15 June 2020

Bathurst Coal Limited
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Wellington 6011

Environment Canterbury Regional Council
Kaunihera Taiao ki Waitaha

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Dear Edwina,

Request for Further Information and additional resource consents

Record Number/s:	CRC184166, CRC200500, CRC201366, CRC201367, CRC201368, CRC203016
Applicant Name:	Bathurst Coal Ltd
Activity Description:	Various consents to undertake mining activities at the Canterbury Coal Mine

Overview

As you are aware, Adele Dawson has been processing your consent application. To assist with auditing your application and respond to information raised by submitters, we are asking for some further information under Section 92(1) of the Resource Management Act 1991 (RMA).

As this is a second request for further information, the time period for responding to this request is not excluded from the statutory timeframe.[1] Options available to you are detailed below under **Response Options**. Please complete one of these options by 6 July 2020.

We need this information so we can clarify and better understand any potential effects from your applications.

Wetlands

1. Dr Philip Grove has identified that approximately 1,700 square metres of seepage wetland habitat has been removed during mine expansion from 2013 and a further 3,800 square metres of seepage wetland impacted by the installation of a track within the MOA (See Attachment One). Whilst it cannot be conclusively proven these areas are seepage wetlands which meet the definition in the CLWRP, based on the aerial imagery, these areas appear extremely similar to those outside of the MOA and those that were identified in the North ELF. It is considered these are more than likely seepage wetlands and consent is necessary in order to authorise their removal.

[1] In accordance with Section 88C(1) of the RMA.

Additionally, the further information response dated 20 December 2019 states that a further 0.25 hectares of seepage wetland will be removed plus 0.25 hectares disturbed.

Based on implementation of the North ELF consent conditions which require offsetting of the seepage wetlands removed, it is considered offsetting of these areas identified in Appendix 1 is not possible. To address the effects of this seepage wetland loss, it is my view that environmental compensation should be considered. This is consistent with the policy direction in the Canterbury Regional Policy Statement.

Is it proposed to provide any form of environmental compensation? If so, the following details are necessary:

a) A description of the environmental compensation package and where it will be located.

b) How the environmental compensation package will ensure there is an environmental net gain?

c) How the environmental compensation will be protected and endure for perpetuity.

Any environmental compensation package should consider the guidance document '*Biodiversity offsetting under the Resource Management Act'.*[2]

2. Ecologist Markus Davis has stated that there appears to be additional wetland areas within the gullies on the south-east side of the mine below the MOA and connected to the Tara Stream wetland (See Attachment Two). Please identify these areas, provide an assessment of the ecological significance of these areas that is consistent with the methodology in the Canterbury Regional Policy Statement and an assessment of the potential adverse effects on these areas as a result of the mining activities from 2012 and future mining.

3. The further information responses dated 20 December 2019 identifies areas of wiwi rushland/seepages that have been mapped based on either aerial photographs or site inspections. The area that has been surveyed is considered to meet the definition of wetland under the CLWRP and includes the raised spring. Given the ecological significance of these areas, is any monitoring of their health proposed during mining activity and following rehabilitation? If so, please describe this monitoring.

4. The further information response dated 20 December 2019 describes that another 0.25 hectares of wiwi rushland is within the pit shell boundary and is likely to be removed by mining operations and a further 0.25 hectares of wiwi rushland that could be disturbed. As this is based on information reported by Boffa Miskell in March 2019, what is the status of these areas now? Please provide a map showing the seepage wetland areas remaining within the MOA.

[2] Maysek, F., Ussher G., Kessels, G., Christensen M., Brown M. 2018. Biodiversity offsetting under the Resource Management Act. A guidance document September 2018. Prepared for the Biodiversity Working Group on behalf of the BioManagers Group.

5. The impacts of the retrospective and continuing activities on habitat fragmentation have not been assessed. Please provide an assessment of any habitat fragmentation effects that may have occurred, or may occur as a result of the removal of seepage wetlands within the MOA or other mining activities, including as a result of hydrological changes.

Tara Stream and Waianiwaniwa River

6. During mining activity water is diverted and stored for treatment and re-use on site in several ponds forming the Tara Gully Water Management System. The effects of this water storage on the Tara Stream (and wider) hydrological regime have not been assessed. The report of Mr Rekker considers permanent changes in the sub-catchment boundaries but not those temporary changes. Environment Canterbury Senior Scientist – Hydrology, Jen Dodson reviewed the information submitted and assessed there may be a reduction in the 7-day Mean Annual Low Flow (MALF7d) of 23.67%. This was based on information provided on-site that discharges from the water treatment system only occur for approximately 10% of the time.

   Please provide:

   a) Further details on the frequency, timing and volume of water discharged from the water treatment system to date and in the future.

   b) Based on the discharges from the treatment system to date and going forward, an assessment of the potential adverse effects on the hydrological regime of the Tara Stream and Waianiwaniwa River.

   c) Using the assessment of potential effects on the hydrological regime of the Tara Stream and Waianiwaniwa River, an assessment of the potential ecological effects of any changes in natural flows.

   d) An assessment of how the proposed discharge quality limits will be achieved, if discharges are intended to occur more frequently than they have been.

   e) Any mitigation proposed to address the potential effects or monitoring to measure the effects.

Coal Combustion Residuals (CCR)

7. Under current consent CRC170540 and as proposed for this consent application, CCR is to be mixed at a ratio of 1:4 with overburden in order to comply with the Class B landfill criteria in the Ministry for the Environment (2004) Module 2 Hazardous Waste Guidelines: Landfill Waste Acceptance Criteria. This was based on the theoretical minimum mixing requirements to achieve these criteria. Annual composite testing of the mixed CCR and overburden is required under CRC170540. Has any testing been undertaken to date and does it show this ratio achieves compliance with the Class B landfill guidelines?

8. Is there evidence whether the placement of CCR is having an adverse or beneficial effect on groundwater/surface water after four years of depositing the material at the site?

9. Does water that infiltrates through the new CCR deposition area eventually enter the surface water treatment systems, i.e will the current monitoring pick up any potential effects? If not, are new monitoring areas proposed?

10. Are any of the proposed water storage ponds located on areas where CCR has been deposited?

Rehabilitation and future land uses

11. The land use consent only relates to works that occurred following the rules in the CLWRP taking legal effect in 2012. It is noted that there is an area of 3.8 hectares of land that was rehabilitated as at August 2012. Can this area be identified in order to exclude it from the consent, or shall the land use consent reflect the entire MOA?

12. It is proposed to return land back to the landowners following rehabilitation in a state which is suitable for either production forestry or pasture grazing. Capping of the CCR and acid forming rock with overburden and topsoil is proposed. Given the nature of production forestry activities, including the use of heavy machinery and disturbance caused by tree roots, please explain how CCR and acid forming rock will be prevented from being exposed during future land use activities and adversely affecting water quality?

Water treatment system

13. The discharge application AEE dated 23.09.2019 provides details of the Tara Gully Water Treatment system, including the capacity of the different ponds on site. The capacity of the Oyster Pond is not stated. Please provide information on the capacity of the Oyster Pond and an assessment against Rule 5.154 of the CLWRP.

14. Based on the total volume storage provided on site, what sized storm event can be accommodated by the Tara Gully Water Treatment system?

15. Please describe how extreme rainfall events will be managed, for example what operational management actions will be taken and where will secondary flow paths be provided?

16. The storage of water has been assessed under Rule 5.154 of the CLWRP. In order to complete the assessment against this rule, please confirm if the design and construction of the storage ponds have been certified by a Recognised Engineer.

Slope stability

17. During active mining and following rehabilitation will Environment Canterbury be notified of any slope failure or stockpile failure? If so, what failures will be reported, when will Environment Canterbury be informed and what information will be reported?

Dust Mitigation

18. Water is taken from the storage ponds on site and used for dust suppression. Environment Canterbury is of the view the taking and use of this water is not permitted under the CLWRP. In the event that the requested 600m^3/day of water for dust suppression is not granted, are there alternative sources of water available to meet this demand or other measures could be used to manage dust generation on site?

19. The application lodged 23 September 2019 for the take of water states that 600m^3/day of water is required for dust suppression based on the maximum number of water tanker loads that could be achieved. It is not clear whether this volume of water is sufficient to achieve adequate dust suppression. Please provide further details regarding the demand for water considering the area of disturbed land, rainfall, evapotranspiration and the effects of climate change on these climatic factors.

Cultural Impact Assessment

20. The Cultural Impact Assessment lists a number of recommendations from Te Taumutu Rūnanga and Te Ngai Tuahuriri Rūnanga. Please provide detail regarding which recommendations from the CIA will be adopted.

Water quality and ecology

21. As previously requested, it would be useful to have a single map identifying all surface water bodies and other surface water features such as artificial drains and ponds, wetlands, springs and seeps in accordance with the definitions in the CLWRP. The map should include where possible the water quality classification management unit where mapped on the CLWRP Planning Maps. Please also identify any water features that may have been removed and their previous location.

22. Has additional sampling been completed at water quality monitoring points CC03 and CC09 other than results recorded in Table 4 of the Application for consent to discharge treated mine water into Tara Stream; and to take, use and divert surface water and groundwater. If so, please provide the full monitoring record for these locations.

23. Please consider the use of the acid mine drainage index for invertebrates (AMDI) described by Gray & Harding (2012) and referenced in the Water Ways Consulting Ltd report in the application. If it is decided not to apply the index, please explain why.

24. Is it proposed to undertake any ongoing monitoring of aquatic ecology to assess and monitor the effects of the mining activities? If so, please provide a description.

25. The current consent CRC170541 and the CLWRP apply a mixing zone to contaminants listed in Schedule 5. Please describe how monitoring of the discharge occurs in accordance with the mixing zone requirements (20m in times of flow in the Tara Stream and 0m when there is no flow).

26. The current discharge application acknowledges the area downstream of the site as significant habitat for indigenous biodiversity due to the presence of Canterbury Mudfish/Kōwaro and the assessment of effects relies on the conditions of the existing consent, CRC170541 to avoid, remedy or mitigate effects. The existing consent provides a number of water quality trigger limits and the ability to amend these limits, which has been informed by water quality and limited ecology investigations completed several years ago.

    To ensure a comprehensive assessment of potential biodiversity impacts, please confirm how the existing consents will manage the potential effects on downstream ecology, particularly the Canterbury Mudfish/ Kōwaro and how the information used to inform those existing consents is relevant to the current and proposed mining activities.

Your options and response requirements

The options available to you are set in Section 92A(1) of the RMA. You must choose one of the following options.

A. *Supply the requested information* by 6 July 2020.

    If the information can be easily collated and supplied by this date, please provide it in writing (via email is fine) to Adele Dawson.

B. *Agree in a written notice* by 6 July 2020 to supply the information requested.

    Sometimes technical information will take some time to collate or key contacts may not be immediately available. If you need a longer period of time to supply the information requested, please contact Adele Dawson to advise a reasonable timeframe within which you can provide the information. You can do this via email or letter.

C. *Refuse in a written notice* by 6 July 2020 to supply the requested information.

If you chose not to respond to this letter, then the process for Option C. applies.

If you would like to discuss this request in more detail, please don't hesitate to contact Adele Dawson at adele@incite.co.nz or 027 861 8846.

Yours sincerely,

Jocelyne Allen
Consents Planning Team Leader

Attachment One: Dr Philip Grove's assessment of wetland/seepage removal

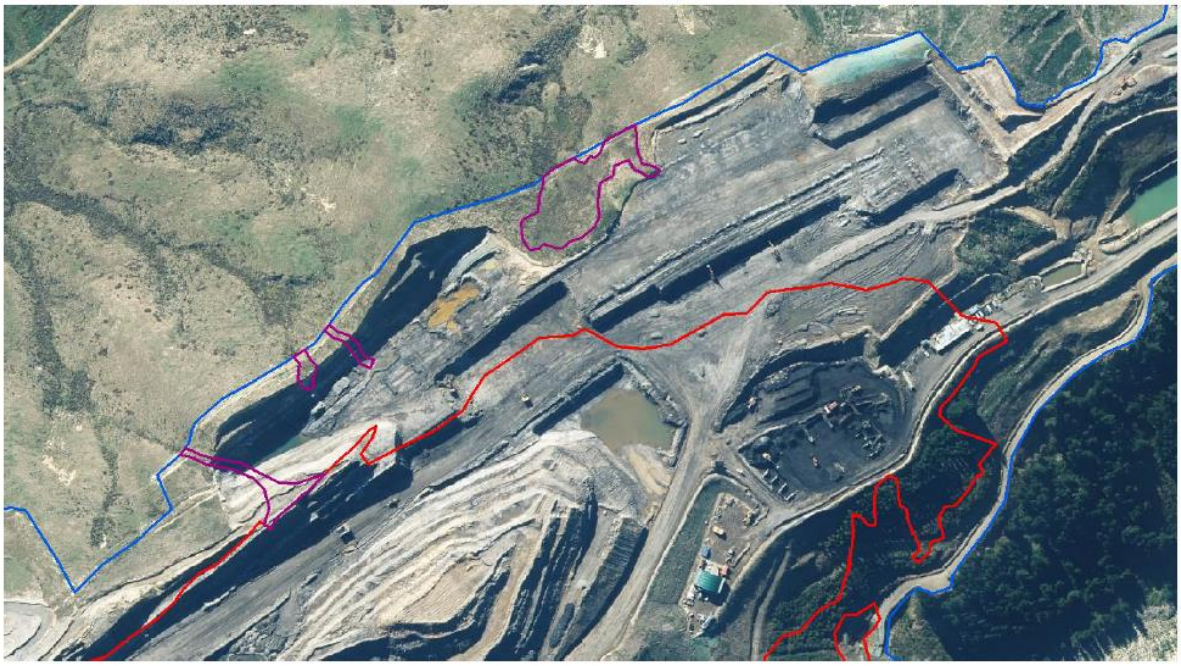

Figure 1: Gully seepage wetlands removed

Excerpt from Dr Grove's memo for notification

I am concerned that, as discussed by Mr Davis in his report, recent aerial photographs and satellite images indicate that some wetland habitats and vegetation within the proposed MOA have already been disturbed/removed. I have looked at aerial imagery of the mine operating area in 2013 and 2019 which show its expansion over that period. Wetlands on hillslopes NW of the 2013 mine area have been impacted (additional to those impacted by construction of the North ELF). From this aerial imagery I estimate that about 1700 square metres of seepage wetland habitat have been removed by mine expansion. Another approximately 3800 square metres of seepage wetland, while still present, appear to have been impacted by recent track installation.

Figure 1 attached is a 2019 aerial photo showing the mine operating area at that time (blue outline), the mine operating area as it was in 2013 (red outline) and 'NW hillslope' seepage wetland areas (purple lines) that have been removed (west three) or otherwise impacted by mine activities (track and fence construction by the looks). Figure 1 indicates that the top end of several gully seepage wetlands have potentially already been affected. It is noted that this is just a desktop assessment based on the aerial imagery but is information the applicant was requested to provide and did not.

Attachment Two: Potential wetlands identified in the south-east gullies

Lower Tara 1

- Boffa's vegetation map shows this to be Himalayan honeysuckle scrub? I think this may be incorrect, and its also very likely to be a wetland area referred to in the Water Ways Tara Stream ecological report (Water Ways Consulting Ltd. 2016b).
- It is possible that there may be other smaller wetland extensions off the north side of Tara wetland between Lower Tara 1 and Mid Tara 2, but they would be pretty small and any presence would be masked by the pine trees or their shadows.

Mid Tara 2

- There appears to be some wetland vegetation at this point. If correct, it is unknown about any continuation downstream due to the cover or shading from pine trees. There appear to be a possible stream channel at the junction with Tara wetland. Boffa's vegetation map shows this to be Himalayan honeysuckle scrub.

Upper Tara 3

- This is small wetland extension adjoining Tara wetland. It has been identified in Boffa's map, but it is unclear how far to the north it may extend. The vegetation map shows it merging with Himalayan honeysuckle scrub to the north.

Upper Tara 4

- This wetland has been identified in Boffa's map, but it is unclear how far north it extends into their mapped Himalayan honeysuckle scrub. This wetland is very close to the blue line.

Upper Tara 5

- This wetland has now been identified on Boffa's vegetation map.

Upper Oyster Gully wetland

- This appears to be an isolated area of wetland vegetation, surrounded by what Boffa's have mapped as Himalayan honeysuckle scrub?


Untitled Map
Potential Tara Gully wetlands
Legend
Peat bog location
Upper Tara
Mid Tara 2
Upper Tara 3
Upper Tara 4
Upper Tara 5
Lower Tara 1
Google Earth
Image © 2020 CNES / Airbus
©2020 Google
N
200 m


Upper Oyster Gully wetland
Write a description for your map.
Legend
Peat bog location
Upper Oyster Gully wetland
Upper Oyster Gully wetland
Google Earth
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