



**Central Otago District Council
Otago Regional Council**

Land Use Consent RC200343
Water Permit Application RM20.360.01
Discharge Permit Applications to land, water RM20.360.02
Discharge Permit Application to air RM20.360.03
Land Use Consent for a Bore RM20.360.04

Cromwell Certified Concrete Ltd

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4/4/2022

CENTRAL OTAGO DISTRICT COUNCIL AND OTAGO REGIONAL COUNCIL

Memorandum responding to revisions and comments from the Applicant

1. Purpose

- 1.1. This memorandum has been prepared following the adjournment of the hearing for the resource consent applications to Central Otago District Council and Otago Regional Council and in response to the Commissioner's fourth minute dated 9 March 2022 that sought clarification on the following matters:
- Cleanfill Deposition and Site Rehabilitation
 - Mobile Refuelling
 - Sampling of Monitoring Bores and Associated Conditions
 - Conveyor
 - Community Liaison Group
 - Bond
 - Timing of Bund Construction
 - Confirmation Process for the Siting of Continuous PM Monitors
 - Conditions and Plans
- 1.2. The applicant provided the following on Monday, 28 March 2022:
- Revised conditions and comments in tracked changes relating to the deepening and expansion proposal;
 - Supplementary Evidence of Matthew Curran (Planning), 28 March 2022;
 - Supplementary Evidence of Dr Mike Freeman (Groundwater), 28 March 2022; and
 - Supplementary Evidence of Travis Allison (Operations), 28 March 2022.
- 1.3. I have been appointed by both Councils to assist with planning advice in relation to the proposed applications. In the interests of efficiency this memorandum has been prepared to comment in relation to the resource consent applications lodged with both Councils. Attached as Appendix 1 to this memorandum is the response to comments and tracked changes provided by the applicant. In Appendix 1 I have added my own comments and also made deletions/additions as further tracked changes.
- 1.4. In responding to the matters requiring clarification, I have been assisted by Ms Alexandra Badenhop in relation to the groundwater monitoring bores, particularly in relation to Condition 13 (renumbered) of the discharge permit RM20.360.02.

2. Cleanfill Deposition and Site Rehabilitation

- 2.1. I note that both Mr Allison and Mr Curran have stated that it is not proposed to allow the importing of cleanfill material to the site during the operations of the quarry, but a condition is volunteered to address the request of the Amisfield Estate Society in relation to cleanfill that may be imported to the site for future rehabilitation. The existing quarry is proposed to be rehabilitated with virgin excavated natural materials from the site to restore ground level above groundwater. Any cleanfill imported to the site for this purpose is proposed to be excluded from areas of exposed groundwater, its location of deposition recorded, and not within 10 metres of a water body or the exposed margins of groundwater. I am supportive of this approach. Since the applicant has proposed these additional conditions for what could be otherwise considered a permitted activity (assuming any cleanfill is not within, or where it would enter, a water body), I believe there is no constraint to imposing them.
- 2.2. In my view the proposed rehabilitation is different to operating a cleanfill landfill, particularly if material is won from the site and it has the fine sediments removed for this process where it occurs in exposed groundwater. I consider that this is sufficiently described in the operation of a quarry and those activities required to rehabilitate a quarry at the conclusion of its operations. For that reason, I believe it is within the scope of the resource consent applications and is permitted without an additional resource consent from either CODC or ORC. I can also see a need to import topsoil to the site as part of rehabilitation and I do not consider that to be an activity outside the scope for restoration and rehabilitation of a quarry.
- 2.3. Additional conditions are proposed by Mr Curran, including locking the quarry gates outside hours of operation and signage to prevent unauthorised discharge or deposition of material by other parties. I support those additional measures.
- 2.4. The application already seeks resource consent for a 4.5m² sign to be erected on Lot 5 DP 301379. The condition proposed by Mr Curran references the Standard of 12.7.5 of the Operative Central Otago District Plan which allows for a number of signs as a permitted activity throughout the district. In my view the purpose of the sign is not permitted by 12.7.5 (i) (d):
“Any sign erected to display public safety information or to warn the public of the existence of a hazard provided the sign is no larger than is necessary to adequately convey such information.”
It may be possible to argue that the proposed sign is displaying public safety information in the sense of a risk to contaminating groundwater that could be seen as a risk to public safety for nearby bore users. However, that is not my view. I believe that it is a sign providing an advisory notice, and that the hazard or public safety risk at the site would be more likely to be a steep drop at the sides of the quarry. Therefore I do not believe it is one of the named purposes in those provisions of Chapter 12.
- 2.5. There are also specific provisions in the Rural Resource Area that apply to signs and a single sign of up to 3m² is permitted per site. Lot 5 and Lot 8 DP 301379 are held in the same certificate of title and fall within the definition of “site”. While the location of the second sign is not specified other than at the quarry gates at the entrance to the site, I believe this to be located on Lot 8 DP 3801379. There is a separation of approximately 95m between the location of the Amisfield Quarry sign and a sign erected at the entrance gates to the quarry.
- 2.6. There is some difficulty in imposing a condition that would trigger a rule requiring additional assessment beyond the scope of the application that was limited notified. I do not believe this is overcome by considering a sign erected on Lot 5 and an additional sign on Lot 8 as being one sign on a site in this instance. However, I certainly see the value in providing the information proposed to prevent unauthorised dumping of cleanfill or other materials. While

details have not been provided on the size of the sign, its orientation, colours, etc I would observe that in most instances I would expect that this is sufficiently separate from the other sign and from State Highway 6 as to have less than minor effects on rural amenity and no adverse effects on traffic safety. I see the merits in clearly stating the reasons that unauthorised dumping of material creates environmental risks. I have not tracked changes to remove the references to the second sign but reworded it to a form that will allow it to be imposed if the Commissioner does not see the same practical difficulty in granting approval for a second sign as I have described above.

3. Mobile Refuelling

- 3.1. Mr Allison and Mr Curran have provided further discussion of mobile refuelling activities, the equipment presently on the site, and identified the practical difficulties of refuelling the long reach excavator at the existing refuelling area near the workshop.
- 3.2. In my view the refuelling nozzles as proposed by the applicant provide a good standard of protection from accidental spills during the refuelling process. In my view the bunding provided with the existing double-bunded fuel cell combined with the refuelling nozzle, its impervious pad, protective bollards, means that a bunded refuelling area is not necessary. I note that bunding will still be provided for lubricants and that all refuelling other than for the long reach excavator will be in a single location where there is ready access to spill kits.
- 3.3. The daily movement of a fuel tanker within the site represents a risk of collision with other plant and machinery and I expect that any additional measures required to reduce this risk will be contained within the Quarry Management Plan and its procedures and communication protocols such that remaining risk will be low.

4. Sampling of Monitoring Bores and Associated Conditions

- 4.1. Ms Badenhop has advised that she agrees with the comments made by Dr Mike Freeman in relation to turbidity for the determinants measured at monitoring bores and those associated changes in the renumbered condition 13.
- 4.2. I note that the applicant has also sought to raise the standard of the test for determining the likelihood of contamination caused by the consent holder from likely to highly likely that I do not support. I do not consider it reasonable to increase the threshold for this test when at issue is the potable drinking water supply of other bore owners if they are affected.
- 4.3. The applicant is also proposing a specific timeframe to provide an alternative potable drinking water supply, this being within 72 hours of notifying bore owners of the results of a contamination issue. I agree it is appropriate to include a specific timeframe and this may be a practical issue to source an alternative potable drinking water supply, but a shorter period would be preferable.

5. Conveyor

- 5.1. Mr Allison and Mr Curran have clarified that a conveyor will be the sole method of transporting material from the expansion area to the processing area on the existing quarry and haul trucks will not be used. Clarification has been provided that trucks will be used when stripping and constructing the bunds. These changes are supported if resource consent is granted for the deepening and expansion scenario.

6. Community Liaison Group

- 6.1. The addition of a condition for a Community Liaison Group (CLG) as proposed by the applicant is supported. The frequency of meetings suggested by the applicant is every 12 months. Submitters may suggest more frequent meetings and the specific timing of meetings that avoids harvest times or other periods of high activity for neighbouring land uses. Since they have an opportunity to comment, I have not sought to discuss this directly with them.
- 6.2. The persons and organisations to be invited to these CLG meetings is listed in an appendix to the CODC land use consent and to the discharge permit (to air). Rather than providing the minutes of the meetings to the consent authorities, I suggest that the condition require providing minutes to all invited parties.

7. Bond

- 7.1. When considering the bond amount put forward by the applicant, I examined the rates and estimated volumes for rehabilitation solely based on the earthworks proposed and anticipated that the applicant would be available to undertake the proposed works, particularly if rehabilitation occurred progressively on the site. I also noted that it was a substantial increase above the existing bond amount even allowing for an expanded area, although it was recommended that land use consent only be on the basis of deepening the existing quarry which allowed for some contingency.
- 7.2. I did not seek estimates from other companies or Council officers as a check against the proposed bond amount which I agree it would be prudent when the bond may be used to engage other parties to complete the works. I agree that it does not make any allowance for remediation of fuel spills, contamination, or the costs of supplying alternative drinking water supplies. The only additional allowance I made for the bond amount was to make annual adjustments for inflation which I viewed as particularly important given the potential life of the quarry.
- 7.3. I agree with Mr Curran that it is difficult assess the quantum of a bond amount to allow for spills and contamination when the type or extent of those spills is unknown. The costs of remediation could be considerable if the entire 29 hectare (deepening and expansion) site was affected, or if neighbouring bores had to be abandoned and could not be replaced. Some practical scenarios based on a tanker volume of fuel may address the most likely risks. As Mr Curran has noted the purpose of the bond is specified in the bond conditions of land use consent RC200343. If the purpose of the bond is to be broadened then additional changes will be required.
- 7.4. I support the proposal by Mr Curran to require the Consent Holder to engage a SQEP to review the bond amount. I believe it would be possible to estimate the costs associated for a range of additional remediation scenarios based on the likely volumes of a fuel spill for machinery, equipment, and disposal rates to remove contaminated material.
- 7.5. With the additional measures proposed to avoid unauthorised dumping, and the clarification that no cleanfill landfill activity is proposed, then that avoids the risk of contamination from those sources. As an experienced quarry operator, even with the deepening of excavation, I do not anticipate that this creates a risk of subsidence or other hazards for neighbouring sites that need to be included within the purpose of the bond.

8. Timing of Bund Construction

- 8.1. The revisions to the timing of bund construction and land stripping and land rehabilitation are supported. There have been other changes to conditions relating to the slope of bunds, certification of a bund planting plan, and other matters that have gone further than requested by the Commissioner that I have not commented on.

9. Confirmation Process for the Siting of Continuous PM Monitors

- 9.1. I note that Mr Curran has referenced those conditions of the resource consent (RM302.360.03, discharge permit to air) where the siting of PM monitors is considered. Mr Curran has made changes to the conditions relating to the Annual Report to allow for the review of the location of the PM monitors.
- 9.2. In my view the DMP is the most appropriate location for that process of updating the location of the PM monitors and any updates must already be certified by a SQEP. It is not necessary for the Consent Authority to have a role in determining the location of PM monitors beyond the first certification of the DMP provided that subsequent changes are certified by a SQEP.

10. Conditions and Plans

- 10.1. A revised Amisfield Quarry Draft Rehabilitation Plan, Feb 2021 was attached and referenced in Mr Curran's supplementary evidence. It shows only a single pond area on the expansion area. I support the inclusion of this updated plan if approval is granted for the deepening and expansion scenario. I do note that it does not include a new date or revision number so it will be important to attach this updated plan to resource consent decisions to avoid reference to the incorrect plan in the future.
- 10.2. In preparing a set of approved plans for the deepening-only scenario, I have had to redact parts of plans provided by the applicant. The applicant has not provided an updated set of plans for this purpose.
- 10.3. Mr Curran discusses the Indicative Bund Cross Section included in Mr Compton-Moen's evidence which shows the proposed bund as 1:6 and why that should not be in the approved plans. In my view it is of sufficient importance to include this plan to demonstrate what is proposed and the condition requiring 1:5 or 1:6 was deliberate on my part because I believe it also demonstrates why the steep slopes of a 1:3 bund or similar and in different locations leads to very different outcomes that I do not support.

11. Other Matters

- 11.1. There are other matters or changes in revised conditions that do not relate to the matters requested to be clarified in the Commissioner's fourth minute. In some instances I have responded to what I consider to be critical issues such as the term of resource consents or matters required to be retained for clarity.
- 11.2. I have not identified all instances of what I consider critical issues and that are beyond those matters that the Commissioner has requested clarification. No comment on any additional matters raised or revisions should not be considered to be my agreement with the changes proposed by the applicant.

Appendix 1: Comments on Revised Conditions of Consent

RC200343: Land Use Consent

General

1. The activities authorised by this consent shall ~~only be undertaken on Lot 3, Lot 5 (access), and Lot 8 DP 301379~~ generally in accordance with the information and plans submitted with the application dated 23 October 2020, further information provided on 9 March 2021 and 10 November 2021, and with the evidence submitted by the Consent Holder at the hearing, including the following specific plans:

- a. Site Plan prepared by Landpro, Revision F dated 9 December 2021;
- b. Mine Plan (Maps 1 to 4) received as further information 10 November 2021;
- c. Temporary Diversion and Bund Extension received as further information 10 November 2021; and

~~— Landscape and Impact Assessment Indicative Bund Cross Section prepared by Mr David Compton Moen included in his statement of evidence, dated November 2021;~~

~~e. — Draft Amisfield Quarry Draft Rehabilitation Plan, February 2021.~~

Should there be any inconsistencies between those documents and consent conditions, the consent conditions shall prevail.

2. Prior to the exercise of this land use consent the Consent Holder shall surrender land use consent RC1500052 ~~and any other land use consents issued for quarrying and ancillary activities~~ issued by Central Otago District Council ~~and relating to this site.~~

Advice note:

~~RC980019 expired on 12 September 2015, and 28421137 issued on 21 October 1994 also expired with the mining permit.~~

~~5.3.~~ The lapse date for the purpose of Section 125 shall be 5 years from the date of granting the consent.

~~4.~~ The annual volume of aggregate material extracted from the Quarry shall not exceed 200,000 m³ ~~and the active working area of the quarry (excluding crushing and screening operations) shall be no more than 2 ha at any one time.~~

~~5.~~ ~~The Consent Holder shall maintain all stockpiles so that their maximum height is below natural ground level at all times. The maximum area of unconsolidated land comprising of the excavation area, backfilling areas and rehabilitation area shall not exceed 2 ha.~~

Advice Note: The maximum area of unconsolidated land does not include the haul roads within the existing quarry, land covered by the conveyor, the processing area, stockpiles, areas which are covered with 50mm (or more) of washed gravels or stabilised with a dust suppressant, portacoms or workshops, or the conveyor and its associated service area.

~~6.~~ ~~The height of aggregate stockpiles shall be maintained below the height of existing ground level at the point immediately due northeast of stockpile.~~

~~6.7.~~ Activities authorised by this consent shall not give rise to dust or the deposition of particulate matter that causes a noxious, dangerous, objectionable or offensive effect beyond the boundary of the site.

Enabling Works

~~7.8.~~ Prior to the commencement of the consented activity, a right turn bay shall be constructed within State Highway 6 at the access to the site.

Commented [DW1]: Opposed. The legal description of land is to be retained for clarity. The use of only is also to be retained to make it clear that if there is a subsequent boundary adjustment, any additional land in the encroachment area is not authorised by this land use consent because its proximity to the north branch of the Amisfield Burn has not been assessed.

Commented [MC2]: The Site Plan and Mine Plan (Maps 1-4) are the key plans to be referenced.

All other relevant plans submitted are captured by the requirement to undertake activities in general accordance with information and plans submitted with the application.

Commented [MC3]: The 'Temporary Diversion and Bund Extension' and 'Amisfield Quarry Rehabilitation Plan' are now both proposed to be included, noting that the Rehabilitation Plan is in draft form.

Commented [MC4]: The applicant has updated the Draft Rehabilitation Plan so as to remove the lake originally proposed to be retained within the existing quarry. The draft Plan can therefore be included in the plans referenced in Condition 1.

In my view, the plan (d) (Temporary Diversion and Bund Extension Plan) should not be referenced in Condition 1 for the reasons set out in my supplementary evidence in reply.

Commented [DW5R4]: I agree that the updated Amisfield Quarry Rehabilitation Plan, February 2021 now shows only a single pond area on the expansion area. I support the inclusion of this updated plan if approval is granted for the deepening and expansion scenario. I do note that it does not include a new date or revision number so it will be important to attach this updated plan to resource consent decisions to avoid reference to the incorrect plan in the future.

Commented [DW6]: Not within the scope of matters set out in the fourth minute. Changes opposed to retain clarity.

Commented [MC7]: Proposed wording recognises that the height of bunds along the southwest boundary of the existing quarry is lower than ground level along the northeast boundary.

Appendix 1

8.9. Prior to the right turn bay formation works occurring, the Consent Holder shall submit to Central Otago District Council a copy of Waka Kotahi NZ Transport Agency's approval to undertake works on the State Highway (as detailed in advice notes a to c).

Advice Note:

- a. *It is a requirement of the Government Roading Powers Act 1989 that any person wanting to carry out works on a state highway first gain the approval of Waka Kotahi New Zealand Transport Agency for the works and that a Corridor Access Request (CAR) is applied for before any works commence. A CAR will be required for the right turn bay formation works within State Highway 6.*
- b. *Detailed design approval from Waka Kotahi NZ Transport Agency shall be gained by the Consent Holder prior to applying for a CAR. The detailed design shall be prepared by a suitably qualified professional who has been certified by Waka Kotahi. In developing the detailed design, the Consent Holder will need to consult with the Waka Kotahi appointed state highway maintenance contractor for Central Otago (Aspiring Highways) and a Waka Kotahi Safety Engineer.*
- c. *A Corridor Access Request is made online via www.submitica.co.nz. The CAR needs to be submitted at least 21 working days before the planned start of works. A copy should also be sent to the Waka Kotahi NZ Transport Agency System Design and Delivery Planning Team at EnvironmentalPlanning@nzta.govt.nz. The Corridor Access Request will need to include:
 - (i) *The detailed final design for the right turn bay, including both layout and pavement design.*
 - (ii) *A Construction Traffic Management Plan that has attained approval from the Waka Kotahi NZ Transport Agency appointed state highway maintenance contractor for Central Otago (Aspiring Highways).**

9.10. Prior to the commencement of the consented activity, the Consent Holder shall provide to Central Otago District Council correspondence from Waka Kotahi NZ Transport Agency confirming that works to the State Highway, including the construction of the right turn bay, have been constructed to Waka Kotahi NZ Transport Agency standards.

Bunds – Lot 8 DP 301379

10.11. Within 12 months of the exercise of this consent, the Consent Holder shall plant or stabilise by other means the [inward and outward faces of the](#) existing bunds within Lot 8 DP 301379.

12. [Within 12 months of the exercise of this consent, the consent holder shall construct a new section of bund within Lot 8 DP 301379 along its boundary with Lot 2 DP 508108 \(shown in 'Site Plan Rev F' attached as Appendix 1 to this consent\). Following construction, the new section of bund shall be immediately stabilised using mulch or another suitable product. As soon as practicable following construction, it shall be planted with native plant species and thereafter watered to ensure 90% cover is established and maintained. Dust control measures shall be put in place during formation of the bund to ensure compliance with Condition 7 of this consent.](#)

Commented [MC8]: Reference to groundcover removed as per Mr Whyte's recommendation. However, I note that the species will be selected based on advice from DoC and iwi who have indicated that groundcover species should be planted.

Removing 'groundcover' does not effect DoC and iwi's ability to select groundcovers species, according the applicant does not oppose it being deleted.

Commented [MC9]: Requirement to maintain 90% vegetation cover adopted for new bunds.

Commented [MC10]: Separate conditions have been proposed to capture the planting and stabilisation of existing bunds and the construction and planting of a new section of bund within Lot 8 DP 301379.

Appendix 1

13. The height of the new section of bund to be formed within Lot 8 DP 301379 along its boundary with Lot 2 DP 508108 shown in 'Site Plan Rev F' attached as Appendix 1 to this consent shall be the same height (within 200 mm) of the existing bund immediately to the west and east of the new section.

Advice note: Bund refers to mounded land above ground level that surrounds the active quarry area.

Commented [MC11]: New condition to ensure the new bund on Lot 8 DP 301379 is constructed to an appropriate height.

Commented [MC12]: Included to clarify that the inward face of the quarry (below ground level) is not captured by conditions relating to bunds.

Bunds – Lot 3 DP 301379

11.14. Prior to extraction of Lot 3 DP 301379, perimeter bunding, landscape planting and associated irrigation shall be established on that parcel of land in accordance with the information and plans submitted with the application. All outward faces and the crest of the bunds shall be stabilised and planted. All inward faces of the bunds shall be stabilised.

12.15. The bunds shall be constructed during winter months (1st May to 31st August) for dust mitigation reasons and so as to avoid bird nesting season which is from 1 September to 1 January.

Commented [DW13]: Supported.

16. The consent holder shall submit a Bund Landscaping Plan for certification by the Consent Authority at least 20 working days prior to commencing planting.

Commented [MC14]: Provision has been made for the submission and certification of a Bund Landscape Plan.

17. In preparing the Bund Landscaping Plan the Consent Holder shall engage with both the Department of Conservation and Kāi Tahu regarding the selection of locally sourced native plant species, eco-typed to the area.

18. If 30 working days have elapsed and no advice has been provided by either the Department of Conservation or Kāi Tahu as to the plant species to be used for planting of the bund, the Consent Holder shall choose appropriate local native plants and submit the Bund Landscaping Plan for certification by the Consent Authority at least 20 working days prior to commencing planting.

19. Planting the bund in Lot 3 DP 301379 shall not commence until the Consent Holder has received written certification of the Bund Landscape Plan. Notwithstanding this, the works may proceed if the Consent Holder has not received a response from the Consent Authority within 20 working days of the date of the submission of the Bund Landscape Plan.

13.20. The perimeter bunding shall include:

a. Establishment of 3 m high earth bunds around the perimeter of that parcel of land, with the exception of site accessways. Where topography varies, a uniform top bund elevation shall be maintained. The outer face of the bund shall have a gradient of 1:3 – 1:5 with an irregular slope profile.

Commented [MC15]: As per Mr Compton-Moen's expert landscape advice

b. Following the construction of the bunds, they shall be immediately stabilised using mulch or another suitable product.

c. As soon as practicable following construction of the bunds, they shall be planted with native plant species (90% cover) selected in accordance with the Bund Landscape Plan and Condition 19 and thereafter watered to ensure 90% cover is established and maintained.
Dead or diseased plants shall be replaced in the next planting season.

Commented [DW16R15]: In my view a slope of 1:5 or 1:6 is more consistent with the natural terraces of this landscape rather than an abrupt 1:3 or 1:4.

c.d. Control of weed species shall be undertaken.

Fences, Security and Signage

Appendix 1

21. [The consent holder shall install a deer fence or similar in Lot 3 DP 301379 between the parcel boundary and the bund to a height of 2 m.](#)

22. [The gates at the entrance to Lot 8 DP 301379 shall be locked outside of operating hours and a sign of up to 3m² that complies with Standard 4.7.6 H. Signs, and Standard 12.7.5 of the Central Otago District Plan shall be erected at the entrance which is able to be read from a distance of five metres stating as a minimum:](#)

a. [The name of the site;](#)

b. [The name of the owner of the operation and a day time and out of hours contact telephone number for the Quarry Manager;](#)

c. [That groundwater is vulnerable to contamination;](#)

d. [That no materials may be discharged or disposed of within the site perimeter without express written permission from the Quarry Manager;](#)

15.23. The Consent Holder shall rabbit proof all fences around the boundary of the site.

Management Plans

16.24. At least one month prior to exercising this resource consent, the Consent Holder must prepare a Quarry Management Plan (QMP) and submit it for certification by the Consent Authority.

17.25. The QMP shall include, but not be limited to:

a.e. [A plan showing the areas of extraction, the location of the screening and crushing plant, and the locations of the aggregate stockpiles;](#)

b.f. [The setbacks in the expansion area required by RM.20.360.03 \(granted by the Otago Regional Council\);](#)

c.g. [Names and contact details of staff responsible for implementing the QMP \(during and after hours\) and reviewing the QMP in order to achieve the requirements of this consent](#);

d.h. [A description of the proposed methods of any enabling works including overburden removal operations, stripping and placement of material;](#)

e.i. [A description of all relevant site operations and procedures including mobile re-fuelling procedures and spill responses;](#)

f.j. [A description of all environmental effects, including \(but not limited to\) noise, dust and visual effects;](#)

g.k. [All operational traffic aspects;](#)

h.l. [All consent conditions and any other mitigation measures to be employed to minimise environmental effects and/or adhere to best practice;](#)

m. [Relevant monitoring and reporting requirements;](#)

i.n. [A plan showing areas that will be subject to progressive rehabilitation.](#)

[The Consent Holder may review and update the QMP where it is to modify SOPs, respond to The](#)

[Consent Holder may review and update the QMP where it is to modify SOPs, respond to complaints and monitoring data, implement technological or process improvements, providing revisions are certified by the Consent Authority.](#)

18.26. At least one month prior to exercising this resource consent, the Consent Holder shall prepare a Dust Management Plan (DMP) and submit it for certification by the Consent Authority.

Commented [MC17]: New condition proposed to prevent unauthorised discharges by third parties.

Commented [DW18R17]: Supported but with changes to note that gates are at the boundary of Lot 8 DP 301379, the sign will be located on this part of the site, and will not exceed the permitted area. Despite the merits of the additional sign it may not be possible to erect a second sign on the site without an additional resource consent if it is not within the permitted purposes such as providing public safety information.

Appendix 1

19.27. The DMP shall include, but not be limited to:

- a. A description of the purpose of the DMP;
- b. A description of the dust sources on site;
- c. A description of the receiving environment and identification of sensitive receptors within 250 m of site boundaries (sensitive receptors being any dwelling and the land within 20 m of the façade of an occupied dwelling's notional boundary, and sensitive commercial crops);
- d. The methods (including dust reduction through design methodologies) which will be employed to ensure compliance with the conditions of this consent;
- e. A description of site rehabilitation methodology and associated dust control measures. Rehabilitation shall be undertaken progressively where practicable;
- f. A description of particulate matter and wind monitoring requirements required by RM360.60.03 (granted by the Regional Council);
- g. A description of procedures for responding to dust and wind condition-based trigger levels set by RM360.60.03 and associated follow up investigations, actions and recording of findings;
- h. A system for training employees and contractors to make them aware of the requirements of the DMP;
- i. Names and contact details of staff responsible for implementing and reviewing the DMP in order to achieve the requirements of this consent, and procedures, processes and methods for managing dust outside of standard operating hours;
- j. A method for recording and responding to complaints from the public;
- k. A maintenance and calibration schedule for meteorological and particulate matter monitoring instruments;
- l. Contingency measures for responding to dust suppression equipment malfunction or failures, including wind and particulate matter monitoring instruments;
- m. A procedure for completing an end-of-day dust control checklist;
- n. Separate Standard Operating Procedures (SOPs) dedicated to the management of potential dust discharges from specific sources, including but not limited to:
 - (i) Stockpiles;
 - (ii) Site roads – sealed and unsealed;
 - (iii) The conveyor used to convey aggregate from Lot 3 DP 301379 to the processing plant located within Lot 8 DP 301379;
 - (iv) Triggers for the use of water for dust suppression;
 - (v) The use of dust suppressants other than water;
 - (vi) Aggregate excavation and backfilling areas;
 - (vii) Topsoil and overburden stripping and stockpiling;
 - (viii) Bund construction, maintenance and the recontouring of slopes during rehabilitation;
 - (ix) Any automated dust suppression for dust prone areas that can be activated outside of working hours;
 - (x) Location of particulate matter and meteorological monitoring equipment, and the frequency for review of the location and calibration of that equipment;

Commented [DW19]: Opposed. Must.

Commented [DW20]: Supported.

Commented [MC21]: Condition amended in recognition that the location of monitors may change subject to approval from a SQEP as works progress as part of the annual report/plan process.

Commented [DW22R21]: Changes to be included in DMP instead.

Appendix 1

o. Environmental information management for recording, quality assurance, archiving and reporting all data required for dust management on the site.

Advice note: The location of the PM10 monitoring equipment will be reviewed on an annual basis as part of the annual report required by Condition 61 of this consent.

20.28. The Consent Holder may review and update the DMP where it is to modify SOPs, respond to complaints and monitoring data, implement technological or process improvements provided revisions are certified by an independent Suitably Qualified and Experienced Practitioner (SQEP) and the updated plan is provided to the Consent Authority.

21.29. The Consent Holder shall carry out its activities in accordance with the QMP and DMP at all times.

22.30. Works authorised by this consent shall not commence until the Consent Holder has received written certification of the QMP and DMP. Notwithstanding this, the works may proceed if the Consent Holder has not received a response from the Central Otago District Council within 20 working days of the date of the submission of the QMP and DMP.

Hours of Operation

23.31. The hours of operation for quarry activities other than monitoring and dust suppression are limited to:

Monday to Saturday (excluding public holidays):

- a. Arrival and departure of staff: 0600 to 2000 hours;
- b. Site excavation, processing, dump truck, loader and purchasing truck movements: 0700 to 1900 hours except that no more than twice per week, up to 4 purchasing trucks may enter the site, be loaded and depart the site between 0600 to 0700 hours Monday to Friday and between 1900 to 2000 hours Monday to Friday provided that:
 - (i) no more than 1 truck shall be loaded in any 15 minute period between 0600 to 0700 hours; and
 - (ii) between the hours of 0600 to 0700 hours, no truck shall be loaded with any product larger than 22 mm concrete aggregate.

Sundays and public holidays: Dust management activities only.

Noise

24.32. There shall be no stockpiling or processing of aggregate in the quarry expansion area.

25.33. Operation of processing plant shall be restricted to the hours of 0700 to 1900 hours, Monday to Saturday.

26.34. Noise from the operation of the quarry shall comply with the following noise limits as assessed at the notional boundary of any dwelling when measured in accordance with NZS 6801:2008 Acoustics – Measurement of environmental sound and assessed in accordance with NZS 6802:2008 Acoustics – Environmental noise. Due to the nature of the proposed activity, no duration adjustment in accordance with NZS 6802:2008 shall be permitted.

Day	Time period	Noise limit
Monday to Saturday	0700 to 2000 hours	55 dB L _{Aeq} (15 min)
At all other times		40 dB L _{Aeq} (15 min) and 70 dB L _{Amax}

27.35. All vehicle reversing alarms on quarry-based equipment or trucks, shall only be broadband reversing alarms.

Commented [MC23]: Advice note included to specify the process by which the mobile PM10 monitoring equipment may move.

Commented [DW24R23]: Not necessary. Already provided in the condition below for review and updating DMP and to be certified by a SQEP and provided to the consent authority.

Commented [DW25]: Supported.

Appendix 1

28.36. Construction activities shall be managed in accordance with the requirements of NZS 6803:1999 Acoustics – Construction Noise and any noise generated shall comply with the limits given in Table 2 of that standard.

For the purposes of this consent “construction activities” means activities associated with the establishment, or rehabilitation of the quarry, such as: site establishment; the construction and removal of bunds, topsoil stripping, creation and removal of the underpass to the expansion area, constructing slope batters and contouring the final land. If ongoing backfilling activity associated with the construction of slope batters occurs at the same time as the quarry is operational, this is not considered to be construction noise and shall comply with the operational noise limits for the site.

29.37. Compliance monitoring of the daytime noise generated by quarrying activities shall be measured and assessed by a suitably qualified and experienced acoustic consultant as follows:

- a. once within the first 12 months following the commencement of quarrying within Lot 3 DP 301379; and
- b. once when quarrying within Lot 3 DP 301379 initially advances to within 200 m of the dwelling at 1308 Luggate-Cromwell Road.

The measurements required by this condition shall be undertaken when excavation is occurring at the highest ground elevation and shall include day time noise readings taken at a time when processing machinery is operating simultaneously with quarrying activity within Lot 3 DP 301379.

30.38. Within 10 working days of each round of monitoring in accordance with Condition 37, a report describing the measurement results and compliance or otherwise with the noise limits in Condition 34 shall be submitted to the Consent Authority. That report shall also address whether compliance with the noise limits in Condition 34 of this consent will be maintained at closer distances to the dwelling at 1308 Luggate-Cromwell Road and a dwelling (if existing) on Lot 1 DP 508108. If the report identifies that noise levels are higher than authorised by Condition 34, it shall recommend mitigation measures to be adopted by the consent holder to achieve compliance with Condition 34. A copy of the report shall be provided to the Consent Authority.

Traffic

31.39. The activity shall be limited to a maximum of 150 heavy vehicle movements per day.

32.40. Vehicle and heavy machinery speeds within the site shall not exceed 30 km/h.

Hazardous Substances

33.41. To minimise the risk posed from Hazardous Substance spills:

- a. The Consent Holder shall take all practicable measures to avoid spills of fuel or any other contaminant within the site.
- b. Permanent storage of fuel and lubricants shall only occur within the workshop area identified on ‘Site Plan Rev F’ attached as Appendix 1 to this consent. Lubricant shall be stored in a bunded area capable of containing 125% of the volume being stored. Fuel shall be stored in a double skinned tank certified in accordance with the manufacturers specifications and capable of containing a spill at maximum capacity.
- c. Refuelling and maintenance of all vehicles or machinery except for the excavator shall be undertaken within the workshop area identified on ‘Site Plan Rev F’ attached as Appendix 1 to this consent ;

Commented [MC26]: Text inserted to identify measures that can be undertaken to address compliance by the consent holder and to inform any response by the consent authority.

Commented [MC27]: Speed limit agreed in JWS provided by Air Quality Experts.

Commented [MC28]: This condition has been amended to further reduce the risk of spills of fuel and lubricants.

Commented [DW29R28]: Supported.

Commented [MC30]: The Workshop Area is located 20 m from waterbodies, exposed groundwater and the settlement ponds.

Commented [DW31R30]: Supported.

Appendix 1

d. Mobile refuelling of the excavator shall be undertaken at least 10 m from any waterbody, water flow channel or stormwater system using a nozzle that incorporates a shut off valve and sensor system to avoid fuel leaks or overfilling of the excavator fuel tank;

c. A spill kit of suitable capacity shall be kept on site at all times.

A spill kit of suitable capacity shall be kept on site at all times.

Commented [DW32]: Opposed. To be retained.

34.42. In the event of a spill of fuel or any other contaminants to land, the Consent Holder shall clean up the spill as soon as practicable and take measures to prevent a recurrence.

35.43. The Consent Holder shall inform the [Consent Authority](#) and the Amisfield Estate Society Incorporated within 24 hours of any spill event to land greater than 4 litres and shall provide the following information:

- a. The date, time, location and estimated volume of the spill;
- b. The cause of the spill;
- c. The type of contaminant(s) spilled;
- d. Clean up procedures undertaken;
- e. Details of the steps taken to control and remediate the effects of the spill on the receiving environment and an assessment of the risks to the Amisfield Estate Water Supply Bore; and
- f. An assessment of any potential effects of the spill and measures to be undertaken to prevent a recurrence.

Ecology

36.44. No quarrying shall be undertaken, or heavy machinery be used within 50 metres of the Mahaka Katia Scientific Reserve between 1 September and 1 January in any year (bird nesting season).

37.45. Any planting required as part of mitigation for the proposed works shall be accompanied by a pest management plan identifying the control of pest plant and animal species including rabbits that may impact on the viability of the mitigation proposed.

38.46. Control of weed species identified in the 2019 Otago Regional Pest Management Strategy (RPMS) shall be undertaken within the 25 m buffer between the boundary of the Mahaka Katia Scientific Reserve and proposed expansion area identified on 'Site Plan Rev F' attached as Appendix 1 to this consent. Weed species of concern are, exotic broom, gorse, Russell lupin, ragwort, nodding thistle, wilding pine sp. (see RPMS for full list of unwanted organisms).

39.47. Water used in the quarry for dust mitigation shall not directly enter Mahaka Katia Scientific Reserve.

Accidental Discovery Protocol

40.48. In the event of any discovery of archaeological material:

- a. The Consent Holder shall immediately:
 - (i) Cease extraction operations in the affected area and mark off the affected area;
 - (ii) Advise the Central Otago District Council of the disturbance; and
 - (iii) Advise Heritage New Zealand Pouhere Taonga of the disturbance.
- b. If the archaeological material is determined to be Koiwi Tangata (human bones) or taonga (treasured artefacts) by Heritage New Zealand Pouhere Taonga, the Consent Holder shall immediately advise the office of Kāi Tahu of the discovery.

Appendix 1

- c. If the archaeological material is determined to be Koiwi Tangata (human bones) by Heritage New Zealand Pouhere Taonga, the Consent Holder shall immediately advise the New Zealand Police of the disturbance.
- d. Work may recommence once Heritage New Zealand Pouhere Taonga (following consultation with Kāi Tahu if the site is of Maori origin) confirms to Central Otago District Council that appropriate action has been undertaken.

Rehabilitation

41.49. Within five years of exercising this resource consent, the Consent Holder shall submit to the Central Otago District Council a Rehabilitation and Closure Plan for the site. The Rehabilitation and Closure Plan shall provide for:

- a. Progressive rehabilitation of areas that will not be subject to future quarrying activities;
- b. Removal of all buildings, other structures and plant from the site;
- c. Recontouring of the land to provide a stable profile;
- d. Management of dust to avoid nuisance beyond the site;
- e. Record keeping requirements of any material to be brought to the site as part of the rehabilitation process, including cleanfill material;
- f. Re-establishment of topsoil and grass, plants or trees utilising best practice;
- g. Appropriate drainage of the site, to avoid uncontrolled runoff into any water body; and
- h. Leaving the site in a clean and tidy state.

The Rehabilitation Plan shall be prepared in consultation with adjoining landowners and Kāi Tahu. Feedback received from those persons shall be included for the information of Central Otago District Council.

42.50. Implementation of the Rehabilitation and Closure Plan shall not commence until the Consent Holder has received written certification of that Plan from the Central Otago District Council. Notwithstanding this, the works may proceed if the Consent Holder has not received a response from the Central Otago District Council within 20 working days of the date of the submission of the Plan.

51. Implementation of the Rehabilitation and Closure Plan shall be completed within 3 years of quarrying activities ceasing, noting that no construction or earthworks be undertaken within 50 m of the Mahaka Katia Scientific Reserve between 1 September and 1 January in any year (bird nesting season).

52. Any material used to backfill areas where groundwater has been exposed shall originate from within the site and shall only consist of virgin excavated natural materials.

43.53. The final rehabilitated landform shall not include lakes/ponds within Lots 8 DP 301379.

Cleanfill

54. The consent holder shall ensure that if cleanfill is imported into the site under any relevant regional permitted activity rules:

- a) The origin and location of deposition within the site of any externally sourced cleanfill shall be recorded; and
- a)b) Externally sourced cleanfill shall not be placed within 10 metres of any waterbody, water flow channel or stormwater system and shall be located above the level of groundwater.

Commented [MC36]: The applicant has proposed to submit to Council a Rehabilitation and Closure Plan within 5 years of consent being exercised, previously it was proposed that the plan would be submitted least two years prior to ceasing the extraction activities.

Commented [DW37R36]: Generally these changes are supported except there is a draft plan already. I believe that this should be updated and available for implementation within a shorter period (12 months) to allow for progressive rehabilitation.

Commented [MC38]: Following extraction it is proposed to progressively rehabilitate areas of the quarry that will not be subject to future quarrying activities.

Commented [MC39]: Reference to cleanfill added as per AES request.

Commented [DW40]: Specifying a timeframe for completion is accepted, but will rehabilitation rely on access to water? This needs to be considered for the appropriate time period.

Commented [MC41]: New condition proposed to provide for the backfilling of the pit where groundwater has been exposed (bore).

I do not consider the backfilling of the pit where groundwater has been exposed with material excavated from within the quarry to constitute the operation of a cleanfill landfill i.e. backfilling the pit where groundwater is exposed does not breach permitted activity Rule 7.6.3 in the Regional Plan: Waste for Otago (the Waste Plan).

Backfilling the pit where groundwater has been exposed is considered to constitute decommissioning a bore which can be captured as a component of its construction.

Commented [DW42R41]: Supported.

Commented [MC43]: Noting the Rehabilitation and Closure Plan will remain in draft form until it is submitted to council within five years of consent being exercised, the applicant has proposed a condition to provide certainty regarding the location of ponds/lakes within the final rehabilitated land form.

As advised by Mr Allison only one lake will be left in Lot 3, this condition is proposed to reflect that.

Commented [DW44R43]: In my view the Rehabilitation Plan needs to be finalised earlier to allow for progressive rehabilitation. There will be a depression even when restoring ground level above groundwater. Is it certain that there will be no ponding even after major rain events?

Advice note: This consent does not authorise the importation of cleanfill for use on the site. At the time of granting this consent, the use of cleanfill on the site for rehabilitation purposes is not controlled by the Central Otago District Plan, and the discharge of any contaminants into or onto land when occurring as the result of cleanfill landfills is a permitted activity under Rule 7.6.3 of the Otago Regional Waste Plan provided that no sediments enter into any water body. However the use of cleanfill may not remain a permitted activity in the future and may require a resource consent under the relevant plans.

Commented [MC45]: Condition amended and advice note added to make it clear that cleanfill rules may change in future.

Commented [DW46R45]: CODC district plan may also change.

Complaints Register

44.55. The Consent Holder shall maintain and keep a register for complaints regarding all aspects of operations at the site related to the exercise of this consent, received by the Consent Holder. The register shall record:

- a. the date, time and duration of the event/incident that has resulted in a complaint;
- b. the location of the complainant when the event/incident (if possible, specify nature of incident e.g. dust nuisance) was detected;
- c. the possible cause of the event/incident;
- d. the weather conditions and wind direction at the site when the event/incident allegedly occurred;
- e. any corrective action is undertaken by the Consent Holder in response to the complaint;
- f. any other relevant information.

45.56. The complaints register shall be available to the Central Otago District Council on request.

57. Complaints received by the Consent Holder that may indicate non-compliance with the conditions of this resource consent shall be forwarded to the Central Otago District Council within 5 days of the complaint being received.

Community Liaison Group

Commented [MC47]: Conditions added to require a Community Liaison Group.

Commented [DW48R47]: Supported.

58. Within 12 months of the commencement of this consent, the Consent Holder shall, at its own cost, facilitate community liaison meetings with invitations sent by letter or email to the various organisations and the owners/occupiers of properties listed in Appendix 2 of this Consent. Meetings shall be held at not less than 12 monthly intervals.

59. The purpose of the meetings shall be for the Consent Holder to report to those attending on the activities undertaken in the past 12 months and the works planned in the next 12 months, as well as the results of monitoring undertaken during the preceding 12 months.

46.60. The Consent Holder shall keep minutes of the meetings and shall provide them to all parties within two weeks of a meeting.

Commented [DW49]: All invited parties.

Commented [DW50]: Condition to relate to the CODC as consent authority for this land use consent.

Annual Report

47.61. The Consent Holder shall submit an Annual Report before the end of February each year which addresses the following:

- a. The volume of material removed from the site in the preceding 12 months;
- b. Complaints Records for the preceding 12 months;
- c. Any amendments made to the QMP or DMP;
- c.d. The volume of aggregate extracted in the preceding 12 months; and
- e. Records of any cleanfill material brought to site (if any);

f. Details of the work plan for the next 12 months, including specification by a SQEP of the locations of the mobile PM10 monitors during that period so as to comply with the relevant requirements of RM20.360.03.

Bond

48.62.

Within three months of the commencement of this consent, the Consent Holder shall enter into an enforceable written agreement acceptable to the Consent Authority that provides for a \$200,000 bond in favour of the Consent Authority pursuant to sections 108(2)(b) and 108A of the Resource Management Act 1991. The purpose of the bond is to secure the costs of the following works, in the event of default by the Consent Holder in relation to those works:

- a. removal of any plant or buildings;
- b. recontouring of the quarry area, respreading of subsoils and topsoil, re-establishing grass, undertaking additional planting, and establishment of drainage sufficient to meet the post quarrying land use; and
- c. leaving the land in a clean and tidy state.

63. Prior to entering into the bond referred to in Condition 62 of this consent, the Consent Holder shall engage a SQEP to review the bond amount required by Condition 62 and provide a report with their findings and recommendations (Bond Review Report). The Consent Holder shall submit the Bond Review Report to the Consent Authority at least 20 working days before entering into the bond. If the Bond Review Report recommends a higher amount than the amount specified in Condition 62, the Consent Holder shall provide a bond for the higher amount.

49.64. The bond must be a cash bond or bank bond provided by a registered trading bank of New Zealand acceptable to the Consent Authority. The guarantor shall bind itself to pay up to the bond quantum for the carrying out and completion of all obligations of the Consent Holder under the bond. The bond amount must be sufficient to cover the costs of undertaking the works specified in Condition 62.

65. The bond amount shall be adjusted annually on the anniversary of the land use consent to increase the bond based on the consumer price index (CPI) or to be reduced on a pro rata basis if areas of rehabilitation have been completed that year.

66. If the Consent Holder and the Central Otago District Council cannot agree on the terms of the bond, the dispute must be resolved through an agreed disputes resolution process or referred to arbitration.

67. The costs of and incidental to the preparation of all bond documentation, including the Consent Authority's costs, must be met by the Consent Holder.

68. The Consent Authority shall release the bond upon:

- a. The Consent Holder providing verification that the Site has been rehabilitated in accordance with Condition 62; or
- b. The replacement of the bond with a new bond acceptable to the Consent Authority, including if the consent is transferred to another party.

Review

50.69. In accordance with section 128 of the Resource Management Act 1991, the conditions of this consent may be reviewed on each anniversary of the date of this consent coming into force if:

Commented [MCS1]: A requirement for annual review of the location of the PM10 monitors is now included as part of the annual report. I recommend that this is provided for here, rather than by annual review of the DMP, given that there will be long periods when excavations are undertaken below groundwater level and dust emissions during that time will be much reduced.

Commented [MCS2]: The estimated cost of the works secured by the bond has been provided to Mr Whyte and I understand he has had this figure reviewed and is comfortable with it.

Commented [DW53R52]: There has been no review of the bond estimate amount. It is substantially more than the existing bond and the calculations provided by the applicant were simply considered when preparing my report.

Commented [MCS4]: I now understand the bond amount has not been reviewed. A new condition could be included following condition 62 to provide for a review of the bond amount by a SQEP.

Commented [MCS5]: More prescriptive bond conditions have been included as per Ms Hill's recommendation.

Commented [DW56R55]: Accepted.

Commented [MCS7]: The purpose of the proposed bond is set out here, and relates to rehabilitation of the site. If the bond is to cover any other purposes, these will also need to be included here. For the reasons set out in my supplementary evidence, I recommend that the bond cover rehabilitation costs only, and not operational costs.

Commented [DW58R57]: Accepted.

Commented [MCS9]: Possible new condition added to require review of bond amount before consents are exercised and the bond is put in place.

Commented [DW60R59]: Accepted.

Commented [DW61]: CODC or Consent Authority.

Commented [DW62]: Generally accepted but could be expanded to additional purposes such as remediation of fuel spills etc.

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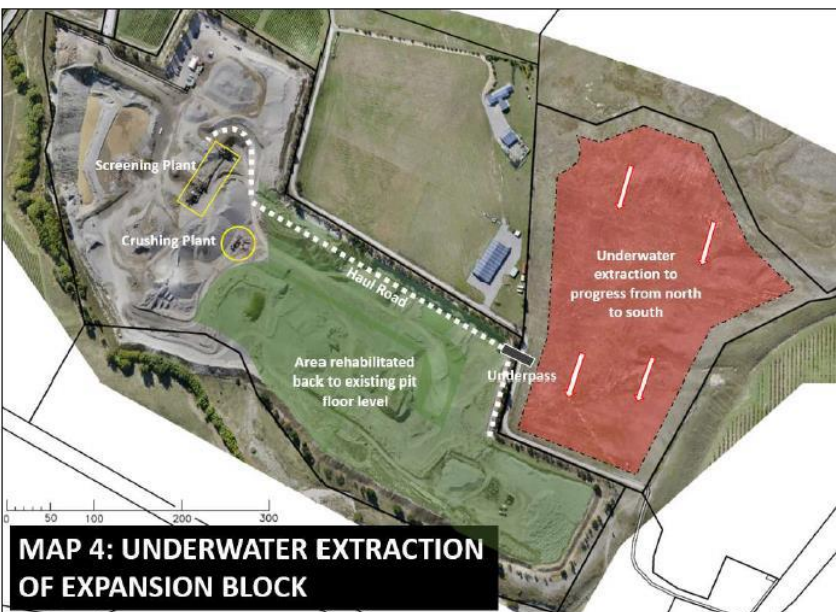
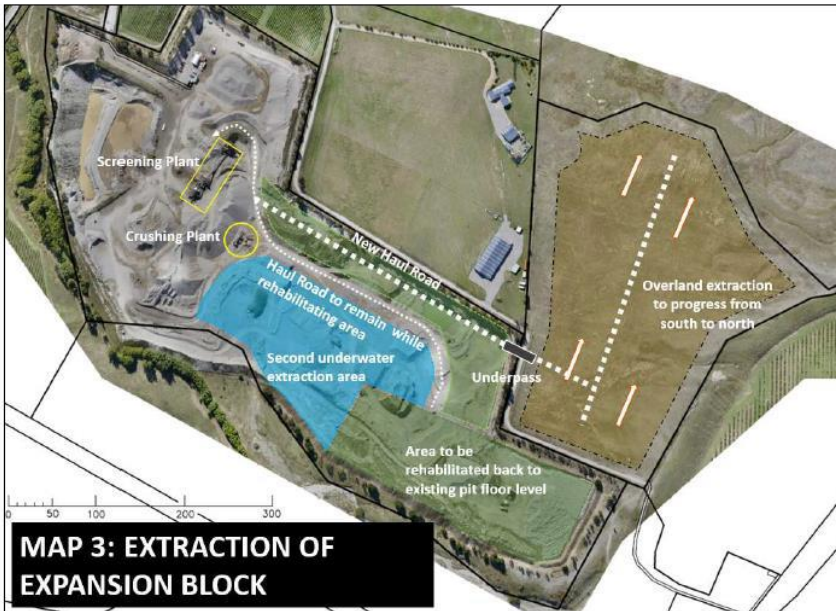
- a. there is or is likely to be an adverse environmental effect that is greater than minor that results from the exercise of this consent, which was unforeseen when the consent was granted;
- b. monitoring the exercise of this consent has revealed that there is likely to be an adverse effect on the environment that is greater than minor;
- c. there has been a change of circumstances such that the conditions of the consent are no longer appropriate in terms of the purpose of the Act.

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Appendix 1

Mine Plan (Maps 1 to 4)





Temporary Diversion and Bund Extension

Temporary Diversion and Bund Extension



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Appendix 1

Appendix 2: People/Organisations to be invited to Community Liaison Group meetings

- Owners/occupiers of the following properties:
 - Lot 2 DP 300388 [Department of Conservation]
 - Lot 1 DP 508108 [Amisfield Orchard Limited]
 - Lot 2 DP 508108 [Hayden Sinclair Little, Tessa Leanne Nyhon]
 - Lot 6 DP 301379, Lot 1 DP 301379 & Lot 10 DP 301379 [Manukau Fifty Limited]
 - Lot 2 DP 301379 [Bryson David Clark, Nicola Jane Clark]
 - Lot 2 DP 518956 [Justine Kate Davis, Philip John Davis, GCA Legal Trustee 2018 Limited]
 - Lot 7 DP 518513 [Lowburn Land Holdings LP]

Holders of the following groundwater permits:

- 2003.363 [Lowburn Land Holdings Limited Partnership]
- 2010.152.V1/G41/0220 [Wanaka Road Wine Holdings Ltd]
- 2001.831/G41/0238 [Manukau Fifty Limited]
- 2004.853/G41/0326 [Jane Marie Miscisco]
- 2006.036/G41/0346 [Felton Park Limited]
- RM14.211.02/G41/0321 [Irrigation and Maintenance Limited]

Organisations

- Aukaha
- Amisfield Estate Society, which takes water from Bore G41/0111
- Otago Regional Council
- Central Otago District Council

Commented [DW63]: Last two bores updated for accuracy.

RM20.360.02: Discharge Consent/Permit

DISCHARGE PERMIT/CONSENT

Pursuant to Section 104B of the Resource Management Act 1991, the Otago Regional Council grants consent to:

Name: Cromwell Certified Concrete Limited

Address: 810 Great South Road, Penrose, Auckland 1061

Activity: To discharge contaminants to land for the purpose of gravel washing and dust suppression

Term: 14.525 years (~~expiring 21 July 2036~~)

Location of consent activity: 1248 Luggate-Cromwell Road (State Highway 6)

Legal description of consent location: Lots 3, 5, and 8 DP 301379

Conditions:

1. This permit shall be exercised ~~is granted~~ in general accordance with the plans and information provided with the application ~~with the discharge of contaminants being sediment in the existing settlement pond in the north-western corner of the site.~~
2. This permit shall not commence until discharge permit RM16.108.02 has been surrendered or expired.
3. This consent shall be exercised in conjunction with water permits RM16.108.01 and RM20.360.01 (or any permits granted which replace those permits) which authorise the abstraction of water from bores G41/0456 and G41/0127.
4. The volume of water discharged shall not exceed:
 - a. 3,024 cubic metres per day;
 - b. 93,744 cubic metres per month; and
 - c. 846,720 cubic metres per year.
5. No contaminants other than silt and sediment shall be discharged into the Pisa Groundwater Management Zone.

Advice note: for the purpose of this consent, silt and sediment is the natural fine material that results from the crushing and washing aggregate.
6. The discharge treatment system shall be located at approximate map reference NZTM (NZDG2000) E1305493 N5017426 and shall include a primary settlement pond with minimum dimensions of 40 m long, 5 m wide and 1 m depth with an overflow to a larger infiltration/settlement pond. These ponds shall be maintained by the Consent Holder in effective operating condition at all times, including at least:
 - a. Three monthly inspections; and
 - b. Pond desludging at least 6 monthly or more frequently if required.
7. The Consent Holder shall ensure that there is no direct discharge from the ponds to any surface watercourse.
8. Within three months ~~At least one month prior to the exercise~~ of this consent being exercised, a water quality monitoring network shall be established for the quarry ~~works~~ which shall include:

Commented [MC64]: The applicant maintains that a 25 year consent term is appropriate to adopt for the discharge of contaminants to land. Although RM16.108.01 expires in approximately 14.5 years on 21 July 2036, the applicant is likely to replace their water permits under the new regional planning framework when it is adopted at which point they can be aligned with the 25 year term proposed for the discharge permit.

Commented [DW65R64]: Opposed. As previously advised in the hearing and in the response to revised conditions on 21 February 2022 that the term of the ORC resource consents should match the duration of water permit RM16.108.01 (expiry 21 July 2036) since all of these other applications are bundled together and dependent on one another for the mitigation of effects.

Water is required to control dust and process quarry material. The maximum term of RM20.360.01 is 6 years as an interim measure which is just one indication that the allocation of water is not to be assumed in Otago. Further changes to water allocation are imminent (new Land and Water Regional Plan by December 2023) so it cannot be assumed that an additional water permit allocation can be obtained.

Commented [MC66]: The consent holder requires some time to allow controlled activity resource consent to be obtained for the monitoring bores and for the bores to be installed.

Appendix 1

- a. three new groundwater monitoring locations (MW1, MW2 and MW3 within 25 m of the marked locations illustrated in Appendix 1 to this consent) with the following specifications:
 - (i) A well with a 2 m screen across the water table at each site.
 - (ii) A second piezometer nested with the water table well screened at 8 to 10 m below the water table at MW2 and MW3. The nested piezometers shall be installed to provide for separation, via grouting, of the screened intervals of the two piezometers to enable depth specific groundwater quality monitoring.
- b. the settling pond and the exposed area of groundwater (to assess discharge water quality).
- c. [Target monitoring](#) bores (G41/0321, G41/0220, G41/0111), and
- d. G41/0319 to represent an upgradient (control) bore.

[Advice note: All monitoring locations should be surveyed and the final locations confirmed in conjunction with the Consent Authority. If upon inspection it is apparent that the headworks of an existing bore do not allow sampling, it will not form part of the water quality monitoring network.](#)

9. The bore drilling and installation of the piezometers required by Condition 8 shall be overseen by a suitably qualified person. A report that demonstrates compliance with the requirements of Condition 8 shall be submitted to the Consent Authority within one month of the installation of the bore.

10. The consent holder shall take quarterly representative water samples from the water quality monitoring network established in Condition 8 commencing [within three months of this consent being exercised](#). During each monitoring event:

- a. Water levels shall be measured and recorded at the time of sampling.
- b. Field parameters (temperature, pH, Dissolved Oxygen, Electrical Conductivity and Oxidation Reduction Potential) should be measured and recorded at the time of sampling using a calibrated water quality meter in a flow cell. Samples should be collected after field parameters have stabilised to within 5% of the previous three measurements. Field filtering of samples [shall](#) be completed for dissolved metals analysis.
- c. Samples should be analysed by a laboratory with IANZ accreditation or equivalent for Total petroleum hydrocarbons, total suspended solids, turbidity, major ions (sodium, potassium, calcium, magnesium, alkalinity, chloride, sulphate, nitrate), copper, chromium, zinc, Arsenic and E-coli, iron and manganese. Samples should be analysed for both total and dissolved metals.
- d. The sampling shall be undertaken by a suitably qualified person in general accordance with the National Environmental Monitoring Standards Water Quality Part 1 of 4: Discrete Sampling, Measuring, Processing and Archiving of Discrete Groundwater Quality Data.
- e. [If 20 consecutive sampling results show no statistically significant difference in water quality monitoring determinants then the frequency of groundwater testing required shall reduce to annually for all monitoring locations, except G41/0111 and G41/0321, which shall continue to be monitored quarterly until the expiry or surrender of this consent, whichever occurs first.](#)

If permission to sample any of the private bores is not granted, the remaining water quality network will still be sampled.

Commented [MC67]: Council officers suggested that this may not be necessary at MW1, the applicant agrees.

Commented [MC68]: As noted in relation to Condition 8, the applicant requires some time to allow monitoring bores to be consented and installed.

In place of commencing monitoring prior to consent be exercised as proposed by Council officers, the applicant has proposed a new condition that requires baseline monitoring in the target monitoring bores to occur within two weeks of consent being granted.

Commented [DW69]: Opposed. Must.

Commented [MC70]: Based on the applicant's expert groundwater advice the frequency of groundwater monitoring proposed is considered appropriate.

As per Mr Allison's evidence full production will be achieved in a relatively short time.

The applicant has proposed that quarterly monitoring of G41/0111 and G41/0321 would continue even if 20 consecutive sampling results show no statistically significant difference in water quality monitoring, sampling at the other monitoring locations would reduce to annually.

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11. Prior to consent being exercised the consent holder shall take representative water samples from the target monitoring bores, the settling pond and G41/0319 in accordance with Condition 10 a. – 10 d.

If permission to take baseline samples from any of the private bores is not granted, the remaining water quality network will still be sampled.

Commented [MC71]: Condition insert to provide for baseline monitoring prior to consent being exercised.

11.12. The Consent Holder shall submit an Annual Groundwater Report before the end of February to the Consent Authority (customerservices@orc.govt.nz) and owners of sampled bores. The report shall:

- a. Be undertaken by a suitably qualified and experienced water quality expert who has reviewed all the available water quality and level data.
- b. Include a conceptual groundwater for the site based on the collected data.
- c. Include an assessment of whether the data indicates activities on the Consent Holder's site are adversely impacting groundwater quality, and in particular, sensitive receptors.
- d. The identity, expertise and sampling methodology of the person(s) who collected water samples in accordance with this resource consent;
- e. Identification of any measures required under Condition 13 or 14;
- f. Copies of the complaints record for any complaints in relation to groundwater quality for the preceding 12 months.

12.13. Should the measured value of any of the determinants (except for turbidity) in a sample from monitoring bores exceed a NZ Drinking Water Standard Maximum Acceptable Value or Guideline Value (as specified in the New Zealand Drinking Water Standards), then the consent holder shall:

Commented [DW72]: Accepted.

- a. Advise the Consent Authority (customerservices@orc.govt.nz) and bore owners within 48 hours of receipt of the results;
- b. Within one week from the receipt of the results, begin an investigation into the cause of the elevated sample results. The investigation is to be carried out by a suitably qualified water quality expert and is to include, but is not limited to;
 - (i) activities at Amisfield Quarry,
 - (ii) activities at the neighbouring property,
 - (iii) rainfall in the past 48 hours, and
 - (iv) and any additional water quality monitoring that may be required to assess the potential cause of contamination.
- c. Within one month of receipt of the elevated sample results, submit a report signed by a suitably qualified water quality expert to the Consent Authority and the bore owner on the investigation undertaken, any potential sources of contamination identified, the likely cause(s) of the contamination and recommend any remedial measures to prevent or mitigate the contamination.
- d. In the event that the report concludes that it is highly likely that the contamination was caused by the consent holder; and
 - (i) the contamination was in potable drinking water supply, the Consent Holder shall, within 72 hours of receipt of the report, provide the bore owner with an alternative supply of potable drinking water sufficient to provide 2,000 litres per day to each household provided by the supply until such time as monitoring demonstrates compliance with the relevant MAV or Guideline values. All costs associated with this shall be borne by the consent holder.

Commented [MC73]: Condition has been amended as per advice from Dr Freeman to address baseline turbidity results.

Commented [DW74]: Opposed. This seems to raise the standard of the test for contamination.

Commented [DW75]: Support to specify a timeframe for which to provide this alternative potable supply. A shorter period of time would be preferable.

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- (ii) the contamination was in a monitoring bore, sampling frequency at the closest downgradient sensitive bore identified in Condition 8 (c) shall increase to 1 per week until the issue has been rectified.

For turbidity, instead of the NZDWS aesthetic guideline of 2.5 NTU, a guideline of 4.0 NTU shall apply. Should the measured value of turbidity of samples taken from the monitoring bores exceed 4.0 NTU, conditions (a) – (d) above shall apply.

Advice Note:

1. The Guideline Values and Maximum Acceptable Values (MAV) are specified in the publication 'Drinking-water Standards for New Zealand 2005 (Revised 2018)', Ministry of Health or its replacement. The Guideline Values are the limits for aesthetic determinants that, if exceeded, may render the water unattractive to consumers. These standards are primarily aimed at water supply authorities who generally treat water to ensure that these standards are met.

2. Shallow groundwater in this area is vulnerable to increases in turbidity and other contaminants such as nitrate nitrogen, following heavy rainfall. It is likely that if groundwater quality monitoring is undertaken within days or weeks of heavy rainfall that there will be increases in these contaminants in groundwater.

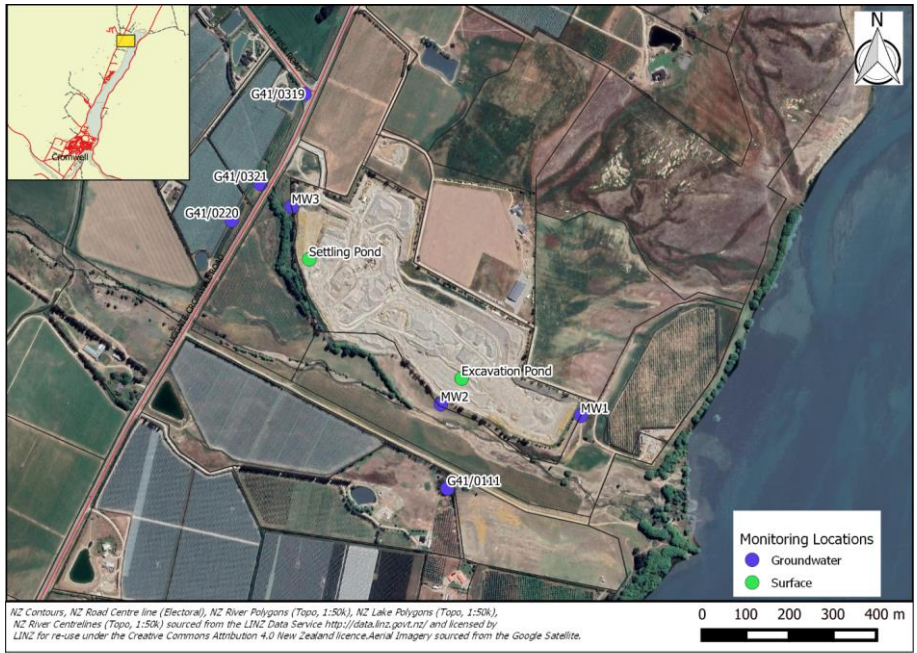
- 13.14. If a report required under Condition 13 concludes that the discharge is causing a significant adverse water quality effects at a target monitoring bore, the Consent Holder shall within three months of receiving that report implement additional or alternative sediment treatment/ management measures to reduce the concentration of suspended solids entering the infiltration/settling pond:
- a. The Consent Holder shall report to the Consent Authority as soon as practicable on the completion of any such works; and
 - b. Within 12 months of completion of any additional sediment treatment/management measures, the Consent Holder shall provide a report to the Consent Authority written by a suitably qualified person on the effectiveness of those measures.
- 14.15. The Consent Holder shall ensure that the discharge authorised by this consent does not cause any flooding, erosion, scouring, land instability or damage to any adjacent property.
- 15.16. The Consent Authority may, in accordance with Sections 128 and 129 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions of this consent within 3 months of each anniversary of the commencement of this consent for the purpose of:
- a. Adjusting the consented rate of discharge under Condition 4, should the consented amounts or rates of water take approved under Water Permits RM16.108.01 and RM20.360.01 (or any replacement consents) be reduced; or
 - b. Determining whether the conditions of this consent are adequate to deal with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage (including any adverse effects of the discharge to the ponds on groundwater quality in bore G41/0321 or G41/0220); or
 - c. Ensuring the conditions of this consent are consistent with any National Environmental Standards.

Commented [DW76]: Accepted.

Commented [MC77]: Advice note included to address amendments to condition.

Appendix 1

Appendix 1: Water Quality Monitoring Network



DRAFT

RM20.360.04: Bore Consent

LAND USE CONSENT

Pursuant to Section 104A of the Resource Management Act 1991, the Otago Regional Council grants consent to:

Name: Cromwell Certified Concrete Limited

Address: 810 Great South Road, Penrose, Auckland 1061

Activity: To construct a bore for the purpose of excavating gravel below groundwater and to decommission the bore following completion of excavations

Term: For an unlimited term

Location of consent activity: 1248 Luggate-Cromwell Road (State Highway 6)

Legal description of consent location: Lots 3, and 8 DP 301379

Conditions:

1. The bore must be an open excavation on Lot 3 or Lot 8 DP 301379. This permit shall be exercised in general accordance with the plans and information provided with the application.
2. If this consent is not given effect to within a period of five years from the date of commencement of this consent, this consent shall lapse under Section 125 of the Resource Management Act 1991. The consent shall attach to the land to which it relates.
3. At least one month prior to the exercise of this consent, the Consent Holder shall undertake water quality sampling and reporting as per the requirements of RM20.360.02: Discharge Permit, which are considered to provide an integrated water quality monitoring programme for the site (refer to Appendix 1 for the monitoring locations).
4. A Quarry Groundwater Management Plan (QGMP) shall be submitted to the Otago Regional Council at least 1 month prior to the exercise of this consent for certification that it documents, as a minimum:
 - a. A plan showing the areas of groundwater extraction and the water quality monitoring network;
 - b. A description of the groundwater quality monitoring required by the conditions of this consent and RM20.360.02;
 - c. Names and The contact details of staff responsible for implementing and reviewing the GMP in order to achieve the requirements of this consent quarry manager;
 - d. A description of the proposed methods of excavating aggregate within groundwater;
 - e. A description of all relevant site operations and procedures, including mobile refuelling procedures and spill responses;
 - f. A description of all environmental effects, including (but not limited to) discharges to water;
 - g. All consent conditions and any other mitigation measures to be employed to minimise environmental effects and/or adhere to best practice;
 - h. The minimum maintenance frequency for all machinery operated by the Consent Holder and working on the site;
 - i. Relevant monitoring and reporting requirements.
5. Activities authorised by this consent must shall not commence until the Consent Holder has received written certification of the QMPGMP. Notwithstanding this, the works may proceed

Commented [MC78]: Reference to Lot 5 DP 301379 removed.

Commented [DW79R78]: Accepted.

Commented [MC80]: Previously this was named the Quarry Management. Given this consent authorises groundwater interception, it has been renamed a Groundwater Management Plan.

Commented [DW81R80]: Unnecessary change.

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if the Consent Holder has not received a response from the [Consent Authority](#) within 20 working days of the date of the submission of the [GMP](#).

6. Any erosion, scour or instability of the bed or banks of the pit or formed waterbody that exceeds the extent shown in the consent application shall be reinstated or remedied by the Consent Holder. When such reinstatement or remediation is necessary, the Consent Holder shall record the following information and include it in the Annual Groundwater Report required by Condition 10 of this consent:
 - a. The location of the reinstatement or remediation works identified on a site plan;
 - b. A description of the nature of the damage that occurred, including photographs;
 - c. An assessment of the likely causes of the damage, including reference to preceding weather conditions, activities taking place in the area, the angle of the pit slopes etc.
 - d. A description of the nature of the reinstatement or remediation works required and when these were carried out;
 - e. Any changes to be made to site management measures to reduce the likelihood of similar issues arising in future.
7. In the event of a discharge of unauthorised contaminant(s) to water or to land in a manner that may enter water, including but not limited to fuel, hydraulic fluid, overspray of weed killer, contaminated soil or leachate, the Consent Holder shall:
 - a. Undertake all practicable measures as soon as possible to contain the contaminant;
 - b. Ensure that the contaminants and any material used to contain it are removed from the site and disposed of at an authorised landfill;
 - c. Immediately notify the Consent Authority and Amisfield Estate Society Incorporated of the spill or contamination and of the actions taken and to be taken to remediate and mitigate any adverse environmental effects;
 - d. Immediately have a suitably qualified water quality expert assess the risk of the spill to bore G41/0111 (the Amisfield Estate Society Incorporated drinking water supply) and provide recommendations on the measures to be taken to address any identified risk;
 - e. Provide a copy of the risk assessment carried out under Condition 7(d) above to the Consent Authority and Amisfield Estate Society Incorporated within 1 week and implement all recommendations in the risk assessment;
 - f. If requested by the Consent Authority, undertake additional water quality sampling and any other actions necessary to remediate or mitigate any adverse effects on the environment, to the satisfaction of the Consent Authority.
8. The Consent Holder shall ensure that:
 - a. All machinery to be operated within exposed groundwater on the site is thoroughly cleaned of vegetation (e.g. weeds), seeds or contaminants at least 10 [metres](#) away from any waterbody, water flow channel or stormwater system, prior to entering the site;
 - b. All machinery shall be regularly maintained to ensure that no contaminants (including but not limited to oil, petrol, diesel, hydraulic fluid) shall be released into water, or to land where it may enter water, from equipment being used for the works;
 - c. All contaminant storage or re-fuelling areas (other than areas where mobile re-fuelling occurs) are bunded or contained in such a manner so as to prevent the discharge of contaminants to water or to land where it may enter water;

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d. No machinery shall be maintained, cleaned, stored or refuelled within 10 metres of any waterbody, water flow channel or stormwater system;

e. Permanent storage of fuel and lubricants shall only occur within the workshop area identified on 'Site Plan Rev F' attached as Appendix 1 to this consent. Lubricant shall be stored in a bunded area capable of containing 125% of the volume being stored. Fuel shall be stored in a double skinned tank certified in accordance with the manufacturers specifications and capable of containing a spill at maximum capacity.

f. Refuelling and maintenance of all vehicles or machinery except for the excavator shall be undertaken within the workshop area identified on 'Site Plan Rev F' attached as Appendix 1 to this consent.

e.g. Mobile refuelling of the excavator shall only be undertaken using a nozzle that incorporates a shut off valve and sensor system to avoid fuel leaks or overfilling of the excavator fuel tank.

h. Mobile refuelling occurs in accordance with best practice and spill kits are available at the mobile refuelling locations.

g.i. The origin and location of deposition within the site of any externally sourced cleanfill shall be recorded;

9. Externally sourced cleanfill shall not be placed within 10 metres of any waterbody, water flow channel or stormwater system and shall be located above the level of groundwater.

9.10. The Consent Holder shall maintain a permanent record of any complaints received alleging adverse effects from or related to the works authorised by this consent. This record shall include:

- a. The name and address of the complainant (if provided);
- b. The date and time that the complaint was received;
- c. Details of the alleged event;
- d. Weather conditions at the time of the complaint; and
- e. Any measures taken to mitigate/remedy the cause of the complaint.

This record shall be made available to the Consent Authority on request.

10.11. The Consent Holder shall submit an Annual Groundwater Report before the end of February each year which includes the following:

- a. Results of the water quality monitoring carried out in accordance with Condition 3;
- b. The identity and expertise of the person(s) who collected water samples in accordance with this resource consent;
- c. Identification of any measures required under Condition 9(e);
- d. Records kept in accordance with Condition 9 and 8(f); and
- e. Copies of the complaints record for any complaints in relation to groundwater quality for the preceding 12 months.

11.12. The Consent Authority may, in accordance with Sections 128 and 129 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions of this consent within 3 months of each anniversary of the commencement of this consent for the purpose of:

Commented [MC82]: All vehicles and machinery other than the excavator can be re-fuelled at the workshop area. The excavator will need to be mobile re-fuelled for the reasons described in Mr Allison's supplementary evidence.

Commented [DW83R82]: Supported.

Commented [MC84]: Additional conditions adopted to prevent discharges of fuel and lubricants to land or water.

Commented [DW85R84]: Supported.

Commented [MC86]: Adopted wording proposed by AES.

Commented [DW87R86]: Supported.

Commented [MC88]: Amended and inserted as a standalone condition.

Commented [DW89R88]: Supported.

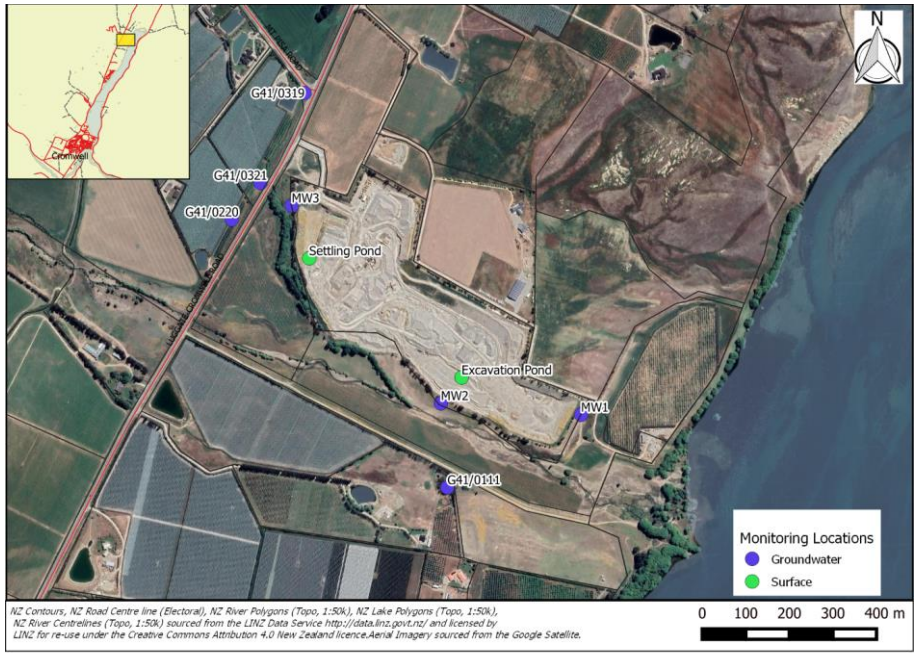
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- a. Adjusting the variables or frequency of the sampling requirements under Condition 3; or
- b. Determining whether the conditions of this consent are adequate to deal with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; or
- c. Ensuring the conditions of this consent are consistent with any National Environmental Standard or National Planning Standard.

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Appendix 1

Appendix 1: Water Quality Monitoring Network



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Deepening and Expansion

RM20.360.01: Water Take

WATER PERMIT

Pursuant to Section 104B of the Resource Management Act 1991, the Otago Regional Council grants consent to:

Name: Cromwell Certified Concrete Limited

Address: 810 Great South Road, Penrose, Auckland 1061

Activity: To take and use ground water for the purpose of gravel washing, irrigation, potable and sanitary use, and dust suppression

Term: 6 years

Location of consent activity: 1248 Luggate-Cromwell Road (State Highway 6)

Legal Description of land at point of abstraction: Lot 8 DP 301379

Legal Description of land where water is to be used: Lots 3, 5, and 8 DP 301379

Map Reference at point of abstraction: Bore G41/0127 - NZTM 2000 E1305397 N5017068
Bore G41/0456 - NZTM 2000 E1305502 N5017223

Conditions:

1. This permit shall be exercised in conjunction with Water Permit RM16.108.01, Discharge Permit RM20.360.02, and any consents granted in replacement of those permits.
2. If this consent is not given effect to within a period of five years from the date of commencement of this consent, this consent shall lapse under Section 125 of the Resource Management Act 1991. The consent shall attach to the land to which it relates.
3. The combined rate of abstraction from bore G41/0127 and bore G41/0456 shall not exceed 24 litres per second.
4. The rate of abstraction when combined with Water Permit RM16.108.01 shall not exceed 25 litres per second from bore G41/0127 and 45 litres per second from bore G41/456, and the quantity of water abstracted shall not exceed:
 - a. 3,024 cubic metres per day;
 - b. 93,744 cubic metres per month; and
 - c. 846,720 cubic metres per year.
5. The consent holder shall:
 - a. Maintain water meter(s) to record the water take, within an error accuracy range of +/- 5% over the meter(s) nominal flow range, and a telemetry compatible datalogger with at least 24 months data storage and a telemetry unit to record the rate and volume of take, and the date and time this water was taken.
 - b. The datalogger shall record the date, time and flow in litres per second.
 - c. Data shall be provided once daily to the Consent Authority by means of telemetry. The consent holder shall ensure data compatibility with the Consent Authority's time-series database.

Commented [MC90]: Domestic has been replaced with potable and sanitary.

Commented [DW91R90]: Supported.

Deepening and Expansion

- d. The consent holder shall ensure the full operation of the water meter(s), datalogger and telemetry unit at all times during the exercise of this consent. All malfunctions of the water meter and/or datalogger and/or telemetry unit during the exercise of this consent shall be reported to the Consent Authority within 5 working days of observation and appropriate repairs shall be performed within 5 working days. Once the malfunction has been remedied, a Water Measuring Device Verification Form completed with photographic evidence shall be submitted to the Consent Authority within 5 working days of the completion of repairs.
 - e. The water meter(s), datalogger and telemetry unit shall be verified for accuracy within one month from the first exercise of this consent.
 - f. Any electromagnetic or ultrasonic flow meter shall be verified for accuracy every five years from the first exercise of this consent.
 - g. Each verification shall be undertaken by a Consent Authority approved operator and a Water Measuring Device Verification Form shall be completed and submitted to the Consent Authority with receipts of service within 5 working days of the verification being performed, and at any time upon request.
6. The consent holder shall take all practicable steps to ensure that:
 - a. There is no leakage from pipes and structures;
 - b. There is no runoff of irrigation water either on site or off site;
 - c. A back flow preventer device is fitted to prevent any contaminants from being drawn into the source of the water.
 7. The Consent Authority may, in accordance with Sections 128 and 129 of the Resource Management Act 1991, serve notice on the consent holder of its intention to review the conditions of this consent for the purpose of imposing aquifer restriction levels, if and when an operative regional plan sets aquifer restriction levels.
 8. The Consent Authority may, in accordance with Sections 128 and 129 of the Resource Management Act 1991, serve notice on the consent holder of its intention to review the conditions of this consent within 3 months of each anniversary of the commencement of this consent for the purpose of:
 - a. Determining whether the conditions of this consent are adequate to deal with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; or
 - b. Ensuring the conditions of this consent are consistent with any National Environmental Standard or National Planning Standard.

Deepening and Expansion

RM20.360.03: Air Discharge Permit

DISCHARGE PERMIT

Pursuant to Section 104B of the Resource Management Act 1991, the Otago Regional Council grants consent to:

Name: Cromwell Certified Concrete Limited

Address: 810 Great South Road, Penrose, Auckland 1061

Activity: To discharge contaminants to air for the purpose of operating an alluvial quarry

Term: 14.525 years (expiring 21 July 2036)

Location of consent activity: 1248 Luggate-Cromwell Road (State Highway 6)

Legal Description of consent location: Lots 3, 5, and 8 DP 301379

General Conditions

1. The activity shall be carried out in general accordance with information and plans submitted with the application dated 23 October 2020 for resource consent RM20.360.03 and with evidence submitted by the Consent Holder at the hearing. Should there be any inconsistencies between those documents and consent conditions, the consent conditions shall prevail.
2. If this consent is not given effect to within a period of five years from the date of commencement of this consent, this consent shall lapse under Section 125 of the Resource Management Act 1991. The consent shall attach to the land to which it relates.
3. Aggregate extracted from the site **must-shall** not exceed 200,000-m³ in any 12-month period.
4. The discharge shall not give rise to dust or the deposition of particulate matter that causes a noxious, dangerous, objectionable or offensive effect beyond the boundary of the site.
5. The Quarry Manager or another nominated person **must-shall** be available at all times (including outside quarry operation hours) to respond to dust emission complaints and trigger level alerts in accordance with measures described in the Dust Management Plan (DMP).
6. The maximum area of unconsolidated land comprising of the excavation area, backfilling areas and rehabilitation area shall not exceed 2 ha.

Advice Note: The maximum area of unconsolidated land does not include the haul roads, processing area, stockpiles, areas which are covered with 50-mm (or more) of washed gravels or stabilised with a dust suppressant, portacoms or workshops, or the conveyor and its associated service area.

Dust Management Plan (DMP)

7. At least one month prior to exercising this resource consent, the Consent Holder **must-shall** prepare a Dust Management Plan (DMP) and submit it for certification by the Consent Authority.
8. Works **must-shall** not commence until the Consent Holder has received written certification from the Consent Authority of the DMP. Notwithstanding this, the works may proceed if the Consent Holder has not received a response from the Consent Authority within 20 working days of the date of the submission of the DMP.
9. The DMP **must-shall** include, but not be limited to:

Commented [MC92]: The applicant maintains that a 25 year consent term is appropriate to adopt for the discharge of contaminants to air. Although RM16.108.01 expires in approximately 14.5 years on 21 July 2036, the applicant is likely to replace their water permits under the new regional planning framework when it is adopted at which point they can be aligned with the 25 year term proposed for the discharge to air permit.

Commented [DW93R92]: Opposed. As above. To match the term of water permit RM16.108.01 (expiry 21 July 2036).

Commented [DW94]: Opposed. Must.

Deepening and Expansion

- a. A description of the purpose of the DMP;
- b. A description of the dust sources on site;
- c. A description of the receiving environment and identification of sensitive receptors within 250 m of site boundaries (sensitive receptors being any dwelling and the land within 20 m of the façade of an occupied dwelling's notional boundary, and sensitive commercial crops);
- d. The methods (including dust reduction through design methodologies) which will be employed to ensure compliance with the conditions of this consent;
- e. A description of site rehabilitation methodology and associated dust control measures;
- f. A description of particulate matter and wind monitoring requirements including:
 - (i) The location of the wind monitoring equipment;
 - (ii) The location of particulate matter monitors between active work areas and sensitive off-site activities;
 - (iii) Details of wind speed trigger levels as set out in Condition [12\(a\)](#) and associated alarm system. This shall also include the wind direction to be used in fulfilment of Condition [12\(b\)](#);
 - (iv) Details of the particulate matter trigger levels as set out in Conditions [14](#) and [15](#) and associated alarm system; and
 - (v) Monitoring instrumentation methodology, setup requirements, maintenance and calibration procedures, [and the frequency of review of the location of monitoring equipment and calibration.](#)
- g. A description of procedures for responding to dust and wind condition-based trigger levels and associated follow up investigations, actions and recording of findings;
- h. A system for training employees and contractors to make them aware of the requirements of the DMP;
- i. Names and contact details of staff responsible for implementing and reviewing the DMP in order to achieve the requirements of this consent, and procedures, processes and methods for managing dust outside of standard operating hours;
- j. A method for recording and responding to complaints from the public [in accordance with Condition 38](#);
- k. A maintenance and calibration schedule for meteorological and particulate matter monitoring instruments;
- l. Contingency measures for responding to dust suppression equipment malfunction or failures, including wind and particulate matter monitoring instruments;
- m. A procedure for completing an end-of-day dust control checklist;
- n. Separate Standard Operating Procedures (SOPs) dedicated to the management of potential dust discharges from specific sources, including but not limited to:
 - (i) Stockpiles;
 - (ii) Site roads – sealed and unsealed;
 - (iii) [The conveyor used to convey aggregate from Lot 3 DP 301379 to the processing plant located within Lot DP 301379;](#)
 - (iv) Triggers for the use of water for dust suppression;
 - (v) The use of dust suppressants other than water;
 - (vi) Aggregate excavation and backfilling areas;
 - (vii) Topsoil and overburden stripping and stockpiling;

Commented [DW95]: Supported.

Deepening and Expansion

- (viii) Bund construction, maintenance and the recontouring of slopes during rehabilitation;
 - (ix) Any automated dust suppression for dust prone areas that can be activated outside of working hours;
 - (x) Location and calibration of particulate matter and meteorological monitoring equipment and the frequency of review of their location and calibration;
- o. Environmental information management for recording, quality assurance, archiving and reporting all data required for dust management on the site.

10. The Consent Holder shall carry out its activities in accordance with the DMP at all times.

11. The Consent Holder may review and update the DMP where it is to modify SOPs, respond to complaints and monitoring data, implement technological or process improvements, providing revisions are certified by an independent Suitably Qualified and Experienced Practitioner (SQEP).

Commented [DW96]: Supported since this is a mechanism to update the location of PM monitors.

Trigger Levels and Dust Mitigation

Trigger Levels

10.12. Quarry activities (except dust suppression measures) within 250 metres of a sensitive receptor location (sensitive receptors being those defined in Condition 9(c)) shall not be undertaken when:

- a. Wind speed reaches or exceeds 7 m/s (10 minute scalar average); and
- b. Quarry activities would be directly upwind of a sensitive receptor (10-minute average wind direction); and
- c. Less than 1 mm of rain has fallen during the preceding 12 hours.

11.13. If at any time, including outside normal operating hours, visible dust is blowing beyond the site boundary or if the particulate matter monitoring trigger in Condition 14 is breached the Consent Holder shall:

- a. Cease all quarry activities (including loading of purchasing trucks), except dust suppression measures;
- b. Continue all dust suppression activities including but not limited to the immediate watering of both active and inactive exposed surfaces;
- c. Investigate possible sources of the dust;
- d. Only resume quarry activities (other than dust suppression) once there is no longer visible dust blowing beyond the site boundaries and when the monitoring trigger in Condition 14 is no longer being breached; and
- e. Notify the Consent Authority within 24 hours, detailing its cause and the dust suppression actions undertaken.

12.14. The trigger concentration which indicates the potential for excessive quarry derived dust at or beyond the site boundary is a maximum real time PM₁₀ concentration of ≥ 150 micrograms per cubic metre, as a rolling 1-hour average, which shall be updated every ten minutes.

13.15. A pre-trigger concentration alert level shall be specified in the DMP, the purpose of which is to provide an early warning that the trigger concentration in Condition 14 may be reached. This shall be a maximum PM₁₀ concentration value of ≥ 150 micrograms per cubic metre, as a rolling 10-minute average, which shall be updated every 1 minute.

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14.16. If the investigation required under Condition 13(c) determines the source of dust is localised to the excavation area only and is only impacting on areas downwind of this source, then activities within the central processing area, including sales of product, can continue. This is contingent on all activities within the existing processing and load out area not causing visible dust blowing beyond the site boundary and their downwind real time PM₁₀ monitors not reaching or exceeding the trigger in Condition 14.

15.17. The Consent Holder shall submit a report by an independent Suitably Qualified and Experienced Practitioner (SQEP) to the Consent Authority 2 years after the exercise of this consent and a further report 12 months after quarrying has commenced on Lot 3 DP 301379 to confirm that the PM₁₀ trigger concentration levels set in Conditions 14 and 15 are not giving rise to a breach of Condition 4 of this consent or if they are set unnecessarily low for avoiding such effects. The report shall contain data on PM₁₀ levels recorded by the monitors from two early summer/late autumn periods (1 October to end of May) and shall identify whether a change is needed to the trigger levels in Condition 14 and 15 to achieve routine compliance with Condition 4 of this consent.

16.18. If the report by an independent SQEP (as required under Condition 17) determines the PM₁₀ trigger concentration should be decreased in order to achieve routine compliance with Condition 4, then the revised value as recommended by the SQEP shall be specified within an updated DMP and alarm settings on monitoring equipment shall be adjusted to reflect this revised value within 15 working days of receipt of the SQEP's report.

Mitigation Measures

17.19. The Consent Holder shall take all practicable measures to minimise the discharge of dust from quarry activities, including but not limited to:

- a. Placing clean reject gravel over extraction areas if they are not being actively used by the Consent Holder. Areas where clean reject gravel cannot be placed will be stabilised using polymers;
- b. Assessing weather and ground conditions (wind and dryness) at the start of each day and ensure that applicable dust mitigation measures and methods are ready for use prior to commencing quarry activities;
- c. Taking wind direction and speed into account in planning quarry activities to minimise the risk of dust dispersion towards any residential dwellings and sensitive commercial crops that are within 250 metres of the site boundary;
- d. Water suppression such as using watercarts or fixed sprinklers will be applied as required to dampen down disturbed areas and stockpiles. This shall occur during dry weather, irrespective of wind speed and a back up watercart shall be available in the event that the dedicated site watercart breaks down;
- e. Pre-dampening topsoil and overburden with a water cart or sprinklers prior to its extraction and removal.
- f. Constructing and maintaining unsealed internal haul roads so that their surfaces consist of a crushed clean aggregate layer that is free of potholes;
- h.g. Minimising drop heights when loading trucks, conveyor hoppers and when moving material;
- i.h. Operating fixed and mobile crushing plant in conjunction with water dust suppression (either sprays or high-pressure fogging system) as necessary to avoid the dust trigger level, as specified in Condition 14 and 15, being reached or exceeded;

Commented [MC97]: Reference to 'sensitive commercial crops' has been added to link to Condition 9(c).

Commented [MC98]: Wording added to address query raised by Mr Van Kekem relating to the potential for the watercart to breakdown.

Deepening and Expansion

- j.i. Undertaking routine onsite and offsite inspections of visible dust emissions and deposited dust throughout each day of quarry activities and electronically logging findings and any dust suppression actions, and making the results of the inspections available to the Consent Authority when requested;
- k.i. Maintaining an adequate supply of water and equipment on site for the purpose of dust suppression at all times;
- l.k. Application of water via watercart or fixed irrigation of dust suppression water onto any section of the external access road shall only be used as a contingency/back up measure;
- m.l. Fixed and mobile crushing and screening plant shall be located in the areas identified on Site Plan Rev F included in Appendix 1 to this consent.

20. Aggregate (once extracted from the quarry face) shall be placed on a field conveyor and transported from within Lot 3 DP 301379 to the processing plant within Lot 8 DP 301379. Haul trucks shall not be used for that purpose.

18.21. Land stripping and land rehabilitation shall be carried out during winter months (1 May to 31 August) when ground conditions are damp (or the ground or material to be used for rehabilitation has been thoroughly wetted with a water cart) and winds are below 7 m/s (10 minute average).

19.22. The Consent Holder shall impose a speed restriction on all internal haul and access roads of 30 km/hr.

20.23. The Consent Holder shall maintain the existing seal along the length of the site access road contained within Lot 5 DP 301379.

21.24. The northeast-southwest aligned section of conveyor within the expansion area (Lot 3 DP 301379) shall be located at least 75 m from the shared boundaries with Lot 2 DP 301379 and Lot 1 DP 508108.

22.25. The height of aggregate stockpiles shall be maintained below the height of existing ground level at the point immediately due northeast of stockpile.

Meteorological Monitoring

23.26. Prior to exercising this consent, the Consent Holder shall install a meteorological monitoring station at the location described in the DMP. The meteorological monitoring station shall be capable of continuously monitoring:

- a. Wind speed and direction at a minimum height of 6 m above the natural ground level;
- b. Rainfall;
- c. Relative humidity; and
- d. Temperature.

24.27. The meteorological monitoring instruments shall:

- a. Measure wind speed as 1-minute scalar averages with maximum resolution of 0.1 metres per second (m/s), have an accuracy of at least within +/-0.2 m/s, and a stall speed no greater than 0.5 m/s;
- b. Measure wind direction as 1-minute vector averages with maximum resolution of 1.0 degree and accuracy of at least within +/- 1.0 degree, and a stall speed no greater than 0.5 m/s;
- c. Measure screened temperature with accuracy of +/- 0.5 degree;

Commented [MC99]: This has been made a stand alone condition and the wording has been amended to clarify the purpose of the conveyor i.e. it will be used instead of a haul road.

Commented [DW100R99]: Supported.

Commented [MC101]: Text added to clarify that aggregate will not be transported in haul trucks from the expansion land to the processing plant.

Commented [DW102R101]: Supported.

Commented [DW103]: Supported.

Commented [MC104]: Speed limit was agreed in the JWS by technical experts.

Deepening and Expansion

- d. Measure relative humidity with an accuracy of +/- 1%;
- e. Measure rainfall with an accuracy of +/- 0.2mm;
- f. Be located on the site in accordance with AS/NZS 3580:14-2014 (Methods for sampling and analysis of ambient air – Part 14 Meteorological monitoring for ambient air quality monitoring applications). If the monitoring station cannot be located in accordance with AS/NZS 3580:14-2014 an alternative location shall be agreed in writing with the Consent Authority;
- g. Maintain a data and time stamped electronic record for at least 36 months of meteorological monitoring results, recorded as rolling 10-minute averages, which are up-dated every one-minute in real-time.
- h. Send an alarm to the Quarry Manager (for example via mobile phone) if the wind speed trigger level in Condition 12(a) is reached or exceeded while the rainfall criteria specified in Condition 12(c) are being met.
- i. Be maintained and calibrated in accordance with the manufacturer's specifications.

25.28. All meteorological monitoring data shall be made available to the Consent Authority on request.

Particulate Matter Monitoring

26.29. Prior to exercising of this consent, the Consent Holder shall operate and maintain one permanent real-time dust management monitor for continuous monitoring of ambient 10-minute average PM₁₀ concentrations, which shall be installed and operated at a fixed location at the existing quarry's southwest boundary and in accordance with the DMP.

Advice Note: The permanently located real-time dust management monitor shall be an accepted method for general dust management/monitoring purposes, and does not need to be a certified USEPA, or National Environmental Standards for Air Quality (NESAQ) compliant method.

27.30. The permanent monitor shall be installed, operated, maintained and calibrated in accordance with the AS/NZS 3580.12.1:2015 *Methods for sampling and analysis of ambient air – Determination of light scattering – Integrating nephelometer method*, or else an equivalent or superior standard which is approved by the Consent Authority;

28.31. Prior to the exercising of this consent, the Consent Holder shall operate and maintain at least two mobile real-time dust management monitors for continuous monitoring of ambient ten-minute average PM₁₀ concentrations, whose location changes for different stages of the quarry development. **For the first 12 months of operations, the location of the mobile monitors shall be as identified in the DMP. The locations of the mobile monitors thereafter shall be reviewed by a SQEP and if the SQEP recommends that the locations of the monitors should be changed, this shall be identified in the annual report required by Condition 43 of this consent.**

29.32. The mobile real-time dust management monitors can be equivalent to that used for the permanently located dust monitor, or else be a lower cost method, on the basis that this can be effectively calibrated against the permanent dust monitor.

30.33. The two mobile dust monitors shall be positioned at different site boundary locations, such that real-time dust monitoring is undertaken at locations which are between active excavation and central processing areas and downwind sensitive receptor locations, when the latter are within 250 m of the dust source.

31.34. All three dust monitors shall:

Commented [MC105]: Condition amended to support compliance with the requirements of conditions 31, 33 and 34(a) of this consent.

Commented [DW106R105]: Opposed. To be considered above in the DMP.

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- a. Be sited in general accordance with AS/NZS 3580.1.1:2016 Methods for sampling and analysis of air – Guide to siting air monitoring equipment;
- b. Have a GPS location service (or similar technology) which enables their locations to be remotely monitored and recorded;
- c. Provide and record the results continuously using an electronic data logging system with an averaging time for each parameter of not more than one minute;
- d. Record monitoring results in real-time as rolling 10-minute averages in an appropriate electronic format;
- e. Be fitted with an alarm system that is able to send warnings and alerts to the Quarry Manager or other nominated person; and
- f. Be maintained in accordance with the manufacturer's specifications.

Set backs

32.35. Active quarrying excavations within Lot 3 DP 301379 shall be set back:

- a. At least 25 m from the boundary of that land apart from along the right of way between Lot 8 DP 301379 and Lot 3 DP 301379 where a 10 m setback is required; and
- b. 50 m from the boundary of Lot 3 DP 301379 in the vicinity of the existing main dwelling on Lot 2 D301379
;
- c. 50 m from a commercial crop sensitive to dust which existed at the time this consent was granted; |
- d. 50 m from a dwelling authorised by RC210261 on Lot 1 DP 508108, if one exists at the time of extraction
.

As shown on Site Plan Rev F included in Appendix 1 to this consent.

Video Monitoring

33.36. The Consent Holder shall install and maintain at least two video cameras at locations which provide a clear view of the site activities (i.e. on the boundary bunds looking in). Data collected by the video cameras shall be recorded and kept for a minimum period of six months and supplied to Otago Regional Council on request.

Bund Formation and Planting

34.37. When constructing the bunds, the following controls apply:

- a. The bunds shall be constructed during winter months (1st May to 31 August) for dust mitigation reasons and so as to avoid bird nesting season which is from 1 September to 1 January; |
- b. Maintain a buffer distance of 250 m when wind speeds are above 7 m/s (10 minute average) in a direction towards the nearest sensitive locations;
- c. Material to be excavated shall be thoroughly wetted using a water cart, if not already damp, ahead of excavation and wetted thoroughly thereafter;
- d. Wind monitoring shall be carried out and dust generating activities shall cease when the wind is blowing towards sensitive locations and the wind speeds exceed 7 m/s (10 minute average) in accordance with Condition 12(a);

Commented [MC107]: Text included to provide certainty regarding the set backs required in the future.

Commented [DW108R107]: Reduction of setback distances opposed.

Commented [DW109]: Supported.

Deepening and Expansion

- e. Following the construction of the bunds they shall be immediately stabilised using mulch or another suitable product.
- f. Vegetated cover (90%) shall be established on all new bunds as soon as practicable and maintained to ensure healthy cover during dry months.

g. Within 12 months of the exercise of this consent, the Consent Holder shall plant or stabilise by other means the inward and outward faces of the existing bunds within Lot 8 DP 301379.

Complaints Register

35.38. The Consent Holder shall maintain a Complaints Register for any complaints received. The Complaints Register shall include:

- a. The date and time the complaint was received;
- b. The nature and location of where the complaint has originated, if provided;
- c. A summary of the complaint;
- d. Particulate matter and wind conditions at the time when the dust was observed by the complainant; and
- e. Any corrective action undertaken by the Consent Holder to avoid, remedy or mitigate the issue raised.
- f. Any amendments made to the DMP in response to the complaint(s).

39. The Complaints Register shall be provided to the Consent Authority on request.

Community Liaison Group

40. Within 12 months of the commencement of this consent, the Consent Holder shall, at its own cost, facilitate community liaison meetings with invitations sent by letter or email to the various organisations and the owners/occupiers of properties listed in Appendix 2 of this Consent. Meetings shall be held at not less than 12 monthly intervals.

41. The purpose of the meetings shall be for the Consent Holder to report to those attending on the activities undertaken in the past 12 months and the works planned in the next 12 months, as well as the results of all monitoring undertaken during the preceding 12 months.

42. The Consent Holder shall keep minutes of the meetings and shall provide them to all parties within two weeks of a meeting.

Advice note: Community Liaison Group meetings are not restricted to matters relating to the discharge of contaminants to air, other matters relating to the operation of the quarry such as groundwater matters can also be discussed.

Annual Report

36.43. On the annual anniversary of this consent the Consent Holder shall provide a report to the Consent Authority to include the following:

- a. The number of occasions that the particulate monitors recorded a breach of the trigger level in Condition 14;
- b. Complaints Records for the preceding 12 months;
- c. Maintenance and calibration records for the particulate monitors;
- d. The volume of aggregate extracted in the preceding 12 months; and

Commented [MC110]: Approach to planting or stabilising by other means new and existing bunds reflects what is included in the draft land use consent.

Commented [DW111]: Opposed. Must.

Commented [DW112]: Supported.

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e. Any amendments made to the DMP.

e.f. Details of the work plan for the next 12 months, including specification by a SQEP of the locations of the mobile PM10 monitors during that period so as to comply with the requirements of conditions 31, 33 and 34(a) of this consent.

Review

37.44. The Consent Authority may, in accordance with Sections 128 and 129 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions of this consent within 3 months of each anniversary of the commencement of this consent for the purpose of:

- a. To deal with any adverse effect on the environment which may arise from the exercise of the consent that was not foreseen at the time of granting of the consent, and which is therefore more appropriate to deal with at a later stage; and/or
- b. To require the Consent Holder to adopt the best practicable option to reduce any adverse effects on the environment resulting from the activity; and/or
- c. Ensuring the conditions of this consent are consistent with any National Environmental Standard or National Planning Standard; and/or
- c.d. Implementing any changes required to adopt recommendations included in a report prepared and pursuant to Condition 17 of this consent.

Commented [DW113]: In my view this is where changes to PM monitors would be included in the Annual Report without the additional change below.

Commented [MC114]: A requirement for annual review of the location of the PM10 monitors is now included as part of the annual report. I recommend that this is provided for here, rather than by annual review of the DMP, given that there will be long periods when excavations are undertaken below groundwater level and dust emissions during that time will be much reduced.

Commented [DW115R114]: Not necessary. Refer above.

DRAFT

Deepening and Expansion

Appendix 2: People/Organisations to be invited to Community Liaison Group meetings

- Owners/occupiers of the following properties:
 - Lot 2 DP 300388 [Department of Conservation]
 - Lot 1 DP 508108 [Amisfield Orchard Limited]
 - Lot 2 DP 508108 [Hayden Sinclair Little, Tessa Leanne Nyhon]
 - Lot 6 DP 301379, Lot 1 DP 301379 & Lot 10 DP 301379 [Manukau Fifty Limited]
 - Lot 2 DP 301379 [Bryson David Clark, Nicola Jane Clark]
 - Lot 2 DP 518956 [Justine Kate Davis, Philip John Davis, GCA Legal Trustee 2018 Limited]
 - Lot 7 DP 518513 [Lowburn Land Holdings LP]

Holders of the following groundwater permits:

- 2003.363 [Lowburn Land Holdings Limited Partnership]
- 2010.152.V1/G41/0220 [Wanaka Road Wine Holdings Ltd]
- 2001.831/G41/0238 [Manukau Fifty Limited]
- 2004.853/G41/0326 [Jane Marie Miscisco]
- 2006.036/G41/0346 [Felton Park Limited]
- RM14.211.02/G41/0321 [Irrigation and Maintenance Limited]

Organisations

- Aukaha
- Amisfield Estate Society, which takes water from Bore G41/0111
- Otago Regional Council
- Central Otago District Council

Commented [DW116]: These bore numbers updated for accuracy.