

**BEFORE A COMMISSIONER APPOINTED BY THE OTAGO REGIONAL
COUNCIL AND THE CENTRAL OTAGO DISTRICT COUNCIL**

IN THE MATTER OF

the Resource Management Act 1991

AND

IN THE MATTER OF

applications by Cromwell Certified
Concrete Limited for resource
consents to expand Amisfield Quarry

**STATEMENT OF EVIDENCE OF TRAVIS ALLISON
ON BEHALF OF CROMWELL CERTIFIED CONCRETE LIMITED**

(OPERATIONS)

Dated: 30 November 2021

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1 **INTRODUCTION**

1.1 My name is Travis Allison. I am the manager of Amisfield Quarry. I have held this role since 2016, shortly after the most recent consents for the existing quarry were granted. I hold an A grade Quarry Manager's certificate with the Certificate of Competency for an A grade quarry. Prior to this, I worked in West Africa gold and diamond exploration and as operations manager for Glass Earth's alluvial gold mine at Alexandra which was of a similar scale to Amisfield Quarry.

1.2 In my role as quarry manager, I am responsible for all aspects of quarry operations including quarry planning, all facets of excavation operations (including consent compliance), processing and stockpiling of materials, sales and direct relationships with surrounding landowners. All employees at the site report to me.

1.3 I was involved in the due diligence undertaken by Cromwell Certified Concrete when it was considering purchasing a large block of land next to the existing quarry from the then owners. Since then, I have been involved in all aspects of the proposal to deepen the existing quarry and expand the quarry onto the adjoining land. I have been involved in consultation with neighbours regarding the proposal, led the development of the operational and staging plans and have worked closely with our technical consultants. As a result, I have a very good understanding of the operational and environmental aspects of the expansion proposal, as well as the amendments made to the proposal in response to concerns expressed by our neighbours and submitters through the consultation and submission process.

2 **SCOPE OF EVIDENCE**

2.1 My evidence:

- (a) Describes the existing site and the expansion land, including the type, quality and quantity of the aggregate resource;
- (b) Describes the existing quarry operation and the proposed expansion;

- (c) Outlines how we will manage the expansion activities in accordance with the proposed consent conditions and management plans;
 - (d) Comments on some of the submissions on the proposal which relate to operational matters; and
 - (e) Addresses any relevant operational matters raised in the section 42A officer's reports.
- 2.2 My evidence is intended to be read in conjunction with that of Dominic Sutton. Mr Sutton's evidence describes the history of the quarry, the demand for aggregate resource in Central Otago, and the importance of Amisfield Quarry in meeting that demand.

3 **THE SITE**

- 3.1 The existing quarry site and the adjoining expansion land both contain a quality and plentiful source of stone and aggregate¹. The aggregate resource in this area is well understood, given the length of time the quarry has been in operation (approximately 27 years).
- 3.2 The existing quarry produces a range of premium grade concrete aggregates, and a range of other non-concrete aggregate products² suitable for making hotmix and chip sealing products which meet New Zealand Transport Agency and Central Otago District Council specifications.
- 3.3 Not all aggregate is created equal and the Inland Otago market for concrete aggregates and high quality surfacing materials already has limited suppliers, many of whom who are already at full capacity.
- 3.4 As described in Mr Sutton's evidence, currently only 3 quarries in Inland Otago produce high quality material suitable for concrete aggregates (Amisfield Quarry and the Parkburn quarries).

¹ Investigations, in the form of test pits, were undertaken on the expansion land and the results confirm that the quality of the aggregate resource within that land is consistent with the existing Amisfield Quarry resource.

² Amisfield Quarry produces a range of products including gabion rock, sump rock, and aggregates in the size range of 20-40mm, 20mm, 13mm, 8mm and sand. The crushing plant produces AP65, AP40, AP20, GAP32, crusher dust, crushed scalplings, 20mm chip and 13mm chip.

3.5 Some of the non-concrete aggregate quarries in Inland Otago sell gravel which is a non-complete material in that it does not meet the specifications needed for some uses. The Queenstown Lakes District Council for example, excludes certain types of aggregate being used on its roading projects which means more of the aggregate used in that district has to come from either the quarries at Parkburn or Amisfield Quarry.

Topography

3.6 The existing quarry and the expansion land are located on predominantly flat land on an upper terrace of Lake Dunstan. The land drops away steeply (10m+) to the east and south of the quarry boundary onto a lower terrace. The site cannot be seen from the State Highway due to shelter belts within the site and existing perimeter bunding.

Site Layout

3.7 The quarry is set back from the State Highway (Luggate-Cromwell Road) and is accessed via a sealed access way as shown on the site plan in **Figure 1** below. The site plan also shows the location of the site office, workshop and parking, as well as the fixed washing/screening plant, the crushing plant and the settling ponds.

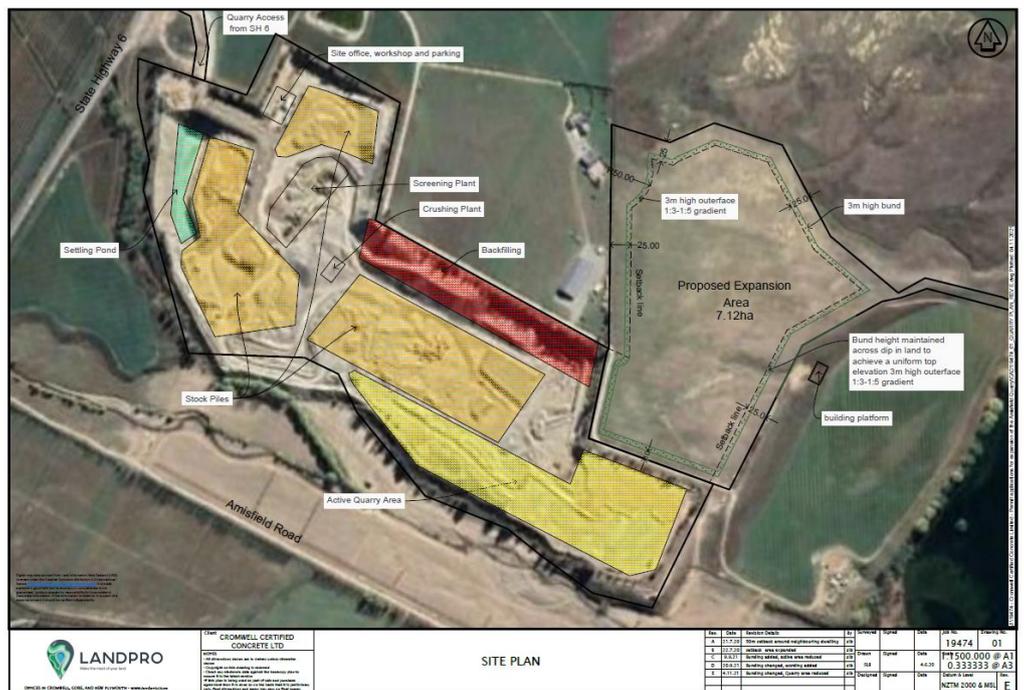


Figure 1 – Site Plan

3.8 There are a number of existing unsealed ancillary roads within the quarry that allow for the movement of vehicles across the site. These include the haul roads from the active face being quarried to the crushing and washing/screening plant.

3.9 The washing and screening plant is capable of processing 250 tonnes of material per hour but generally only currently operates at 150 tonnes per hour. The crushing plant has a processing capacity of 150 tonnes per hour. Washwater from the processing plant is directed to the settling ponds, which filter out the sediment in the water. The water is discharged to ground (and back into the aquifer) by seepage.

4 **EXISTING OPERATION**

4.1 The quarry operates with a pre-strip, active face and backfill configuration with each strip being up to approximately 50m wide. The surface of the ground is naturally stony, so there is very little topsoil and overburden. No blasting occurs at the site. The gravel is extracted by traditional dump truck and shovel techniques. A dump truck transports the unprocessed gravel from the active face to the fixed plant.

4.2 **Figure 2** below shows an active quarry face, while **Figure 3** shows the screening/washing plant.



Figure 2 – Active Quarrying Face



Figure 3 – Screening/Washing Plant

- 4.3 The quarry has a number of stockpiling areas that are used to store different grades of processed aggregate. The stockpiling areas can be seen on the site plan in **Figure 1**. Tops of stockpiles are kept below the natural ground level of the surrounding land.
- 4.4 Areas of the quarry which have been worked are backfilled with overburden when it is available, however no topsoil has been overlaid over areas that have been backfilled with overburden as yet because approximately 15 ha of the 19 ha site is being actively used for quarrying, processing areas, stockpiling, haul roads, process and stormwater treatment, site offices, parking and loading areas, access ways and turning areas and storage of materials. This is the minimum working space needed for the safe and efficient operation of the site.
- 4.5 Existing support facilities located within the quarry site include an office building/lunchroom (portacom), car parking (10 spaces), a wash pad, ablutions, diesel tanks and an engineering workshop.
- 4.6 Potable water is taken from the same bores that provide water for dust suppression and the washing/screening of raw material. Sewage/wastewater is managed by way of on-site storage and is pumped out monthly by Wastetech Services. Fuel is stored in a double bunded fuel cell from Z Energy. Re-fuelling of quarry vehicles takes place by the workshop and in the lower pit area via mobile

trailer tanks. Spill precaution measures are undertaken when re-fuelling. No machines are refuelled near open water bodies. Staff are trained in spill management and there are emergency response procedures and spill kits located onsite.

- 4.7 Quarried material is transported off site by trucks owned by contractors or customers. Those trucks are loaded by a front end loader within the stockpiling areas. At present, approximately 40 trucks visit the quarry per day.
- 4.8 Most of the boundary of the existing quarry site is bunded and fenced with a mix of sheep and deer fencing. The locations and heights of the existing bunds are shown in **Appendix 1** of my evidence. The boundary is rabbit fenced and there are "open pit" signs located every approximately 50m-100m around the boundary.

Existing consents

- 4.9 The three following resource consents (obtained in 2015 and 2016) authorise the existing quarry:
- (a) RC150052 – land use consent authorising the operation of a metal quarry and crushing plant. This consent does not have an expiry date and includes controls in relation to a range of matters including noise and discharge of nuisance dust;
 - (b) RM16.108.01 – consent to take and use groundwater for the purposes of gravel washing and dust suppression;
 - (c) RM16.108.02 - consent to discharge contaminants to land for the purposes of gravel washing and dust suppression.
- 4.10 The quarry does not have an air discharge permit. It operates as a permitted activity under the Otago Regional Plan: Air because the annual extraction rate does not exceed the extraction rate limit of 100,000m³/year in Rule 16.3.5.3 of that Plan, and because the crushing/screening rate is less than 200 tonnes per hour. Rule 16.3.5.3 of the Air Plan requires that any discharge of particulate matter is not noxious, dangerous, offensive or objectionable at or beyond the boundary of the property.

Dust Control

4.11 A large number of the activities undertaken within the quarry can potentially generate dust if not controlled. These include:

- (a) Excavation and stripping of overburden;
- (b) Extraction of gravel;
- (c) Overburden stockpiling;
- (d) Raw and finished material stockpiling;
- (e) Loading and unloading of raw materials;
- (f) Vehicle movements; and
- (g) Crushing and screening of gravel.

4.12 We currently use a range of measures to control dust from these sources to ensure that compliance with Rule 16.3.5.3 of the Air Plan is achieved and that any discharge of dust is not noxious, dangerous, offensive or objectionable at or beyond the boundary of the site. Condition 6 of our District land use consent also requires that we adopt the best practicable means of preventing any dust nuisance to neighbouring occupiers.

4.13 By way of a summary, the measures we currently use to control dust are as follows:

- (a) Visual monitoring of all activities undertaken on the site, monitoring of wind conditions and the weather forecast;
- (b) Potentially dusty activities such as stripping of overburden is carried out on days with favourable weather conditions;
- (c) Exposed, uncovered areas are minimised;
- (d) A water cart is used to dampen haul roads, stockpiles and working areas when required. A photo of the water cart is included in **Appendix 2** to my evidence. Polymers (Haul loc³

³ This is a liquid polymer that is added to water carts to reduce the water required for continuous dust suppression by up an estimated 65% with extended dust suppression

and Rubble loc⁴) are also used as needed. Haul loc is used on a daily basis to suppress dust on haul roads. Rubble loc is used as required, including prior to long weekends or if strong winds are forecast;

- (e) Water sprays are used throughout the crushing and screening plant to control the moisture content of the material and limit dust production. The crushing plant is located on the pit floor;
- (f) In addition to watering haul roads and using polymers when needed, dust on haul roads is controlled by:
 - (i) minimising access to the working areas to essential vehicles only;
 - (ii) imposing a speed limit on all site and access roads;
 - (iii) maintaining unsealed internal haul roads and access roads by grading and laying of fresh gravel;
 - (iv) regularly washing the sealed entrance road to the quarry; and
- (g) Grassing bunds.

4.14 These measures are very effective at controlling dust on the site.

5 THE EXPANSION PROPOSAL

5.1 The key features of the expansion proposal are as follows:

- (a) Deepening of the existing quarry to below groundwater level;
- (b) Establishing access to the expansion area via an underpass under an access road within the site;
- (c) Expansion of the existing quarry onto the adjoining land, as shown on the site plan (that land has been cultivated in the past but is currently bare);
- (d) Increasing annual production from 70,000 m³ to 200,000 m³.

control. Mixed with water, Haul loc binds fine particles and prevents them from becoming air-borne.

⁴ This is a similar product to Haul loc but is designed for use on dynamic surfaces such as quarries with material stockpiles. The product provides long term dust treatment and lasts for until the next heavy rain or until it is disturbed.

- 5.2 The total volume of material proposed to be excavated is estimated to be approximately 4.6M tonnes. Because this is an expansion of the existing quarry, we will be able to realise full production in a relatively short space of time.
- 5.3 The resource consents sought for the expansion include:
- (a) A land use consent for the expanded quarry, including to increase the rate of production from 70,000m³/yr to 200,000m³/yr and to install a sign at the entrance;
 - (b) Discharge permits for the discharge of contaminants to air and continued discharge of contaminants from processing to land;
 - (c) A new water permit to take a further 33 l/s of groundwater (currently a rate of 47 l/s is authorised); and
 - (d) Land use consent to construct a bore, to authorise the excavation below groundwater.

Hours of operation

- 5.4 We currently operate between the hours of 07:00 and 19:00, Monday to Saturday. There is no processing undertaken on Sundays and public holidays. The only changes proposed to the current operating hours are:
- (a) To allow some limited loading of customer's trucks (purchasing trucks) on Monday to Friday between 06:00 to 07:00, and between 19:00 and 20:00. This is needed for early morning concrete pours. Loading trucks between those hours will not take place more than twice per week, and will be limited to concrete aggregate only;
 - (b) To allow staff to leave the site between 19:00 to 20:00, Monday to Saturday, if required (there are times when staff may need to work in the office after operations on the site have finished for the day); and
 - (c) To allow dust control measures (including the operation of a water cart) should these be needed on days or during times when the quarry is not operating (e.g. on Sundays). Dust

control outside of operating hours is not expected to be needed given the use of polymers on the site.

Development of the Expansion Area

- 5.5 Prior to quarrying commencing on the expansion land, topsoil will be removed and used to construct the perimeter bunds. The overburden is relatively shallow in depth, approximately 0.2 metres.
- 5.6 Quarrying will be staged, commencing in the southern part of the expansion land and progressing north as shown in the Mine Plans attached to my evidence in **Appendix 3**.
- 5.7 A 3 ha active working area⁵ is proposed which includes the quarry face and working area, haul roads and processing plant. We have spent a considerable amount of time determining the smallest operational area that we can work with on this site and I am confident that the quarry can operate within this limit commercially, safely and efficiently.
- 5.8 The same methods of excavation and processing will be used. One excavator and dump trucks will work on the expansion land. Aggregate will continue to be transported back to the existing fixed plant for processing. There will be no processing in the expansion area. Activities in the expansion area will be limited to excavation only and transporting material back to the plant.
- 5.9 Careful consideration has been given to the way in which the proposal may affect the use of land beyond the boundary of the site. A number of mitigation measures are proposed in order to minimise any effects beyond the site boundary, such as boundary setbacks and visual screening through bunding, and cessation of work under certain wind conditions. These mitigation measures are based on the recommendations made by our technical experts, and are discussed in detail in the evidence of the relevant witnesses.

⁵ The 3 ha active working area is the area of the quarry that includes the working face and adjacent working area, the haul roads and the area surrounding the processing plants. The areas surrounding active areas which have not been worked for some time have formed crusts such that they are not sources of dust unless they are disturbed. For this reason, those areas have not been included in the 3 ha working area.

Setbacks and Bunds

- 5.10 The site plan (**Figure 1**) shows the proposed setbacks for the expanded quarry and the location of the proposed new bunds. All activities within the expansion area will be screened from (SH6 (Luggate-Cromwell Road)) by existing bunding and planting.
- 5.11 At the Clark house (1308 Luggate-Cromwell Road), a 50 m setback from the boundary is proposed. The outer face of the bund will have a gradient of 1:3 – 1:5 with an irregular slope profile. This will give the outer face of the bund a more natural appearance and will help plants to grow.
- 5.12 For all other locations, a 25 m proposed setback is considered sufficient according to the advice of our technical experts.
- 5.13 For the building platform and consented house on the Amisfield Orchard site, where the quarry site dips, the top of the bund height will be maintained across the dip with a uniform top elevation. This could result in the bund being up to 6m in height on its inside face. The outer face of the bund will have a gradient of 1:3 – 1:5 with an irregular slope profile.
- 5.14 Stripping of the expansion block and formation of the new bunds will be completed during winter months and before spring, so as to not coincide with the bird nesting season. As agreed with the Department of Conservation and mana whenua, the plant species used for planting of the bunds will be agreed with them prior to planting and will be low growing species typical of the adjoining DOC reserve.
- 5.15 The bunds will be planted as soon as possible following their formation and, if necessary, will be watered to create a crust to keep the bunds stable while the plants establish. Temporary irrigation of the bunds will take place to make sure a high level of plant cover is established as soon as possible. We have extensive experience in overseeing bund construction on this site and the establishment of good vegetative cover.

Additional Dust Control Measures

- 5.16 We prepared an initial draft DMP for the site which Beca then reviewed and was provided as part of the s92 response. Mr Cudmore

has since suggested some amendments to that plan and the revised draft DMP is attached to his evidence. Broadly, the main changes for controlling dust (compared with how we operate currently) are:

- (a) Surfacing haul roads with aggregate products;
- (b) Clean reject gravels will be used to cover the expansion land after it has been stripped, until such time as it is to be quarried (which will be done in stages); and
- (c) The use of real time continuous instrument monitoring of wind speed and wind direction, and continuous monitoring of ambient total PM₁₀ concentrations when quarrying is taking place near sensitive receptors. One permanent and two mobile monitors are proposed. Windspeed and PM₁₀ alert limits are proposed which (if met) will require dust control measures on site to be reviewed. If alarm limits are met, works on the site (other than dust) control will stop until wind conditions improve. The monitoring instruments will send alerts and alarms to my phone. A permanent meteorological station will also be established on the site.

5.17 Use of covers on trucks is currently at the discretion of the contractors who purchase the aggregate. We cannot require these to be covered however we can spray them if it is windy (above 7m/s) so that they form a crust and dust is minimised.

Depth

5.18 The deepened quarry will intercept groundwater. When groundwater is intercepted, gravel will effectively be dredged (such as by a mobile dragline machine or similar machinery). The depth of the gravel is anticipated to extend approximately 10m below the groundwater level.

5.19 I have significant experience in excavating gravel below groundwater level. This has advantages for dust control and water requirements because the material is wet when it comes out of the ground.

Vehicle Movements

5.20 The number of vehicle movements beyond the site is anticipated to increase from up to 47 trucks per day up to 75 trucks per day (150 trips/day). A new right turning bay into the site is proposed, as described in the transport evidence of Mr Fernando.

Stockpiles

5.21 The current stockpiling areas are shown on the site plan (**Figure 1**). While further stockpiling of material could occur as the quarry expands, stockpiles will remain in the same locations and be of the same heights as existing stockpiles.

Water Take

5.22 We have applied to increase our total water take to 70 l/s. This allows for crushing at full capacity all day and all the time (which is unlikely to occur) and doesn't account for the use of polymers which reduce the amount of water needed for dust control. Our estimated daily water use is as follows:

	Volume (m ³ /day)	% of Total
Washing and Crushing Plant	2,768	91.5%
Dust Suppression	240	8%
Irrigation	15	0.5%
Potable use/washdown	1 (rounded up)	Negligible
TOTAL	3,024	100

Table 1: Estimated Daily Water Use

Water Management Infrastructure

5.23 Extracted material from the expanded quarry will be processed within the existing quarry and will therefore benefit from the existing water management infrastructure which will cater for the proposed increase in production. No additional water management infrastructure (e.g. an additional soakage pond) is considered necessary. Stormwater from buildings on the site will continue to discharge directly to ground.

Lighting

5.24 Artificial lighting will continue to be required to allow the quarry to operate in low light conditions, especially over the winter. Potential light sources include:

- (a) dormant lighting to be used when the site is unoccupied, such as a security light (on sensor) at the main office;
- (b) headlights on vehicles operating within and visiting the quarry; and
- (c) fixed lighting on the washing/screening plant used during low light conditions in the winter months.

5.25 There will be no lighting towers used in the expansion area.

Signage

5.26 The entrance to the quarry does not currently have a sign. A free-standing sign (3-5m² in area) is proposed, perpendicular to Luggate-Cromwell Road at the quarry entrance. The sign will display the name of the quarry, the quarry's operational hours and contact details⁶.

Ancillary Roads

5.27 An underpass (cut and cover) is proposed to be constructed under an existing internal access road to link the existing quarry to the expansion area, in the location shown on **Figure 3**. The internal access road also provides access to land owned by Amisfield Orchard and Hayden Little Family Trust.

⁶ Location and sign shown on page 6 of the District Council s42A report.



Figure 3: Location of underpass

5.28 The underpass will be engineered and constructed to a size of 5m x 5m as to allow for the largest of our machinery to pass through and to allow heavy vehicles to pass over the top of it (as shown in **Appendix 4** to my evidence). The underpass will avoid any effects on the access to the land owned by the Orchard and the Trust. The edges of the access road will have a 3m high bund, as recommended by Mr Compton-Moen (our landscape) to screen views of drivers into the quarry.

Security

5.29 The expansion area is already sheep fenced and rabbit fenced. There will be open pit signs located every 50-100m around the boundary of the excavation.

Backfilling and Rehabilitation

5.30 The existing land use consent requires that a Closure and Rehabilitation Plan be provided to the Council for approval at least two years prior to ceasing the extraction of material for processing. This Plan will provide a framework for returning the site to a natural state, including the removal of all buildings, re-contouring the land and providing for appropriate drainage and other landscape remediation. A similar condition is proposed in relation to the expansion, as discussed in the evidence of Mr Compton-Moen.

- 5.31 A draft Rehabilitation Plan for the expanded quarry was prepared in February 2021 to provide an indication of the scope of works required to rehabilitate the site (for bond purposes) and the anticipated environmental outcomes at site closure. The draft Plan (which is attached to the landscape evidence of Mr Comptoen-Moen) sets out the objectives of quarry rehabilitation, describes the rehabilitation works, the rehabilitation process and timelines. In the current draft Rehabilitation Plan, the main goals of rehabilitation are to minimise fugitive dust emissions from the site and to rehabilitate the land for future use, with positive benefits for the environment and the local community.
- 5.32 The nature of the quarry layout requires the majority of the rehabilitation staging to take place once the quarry has exhausted the northern most point of the expansion area (see **Figure 4** below). This is due to the processing plant and stockpile area being located next to the entrance to the west.



Figure 4: Indicative rehabilitation staging and timeline

- 5.33 Significant volumes of silt and unsaleable aggregates are produced during the operational life of a quarry and this will be used in rehabilitation to form the batter slopes, to a slope of 3.5L:1H and to contour the land. The noise bunds will be removed and will provide additional material suitable for backfill. Topsoil and subsoil materials which have been stored following site preparation will be used in the final topsoil layer, enabling pasture growth. The stockpiled soil should be similar in volume to what was initially removed. However

if there is a deficit, the final stages of rehabilitation can be expedited by importing topsoil for finishing.

6 SURROUNDING LAND USES

6.1 The area surrounding the quarry and the expansion land is predominantly rural and includes a mixture of vineyards, orchards and unirrigated grazing land as well as the Mahaka Katia Scientific Reserve, as shown in **Figure 5** below. Approximately 2km to the south are the two large quarries at Parkburn operated by Downer and Fulton Hogan.



Figure 5: Surrounding land uses

6.2 Photos showing the land uses around the immediate boundaries of the application site are included in **Appendix 2** to my evidence.

6.3 To the immediate north of the existing quarry, at 1308 Luggate-Cromwell Road, is a property owned by the Bryson and Nicola Clark. This property includes a house, land used for grazing and a commercial vehicle storage business.

6.4 To the immediate east of the expansion area and to the immediate south of the existing quarry, on a lower river terrace, are two properties owned by the Amisfield Orchard Limited and Hayden Little Family Trust. A cherry orchard is being developed on the Trust's

property and there is also a building on Amisfield Orchard's property which is used as a dwelling/worker's accommodation.

- 6.5 To the immediate west of the quarry, across Luggate-Cromwell Road and to the north of the quarry entrance are established vineyards. There is a house located approximately 100m to the northwest of the quarry entrance, at 7 Mt Pisa Road⁷, and another located approximately 270m west of the western extent of the working area of the existing quarry.
- 6.6 Amisfield Road, a small gravel road, is located to the south of Hayden Little Family Trust's southern orchard and provides access to Lake Dunstan as well as to the land owned by Amisfield Orchard Limited and the Hayden Little Family Trust.
- 6.7 In my 5 years as the manager of the quarry, we have had good relationships with our neighbours, most of whom bought their land after the quarry was consented in 2015/2016. Since we began consultation on the expansion proposal, relationships with some immediate neighbours have been more difficult, and I have received one complaint in relation to dust. I am aware that complaints have also been made to consent authorities after our resource consent applications were lodged.
- 6.8 As manager, I try to engage with our neighbours on a regular basis (some of them are also our customers) and they all have my mobile number. My mobile number is also on our Facebook page/website and listed at the quarry entrance. I am always open to listening and responding to any concerns any neighbours may have about the quarry.

7 COMPLIANCE WITH CONSENT CONDITIONS AND MANAGEMENT PLANS

7.1 We currently use a number of tools to ensure compliance with our resource consents including the following:

- (a) All relevant consent documents are kept on site in hard copy (in a binder in the main office) and electronically. Consent

⁷ Owned by Lindsay Moore

condition requirements are loaded into our electronic management system (SiteApp Pro) which all staff have on their phones;

- (b) Relevant monitoring/reporting requirements are also recorded in my Site Diary, which is where I also record any complaints;
- (c) Daily site inspections are undertaken by myself as manager;
- (d) Staff working on the site must undergo a site-specific induction, which includes making them aware of the requirements of all relevant resource consents. Any contractors who may work on the site are also required to undergo an induction specific to their reason for being on the site;
- (e) Daily pre-start meetings are held to discuss all onsite activity and any consent requirements relevant to that particular activity. We also discuss operational matters relevant to consent requirements at daily and monthly toolbox meetings;
- (f) Regular training is provided by me as needed. Two of our staff are also working towards their B Grade Quarry Managers Certificate⁸; and
- (g) Quarterly environmental meetings are held with site staff. In these meetings, we discuss water quality results and whether there are any trends, whether any action is required and, if so, how that will be implemented.

7.2 Our current consents do not require us to have any management plans. Going forward, the following management plans are proposed:

- (a) A Quarry Management Plan ("QMP"); and
- (b) A Dust Management Plan ("DMP"); and
- (c) A Complaints Register.

7.3 I have worked with Mr Cudmore to develop the draft DMP, and have helped to develop all of the draft consent conditions which we have

⁸ A B Grade certificate allows them to supervise 5 staff or less, an A Grade certificate allows supervision of unlimited staff.

proposed. Based on my experience, my knowledge of quarrying operations, compliance with current consent conditions and the systems in place at the site, I am confident that we can implement and comply with the proposed consent conditions and the management plans for the expansion.

- 7.4 I will continue to have responsibility for compliance with consent conditions as well as implementation of the QMP and DMP and authority to ensure that all staff are effectively employing the dust management procedures required in the DMP to control dust on the site.
- 7.5 All operational staff will be given training with respect to the QMP and updated DMP and the standard operating procedures which will implement the DMP. This training will be my responsibility as the Quarry Manager. Staff will be required, as part of their overall duties to:
- (a) Keep records of all dust mitigation related actions within our site app; and
 - (b) Complete dust management procedures successfully as defined in the DMP.
- 7.6 All dust related alerts and alarms will be sent to myself as Quarry Manager and my 2iC in the event any trigger points provided for in the conditions of the air discharge permit.
- 7.7 We will undertake periodic internal audits of all dust control mechanisms and monitoring systems to ensure the system is working effectively and identify any improvements required to the DMP (and the QMP).
- 7.8 We will also require staff to undertake environmental training in Environwise (or similar) which covers our environmental risks. All operational staff will be required to attend regular refresher training.

8 SUBMISSIONS

8.1 I am familiar with the submissions made on the applications. A number of amendments were made to the proposal in response to submissions, including:

- (a) Proposal of a QMP and preparation of an updated draft DMP;
- (b) An additional bund will be constructed along the Right of Way (RoW) that provides access to the land owned by Amisfield Orchard to the east of the quarry and by Hayden Little Family Trust to the south/south-east;
- (c) The gradient of the outer face of the bund around the proposed expansion area will be variable and will range between 1:3-1:5;
- (d) Prior to any physical construction works of the bunds, we will engage with both the DOC and Kāi Tahu regarding the selection of locally sourced native groundcover plant species, ecotyped to the area;
- (e) Control of weed species identified in the 2019 Otago Regional Pest Management Strategy (RPMS) will be undertaken within the 50m setback between the boundary of the Reserve and proposed expansion area;
- (f) No quarrying will be undertaken or heavy machinery used within 50 metres of the Reserve between 1 September and 1 January in any year (bird nesting season); and
- (g) Reversing alarms will only be broadband alarms.

8.2 The submission by Hayden Little Family Trust refers to part of a bund being located on the Trust's land. Removal of that part of the bund would be straightforward. 95% of that material is clean washed pea-gravel, and therefore has low potential to generate dust. A loader and dump truck could pick up the material, and the truck would transport it back into the quarry. This could be done within two weeks with one loader and digger/truck (or faster with more equipment) and to avoid generating any dust, could be done in winter or sprayed with a water cart while the work is being done.

- 8.3 The submission by Nicola and Bryson Clark raises a concern about outdoor lighting sensors. There is only one security light on a sensor at the site office. Gates to the entrance are locked at night.
- 8.4 The Clark submission also raises a concern regarding the size of the setbacks from their property and whether these are sufficient to ensure that there is no increase in the risk of subsidence on their land. In my opinion, there is no increased risk given the setback and the proposed slope of the sides of the quarry.
- 8.5 I have seen the photos and videos which were included with the Trust's submission. Dust control measures on the site have been refined significantly since then and are not representative of our current dust controls.

9 **SECTION 42A OFFICER REPORT**

- 9.1 My comments in respect of some of the matters raised in the officers' reports are set out below.
- 9.2 Paragraph 5.6.1 of the District Council s42A Report refers to a white tunnel shed within the quarry which does not have land use consent. This is a temporary container shelter (see Figure 2 on page 6 of the AEE).
- 9.3 At paragraph 12.15.2 of the District Council report and page 37 of the Regional Council report, the Officer seeks more information on the scale of effects associated with sediment from the sides and disturbed area within the quarry (or of the extraction below the level of groundwater) in contributing or transporting sediment to the exposed groundwater. Sediment from the sides/disturbed area within the quarry will not be transported to the exposed groundwater. There will be a 6m set back from banks/slopes with 1m high bunding along the edges. When excavating below groundwater, the sediment suspended by quarrying activity will settle out during periods of inactivity. Any suspended sediment will be naturally filtered as groundwater flows through the aquifer media. Years of groundwater monitoring results required under our existing discharge consent confirm that sediment is not drawn into groundwater and does not affect surrounding bores.

9.4 At page 55, the officer encourages the applicant to join a Water Management Group if one is developed. We would certainly want to do that.

10 **CONCLUSION**

10.1 In my view, the controls and methods proposed to be applied as part of this expansion are practical and achievable, and will ensure a very high standard of environmental performance. I am confident of our ability to comply with the proposed consent conditions and am committed to ensuring consent compliance and best practice.

Travis Allison

November 2021

Appendix 1 – Location of Existing Bunds



Appendix 2 – Photos





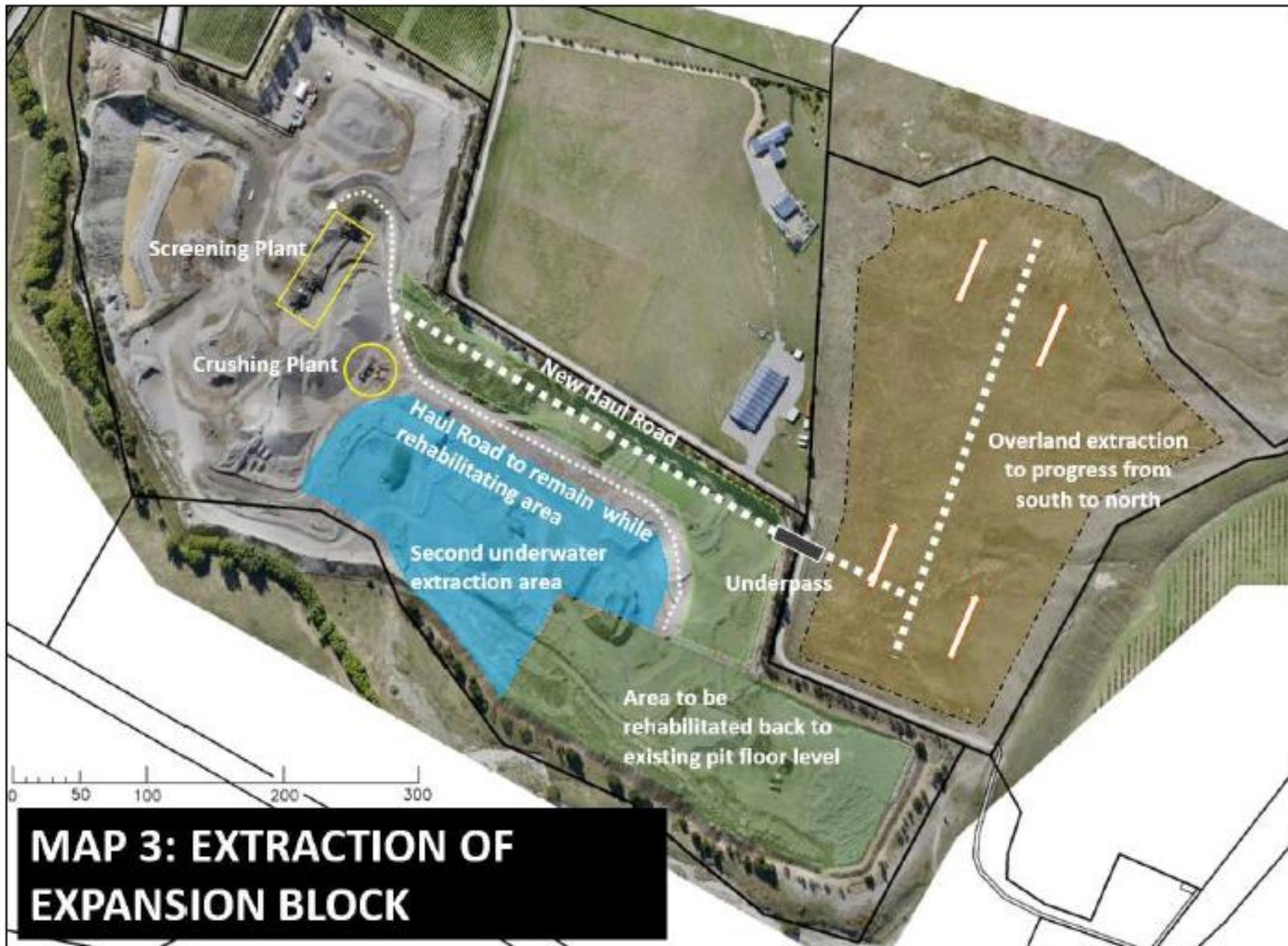
Appendix 3 - Mine Plan

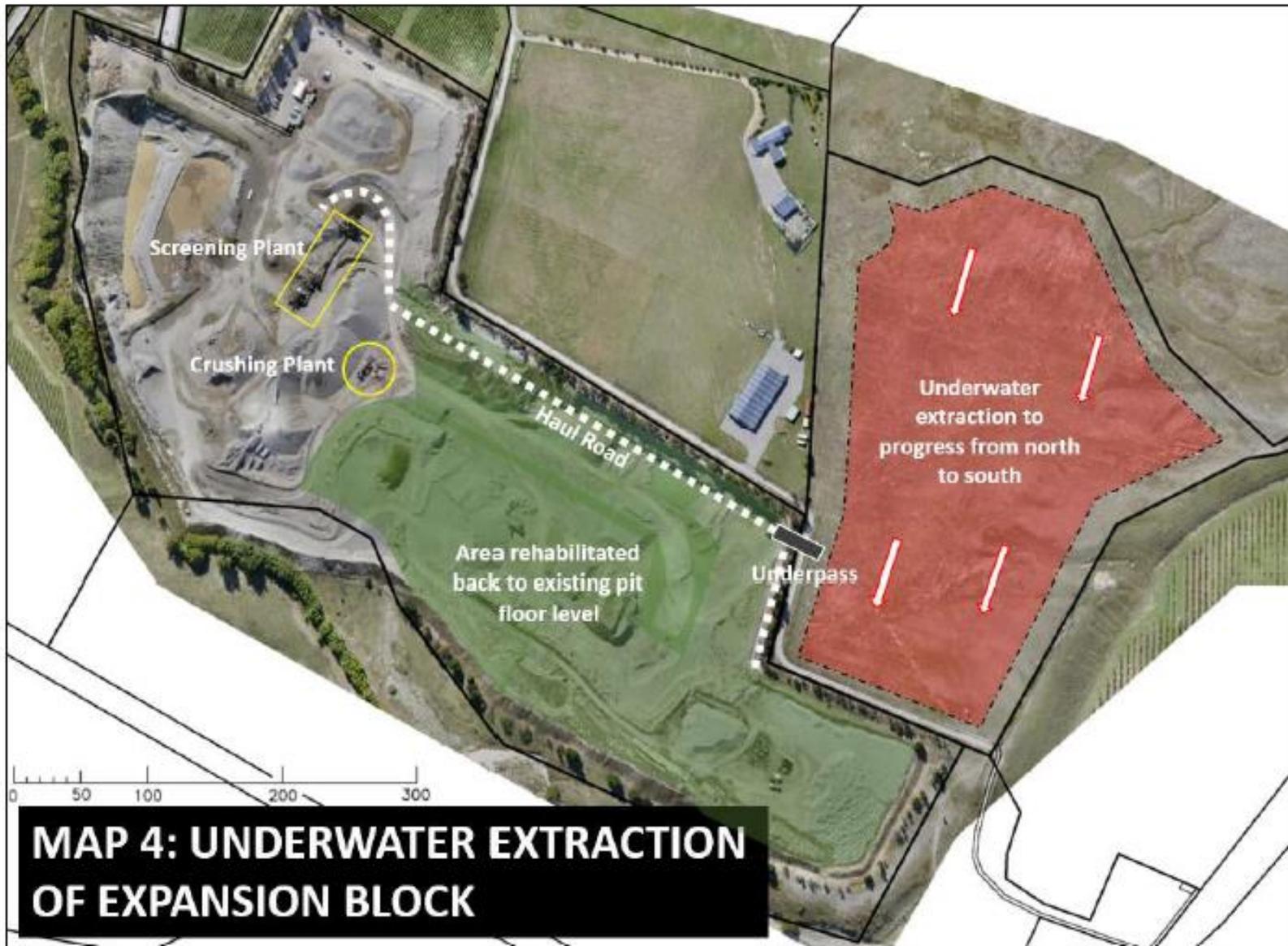


MAP 1: EXISTING LAYOUT



MAP 2: UNDERWATER EXTRACTION

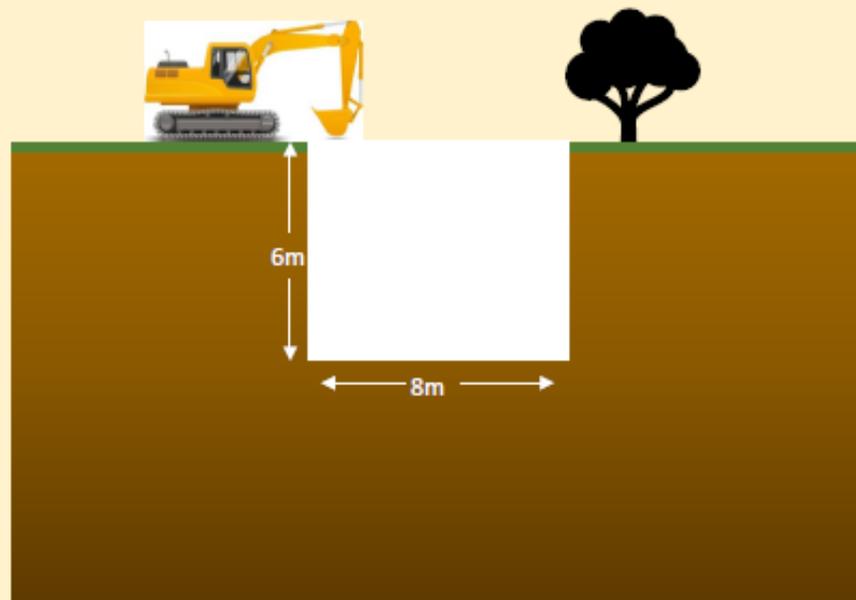




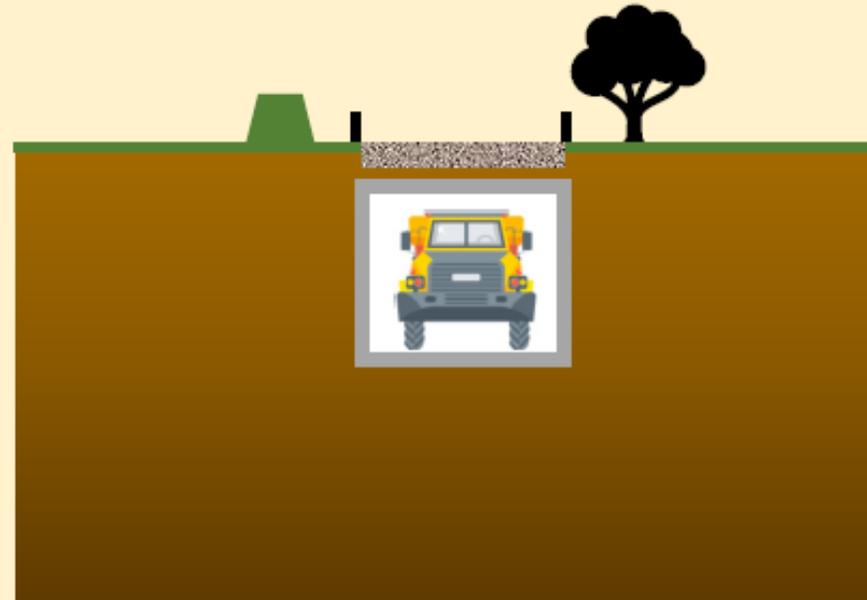
Appendix 4 – Cut and Cover for Expansion Land Access

Cut and Cover for Expansion Land Access

A cut will be made approximately 6m deep x 8m wide x 12m long across the right of way from the existing quarry into the proposed expansion land (24m total length).



A box culvert will then be installed. Safety fencing along the underpass will be installed and the right of way will be re-established with construction taking approximately 6 weeks.



Temporary Diversion and Bund Extension

