to ensure that this is achieved.

The biomass in the top farm and the middle raceway will not increase at the same rate or necessarily peak at the same times. Generally the upper farm stocking rate is more constant but the stocking is balancing act and dependant on what is happening in the Tekapo farm, where fish are being moved too, the space available, and the farming strategy at the time.



Kind Regards

Lindsay Blakie | Partner & Principal Engineer | ☐



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From: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Sent: Thursday, 23 November 2023 3:35 pm
To: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Hi Lindsay,

Any update on this one?

Thanks,
Cherie.

From: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Sent: Tuesday, November 21, 2023 9:45 AM
To: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

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Hi Cherie
I will confer with Mt Cook Alpine Salmon and get back to you by tomorrow.

Kind Regards

Lindsay Blakie | Partner & Principal Engineer | ☐



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From: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Sent: Tuesday, 21 November 2023 9:14 am
To: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Hi Lindsay,

Could you please explain the modelling further? The below email does not go into sufficient detail to alleviate concerns enough to warrant a non-notified decision.

Additionally, I haven't been able to get cultural advice for this proposal yet as we are not able to do this until the proposal is in the 'final stages' (i.e., we have finalised where we are landing on this water quality aspect). The cultural advice will provide guidance on whether rūnanga may be considered affected by the proposal (limited notification).

I understand you have previously said that there is a base load at the top farm year round – however, does it have a similar production plan and will increase biomass at similar times?

In the s92 response it said, “a pool vacuum will be used to clean the races and will operate at a rate of 80-150 L/min for up to two hours per day (assuming only one race is cleaned per day)”. It also states the raceways will be cleaned once a week. So, does this mean each raceway is cleaned once per week for two hours? Is that what the modelling has been based on?

- How often are the fish fed and what quantities?
- How much of food has been modelled as captured by the bags?

It would be useful if you could provide the modelling rather than a screenshot – that way our scientists can review it.

To keep it super simple - the meaning of effect includes cumulative effect – and the water quality data provided to us in August shows that the ‘outflow pond’ is consistently sitting above the Schedule 5 DRP limit already. My preliminary response is that the water quality is consistently above the Schedule 5 DRP limit, sometimes significantly – the proposal will result in this increasing further at times = more than minor effect.

Kind regards,
Cherie.

From: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Sent: Monday, November 20, 2023 4:56 PM
To: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

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Hi Cherie
Mt Cook Alpine Salmon have done some more modelling of the DRP (which comes from the fish feed). When taking account of the vacuum of uneaten feed into the geosynthetic dewatering bags they estimate that there will only be a very small qty of DRP discharged and contend the effect will be less than minor effect on the DRP levels in the drain (that they are to take surface water from and discharge to).

This being the case can they still go down the non-notified route?

Kind Regards

Lindsay Blakie | Partner & Principal Engineer | ☐



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From: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Sent: Thursday, 16 November 2023 3:30 pm
To: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Good afternoon Lindsay,

I tried to give you a call but missed you. I'll give you a call on Monday if you could please let me know a time that works for you? I generally work 7:00 am – 3:30 pm.

Kind regards,
Cherie.

From: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Sent: Wednesday, November 8, 2023 3:10 PM
To: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

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Thankyou

Kind Regards

Lindsay Blakie | Partner & Principal Engineer | ☐



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From: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Sent: Wednesday, 8 November 2023 12:43 pm
To: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Hi Lindsay,

They're all quite busy so that's the only time we can manage to get a few of them in a room together. I'll try to get to the bottom of it in the meantime and as a last resort, I will go to the forum on Tuesday.

Kind regards,
Cherie.


From: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Sent: Wednesday, November 8, 2023 10:50 AM
To: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Cc: Rick Ramsay <rick.ramsay@alpinosalmon.co.nz>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

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Hi Cherie

Is it possible for you to raise with them outside of that forum? Only that there are some issues for Mt Cook Alpine Salmon that have made this reasonably urgent to resolve.

Kind Regards

Lindsay Blakie | Partner & Principal Engineer | 



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From: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>

Sent: Wednesday, 8 November 2023 10:44 am

To: Lindsay Blakie <lindsay.blakie@e2environmental.com>

Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Hi Lindsay,

Thanks for your email. I will look into this and get back to you.

As this will have implications for future applications, I think it will be best to get an agreed approach from some principal planners. We have a forum held on Tuesday afternoons for issues such as this where a panel of principal planners will discuss the issue and come up with an approach. Are you happy to wait until then? Unfortunately we just missed this week's one!

I note that the Waimakariri River Regional Plan defines the Otukaikino as:

Otukaikino Creek is the mainstem of the Otukaikino Creek, its tributaries, and groundwater which is hydraulically connected to these surface waters.

Which I think only muddles things further!

Kind regards,

Cherie.

From: Lindsay Blakie <lindsay.blakie@e2environmental.com>

Sent: Tuesday, November 7, 2023 4:31 PM

To: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>

Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

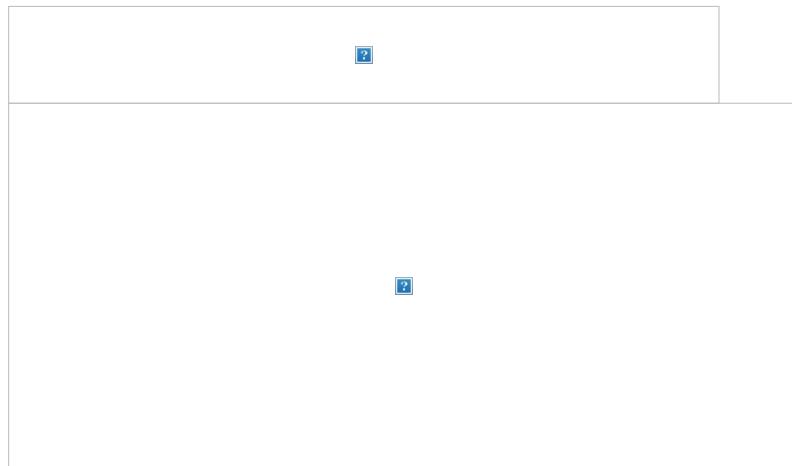
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Hi Cherie

A couple of clarifications before I respond on behalf of the Applicant.

There appears to be a miss-understanding where the Otukaikino becomes defined as a RIVER and I was wondering this might have implications for the assessment /application of the NES FM and LWRP.

Reviewing historic photos the Otukaikino Stream starts approximately 1.9km downstream of the Isaac Construction Offices (as in aerial image 1969). An artificial drain was constructed between 1969-1974 when ICL started quarrying at 22 McArthurs Road to get rid of water during the quarrying operation.




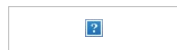
Canterbury Maps 1965-69 Aerial phot (Otukaikino Stream in NE of photo. No stream in this aerial linking head of the Otukaikino and ICL quarry.

I note your comments about the LWRP Schedule 5 limit of 0.016mg/L DRP are almost 3x lower than the NES FM for 95% protection (and this is a more recent national standard for RIVERS). Does ECan have discretion to look at higher limits if from an artificial water course?

Maybe we can chat tomorrow and see if the categorisation of the drains inside of ICWL land and 1.9km downstream as artificial water courses allow any flexibility to the application.

Kind Regards

Lindsay Blakie | Partner & Principal Engineer | 



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From: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Sent: Monday, 11 September 2023 8:06 am
To: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Hi Lindsay,

Thanks for your patience while we worked through the monitoring information you sent through. For context, the Waimakariri River Regional Plan does not specify limits for some of the attributes that we are concerned about (particularly ammoniacal-nitrogen and dissolved reactive phosphorus), therefore, we were looking to the Canterbury Land and Water Regional Plan and the National Policy Statement for Freshwater Management for guidance and direction.

The water quality information from the outflow of the Top Farm suggests that the stream adjacent to the Thompson/Middle Raceways indicates some water quality attributes are being degraded. Current data provided indicates Specifically, inflow water for the newly proposed raceway likely exceeds the Land Water Regional Plan (LWRP) region-wide limit for dissolved reactive phosphorus (DRP). It also sits within NPSFM 2020 Band D which is the most degraded of the water quality attribute states.

While the NPS-FM 2020 does not specify a national bottom line for Dissolved Reactive Phosphorus, it does clearly describe the ecosystem health effects associated with each attribute band (A-D). For Band D (median > 0.018 mg/L and 95th percentile > 0.054 mg/L) it specifies: "Ecological communities impacted by substantial DRP elevation above natural reference conditions. In combination with other conditions favouring eutrophication, DRP enrichment drives excessive primary production and significant changes in macroinvertebrate and fish communities, as taxa sensitive to hypoxia are lost".
The monitoring data provided indicates that the stream would be categorised as Band D.

I note the LWRP can provide an indication of the relevant requirements for the greater Canterbury region, noting this application falls within the WRRP. Schedule 5A receiving water standards specify that DRP concentrations "shall be less than" 0.016 mg/L in spring-fed plains rivers after reasonable mixing. This wording infers that measured maximum concentrations need to comply with this standard. Mixing zones are defined under Schedule 5 of the plan. If such an approach was to be provided in this instance, the inflow water taken for the Thompson Raceway is likely to exceed the standard already therefore, mixing becomes irrelevant. To put this application into perspective with the LWRP, the maximum DRP concentrations as measured at the Top Farm outflow is 0.063 mg/L (almost four times greater than the Schedule 5A receiving water standard).

Given the above, there is already a substantial ecological impact of DRP concentrations occurring in the source stream. The data supplied from the existing Top Farm operation suggests that the newly proposed operation is likely to have an impact by further enriching nutrients (ammoniacal nitrogen and DRP) concentrations in the stream. Given the state of the existing environment, the proposed discharge from the Thompson Raceway would need to have a net zero increase in relation to DRP concentrations in the river, although this seems unlikely given the nature of the activity.

For the likes of ammoniacal- N, Nitrates, TSS, CO2 and dissolved oxygen the monitoring intakes where stated in the NPS these are likely to be above the national bottom line. However, with no modelling provided as to the potential additional discharge monitoring would need to include several monitoring points and relevant limits to ensure there is certainty the stream will not be degraded over time. In addition, actions would be required in the case of any exceedances.

Going forward, it is clear that DRP is of significant concern given the existing state of the stream, therefore:

1. Please Provide information on whether the applicant can achieve a net-zero increase in DRP concentrations in the proposed discharge. Such an assessment would need to clearly outline how this is to be achieved. **OR**
2. Further information as to the state of the stream to further determine the Band status under the NPS-FM 2020. Detailed information again is needed to ensure certainty of the state of the stream.
Noting that if the status remains in the current Band, Option 3 is likely required. Any potential change to the attribute state for the stream will also need to consider the effects of the proposed discharge.
3. If no further information is provided, I will be required to proceed with processing the application, noting that given the above, it is likely that my recommendation would be to publicly notify the application based on the uncertainty of the effects on water quality within the stream.

I will give you a call if you would like to discuss further.

Let me know how you would like to proceed.

Kind regards,
Cherie.

From: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Sent: Wednesday, August 30, 2023 2:10 PM
To: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Subject: FW: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

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Hi Cherie
Has there been any further progress on this? Do you need anything further to complete your assessment?

Kind Regards
Lindsay Blakie | Partner & Principal Engineer | ☐



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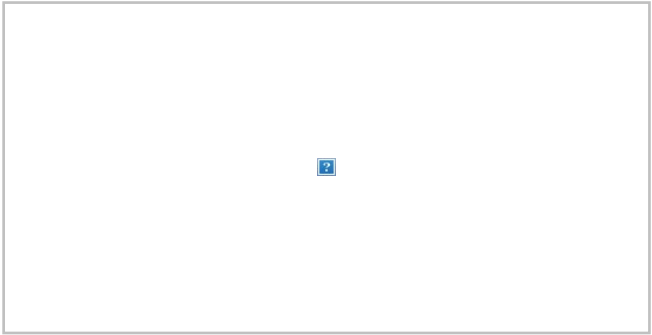
From: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Sent: Tuesday, 22 August 2023 3:30 pm
To: 'Cherie Lennon' <Cherie.Lennon@ecan.govt.nz>
Subject: FW: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Hi Cherie

Responding to your question from last week. Ultimately as mentioned at the site meeting the fish are the "canary in the mine" in terms of WQ. So if they are having an adverse effect on WQ (N&P), it will become self-limiting in terms of growing fish at this location.

The sampling points are (figure below):

- 1 upstream of the upper farm (at Intake Creek) prior to farm,
- 2 after mixing at the outlet of the upper pond,
- 3 at Hatchery Bore not connected to surface water.



Kind Regards
Lindsay Blakie | Partner & Principal Engineer |



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From: David Sutherland <david.sutherland@alpinesalmon.co.nz>
Sent: Wednesday, 16 August 2023 11:29 am
To: Lindsay Blakie (lindsay.blakie@e2environmental.com) <lindsay.blakie@e2environmental.com>
Cc: Rick Ramsay <rick.ramsay@alpinesalmon.co.nz>; Douglas Lee <douglas.lee@alpinesalmon.co.nz>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Hi Lindsay

The units are actually g/m³ but the same as mg/L. Doug had a look at the intake creek water quality data but it just shows that we and the waterfowl are putting all of the N and P. I think all we can do is to compare the water quality in the outflow creek with the intake water at the Middle raceways. It may have already been done in the first application.

I have had a look at the NPS but can't seem to find a table for N and P, but we are well within our BAP requirements.

Cheers
Dave

David Sutherland
Hatchery Manager - Clearwater



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From: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Sent: Tuesday, August 15, 2023 10:12 AM
To: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Cc: Rick Ramsay <rick.ramsay@alpinesalmon.co.nz>; David Sutherland <david.sutherland@alpinesalmon.co.nz>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Kia ora Lindsay,

Thanks so much for sending that information through.

Could you please clarify, the results for the total ammoniacal-nitrogen and average of dissolved reactive phosphorus – that is milligrams per litre, correct? And the testing has been undertaken in a location that has allowed for reasonable mixing after the discharge? Is monitoring undertaken upstream of the take point? Taking into consideration the NPS-FM I am a little concerned with these levels.

Kind regards,
Cherie.

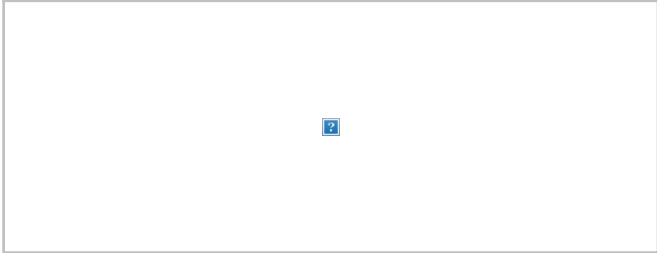
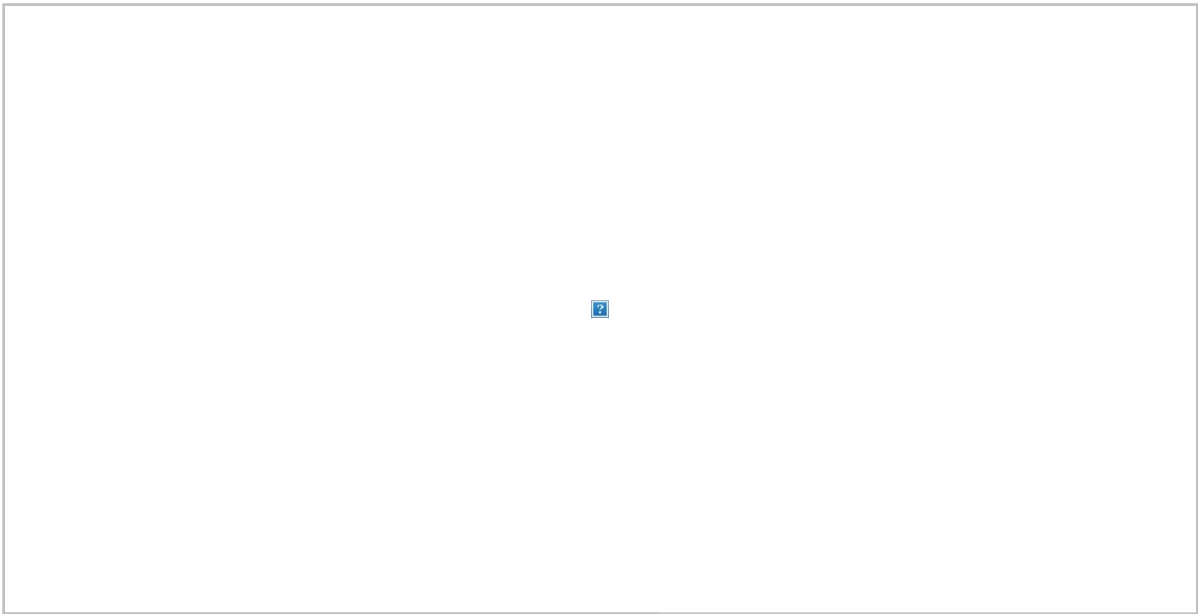
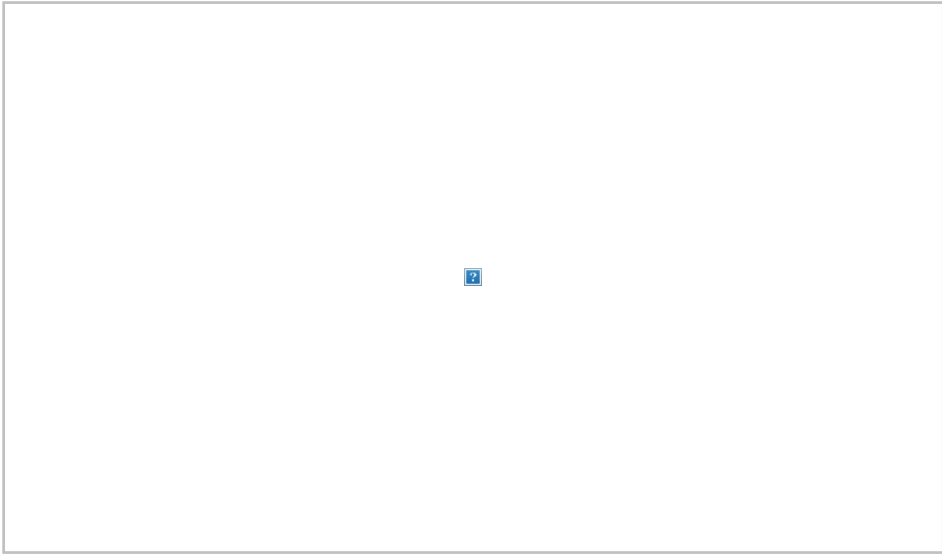
From: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Sent: Wednesday, August 9, 2023 1:56 PM
To: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Cc: Rick Ramsay <rick.ramsay@alpinesalmon.co.nz>; David Sutherland <david.sutherland@alpinesalmon.co.nz>
Subject: FW: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Caution: This is an external email. Please take care when clicking links or opening attachments. When in doubt, contact your IT Department

Hi Cherie
It has taken a while to gather this information but attached is the Environmental Management plan for Mt Cook Alpine Salmon's operation at Harewood.

Also included is Appendix E of the EMP which details the Standard Operation Procedures for Thompson Raceways (aka Middle Raceways).

The team have done some analysis of water temperature and biomass:TN:TP relationship from the operation at the Upper Farm as a reference point for the Thompson Raceway. This average mth record is from 2019 to present and averaged for month at the Upper Farm:



In the table above records the average monthly totals from 2019 in the Upper Farm. The maximum biomass of the upper farm is achieved in mid-winter at around 30-34tonne (depending on water levels). This is rapidly destocked typically in July, when the fish put on their most weight, with 8-9t/wks being transported to the Tekapo Canals. This is why the “average” is recorded at around 27tonne in the table above. Note February has the lowest stocking levels typically between 7-8tonne.

At Thompsons Raceways the qty of bio mass will vary between 2 to max of 20 tonne of biomass across up to 5 races. At the maximum it is approx. half the biomass at the upper farm so the resulting TN/TP will be proportionally less in effects from the new activity.

Kind Regards

Lindsay Blakie | Partner & Principal Engineer | ☐



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From: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Sent: Wednesday, 28 June 2023 9:27 am

To: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Hi Lindsay,

Would the afternoon of Monday 17 work? I'll be bringing a principal consent planner who is providing support for me for this application and he is in a three day hearing from Wed – Friday that week.

From: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Sent: Wednesday, June 28, 2023 9:16 AM
To: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Hi Cherie
The applicant is shifting fish in the mornings (for wk 17-21st July), so only afternoon visits work for them.
How does Wed or Thursday afternoon that week suit?

Kind Regards
Lindsay Blakie | Partner & Principal Engineer | ☐



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From: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Sent: Wednesday, 28 June 2023 8:49 am
To: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Hi Lindsay,

This Friday won't work unfortunately. Would Tuesday 18 July suit? We would have to be back at the office by 11am so meeting at 9am would be preferable if that works?

Thanks,
Cherie.

From: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Sent: Wednesday, June 28, 2023 8:39 AM
To: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Hi Cherie
Next week wont work.
Is it possible to arrange something for this Friday?
The applicant is not available next week (people on leave with school holidays) and I am on leave with the family the following week.

Kind Regards
Lindsay Blakie | Partner & Principal Engineer | ☐



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From: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Sent: Tuesday, 27 June 2023 2:56 pm
To: 'Cherie Lennon' <Cherie.Lennon@ecan.govt.nz>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Hi Cherie
Just working around people's diaries and school holidays. Tentatively next Tuesday at 9-9:30am might work.
Will confirm tomorrow morning.

Kind Regards
Lindsay Blakie | Partner & Principal Engineer | ☐



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From: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Sent: Tuesday, 27 June 2023 1:23 pm
To: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Cc: Rick Ramsay <rick.ramsay@alpinesalmon.co.nz>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

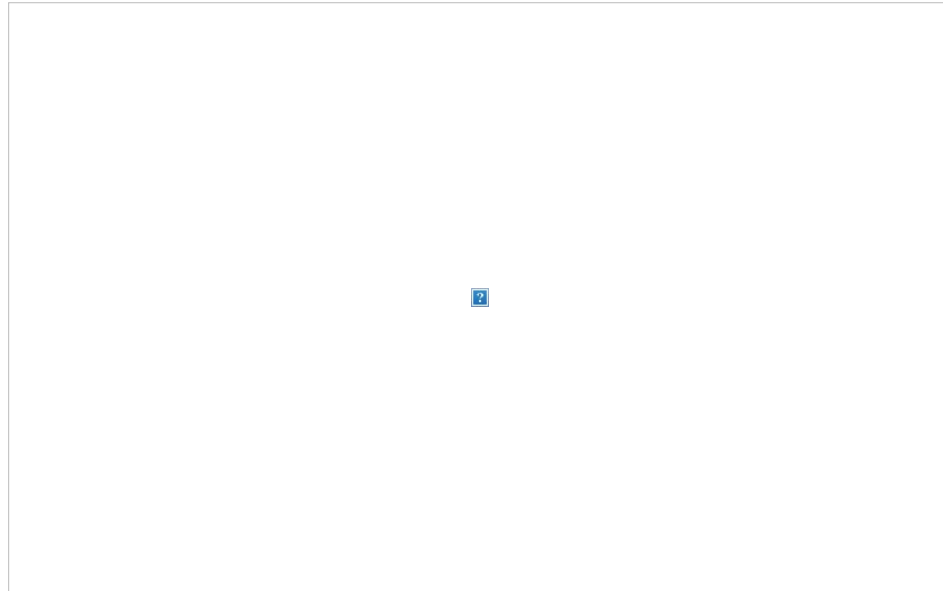
Kia ora Lindsay,

The technical expert thinks that it would be beneficial to come out on site to have a look at the proposal area and to discuss the application? Would this be possible? They are aware that there is urgency for this application and said they could do next week. Would Tuesday or Thursday next week work for you/the applicant?

Thanks,
Cherie.

From: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Sent: Tuesday, June 27, 2023 10:23 AM
To: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Cc: Rick Ramsay <rick.ramsay@alpinesalmon.co.nz>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Hi Cherie
The pumps are in the stream, upstream of the weir and placed normal to the flow.



Kind Regards
Lindsay Blakie | Partner & Principal Engineer | ☐



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From: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Sent: Tuesday, 27 June 2023 9:36 am
To: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Cc: Rick Ramsay <rick.ramsay@alpinesalmon.co.nz>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Kia ora Lindsay,

Would you be able to clarify exactly where and how the pumps and screens are positioned? The technical expert wants to ensure that they are positioned correctly to ensure that fish are not trapped/sucked to the fish screen when the water pump is activated. There is a little confusion as to if they are positioned on the banks or in the stream so some clarification would be useful.

Thanks in advance,
Cherie.

From: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Sent: Monday, June 26, 2023 10:31 AM
To: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Hi Cherie
The applicant agrees to the timeframes but requests that some weight or urgency be applied if possible so that it does not negatively impact their fish rearing operation.

Kind Regards
Lindsay Blakie | Partner & Principal Engineer | ☐



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From: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Sent: Monday, 26 June 2023 8:19 am
To: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Cc: Rick Ramsay <rick.ramsay@alpinesalmon.co.nz>

Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Morena Lindsay

I sent the information you supplied to the scientist who is providing technical comment for this application on 15 June. I've been informed that I will receive a response back tomorrow. Once this comes back I will then be able to lodge a request for cultural advice with Mahaanui Kurataiao Limited (MKT) who provide cultural advice on behalf of Rūnanga.

Would you agree to a s37 timeframe extension beginning the 15th of June to the date I receive a response back from MKT? I estimate this will be approximately 2-3 weeks.

Kind regards,
Cherie.

From: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Sent: Thursday, June 15, 2023 3:09 PM
To: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Cc: Rick Ramsay <rick.ramsay@alpinosalmon.co.nz>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Hi Cherie
Please find attached our response to your questions.

Kind Regards
Lindsay Blakie | Partner & Principal Engineer | 



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From: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Sent: Wednesday, 14 June 2023 2:19 pm
To: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Hi Lindsay,

Yes, that will be fine – thanks for letting me know!

Kind regards,
Cherie.

From: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Sent: Wednesday, June 14, 2023 12:27 PM
To: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Hi Cherie
I am doing the final reviews to our letter but it will not be ready today. Can I please have an extension until tomorrow?

Kind Regards
Lindsay Blakie | Partner & Principal Engineer | 



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From: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Sent: Tuesday, 23 May 2023 9:16 am
To: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Cc: Rick Ramsay <rick.ramsay@alpinosalmon.co.nz>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Kia ora Lindsay,

Apologies for the delay in getting this request for information to you. There's a lot of information to work through so I figured I would send it via email and if you have any questions or need any clarification on any matters feel free to give me a call or flick me an email.

Kind regards,
Cherie.

From: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Sent: Wednesday, May 17, 2023 8:40 AM
To: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Hi Cherie
Thanks – I was going to touch base with you to see how it was progressing.

Kind Regards
Lindsay Blakie | Partner & Principal Engineer | 



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From: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Sent: Wednesday, 17 May 2023 7:28 am
To: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Good morning Lindsay,

I just wanted to touch base and let you know this one hasn't gotten lost – the technical comment is taking a little longer than anticipated, sorry about that!

Thanks,
Cherie.

From: Lindsay Blakie <lindsay.blakie@e2environmental.com>
Sent: Thursday, April 27, 2023 4:25 PM
To: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Cc: Rick Ramsay <rick.ramsay@alpinesalmon.co.nz>
Subject: RE: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Hi Cherie
Can add some timelines to your discussion points below? It would be helpful to Mt Cook Alpine Salmon to understand likely timeframes for the management of the fish stocks.

Kind Regards
Lindsay Blakie | Partner & Principal Engineer | ☐



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From: Cherie Lennon <Cherie.Lennon@ecan.govt.nz>
Sent: Thursday, 27 April 2023 2:04 pm
To: Lindsay.Blakie@e2environmental.com
Subject: CRC233674 and CRC233675 for Isaac Conservation Trustees Limited

Kia ora Lindsay,

I tried to give you a call but missed you.

Just a quick email to say that I have been assigned resource consent applications CRC233674 and CRC233675 for Isaac Conservation Trustees Limited.

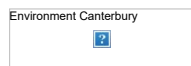
I understand that you have requested that priority be given to this application as Mt Cook Alpine Salmon have started growing fish stock in tanks in preparation of Ecan granting the consent in a timely manner.

Apologies for the delay in the applications being assigned for processing. As stated when the applications were accepted under s88, due to the Consents backlog caused by COVID and other factors there is a delay in assigning consent planners for all applications. I want to clarify that the application will have to go through the usual resource consenting process – i.e., I will need to work through the application to determine a notification recommendation and a substantive decision recommendation. During this process, I will need to consult with our technical experts in-house and also externally with rūnanga. I'm outlining this now to set realistic expectations so that Mt Cook Alpine Salmon can make alternative arrangements if required.

Let me know if you have any questions.

Kind regards,
Cherie.

Cherie Lennon
Consents Planner
Environment Canterbury
Christchurch Office



PO Box 345, Christchurch 8140
Customer Services: 0800 324 636
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Cherie.Lennon@ecan.govt.nz

