



13 December 2018

Bathurst Coal Ltd
c/- Landpro Ltd
PO Box 302
CROMWELL 9342

Attention: Kathryn Hooper (via email: kathryn@landpro.co.nz)

Dear Kathryn,

RC185622/RC185640 – CANTERBURY COAL MINE EXPANSION

Please be advised that this application to the Selwyn District Council has been forwarded to an independent planning consultant for processing; Bellbird Consulting Group Ltd.

I will be assessing the application with respect to planning matters, with input from a number of other consultant experts, as follows:

- Nick Fuller (Novo Group)
- Kirsas Webb (Underground Overground Archaeology)
- Jeremy Trevathan (Acoustic Engineering Services)
- Graham Densem (Landscape Architect)
- Markus Davis (Ecologist)
- Andrew Read (Pedersen Read)

We have reviewed the application and, pursuant to s.92 of the Resource Management Act and on behalf of Selwyn District Council as consenting authority, we request the following further information in order to enable assessment of effects, determination of affected parties and preparation of a notification report. (The issues are roughly grouped under topic headings, but some points may cross over and impact on other topics also.)

TRANSPORT

1. With respect to the sealing of the roads, the Commissioner will be required to make a decision on notification in relation to a specific proposal, including any mitigation incorporated into that application. The application variously discusses the road being sealed and being left as it is currently, and indicates "*should the SDC choose to seal the Preferred Route (with funding from the applicant)*" or "*if SDC chooses to seal the Preferred Route*" in places. To be clear, it has been confirmed by Mark Chamberlain (SDC Team Leader, Transportation) that 'SDC as Road Controlling Authority' will not be sealing the road of its own volition, but, in principle, it does not oppose sealing by the applicant or sealing by SDC at the applicant's request and expense.

Therefore, please confirm if this application proposes that the Preferred Route (Bush Gully and Malvern Hills Roads) is sealed or if it proposes that the roads remain as they are currently. (Please note that if neither is confirmed, it would have to be assumed that the roads will remain as they are for the purposes of notification.)

2. If the road is proposed to be sealed by this application, please provide the details of the sealing/road formation proposed. Please also clarify the speed limits proposed and the “*post-intervention road safety audit process*” referred to on p. 15 of the Abley report. Please also provide the new Site Access Protocol.

It is also noted that the application proposes a cap on funding (yet to be provided as per Footnote 3 of the application) and seeks to essentially contract the Road Controlling Authority arm of the Council to a one year timeframe for sealing the road through this consent, if granted; however, it is not considered appropriate to address those matters through resource consent conditions.

If granted, the consent would likely indicate that the road was to be sealed or left unsealed. Any arrangements with the Council as Road Controlling Authority which were required in order for the applicant to give effect to its conditions of consent would need to be agreed through a separate and independent agreement, and this has been confirmed with Mark Chamberlain. This would also apply to the proposed condition seeking that SDC complete “*tree trimming and other improvements*” on the roadside, with the applicant reimbursing the Council (noting that ongoing maintenance would also need to be built into such an agreement).

Please contact Mr Chamberlain to discuss the details of this separate agreement.

3. If the road is to be left as it is currently, the application proposes (as conditions of consent) the use of a water cart along Bush Gully Road, and 100m either side of dwellings within 50m of the Preferred Route only (on Bush Gully and Malvern Hills Roads), and preparation of a Dust Management Plan to be agreed with SDC as Road Controlling Authority at a later date.

To enable SDC as consenting authority, any affected parties and the Commissioner to consider the mitigation proposed, please provide details of the proposed programme and protocol proposed for dust suppression (including details of product, application rate and frequency of application). This will form a basis for assessment and will not preclude the consideration of the suitability of an adaptive process from that base level. It is noted that this aspect would also require incorporation into the separate agreement with SDC as Road Controlling Authority.

4. The Abley traffic report (and its “*worst-case scenario*”) appears to rely on assessment of the increase in effects from an “*operational baseline*” (which includes unconsented movements) up to the proposed number of movements. It is not clear if the traffic expert was aware of the number of movements currently permitted under the consented baseline. Given that the operational baseline is unconsented, please provide assessment from Abley identifying the increase in numbers proposed by this application and the effects of those increases when compared to the consented baseline and not the unconsented operational baseline, including whether any conclusions reached differ as a result. The consented baseline provided by the previous applications is as follows (at this point, it is understood that on-site processing is proposed):

Heavy vehicle movements	<p>For on-site processing, six vehicle movements per day, and a peak level of 12 movements per day for limited periods of the year.</p> <p>For off-site processing, a maximum of 54 movements per day over a 2-3 day period every 2-3 weeks (with little or no mine truck traffic in the intervening times) and an average of six truck movements each day with a peak level of 12 movements per day for limited periods of the year.</p>	R303578
Other vehicle movements	Other vehicle movements are limited to service vehicles and those used to transport workers (10 consented)	R303578 and RC135632

5. Please clarify what the “water cart” vehicle is – is it a heavy vehicle?
6. The discussion at the bottom of p. 19 of the Abley report states that the sight lines looking east at SH77 are obstructed by the line of trees, and recommends that these trees are pruned by NZTA to improve visibility at the intersection. Please clarify the level of effect if the trees are not pruned and explain whether consultation by the applicant with NZTA has been undertaken/is required.
7. There may be a ‘technical non-compliance’ where the mine access meets Bush Gully Road - Rule 4.5.1.3 - Sight Distance Requirement. Whilst not of significant concern, please briefly comment confirming compliance or otherwise.
8. Proposed Condition 8(d) refers to a traffic management plan. Please provide the traffic management plan, or, as a minimum, please provide a template report or a proposed condition setting out the key elements to be included in the proposed traffic management plan.
9. Proposed Condition 10 seeks that the consent holder be permitted to erect permanent signage warning motorists of the likely presence of heavy vehicles (at the consent holder’s cost), with the size, wording and location being agreed with SDC.

To enable SDC as consenting authority, any affected parties and the Commissioner to consider the effects of the signage, please provide details of the signage proposed other than that already proposed by Appendix B of the Abley report. If this condition is referring to a sign similar to that on p. 18 of the Abley report, please provide the details of the location/size/design of the sign for consideration.

ARCHAEOLOGICAL AND CULTURAL

10. With respect to the archaeological assessment provided with the application, it is considered that further explanation of the archaeological values is required in order to the understand the significance of effect. Please provide evaluation of the significance of the impacts upon archaeological values, using an appropriate scale to adequately describe the significance of the effects on archaeological values.

11. Please provide further details with respect to mitigation. It is noted that section 11.1 states:

“Where it is not possible to avoid adverse effects on archaeological values, an archaeological authority issued under the provisions of the HNZPT Act provides a means of controlling those adverse effects and creating an informational record of a site in accordance with archaeological best practice.”

In the case of a resource consent application, it may be possible to avoid adverse effects if they were considered to be of a significance level that necessitated avoidance. If a proposal did not warrant avoidance, then mitigation might be considered appropriate; however, applying for an archaeological authority is not considered to be a form of mitigation for the destruction of an archaeological site/s; the authority being a separate legal requirement. The types of mitigation that might be considered appropriate could include recording, avoiding, preserving, restoring, information dissemination, education, off-site preservation, etc.

The assessment (section 11.1) recommends that many archaeological features will not require recording prior to being destroyed but that significant features may require some form of recording; however, the level of significance or a method for how the significance of a site might be determined has not been identified.

In conclusion, please provide details of the mitigation proposed. For the avoidance of doubt, if an Archaeological Management Plan is considered an appropriate method of managing mitigation for the effects of this activity, please provide that plan for consideration at this point.

12. Consultation is required with Te Taumutu Rūnanga and Tuahuriri Rūnanga. I understand that Mahaanui Kurataiao Ltd (“MKT”) has been tasked with managing the consultation process for both Runanga with respect to this application. For your information, the relevant contact details are:

*Brad Thomson
Mahaanui Kurataiao Ltd
PO Box 3246, Christchurch
Phone: 03 974 0363
Mobile: 021 485 132
Email: Brad.Thomson@ngaitahu.iwi.nz*

13. Once the consultation has been completed, please provide:
- a. a summary of the results of that consultation,
 - b. a statement of cultural values from MKT, and
 - c. written confirmation from MKT (on behalf of both Runanga) as to whether or not a cultural impact assessment (“CIA”) is required. If a CIA from MKT is required, please provide a copy of that CIA.

LIGHTING

14. The application (p.89) seeks to address lighting effects later through a lighting section in the Environmental Management Plan, and seeks to use UK Guidance Notes with respect to luminaire angle. The RC175261 application was silent as to lighting, no lighting was assessed by the Council and the Council cannot consent parts of an activity as a whole that

are not identified or applied for. Given the scale of this activity (and the potential implications of the up to 70 degree angle proposed), a lighting design and lighting assessment of effects is required from a suitably qualified expert/s. This is to include but is not limited to:

- a. A lighting design that confirms all fixed and mobile lighting proposed,
- b. If mobile, please advise/illustrate the location and maximum area of the site to be lit at any one time,
- c. Maximum number and height of all poles/lights within the specified area,
- d. Details of the luminaires proposed,
- e. Details of luminaire aiming and orientation,
- f. Confirmation of days and times of use of the various types of lighting,
- g. Assessment of effects with respect to light spill, glare, night glow and sky glow (including with respect to vehicle lighting¹), and
- h. Night-time perspective views/photographs of the mine in operation (as per current or to the maximum level proposed if possible) from the potentially most affected neighbouring properties, and from the townships of Whitecliffs, Coalgate, Glentunnel and Darfield. Please specify all lighting parameters operational at that time.

SCALE OF ACTIVITY

15. It has been assumed that the full extent of mining works/excavation undertaken to date between the 'green and blue lines' of Figure 16 of the application are shown on the aerial photograph in that Figure 16. Please confirm whether this is correct or if additional work has been undertaken; if so, please indicate where or perhaps advise which aerial/figure in the application shows the full extent most clearly.

16. Section 4.1.1 states:

"The location of pits will be generally as shown in Figure 2 as they are necessarily centred on identified coal seams. While the models used to estimate the pit shells are based on the latest information, they are only models and if the actual geology is different to that modelled, the mine shells may shift. The outer boundaries of the pit shells may therefore shift to reflect the coal seams and/or geology encountered and to ensure the work can occur safely, but will remain inside the Mine Operations Area."

Can the mine shells be given a maximum outer extent, or perhaps a (+/- x metres) limit, or should all assessment assume pits approaching the 'blue line' on Figure 2?

17. The application states (p. 9): "Annual production is expected to increase to 185,000 tonnes (with a 10% tolerance), measured as a 12 month rolling average for consent purposes...".

Proposed condition 2 states: "The Consent Holder shall be permitted to extract up to a maximum of 185,000 (with a tolerance of 10%) tonnes of coal per annum calculated on a 12 month rolling average. The Consent Holder shall record monthly measurements of coal won to within an accuracy of 10%."

¹ For the avoidance of doubt, any effects resulting from vehicle lighting (including headlights/flashing lights) are to be assessed. (It is noted that the first exemption of Rule 9.18 does not apply, as this night-time activity is not considered to be harvesting or a seasonal outdoor activity.)

Please provide further clarification of the 12 month rolling average calculation proposed by this application. It is understood that a 12 month rolling average is usually a way of working out monthly averages over multiple consecutive 12 month periods for the purposes of providing monthly figures. However, this application proposes a yearly total, i.e. 185,000 tonnes per year (+/- 10%). The application also proposes to provide that yearly figure in the Annual Work Programme as a condition of consent. Therefore, the rolling monthly average reference is not understood.

In discussions pre-application, the Road Metals consent was referenced and potentially this application seeks to use a similar mechanism. The relevant part of that Road Metals condition stated:

The quantity of aggregate excavated on the site shall not exceed 160,000 cubic metres, based on a rolling 12 month period. The consent holder shall demonstrate compliance via the recording of monthly measurements of the total quantity of gravel, sand and other natural material excavated to within an accuracy of 10%...

Therefore, there was no averaging of the monthly measurements, but a 10% tolerance over a rolling 12 month period was provided for.

In any event, an alternative to that type of Road Metals condition, i.e. an averaging of the months over the year, would not be considered useful for this proposal given the significant variance between the summer and winter months, and a maximum tonnage per year is required. Please clarify the intent of the 'rolling average' calculations. Or is it simply proposed that 185,000 (+/- 10%) tonnes of coal be extracted per year?

Please advise any implications of any alternative proposed calculation method for the maximum heavy vehicle movements.

18. As discussed pre-application, the parameters that will define the scale and intensity of the activity will essentially be the extent of the mine, the amount of coal extracted, the number of vehicle movements, the number of staff, shifts and hours of operation.

The application does not wish to specify a maximum pit depth and that is accepted, given the other parameters and legislation that will influence this depth.

The amount of equipment to be operated is relevant, and this is discussed further below under the 'NOISE, VIBRATION AND DISTURBANCE' heading.

The maximum number of staff engaged to work at the mine site is also relevant to the scale of the activity, particularly in relation to the amount of equipment that can be operated, the level of 'activity' on-site and the number of light vehicle movements provided for. It is understood that the earthworks applied for only cater for around the next two years of mining operation; therefore, maximum staffing numbers for those next two years are what is sought.

The application text mentions 51 FTE and 55 FTE. Table 5 of the application states that there will be an additional 45 staff, i.e. a total of 55 staff, and that the proposal involves increasing the FTE's on the site to 51. The written approvals state that "*the number of staff may fluctuate between 50 and 60 people and at times there may be more people on site (e.g. visitors).*" As discussed pre-application, maximums were sought for:

- *The number of staff sought by this application.*
- *The number of people (staff/contractors/consultants) working on-site at any one time sought by this application.*

However, the more important parameter in understanding the scale of the activity is the second one now that the shifts have been clarified, i.e. the maximum number of workers on-site at any one time.² Perhaps the inclusion of “*contractors/ consultants*” in the prior discussions confused matters. To clarify, we are interested in the number of people engaged by Bathurst to work on-site at the mine on a regular basis in association with this mining activity (whether employees, contractors or consultants) – and now referred to as ‘workers’ in this letter – and not one-off or infrequent visitors, e.g. other employees of Bathurst Resources, contractors or consultants. These would be considered additional people on-site, as explained in the application.

The written approvals usefully set a maximum of 60 people for the total number of workers on-site at any one time; therefore, this is accepted as the day-time maximum proposed.

In relation to night-time, the application (p. 31) states that there are “*8-12 people usually manning night shift during the peak production months.*” But it also states that staff numbers will change during a year.

Therefore, it is requested that a maximum number of workers on-site at any one time be provided for night-time hours.

NOISE, VIBRATION AND DISTURBANCE

19. In relation to vehicle movements, the Marshall Day Acoustics (“MDA”) report appears to rely on assessment of an increase in effects from 40 truck movements per day up to 54 movements a day.

The Executive Summary states:

“We note that trucks from the mine already use this road (up to 40 road truck movements per day). The proposed increase to 54 truck movements over the course of the day will be similar to the environment already established.”

The top of page 13 states:

“We note that the number of road truck movements proposed is to increase from 40 to 54 movements per day.

Our predicted noise levels are provided in Table 8 are based on our measurements of road trucks traversing the gravel roads (Bush Gully Road and Malvern Hills Road only) during our mine visit, and account for the additional 14 movements per day.”

It is noted that the “operational baseline” provided by the Abley report would result in an average of 20 movements per day over six days, and not the 40 considered by MDA. However, in any event, comparison with that which is consented is necessary, and not unconsented activity. It is noted that the ‘best case scenario’ for the increase in peak heavy vehicle movements from the consented baseline of 12 would be an additional 42 movements per day, and not the 14 quoted above. It is not clear if the acoustic expert was aware of the number of movements currently permitted under the consented baseline, but a summary is included in point 4 above for their information.

² In relation to pre-application concerns raised by the applicant, please be assured that this request does not result in an issue of inconsistency of administration; the Road Metals consent referred to included a limit on employee numbers. In that case, Condition 1 required that the proposal be carried out in accordance with the information and details submitted with the application and those details anticipated up to 10 full-time employees on the site. This request is considered consistent with SDC administration and best practice.

Given that the operational baseline is unconsented, please provide assessment from MDA with respect to the increase in numbers proposed by this application and the effects of those increases when compared to the consented baseline and not the unconsented operational baseline, including whether any conclusions reached differ as a result.

20. It is noted that the ambient noise level measurements described in section 3 of the MDA report were undertaken between 2157 and 2320 hours. The majority of the noise sources noted in the 'comments' section of Table 2 may be reduced even later at night. The majority of the feedback SDC has received from the community regarding noise from the mine also relates to periods even later at night. Please provide further measurements relating to ambient noise levels from midnight to 0400 hours.
21. The mining fleet list provided in the MDA report does not match that listed in Table 1 (p.12) of the application, with Table 1 including additional equipment. The Table also states that "[t]he mining fleet may change depending on production and operational demands but the effects of operation will be within proposed conditions of consent." It is not considered appropriate to rely on a noise condition of consent and monitoring to mitigate noise effects, unless it can clearly be met by the proposal as described. Comment is sought from the Marshall Day expert/s with respect to:
 - a. any implications that using the Table 1 mining fleet numbers would have on the noise report provided with the application, and
 - b. any implications of unlimited mining fleet numbers, i.e. would the proposal be able to meet the noise parameters proposed at any fleet size or are some maximum fleet types/numbers considered appropriate to ensure this?
22. The MDA report considers effects resulting from areas outside of the Mine Operations Area applied for (which is shown in Figure 2 of the application). It is also noted that Figure 1 of the MDA report goes beyond the Mine Operations Area/application site. In addition, that Figure 1 only shows the mine shells and it is unclear if the noise effects of all activities proposed within the Mine Operations Area have been assessed. The scenarios for the "D3 Victory pit west end ('N06'), day shift" and "D4 Victory Pit east end ('N12'), day shift" noise contour maps contained in Appendix D are also outside scope and not relevant to this application. Therefore, the information provided is not entirely clear and could be confusing.

It is requested that the MDA expert/s clarify whether:

 - a. they have assessed the full proposal as applied for, including all activities proposed within the 'blue line' Mine Operations Area (shown in Figure 2 of the application text and summarised in section 4.2 of the application), and
 - b. their assessment reflects the potentially shifting nature of the mine shells, as discussed in section 4.1.1 of the application and point 16 above.
23. Please provide a figure showing the assumed location of each of the sources listed in Table 6 for each modelling scenario (taking into account the response to the points above) and also showing the 'blue line' extent of the proposed Mine Operations Area. Please also show the Mine Operations Area and the title boundaries on the noise contour maps in Appendix D.
24. Please provide a noise contour map for the 'Northern pit extension' scenario referred to in Table 7.

25. The “Southern pit extension, day shift” noise contour map shows an increase in noise levels to the west and south. The figure does not extend to include the Whitecliffs, South Malvern or Glentunnel areas – or the entire Mine Operations Area. However, Table 7 shows a decrease in noise levels at F: 23 Phillip Street. Please provide a brief explanation, and an extended noise contour map.
26. The noise levels in Table 8 appear to potentially be those received at the façade of dwellings, not at the notional boundary (because the dwellings at 87 and 108 Bush Gully Road are approximately 20 metres or less from the carriageway, the notional boundary is the road boundary). Please confirm. If so, please provide an updated discussion regarding effects where noise levels are greater than 55 dB $L_{Aeq(15\text{ min})}$ at the notional boundary of dwellings.
27. The ‘comments’ in Table 9 include observation of “clatter of machinery” and “horn blasts”. Please provide a discussion regarding the appropriateness of applying a penalty for Special Audible Characteristics to this sound.
28. In Section 6.0, it is observed that the measured noise levels are numerically similar to the predicted levels. It is noted that the predicted levels would be expected to be indicative of those experienced under downwind conditions or under a well-developed, moderate, ground based temperature inversion. The measured noise levels were observed under “calm” conditions. This may suggest that the predicted noise levels are too low and measured noise levels would be higher when meteorological conditions approach the upper limits of the NZS6801:2008 ‘meteorological window’. Given the feedback from the community relating to the existing situation, please undertake a more comprehensive noise monitoring exercise relating to the existing situation including measurements at the upper limits of the meteorological window.
29. Section 7.2.2 of the vehicle movements application mentions road truck speeds of 40, 50 and 70 km/hr, and the possibility of sealing the road. Please confirm what road truck speed the noise levels in Table 6 and Table 8 of the MDA report relate to. We understand these predictions are based on a gravel road surface. Please provide updated noise and vibration analysis relating to a scenario where the road is sealed (but truck speeds are increased, if that is what is to be understood may occur from section 7.2.2). The response to this request will need to take into account the information requested in points 1 and 2 of this letter.
30. Vibration performance standards are discussed in section 4.6 of the MDA report, but only in the context of building damage. Section 8.1.2 states:

“It is important to note the limit of vibration perception by humans occurs at vibration levels that are significantly below building damage risk limits. This means that adverse reaction to vibration is often received at levels well below building damage thresholds.”

Please elaborate and provide discussion with regard to vibration effects on people in terms of amenity, and an assessment as to the magnitude of the effects in this case.
31. Please provide an assessment of compliance with Rule 9.17.1 of the District Plan in relation to vibration (not related to blasting). The rule requires compliance with NZS 2631:1985-89 Parts 1-3, and is summarised below:

9.17.1 Any activity which involves blasting and/or vibration shall be a permitted activity if all of the following conditions are met:

...
9.17.1.2 Except for blasting, any activity which involves vibration from any other source complies with New Zealand Standard 2631:1985-89 Parts 1-3.

DISTRICT PLAN RULES

32. RULE 8.1 – GENERATION, STORAGE AND DISPOSAL OF SOLID WASTE

The Plan defines solid waste as including “...any material which is discarded as being spent, useless, worthless or in excess, and includes liquid or gaseous waste which is stored in containers.”

It is understood that coal combustion residuals (“CCR”) are coal ash (i.e. the waste that is left after coal is combusted - fly ash and bottom ash), that it is transported to the mine and mixed with overburden at a ratio of 1:4 and that its alkalinity has a positive benefit in terms of acid neutralisation.

It is also understood that ECan have considered the ‘discharge to land’ of the CCR and granted it subject to it not exceeding 30,000 dry ash equivalent tonnes per year and meeting the Class B Landfill criteria as described in the Ministry for the Environment Module 2 Hazardous Waste Guidelines: Landfill Waste Acceptance Criteria and landfill classification following mixing with overburden, amongst other conditions.

A specific exemption for ash is provided for one solid waste rule in the Plan (Rule 8.1.1.3(h)), which would imply that all other rules would apply to ash in the usual course of events. The rules would also apply to the incorporation of mussel shells into the ELFs.

However, given the applicant’s view, this interpretation matter will need to be considered by the Commissioner. An interpretation has been provided in the application. Another interpretation might be that the CCR is waste that is disposed of into land; notwithstanding that this is of benefit to mine drainage. The interpretation would have implications as to the status of the activity, i.e. whether it is discretionary, as applied for, or non-complying, as could be the case under a differing interpretation.

To assist and enable full consideration of the issue by the Commissioner with respect to Rules 8.1.1 and 8.1.6.2, please discuss if the CCR contains “hazardous substances” (as per the Plan definition of same), and advise the annual volume of mussel shells incorporated into the ELFs.

33. RULE 9.21 – ACTIVITIES AND CLEARANCE OF INDIGENOUS VEGETATION AND INDIGENOUS PLANT SPECIES

An additional non-compliance has been identified, as follows.

Rule 9.21.1.4 states that the clearance of indigenous vegetation and indigenous plant species shall be a permitted activity provided the indigenous vegetation is not located in a naturally occurring wetland.

Table 5 of the application considers this rule and states “*The additional mining area does not include any wetland.*”

However, proposed Tara Pond 2 involves works within the Tara Wetland, and the Mine Operations Area (which would allow a variety of works) also covers part of that Wetland. (It is noted that there may also be other indigenous vegetation wetlands within the Mine Operations Area, discussed below under ECOLOGY/BIODIVERSITY.)

The proposal does not comply with this rule; however, non-compliance with Rule 9.21.1.4 in particular is listed as both a discretionary and a non-complying activity (under Rules 9.21.3 and 9.21.4). Given that the activity is both discretionary and non-complying under these rules, the more restrictive status is applied and this proposal becomes a non-complying activity.

LANDSCAPE

34. Further to the 'Final Landform' proposals in Appendix 12, please provide computer modelled visualisations (of those areas subject to this consent application) to allow these to be seen in the context of the host topography (Waianiwaniwa Road – Glentunnel landform).³
35. Will the 'Final Landform' be completed in stages as the works proceed along the mine footprint, or will the landform be partially formed and then finally formed upon completion of all of the works proposed in this consent, or later? Please provide further explanation of the staging of the rehabilitation.
36. Is the 'Final Landform (draft)' in Appendix 12 liable to change in the course of mine operations? If the consent is granted, it is anticipated that some form of 'Agreed Landform Review Protocol' may be necessary, providing a process for amending the 'Final Landform' prior to it being completed on-site. The applicant may wish to comment on the likelihood of changes to the 'Final Landform' and a process such as this.
37. Please provide explanation of the "*Potential ex-pit EFL's to improve slopes on existing landform*" illustrated in Appendix 11, p. 12. What form of improvement is referred to?
38. Regarding the landowner agreements cited in Appendix 6, section 3.5, how was the approximate original contour defined? Please provide copies of the plans that are agreed to/being worked to.

ECOLOGY/BIODIVERSITY

To enable consideration of the mine expansion proposal, further ecological assessment is requested, as detailed in the following.

JURISDICTION IN TERMS OF ASSESSMENT

Selwyn District Council ("SDC") is required to assess the effects of this proposal in terms of ecology and biodiversity. This is formalised under s.31 of the Act, i.e. the district council has the function of "*the control of any actual or potential effects of the use, development, or protection of land, including for the purpose of... the maintenance of indigenous biological diversity*".

It is noted that the past consent applications provided to Environment Canterbury ("ECan") stated that consent had already been granted from SDC and ECan have advised that they were processed on that basis, i.e. on the basis that SDC had already considered the relevant ecology/biodiversity effects. ECan have advised that they considered additional terrestrial

³ It is noted that the Appendix 12 Final Landform diagrams extend outside the scope of this application. The Surveyors Gully works in particular are not part of this consent, and it is noted that the works appear to be proposed in the location of the District Plan heritage item – H120 (tunnel).

matters to a degree; however, that was not the main focus of their consideration and they would expect SDC to fully consider all terrestrial matters. Therefore, SDC cannot simply rely on the ECan consents to form the SDC consented baseline on these issues, and it has been determined that further information is required to enable the effects to be assessed. It is recognised that the applicant may wish to provide information that was previously provided to ECan; however, if that is proposed, it will need to be provided to SDC as part of the AEE for this application.

39. It is understood that the applicant and ECan are working together to produce a 'consented baseline' document that will summarise and illustrate the sum of the various consents obtained from ECan over the year. Please provide a copy of that 'ECan consented baseline' document when it is available.

LIMITS OF CURRENT APPLICATION ASSESSMENT

Some information with respect to the North ELF is provided in the Appendix 9 Environmental Management Plan, and an assessment of effects with respect to the construction of Tara Pond 2 is provided in the Appendix 11 ECan application; however, the application does not provide an overall ecological assessment of effects resulting from the expansion of the mine over and above the consented baseline. Given the status of the activity, all relevant ecological effects must be considered; both retrospective and proposed.

The application proposes to enable a variety of works within the Mine Operations Area, a number of which would involve the disturbance of land/vegetation. It is also noted that the Mine Operations Area extends further east into the Tara Wetland beyond proposed Pond 2.

Mr Davis advises that it is clear from satellite imagery and aerial photographs in the application that there are indigenous ecological values in areas other than Tara Wetland between the consented baseline (green line⁴) and the proposed Mine Operations Area outer extent (blue line), and it is likely that ecological values within this area would meet all four National Priorities for protecting threatened biodiversity.⁵

The application also includes some information, either directly or indirectly, that supports the need for further assessment, e.g. 4.1 of the Boffa Miskell report in Appendix 11 confirms that Tara Pond 2 is within an Acutely Threatened land environment (E3.2b), while vegetation descriptions of the North ELF indicate indigenous ecological values.⁶ Mr Davis has confirmed that much of the area comprises this Acutely Threatened land environment E3.2b (which meets National Priority 1). In addition, he indicates that wetlands including seepages are present, the area is likely to contain potential habitat for at risk grass skinks, and limestone may be present (although that is unclear).

⁴ Figure 16, page 51, of the application

⁵ Ministry for the Environment, 2007. Introducing the national priorities for protecting rare and threatened native biodiversity on private land. MfE Wellington.

⁶ Some references of relevance include:

Hooson, S. & Noakes, K, 2017. Canterbury Coal Mine – ecological significance assessment of Tara Stream wetland, the Northern ELF and Bush Gully Stream. Report prepared for Bathurst Resources Ltd. Boffa Miskell, Christchurch, and

The Environmental Management Plan, e.g. Section 13 which refers to a Lizard Habitat Assessment and a Lizard Habitat Rehabilitation Plan (Tonkin & Taylor, 2018), and Section 9.5 which refers to seepage wetlands in the ELF area.

ECOLOGICAL ASSESSMENT REQUIRED

Identification of ecological values

40. To enable the effects of the mine expansion to be assessed, the extent of the ecological values present needs to be identified by a suitably qualified expert/s. It is requested that this includes but is not limited to the following:
 - a. Full survey of the Mine Operations Area between the green and blue lines shown on Figure 16 of the application.
 - b. Survey of areas beyond the blue line that may be affected by the expanded mining operations and which may support indigenous vegetation remnants or values associated with the four National Priorities (including any relevant areas downstream of the blue line, taking into account the information from point 44 below).
 - c. The surveys referred to in a. and b. above are requested to include but are not limited to the following:
 - i. survey of vegetation, wetlands, terrestrial and aquatic invertebrates, lizards and birds (note: for the avoidance of doubt, the survey is also to be undertaken within the area/wetland that is affected/removed by proposed Tara Pond 2, except with respect to vegetation survey which has already been done),
 - ii. consideration of ecological linkages and buffering,
 - iii. consideration of the importance of riparian vegetation for ecological functioning and indigenous fauna habitat,
 - iv. a significance assessment of the ecological values present,
 - v. provision of previous reports that describe the ecological values present, including but not limited to those referred to in Footnote 6 of this letter (the Boffa Miskell and Tonkin & Taylor reports referred to in the application).
41. The application is partly retrospective in nature. Where mining activities are already being undertaken between the green and blue lines, please provide any previous reports that described the ecological values of these 'already developed' areas prior to the works beginning.

Assessment of ecological effects

42. Once the extent and significance of the ecological values has been described, an assessment of the ecological effects of the activities to be undertaken within the expanded Mine Operations Area (between the green and blue lines on Figure 16) is requested from a suitably qualified expert/s. This assessment is not limited and is to consider all resulting ecological effects within and beyond the Mine Operations Area (with the exception of that permitted within the 'green line' consented baseline). This assessment will also need to consider/detail any mitigation measures that may be necessary (which should include provision of any previous expert assessment of any mitigation proposed, e.g. the Boffa Miskell Wetland Restoration Management Plan).
43. The assessment will need to include consideration of the retrospective elements. Where mining activities are already being undertaken within the assessment area between the green and blue lines, e.g. North ELF, Tara Pond 1, etc, please include assessment of the effects of those unconsented activities (to the degree possible based on previous work or extrapolation of current work) and provide details of, and consider the necessity and

appropriateness of, mitigation already undertaken or proposed. This should include provision of any previous expert assessment of any mitigation proposed, e.g. the Tonkin & Taylor Lizard Habitat Rehabilitation Plan referred to in the application.

44. The assessment is also to include consideration of the potential adverse effects of acid mine drainage resulting from the mine expansion on the ecological value of wetlands in the area, and particularly Tara Wetland. This assessment is to take into account any effects resulting from the mine expansion, i.e. an increase from a maximum of 33 hectares of total land disturbance at any one time up to 'a maximum of 42 hectares area of land disturbance plus land or stockpiles under vegetative cover or land being rehabilitated at any one time', and the increased level of production proposed, i.e. from 20,000 tonnes of coal extracted per annum up to a maximum of 185,000 (+10%) tonnes per annum. The assessment is to include but is not limited to the following:
- a. Provision of previous reports that discuss the terrestrial or aquatic ecological values in Tara Valley Wetland, including but not limited to those referenced in the application and referred to in Footnote 7 of this letter⁷,
 - b. In relation to contaminants, it is requested that additional water and sediment sampling below proposed Pond 2 and below the blue line be provided to complement the other locations sampled by Water Ways Consulting Ltd. If already undertaken, please provide the results,
 - c. Taking into account the results of b. above and the application report provided by Water Ways Consulting Ltd, please explain whether the low diversity of aquatic invertebrates also occurs in wetland habitats, and provide a plain English explanation of the water quality parameters used and why they have been chosen. This is to include comment on what the background levels were prior to this mine re-opening (as per historic information pre- or around 2000), what the levels are now, what impacts the expanded mine is expected to have and the implications of any elevated levels of contaminants for wetland biota,
 - d. 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,
 - e. Please provide a summary of the compliance history of the mine with respect to the relevant ECan consents in relation to water contamination (by sediment and other contaminants), the resultant impacts on the wetlands in the area and any remediation measures required/undertaken within the wetlands to date,
 - f. In relation to proposed Tara Pond 2, please provide a simple explanation of when/how often Tara Pond 2 might be expected to overflow, so that the probability of that occurring can be fully understood. If it does occur, what contaminants are likely to move downstream and what are the implications for ecological values in the Wetland, and
 - g. The Water Ways Consulting Ltd report in the application notes that previous surveys reported Canterbury mudfish at Site 3 and upstream in farm ponds. Please provide

⁷ Water Ways Consulting Ltd, 2016. Canterbury Coal: ELF Project; Bush Gully Assessment. Report number: 35-2016-A. Report prepared for Bathurst Resource Ltd. 13 p., and

Golder Associates Ltd., 2014. Aquatic Baseline Assessment of Ecological Values of Streams in the Waianiwaniwa Valley. Client report 1378110242-006-R-Rev1 prepared for Canterbury Coal (2013) Ltd. 26 p + Appendices.

assessment of the implications that the specific contaminants resulting from the expanded mine (including to the level consented by ECan or resulting from any compliance issues in response to e. and f. above) may have for the Canterbury mudfish (Threatened – Nationally Critical), locally and in the wider Waianiwaniwa River system.

Specific avoidance/mitigation/restoration aspects

45. In addition, it is requested that the ecological expert assessment addresses the following points within it.

- a. With respect to any mitigation proposed, it is noted that the last sentence on page 561 of the application (page 8 of the Annual Work Plan) states that, during the 2018/2019 year, the activities proposed on-site include:

“Developing wetland areas for offsetting lost seepage wetland areas...”

Please provide details of that proposed mitigation/compensation, and discussion as to the location, extent, hydrology and ecological values of the lost seepages (including any expert assessment completed prior to the works).

- b. The application states:

Following the de-commissioning of the sediment retention pond (anticipated to occur in 3 - 4 years' time (i.e. 2020 – 2021), the stormwater retention ponds are remediated and planted in appropriate wetland vegetation similar to that being removed (e.g. lowland flax, raupō reedland, purei and toetoe – refer to Appendix 1 for a list of the indigenous species recorded within the wetland). (p. 630)

At end of mine life, both Tara ponds will be remediated and returned as a wetland habitat. (p. 399)

Please include full details of this remediation proposed, clarification of how and when that is intended to occur and consideration of the ecological values/functioning/effects relating to that remediation proposal.

- c. The Boffa Miskell report (p. 630) states that Tara Pond 2 is required to be within the Wetland because the aspect and topography of the mine and the slopes above it, and the location of the existing discharge point, mean that alternative locations are not feasible, based on a personal communication. Please provide some discussion of the alternatives considered and explanation as to why the wetland location is the only alternative that is feasible.
- d. The Wetland Restoration Plan for the Bush Gully wetland was required by ECan as mitigation/compensation for the construction of Tara Pond 2, and this application proposes it as mitigation also. Given that the mitigation proposed is not on the application site, confirmation of the mechanism proposed to ensure that the Bush Gully wetland restoration and maintenance work will continue to mitigate the loss of Tara Valley wetland is to be provided.
- e. On the plan on p. 580, there is an annotation that states “Surge Pond Discharge Conduit (Temp)”. This discharge conduit appears to terminate in the Tara Wetland. Please confirm its purpose and what is being discharged.

*Pursuant to s.92A, please respond in writing to this request (please also copy to Jesse Burgess, SDC Planning Manager) before **25 January 2019** and do one of the following:*

- (a) Provide the information; or*
- (b) Advise that the applicant agrees to provide the information, but proposes an alternative date (please discuss with Jesse Burgess in my absence); or*
- (c) Advise that the applicant refuses to provide the information.*

Pursuant to ss. 95A and 95C, if the applicant does not provide the further information requested before the deadline concerned or refuses to provide the information, the application must be publicly notified.

The processing clock will be formally stopped until the information is provided. Please note that if additional information is required as a result of the applicant's response, further requests from SDC will be considered a continuation of this original request.

I look forward to hearing from you. If you have any queries at all, please do not hesitate to get in contact.

Yours faithfully



Janette Dovey
Director