CRC192410 Discharge of Contaminants to Air

1. The discharge of contaminants to air shall only be from quarrying activities at 107 Dawsons Road and 220 Jones Road, Templeton, located on the land between Cranleigh, Dawsons, Madalions and Jones Road, legally described as Rural Section 6476 and Rural Section 6624, Lot 1 Deposited Plan 4031, Rural Section 6342, Section 7 Survey Office Plan 510345, Rural Section 5381 and Section 6 Survey Office Plan 510345, at or about map reference NZTM2000 1565356mE, 5177132mN. As shown on Plan CRC192406A, attached to and forming part of this resource consent, NZMS 260 M283650S-3830, shown as the area inside the site boundary in red on the Site Location Plan prepared by Golder Associates, dated November 2018, which is attached to these conditions.

The discharge of contaminants into air authorised by this discharge to air consent shall only be generated onsite from the following quarrying activities:

a) Site preparation, topsoil stripping, and overburden removal and storage;

b) Construction and maintenance of bunds and stockpiles;

c) Extraction, loading and transportation of material;

d) Processing of aggregates (including crushing and screening of aggregates);

e) Combustion products from the operation of 1.04 megawatt of diesel fired generation (up to 4 generators) of no more than four 0.26 megawatt diesel fired generators);

f) Forming stockpiles of raw and processed aggregates;

f) Deposit of cleanfill;

h) Site rehabilitation; and

i) Movement of vehicles associated with the above activities.

1.2) The discharge of contaminants into air beyond the boundary of the consent holder’s site described in Condition 1.1 shall not be offensive, objectionable, noxious or dangerous...

Prior to Works

2.3) At least 48 hours one month prior to the commencement of activities authorised under this resource consent, the consent holder shall inform the Canterbury Regional Council, Attention RMA Monitoring and Compliance Manager (the Manager), in writing of the start date of the works.

Monitoring

3.6) Prior to the commencement of activities listed in Condition 1) of this resource consent, a meteorological monitoring station, which measures and records wind direction and wind speed is to be installed on the site at a representative location free from interference from nearby structures, trees etc. The station must:

a) Be installed at a height of at least four metres above pre-quarrying ground level and in accordance with AS 2923 - 1967 Ambient Air Guide for Measurement of Horizontal Wind for Air Quality Applications.
b) Wind speed resolution of measurement shall be not more than 0.1 metres per second and wind speed accuracy of measurement shall be at least within +/- 0.1 metres per second.

c) Wind speed and direction shall be continuously recorded with an averaging time for each parameter of one minute.

d) Record daily rainfall and evaporation.

e) Provide an alarm to site staff (for example, via mobile phone) if the hourly rolling average wind speed trigger level is exceeded.

f) This data shall be:

i. recorded using an electronic data logging system and retained for the duration of the consent; and

4(4)(a) provided to the Canterbury Regional Council upon request. Prior to the commencement of quarrying activities, a meteorological station shall be installed at the site with instruments capable of continuously monitoring and providing representative meteorological data for the site and surrounding area shall be installed. The instruments shall be capable of continuous measurement and real-time logging and reporting of the following:

a) Wind speed as 1-minute temporal averages with maximum resolution of 0.1 m/s and accuracy of at least within +/- 0.1 m/s. Wind speed data shall be recorded at least every hour.

b) Wind direction as 1-minute temporal averages with maximum resolution of 1.0 degree and accuracy of at least within +/- 1.0 degree.

c) Rainfall and evaporation as hourly averages with maximum resolution of 1 mm/day and accuracy of at least within +/- 1.0 mm/day that meets standard good industry practice.

d) Provide an alarm to site staff (for example, via mobile phone) if the hourly rolling average wind speed trigger level is exceeded.

e) Screened Temperature with accuracy of +/- 0.5 degrees.

f) Humidity (¢RH) with accuracy of +/- 5%.

g) The instruments shall be installed on mast such that their height is at least four metres above pre-quarrying ground level and in accordance with AS 2923 – 1987 Ambient Air Guide for Measurement of Horizontal Wind for Air Quality Applications.

h) All measured data shall be:

i. recorded using an electronic data logging system and retained for the duration of this consent; and

ii. provided to the Canterbury Regional Council upon request.

4(4)(b) The instruments specified in condition 4(1) shall be installed and maintained in accordance with the manufacturer’s specifications. The consent holder shall keep a record of when maintenance is
undertaken, and the type of maintenance undertaken. This record shall be provided to the Canterbury Regional Council upon request.

Dust Management Plan

5) The consent holder shall prepare and implement a Dust Management Plan (DMP).

The DMP shall be:

- Reviewed every two years, or more frequently if required, by the consent holder in consultation with the Community Liaison Group as required under Condition 64) of Selwyn District Council resource consent RCI 86627;
- Retained on the site at all times; and
- Forwarded at least one month prior to the exercise of this consent to the Canterbury Regional Council Attention: RMA Monitoring and Compliance Manager. Any updated versions of the DMP shall be forwarded to the Manager within 30 days of completing a review.

The DMP and any revisions shall include all measures necessary to achieve compliance with the conditions of this consent.

6) The consent holder shall prepare and implement a Dust Management Plan (DMP) which shall include, but not be limited to:

i. A description of the dust sources on site;

ii. The methods to be used for controlling dust at each source during site construction, operation of the quarry, aggregate crushing and screening, cleanfill deposition and rehabilitation including dust reduction through design methodologies;

iii. A description of the site rehabilitation;

iv. A description of the monitoring requirements;

v. A system of training for employees and contractors to make them aware of the requirements of the DMP;

vi. Identifying staff responsible for implementing and reviewing the DMP;

vii. Procedures, processes and methods for managing dust when staff are not on site;

viii. Methods for determining the weather conditions that will trigger a restriction of potentially dusty activities;

ix. A method for recording and responding to complaints from the public and

x. A maintenance schedule for meteorological monitoring instruments and particulate monitoring.

7) The DMP shall be:

- Developed to include separate Standard Operating Procedures (SOPs), with each of these dedicated to the management of potential dust discharges from specific sources, including but not limited to:
  a. Central processing plant, associated product stockpiles;
  b. Site roads — sealed and gravelled;
  c. Excavation and cleaning filling area;

Commented [BK2]: These amendments to conditions 11 to 46 refer to the orbital evidence of Mr. Cutmore's paragraph 25.3 to 25.5.
d. Exposed areas of the quarry such as stockpiles;

e. Soil and overburden stripping, and storage;

f. Location and calibration of ambient particulate and noise/particle monitoring equipment; and

g. Environmental information management for recording, quality assurance, archiving and reporting the quantity and types of data including all ambient environmental data for wind, rainfall-evaporation, PM10 concentrations, community feedback, and all data required for dust management of the site.

- Reviewed together with the Resource Consents, every two years, or more frequently if required, by the consent holder in consultation with the Community Liaison Group as required under Condition 64 of Selwyn District Council resource consent RC189627.

- Retained on the site at all times; and

- Forwarded at least one month prior to the exercise of this consent to the Canterbury Regional Council Attention: RMA Monitoring and Compliance Manager. Any updated versions of the DMP shall be forwarded to this Manager within 30 days of completing a review.

The DMP and any revisions shall include all measures necessary to achieve compliance with the conditions of this consent.

8). This consent shall not be exercised until the DMP has been certified by a suitably qualified and experienced Practitioner (SQEP) on air quality at the Canterbury Regional Council to confirm that the measures proposed in the DMP are appropriate to enable the management of discharge of contaminants into air beyond the boundary to a level that is offensive, objectionable, noxious or dangerous. The suitability of compliance with the conditions at the time of certification.

7). If the Canterbury Regional Council fails to provide any further response to the consent holder within a period of one month then the DMP shall be deemed to be certified.

8). The Quarry Manager, or nominated person, shall be available at all times (including outside quarry operation hours) to respond to dust emission issues.

Excavation and Rehabilitation

9). The consent holder shall establish at least 1 m high vegetated earth bunds around the site perimeter, with the exception of site accessways, which shall be constructed with a 1 m wide flat top around the site. The bunds shall have a profile with an outside slope of up to 1:3 (one vertical to three horizontal), be compacted to minimise top soil loss, and shall have a 1 m wide top at least 1 m wide, and shall have a minimum width of 15 m, to remain in place for the duration of extraction and rehabilitation activities.

10). As soon as practicable, but within 14 days, following construction, the bunds are to be sown with grass (or another suitable vegetative cover) or hydro-seeded to achieve swift grass cover and watered regularly to ensure grass cover is established and maintained.

11). To assist in achieving swift grass and vegetative cover, construction of the bunds shall take place outside of summer months and in favourable weather, to avoid significant potential dust risk (e.g. during the months of February to November inclusive) and enable grassing of the bunds to occur in autumn or spring, in order to align with periods of good grass strike.

12). The grassed and vegetated bunds shall be watered, when required to suppress potential dust, until a grass or vegetative cover has been established.
14(15). Each sub-stage, with the exception of any active haul roads, shall be rehabilitated within six months of the completion of cleanfiling. Rehabilitation shall include but not be limited to:

   a) Reshaping the relevant areas;
   b) Spreading of topsoil;
   c) Re-vegetating; and
   d) Undertaking all reasonably practicable measures to prevent a dust nuisance from the rehabilitated area, including but not limited to watering of exposed soil to prevent production of dust.

If this work is required outside of spring or autumn, the area can be suitably mulched or covered with another form of material to suppress dust from the area until it is appropriate to re-sow grass.

**Generator Operation**

16. Diesel generators associated with mobile plant should only be used between 7 am and 8 pm, excluding any warm up and cool down period. The generators shall be serviced at least once every year by a person competent in the servicing of such appliances. The servicing shall include internal cleaning and replacement or repair of damaged equipment and services as necessary.

**Dust Mitigation**

14(17). The consent holder shall take all reasonably practicable measures to minimise the discharge of dust from stockpiles. These shall include but not be limited to:

   a) After the initial site preparation and establishment, locating stockpiles of processed aggregate below natural ground level;
   b) All processed aggregate products shall be stockpiled by grade within the quarry floor area.
   c) Stockpile volumes will have a maximum total volume of 200,000m³ at any one time;
   d) All stockpiles associated with the fixed plant will be set back at least 500 metres from site boundaries and stockpiles associated with the mobile plant will be set back at least 500m from the eastern site boundary and 250 metres from all other site boundaries.
   e) During initial site preparation, limiting the height of stockpiles to no more than 3 m above natural ground level at any one time;
   f) Vegetating any long term over burden or soil stockpiles, including any unprocessed aggregate up to a height of 3 m above natural ground; and
   g) Spraying stockpiles with water as required.

15(18). The consent holder shall take all reasonably practicable measures to minimise the discharge of dust from the site. These measures shall include but not be limited to:

   a) Maintaining haul roads so that they are comprised of an aggregate base, with surfaces that are graded so they are free of pot holes, and sealing the site access and haul road.
a) Using field conveyors as the primary form of transporting aggregate for processing within the site. Note: this does not apply to stripping or overburden material;

b) Minimising drop heights when loading trucks, conveyor hoppers and when moving material;

c) Pre-dampening soil with a water cart or sprinklers prior to removing overburden and carrying out land stripping and land rehabilitation during favourable weather conditions (avoiding winds above 7 m/s) and at times of least vulnerability to neighbouring properties;

d) Locating the fixed plant in the centre of the site and below ground level;

e) Any fixed processing plant and associated stockpiling shall be set back at least 500 m from the site boundaries;

f) Only using operating mobile and the central processing plants with the use of water dust suppression (either sprays or high pressure fogging system) fixed to the plant or located beside the plant;

g) All mobile processing plant and associated stockpiled processed aggregates will be located within the quarry floor and set back at least 500 m from the central processing plant.

h) All processed aggregate products shall be stockpiled by grade within the quarry floor area.

i) All stockpile volumes shall have a maximum total volume of 200,000 m³ at any one time and shall be located below the height of the level of the bunds, following the establishment of the quarry pit;

j) Maintaining, establishing and enhancing shelter belt plants around the site boundaries;

k) All works between the site and contact areas and the expansion that are likely to be affected for bunds and bunds. For all other plants, measures shall be taken such as covering or spraying loads with water, to reduce the potential for dust to be blown away or to some extent reduced from vehicles when leaving the site (trusive);

l) Regularly applying dust suppression measures such as water to unsealed haul and access roads during any conditions when dust is likely to be discharged from them (dry and windy);

m) Undertaking routine site inspections of visible dust emissions throughout each day of operation, and logging findings and any mitigation actions electronically;

n) Overburden stockpiles and bunds are to be re-vegetated or planted;

o) The site will be rehabilitated as soon as reasonably practicable to limit potential for dust generation by minimising exposed surfaces;

p) The use of pea gravel, reject gravel, or pit run gravel and dust suppressants as appropriate on exposed surfaces and additional use of suppressants (water or chemical dust suppressants) as necessary to comply with ambient dust monitoring triggers and avoid visible dust plumes extending beyond the site boundary;

q) Taking wind conditions direction and speed into account in planning and carrying out work so as to minimise dust dispersion towards any residential dwellings that are within 250 m of the area where works are planned (e.g. stripping of overburden);
Using water and/or dust suppressants on all disturbed surfaces including extraction areas, roads and stockpiles when required to avoid visible dust plumes extending beyond the site boundary;

Regularly maintaining unsealed internal roads and yard areas by grading and laying fresh gravel, as necessary to avoid visible dust plumes extending beyond the site boundary;

Maintaining an adequate supply of water and equipment on the Roycon Quarry site for the purposes of dust suppression at all times;

Using chemical stabilisers or other equivalent measures on unsealed road surfaces, if water application is insufficient or unavailable and as necessary to avoid visible dust plumes extending beyond the site boundary;

Applying a speed restriction on all internal roads of 15 kilometres per hour at all times and clearly signpost this limit on all internal roads;

Keeping paved roads and yard areas free of dust by regular sweeping and by use of appropriate sweepers;

x) [Commented BK6: advice note inserted as per recommendation in Mr Black's rebuttal evidence paragraph 24]

No extraction shall occur within 100 m of any dwelling existing at the date of consent being granted, without the prior written consent of the owners and occupiers of these dwellings.

A permanent real-time PM10 monitor (US EPA or National Environmental Standards for Air Quality 2004 (NES) compliance equipment) shall be installed and operated at the eastern boundary directly downwind of the active quarry area for southwest wind conditions. This monitor is to record hourly and 24-hour average PM10 concentrations.

Wind speed and direction will be monitored continuously on site by equipment fitted with an alarm system to advise site personnel when the above triggers are exceeded.

A real-time Total Suspended Particles (TSP) and PM10 monitor (referred to as the "mobile monitor") shall be operated on the quarry's site boundary and shall be located between the active quarrying/clean filling area and the off-site sensitive location that is less than 500 m away from the active quarrying/clean filling area. A portable mobile location of the mobile monitor is necessary to ensure it is at a position directly downwind of the mining area. A mobile monitor can be of a type that is suitable for dust management but does not need to meet the standard for NES compliance monitoring.

When quarrying and/or clean filling operations cause continuously recorded PM10 concentrations at the site boundary, to reach or exceed the trigger levels listed below, then additional dust control measures shall be implemented:

a) [Commented BK7: The amendments to condition 21 refer to paragraphs 35 and 36 of the rebuttal evidence of Mr Cudmore to Mr Kirkby's paragraph 25.10, and are intended to clarify that satisfying condition 21 may require more than one mobile monitor]

PM10 concentration of 150 micrograms per cubic metre (1-hour average) recorded every 30 minutes.
b) Ten-minute rolling TSP concentration of 200 micrograms per cubic metre (1-hour average) detected every 10 minutes.

c) One-hour rolling TSP concentration of 60 micrograms per cubic metre (24-hour average) detected every hour.

21(23) All dust-generating activities (except dust mitigation measures) being undertaken within 250 m of sensitive receptor locations, shall cease when either of the following criteria are exceeded:

a) Trigger concentrations listed in Condition 22) are exceeded at the boundary location that is directly upwind from the sensitive locations and downwind of active quarrying/clean-filling areas;

b) The wind direction (10-minute average) places active quarrying/clean-filling areas directly upwind of these sensitive locations when the wind speed exceeds 7 m/s and following a period of 12 hours or more of there being no rain at the quarry site.

22(24) Condition 23) does not apply when detailed investigations by site personnel, or council enforcement officers, clearly confirms that there are no visible dust impacts or related dust nuisance effects occurring at the downwind sensitive receptor locations. This can include confirmation from occupants that they are not concerned with any nuisance dust effects occurring at the time of investigation and/or else when the criteria listed in Condition 22) are breached.

23(25) Water carts as a back-up will be used, as required, for dust suppression during dry weather, so that dust emissions from working areas, haul roads and stockpiles do not cause breaches of the trigger level listed in Condition 23) or any visible dusty plumes more than 30 m beyond the site boundary. Water will be available for dust suppression from an existing bore (M36/0257) on the site, in association with stored water (i.e. water tanks or similar vessels) in accordance with the conditions of CRCXXXXXX.

24(26) Where the take of groundwater from the existing bore (M36/0257) is reduced in accordance with Condition 2(a) or (b) of CRC182422, the consent holder shall undertake dust suppression measures using the reduced bore take, and water storage capacity on site (i.e. water tanks or similar vessels) and, if deemed necessary, chemical dust suppressants can be used to minimise dust suppression water requirements to achieve compliance with limits specified in Condition 23) or else the confirmation of no visible dust impacts or related dust nuisance effects occurring at the downwind sensitive receptor locations.

25(27) Should the ability to take water authorised under CRC182422 cease at any time in accordance with Condition 2(c)(c) of CRC182422, the consent holder shall assess the need to temporarily cease some or all parts of site operations requiring water usage to manage dust, including any mobile processing and acceptance of cleanfill, until such time when water can be taken again.

Planning of Activities

26(28) The consent holder shall assess weather and ground conditions (dryness and 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 works for the day.

27(29) At any time, including outside normal operating hours, if visible dust is slowing beyond the site boundary or if targeted monitoring triggers are reached, and irrespective of it being a dry, windy day, the consent holder shall:
a) Cease all dust generating activities;

b) Continue all dust suppression activities;

c) Carry out the investigation of possible causes immediately and respond with appropriate corrective and preventive actions (Note: This may include immediate watering of both active and inactive exposed surfaces, even if dust generating activities have been ceased);

d) Only resume site activities (other than dust suppression) once the appropriate mitigation measures are in place to prevent visible dust blowing beyond the site boundary, and when monitoring triggers as set out in Condition 22) are no longer being breached.

d) Notify the Canterbury Regional Council within one working day of the event, including the cause of the event and results of the investigation.

Reporting and Review

24(30). The consent holder shall keep a record of any complaints relating to dust, and shall include:

a) The location where the dust was detected by the complainant;

b) The date and time when the dust was detected;

c) A description of the wind speed and wind direction when the dust was detected by the complainant;

d) The most likely cause of the dust detected;

e) Any corrective action undertaken by the consent holder to avoid, remedy or mitigate the dust detected by the complainant; and

f) This record shall be provided to the Canterbury Regional Council upon request.

29. A notice is to be erected at the entrance advising the public how quarry management can be contacted. The consent holder shall ensure a 24-hour contact is available, with contact details posted in clear view at the site entrance.

30(31). The lapsing date for the purposes of section 125 of the Resource Management Act 1991 shall be 5 years from the date of issue of this consent.

31(32). The Canterbury Regional Council may, once per year, on any of the last five working days of May or September November serve notice of its intention to review the conditions of this consent for the purposes of:

a) Dealing with any adverse effect on the environment which may arise from the exercise of this consent and which it is appropriate to deal with at a later stage; or

b) Dealing with dust suppression requirements;

c) Altering the suspended particulate monitoring requirements of the relevant condition;

d) Ensuring compliance with any relevant National Environmental Standards.
CRC192408 & CRC192409 Land use consent to excavate material and deposit cleanfill material over an unconfined/semi-confined aquifer\Use of Land for Mineral Extraction and Cleanfill Deposition

Description

1) The activities shall be only:

(a) Site preparation works including the excavation of topsoil and overburden material for the purpose of constructing bunds and storage of soil for site rehabilitation;

(b) Excavation of aggregate;

(c) Temporary stockpiling of excavated aggregate;

(d) Deposition of cleanfill; and

(e) Progressive remediation

At 107 Dawsons Road and 220 Jones Road, Templeton, The use of land for the construction works associated with development of the quarry, extraction of overburden and aggregate material, stockpiling of extracted aggregate, the deposition of cleanfill, and remediation of completed quarrying areas shall be at located on the land between Comyns, Dawsons, Maddisons and Jones Road, legally described as Rural Section 6475 and Rural Section 6324, Lot 1 Deposited Plan 4031, Rural Section 6342, Section 7 Survey Office Plan 510345, Rural Section 5381 and Section 6 Survey Office Plan 510345, at or about map reference NZTM2000 1555356mE, 5177132mNZMS-260 M28.6505-3830, as shown on Plan CRC192408A, attached to and forming part of this resource consent.

For the avoidance of doubt, no blasting is authorised by this consent, shown as the area inside the Site boundary in red on the Site Location Plan prepared by Golder Associates, dated November 2018, which forms part of this consent.

Preliminary Works

2) Site Management

(a) The perimeter of the quarry site shall be surrounded by secure fencing, with lockable access gates;

(b) The consent holder shall ensure that warning notices are erected and maintained at all entrances to the site;

(c) Warning notices shall be able to be read from a distance of five metres;

(d) The warning notices shall state:

(i) Name of the site;

(ii) Name of the owner of the site and a contact telephone number;

(iii) Groundwater is vulnerable to contamination;

(iv) Only clean soil may be deposited at this site; general refuse and hazardous waste shall not be dumped at this site.
2) Prior to works commencing, warning notices that can be read from a distance of 5 m shall be erected and maintained at all entrances to the quarry excavation site. These notices shall state:
   a) The name of the site;
   b) The name of the quarry operator;
   c) No unauthorised material sourced from off-site shall be placed in the quarry excavation areas.

3) Access to the quarry excavation areas shall be secured by fencing and lockable gates.

Extraction Depth

3) The consent holder shall ensure the natural ground level of the site is surveyed prior to excavation of overburden material, and annually thereafter to determine elevations of the site relative to Mean Sea Level, including the depth of excavations. The survey:
   a) Shall be undertaken by a registered surveyor;
   b) Results shall be to an accuracy of +/- 50 millimetres vertically;
   c) Results of each survey shall be provided to the Canterbury Regional Council, Attention: Regional Leader Monitoring and Compliance, in February of each year or on request; and provide a contour map showing the surveyed maximum quarry depth relative to the highest groundwater level.

4) Prior to undertaking the activities authorised by this consent at the site, the consent holder shall establish a surveyed datum point at natural ground level in an area that will not be excavated. This point shall be used to certify the depth of excavation at any point within the site described in condition 1.

4) The consent holder shall survey the site prior to excavation, and annually thereafter, to determine the elevations of the site relative to the:
   a) Mean Sea Level, including the depth of excavations;
   b) The survey shall be undertaken by a registered surveyor;
   c) The survey results shall be to an accuracy of +/- 50 millimetres vertically;
   d) The results of each survey shall be provided to the Canterbury Regional Council, attention: RMA Compliance and Enforcement Manager, in February of each year or on request;
   e) Natural ground levels of the site shall be recorded and reported in terms of metres above mean sea level;
   f) The consent holder shall establish a surveyed datum point at local ground level in an area that will not be excavated. This point shall be used to certify the depth of excavation and clearance at any point within the consent holder’s site.

5) During at least the first five years after commencement of consent and upon agreement, two different depths are notified in writing by the Canterbury Regional Council. The depth of quarrying shall not exceed Commented [BK9]: The amendments to conditions 6 through 8 are paragraphs 2A, 2B and 2C of the Water Quality WQ3.
a depth of between 1.1 and 2.5 metres below natural ground level, across the site, as shown in accordance with the contour plan included as Figure BRCX6XX/CRT/122388.

6) The consent holder shall monitor water levels at the field level point after commencement of consent in the four bores specified below:

**Upgradient**
- BX23/0833 (Bore ID DRBH1). Located at or about map reference: NZTM X and Y 1554812 - 5177927
- BX23/0836 (Bore ID DRBH2). Located at or about map reference: NZTM X and Y 1554914 - 5177668

**Downgradient**
- BX23/0835 (Bore ID DRBH4). Located at or about map reference: NZTM X and Y 1556077 - 5177717
- BX23/0834 (Bore ID DRBH3). Located at or about map reference: NZTM X and Y 1555397 - 5176416

Based on this information and historical water levels recorded at nearby Levenswood Quarry, the consent holder may also, submit a report to the Canterbury Regional Council by the anniversary of every 2 years after the commencement date of the consent, an independently qualified person with expertise in groundwater monitoring that, having regard to the water level monitoring information, recommends a revised maximum depth of quarrying. Provided that the Canterbury Regional Council certifies in writing that the findings of the independent report are accepted, the depth of quarrying may be amended in accordance with the report recommendations. Notwithstanding the aforementioned certification process, at all times and in all circumstances the consent holder shall limit quarrying to 1 m above the seasonal high water table referenced to the datum point in Condition 1.

7) No excavation shall occur below 1 m above the highest recorded groundwater level at the site, as at the date of this consent being granted.

8) Should the groundwater water level increase (at times of high-water table) so that the separation is less than 1 m between the measured groundwater levels and the base of the quarry floor, the consent holder shall apply virgin materials (aggregate sourced from within the site, opposed to imported cleanfill) in these areas, so as to re-establish a 1 m separation distance. This requirement shall not apply to any areas which have already been rehabilitated.

For the purpose of this consent, ‘virgin materials’ is aggregate sourced from the quarry pit that is of comparable quality and composition to aggregate which was excavated or replacement of the same material.

9) If groundwater levels rise within the 1 m separation distance, then any machinery (other than that used for backfilling of virgin materials) shall be moved away from these areas and contingency backfilling measures shall be undertaken in accordance with those set out in Condition 8.

9[10] Should groundwater levels rise into the quarry floor during excavation or deposition of cleanfill, the consent holder shall notify the Canterbury Regional Council, Attention: Regional Leader – Monitoring and Compliance within 24 hours.
9(11) Once aggregate extraction has commenced the consent holder shall provide, at three-monthly intervals, and on request from the Canterbury Regional Council Manager Monitoring and Compliance (The Manager), a laser level survey of all depths of excavated and filled areas on the site. Such a survey shall not be required if there has been no excavation in the preceding three-month period. Alternative methods for achieving this condition, such as GPS depth technology on excavation machinery may be used subject to approval in writing from the Manager.

10) The Consent Holder shall survey all excavated and filled areas of the site annually to determine the elevations of the site relative to datum established under Condition 4) including the depth of excavation. The survey shall be undertaken by a registered surveyor. The survey result shall be to an accuracy of +/− 50 millimetres vertically. The results of such survey shall be provided to the Manager, annually and otherwise on request.

Excavation of Aggregate

11(12) Excavation of aggregates shall commence with extraction in the centre of the site (adjacent to the central processing area shown in green) and shall occur in a progressive sequence (moving southward and then anticlockwise) generally in accordance with the three-part diagram in Figure 1 below the plan attached as ORC192408A. Full-staging beyond Stage 3 shall be provided to the Manager at least one month prior to Stage 4 commencing. Excavation of aggregates shall occur from the quarry floor, once the pit is established:

![Figure 1: Three-part diagram showing quarrying staging.]

12(13) Site areas shall be limited to a maximum area in accordance with the following specified open ground limitations, at any one time, as set out in the table below:

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Area (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central processing area, its fixed plant, stockpiles, mobile plant etc.</td>
<td>7</td>
</tr>
<tr>
<td>Excavation in process</td>
<td>5</td>
</tr>
<tr>
<td>Fill and rehabilitation in process</td>
<td>5</td>
</tr>
<tr>
<td>Site roads – unsealed</td>
<td>5</td>
</tr>
</tbody>
</table>
14(14) The excavation of aggregates, deposition of cleanfill and stockpiling of aggregate and cleanfill material shall be setback 20 metres from the boundaries of the site, occur within 20 metres of the boundaries of the Site. This condition does not apply to earthworks involved in the rehabilitation of the Site.

15) Maintaining haul roads so that they are comprised of an aggregate base, with surfaces that are graded so they are and free of pot holes and sealing at least the first 100 m of the site access road.

14) Any roads within the central processing area shall be sealed as shall the access road(s) into the site.
Cleanfilling

16(16) Where additional fill is required to be brought to the site for rehabilitation purposes, the consent holder shall ensure that all material deposited in the excavated area is:

a) Only material defined as 'Cleanfill' as set out in the advice note attached to this condition;

b) The material is not deposited into groundwater; and is at least one metre above the seasonal high water table recorded at the site, subject to Condition 7;

c) Material is deposited in accordance with a Cleanfill Management Plan (CMP) which has been prepared in accordance with Section 8.1 and Appendix B of "A Guide to the Management of Cleanfills", Ministry for the Environment, January 2002;

d) Assessed against the fill acceptance criteria and inspected in accordance with the procedures contained in the draft Roydon Quarry Cleanfill Management Plan (submitted as Appendix F of the AEE and revised V2 as at 12 March 2019); and ejected from the site if load description is contrary to actual content in truck;

Note: Any fill that is not Cleanfill must be removed (and temporarily stored on site), which could avoid the prohibition of depositing and testing of the site's soils, or by agreeing that Canterbury Regional Council can approve levels.

d(e) Checked by the site manager or nominated person prior to deposition in the pit. If the material is not classified as Cleanfill, the consent holder shall immediately remove the material and arrange for the disposal of it at an appropriate location;

e(f) And recorded by an electronic weighing system. The record shall include a detailed record of all materials deposited into the Cleanfill site and shall be provided to the Canterbury Regional Council upon request. This record shall include the following information:

i. The name of the company delivering the material;

ii. The date of deposition;

iii. The physical address of the land the material was sourced from;

iv. A description of the material;

v. Any laboratory reports;

vi. Any authorisation under which the material was removed from the source site (e.g., resource consent); and

vii. The weight or volume of the material deposited.

(fg) Copies of this documentation shall be made available to the Council on request.

Advice note: "Cleanfill" is defined as:

Material that when buried will have no adverse effect on people or the environment. Cleanfill material includes virgin natural materials such as clay, soil and rock, and other inert materials such as concrete or brick that are free of:

- combustible, putrescible, degradable or leachable components
- hazardous substances
- products or materials derived from hazardous waste treatment, hazardous waste stabilisation or hazardous waste disposal practices
- materials that may present a risk to human or animal health such as medical and veterinary waste, asbestos or radioactive substances and liquid waste.

9(2) No cleanfill material shall be deposited at the site which has been sourced from a site defined as 'potentially contaminated'.

For the purpose of this consent, 'potentially contaminated' means a part of a site where an activity or industry described in the list in Schedule 3 of the Canterbury Land and Water Regional Plan, which is attached as Attachment 1 and forms part of this resource consent, has or is being undertaken on it or where it is more likely than not an activity or industry described in the list in Schedule 3 is being or has been undertaken on it, but excludes any site where a detailed site investigation has been completed and reported and which demonstrates that any contaminants in or on the site are at, or below, background concentrations.

17) All cleanfill stockpiles shall be inspected and pushed over the working face on a regular basis.

16(18) Any mixed fill arriving at the site shall be thoroughly inspected to ensure it contains no unacceptable materials or shall otherwise be rejected. This inspection shall include a review of the fill disposal application and information related to the material source and site use, a visual inspection to identify unacceptable material, and adequate analytic testing guided by potential sources of contamination, to confirm the material meets the relevant acceptance criteria.

19) Any contractor depositing material at the site shall have a written contract with the consent holder and shall be provided with a copy of this consent prior to entering the site. Site inductions will be held on a quarterly basis for contractors using the site, and records of these inductions shall be kept and made available to Council on request.

17(20) At least one month prior to the commencement of any cleanfilling activity authorised by this consent the consent holder shall submit a CMP to the Canterbury Regional Council, Attention: RMA Monitoring and Compliance Manager. The CMP shall include but not be limited to the following:

a) Describing the content and purpose of the CMP;

b) Detailing the operation of the site including details of staging of works, area, depth and proposed start and finish date of deposition of cleanfill material;

c) Discussing the actions to be undertaken to ensure compliance with the conditions of this resource consent and actions to be undertaken in response to any incident that may adversely affect the environment;

d) Identifying and providing contact details of the staff member responsible for each action;

e) Discussing the steps to be undertaken to correct incidences of non-compliance;

f) Identifying timeframes for site rehabilitation;

g) The specific location of the cleanfill placement area;

h) A description of operational procedures and monitoring that will be implemented to prevent unauthorised material from entering the site;

i) How rejected material will be stored pending disposal to an authorised landfill;
j) Where rejected material will be disposed of;

k) The maximum length of time that rejected material will be stored on site pending removal;

l) Construction procedures to ensure the long-term stability of cleanfill areas;

m) Timetable of works and re-vegetation measures;

n) Procedures for improving and/or reviewing the CMP;

o) A list of all material accepted in the cleanfill; and

p) Procedure for responding to complaints.

The consent holder shall ensure that a copy of the CMP is held at the site and all personnel working on the site are made aware of and have access to this consent document and the CMP.

21) Specific staff training as required under the CMP shall be provided in accordance with Section 6.2.2 of “A Guide to the Management of Cleanfill” (ME Guide), Ministry for the Environment, January 2002. All records of staff training shall be retained on site and provided to the Canterbury Regional Council on request.

18(22) Annual refresher training shall be provided by a Suitably Qualified and Experienced Practitioner (SQEP) as part of the training programme and as specified in the ME Guide. The consent holder shall maintain a complaints register at the Brydon Quarry site office and make this available to officers of the Canterbury Regional Council on request.

19(23) The CMP shall be:

a) Reviewed and updated at least once every two years for the duration of the consent; and

b) Retained on the site at all times.

Any updated versions of the CMP shall be forwarded to the Canterbury Regional Council, Attention: RMA Monitoring and Compliance Manager, within 30 days of completing a review.

Groundwater quality monitoring

20(24) The following groundwater sampling regime is proposed:

a) Two additional monitoring wells are to be installed on the site at the boundary at the same depth as the existing four monitoring wells. These should be installed downgradient in respect to the groundwater flow and assist in identifying groundwater quality changes caused by quarry activities.

b) Representative samples of groundwater shall be taken from bores XXXX, including onsite bore M36/2743, at three-six-monthly intervals, for a period of five years after quarrying activities commence, and thereafter at a six-monthly interval, from the two upgradient and two downgradient bores;

b) Samples shall be taken after adequate purging to remove all stagnant water from the bores or by using an alternative method, such as low-flow sampling technique, to ensure that fresh groundwater is drawn through the bore screens; and

d) All samples shall be taken by a suitably qualified practitioner and analysed by an accredited laboratory. Groundwater samples shall be analysed for the contaminants shown in Table 1;
The water quality monitoring results shall be supplied annually to the Canterbury Regional Council, RMA Compliance and Monitoring Manager.

Responses to Monitoring

21(25) The results of analysis of groundwater samples tested shall be compared with the contaminant trigger values in Table 1. Any contaminant concentration in the downgradient bores shall be deemed an exceedance if:

a) The tested result is in excess of the trigger values for a contaminant given in Table 1 if the same contaminant upgradient concentration is less than the Table 1 trigger levels; or

b) Any contaminant concentration in the upgradient bore exceeds the Table 1 trigger values for that contaminant and if the downgradient bore exceeds the upgradient bore contaminant concentration by more than 10 percent of the respective Table 1 contaminant trigger value.

22(26) If there is an exceedance in a downgradient bore as determined by Condition 25), the consent holder shall, within one month of receiving the results:

a) Obtain a second sample of groundwater from the bore sampled in accordance with Condition 24); and

b) Obtain a sample of groundwater from the upgradient bore specified in Condition 24); and

c) Analyse these samples in accordance with Condition 24).

23(27) If the results of analysis of groundwater samples carried out in accordance with Condition 24) show that none of the contaminations of contaminants analysed exceed the trigger concentrations given in Table 1, the consent holder shall continue to sample groundwater in accordance with Condition 24).

24(28) If the results of analysis of groundwater in down-gradient bores sampled in accordance with Condition 24), for any contaminant analysed show an exceedance, as determined by Conditions above (24)), the consent holder shall:

a) Notify the Manager; and

b) Notify the residential occupiers with water supply bores of all adjoining properties to the south and south-east of the cleanfill site; and

c) Sample all domestic wells within 500 metres downgradient of the affected monitoring wells in which 50% of MAV trigger level has been exceeded (subject to well owner approval)

d) Implement necessary measures to reduce the concentration of the contaminant in groundwater. Such measures may include:

   i. cessation of activities that may have caused the excessive concentrations;

   ii. removal of the contaminant source(s);

   iii. stabilisation or capping of the contaminant source(s); and

   iv. revision of cleanfill management procedures.

e) Undertake additional monitoring beyond the routine sampling.
Any material removed in accordance with Condition 24(a) shall be disposed of at an appropriate facility, and the consent holder shall provide the Manager, with written confirmation of such disposal within ten working days of the disposal taking place.

Rehabilitation

26. Rehabilitation of the site shall be undertaken generally in accordance with the Quarry Rehabilitation Plan (QRP), as certified by Selwyn District Council under RMAXXXXX.

26(29). Following completion of quarrying and within XXXX 12 months of the conclusion of cleanfilling in a sub-stage, a minimum 300 mm topsoil layer shall be applied over the finished surface level and sown with a suitable grass species or planted with another suitable vegetation.

27.30. Each sub-stage, with the exception of any active haul roads, shall be rehabilitated within six months of the completion of cleanfilling. Rehabilitation shall include but not be limited to:

a) Reshaping the relevant areas;
b) Spreading of topsoil;
c) Re-vegetating; and
d) Undertaking all practicable measures to prevent a dust nuisance from the rehabilitated area, including but not limited to watering of exposed soil to prevent production of dust.

If this work is required outside of spring or autumn, the area can be suitably mulched or covered with another form of material to suppress dust from the area until it is appropriate to re-sow grass.

The rehabilitated grassed areas shall be monitored and maintained to ensure they are functioning appropriately for a period of 24 months following rehabilitation being completed.

28(31). All finished surfaces to be designed and constructed to be free draining, and the final finished floor level shall not be above the ground level that predates quarrying.

Spills

32. The consent holder shall take all practicable measures to prevent leaks and avoid spills of fuel or any other hazardous substances in accordance with a Spill Management Plan. This shall include but not be limited to:

(a) Refuelling or maintenance of vehicles or machinery maintenance shall not occur on the quarry pit floor with the exception of generators for mobile plant;
(b) Appropriate servicing and maintenance of vehicles and machinery such that they do not result in leaks or spills;
(c) Only undertaking refuelling or maintenance on vehicles or machinery on hardstand surfaces that are roofed;
(d) A spill kit capable of absorbing all fuel and oil products shall be kept on site and available at all times. All staff involved in the implementation of activities in condition (1) are to be trained in the use of spill kits.

33. The consent holder shall prepare and implement a Spill Management Plan for the site. The Spill Management Plan shall:
(a) Document the measures to prevent leaks and avoid spills of fuel or any other hazardous substance (including fuel reconciliations);

(b) Set out the procedure to be undertaken in the event of a spill of fuel or any hazardous substance, in accordance with condition (x);

(c) Set out staff training requirements for responding to spills; and

(d) Be provided to Canterbury Regional Council on request.

(a) All reasonably practicable measures shall be undertaken to prevent oil and fuel leaks from vehicles and machinery.

29) A spill kit, that is capable of absorbing the quantity of oil and petroleum products that may leak or be spilled, shall be kept on site at all times.

34) In the event of a spill of fuel or any other hazardous substances:

(a) The spill shall be cleaned up as soon as practicable, and measures taken to prevent a recurrence;

(b) The Canterbury Regional Council, Attention: Regional Leade... Monitoring and Compliance shall be informed within 24 hours of a spill event exceeding four litres and the following information provided:

(i) The date, time, location and estimated volume of the spill;

(ii) The cause of the spill;

(iii) The type of hazardous substance(s) spilled;

(iv) Clean up procedures undertaken;

(v) Details of the steps taken to control and remediate the effects of the spill on the receiving environment;

(vi) An assessment of any potential effects of the spill;

(vii) Measures to be undertaken to prevent a recurrence.

30) The consent holder shall inform the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within 24 hours of any leak or spill 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;

f) An assessment of any potential effects of the spill; and

Measures to be undertaken to prevent a recurrence.
Immediately following the discovery of material suspected to be a taonga, kōwai or Māori archaeological site, the following steps shall be taken:

a) All work in the vicinity of the discovery will cease;

b) Immediate steps will be taken to secure the site to ensure the archaeological material is not further disturbed:

i. Notify the Kaitiaki Rūnanga and the Area Archaeologist of the New Zealand Historic Places Trust (NZHPT). In the case of kōwai (human remains), the New Zealand Police must be notified. The Kaitiaki Rūnanga and NZHPT will jointly appoint / advise a qualified archaeologist who will confirm the nature of the accidentally discovered material;

ii. If the material is confirmed as being archaeological, the consent holder will ensure that an archaeological assessment is carried out by a qualified archaeologist, and if appropriate, an archaeological authority is obtained from NZHPT before work resumes (as per the Historic Places Act 1993);

iii. The consent holder will also consult the Kaitiaki Rūnanga on any matters of tikanga (protocol) that are required in relation to the discovery and prior to the commencement of any investigation;

iv. If kōwai (human remains) are uncovered, in addition to the steps above, the area must be treated with utmost discretion and respect, and the kōwai dealt with according to both law and tikanga, as guided by the Kaitiaki Rūnanga;

v. Works in the site area shall not recommence until authorised by the Kaitiaki Rūnanga, the NZHPT (and the NZ Police in the case of kōwai) and any other authority with statutory responsibility, to ensure that all statutory and cultural requirements have been met;

vi. All parties will work towards work recommencing in the shortest possible time frame while ensuring that any archaeological sites discovered are protected until as much information as practicable is gained and a decision regarding their appropriate management is made, including obtaining an archaeological authority under the Historic Places Act 1993 if necessary. Appropriate management may include recording or removal of archaeological material;

vii. Although bound to uphold the requirements of the Protected Objects Act 1975, the contractor/works supervisor/owner recognises the relationship between Ngāi Tahu whānui, including its Kaitiaki Rūnanga, and any taonga (Māori artefacts) that may be discovered.

Reporting and Review

The consent holder shall maintain a complaints register at the Roydon Quarry site office and make this available to officers of the Canterbury Regional Council on request.

The Canterbury Regional Council may, once per year, on any of the last five working days of May or November/September serve notice of its intention to review the conditions of this consent for the purposes of:
a) Dealing 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) Requiring the adoption of the best practicable option to remove or reduce any adverse effect on the environment.

38) The lapsing date for the purposes of section 125 of the Resource Management Act 1991 shall be 5 years from the date of issue of this consent.

39) A copy of this consent shall be provided to all persons operating or carrying out the activities as authorised by the consent holder.

40) The consent holder shall inform the Canterbury Regional Council, Attention: Regional Leader Monitoring and Compliance, of the date on which this consent is first exercised.

41) At least one month prior to commencement of works authorised by this consent, the Consent Holder or their agent shall arrange and conduct a pre-construction site meeting between the Canterbury Regional Council and all relevant parties. At a minimum, the following shall be covered at the meeting:

(i) Scheduling and staging of the works, including the proposed start date;
(ii) Responsibilities of all relevant parties;
(iii) Contact details for all relevant parties;
(iv) Expectations regarding communication between all relevant parties;
(v) Procedures for implementing any amendments;
(vi) Site inspection; and

(vii) Confirmation that all relevant parties have copies of the contents of this consent document and all associated cleanfill management and dust management plans and methodology, and

(vii) Methods for resolution of non-compliance with the conditions of this consent.
<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Property or trigger action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acidity</td>
<td>No testing</td>
</tr>
<tr>
<td>Alkalinity</td>
<td>100 g/m³ as CaCO₃</td>
</tr>
<tr>
<td>Ammoniacal N</td>
<td>1.2 g/m³ as N</td>
</tr>
<tr>
<td>Chloride</td>
<td>250 g/m³</td>
</tr>
<tr>
<td>Electrical Conductivity</td>
<td>50 mS/m at 25°C</td>
</tr>
<tr>
<td>E. coli bacteria</td>
<td>1 MPN/100 ml median of samples</td>
</tr>
<tr>
<td>Total Hardness (calcium + magnesium)</td>
<td>100 g/m³ as CaCO₃</td>
</tr>
<tr>
<td>Dissolved iron</td>
<td>0.2 g/cm²</td>
</tr>
<tr>
<td>pH</td>
<td>8.5</td>
</tr>
<tr>
<td>Dissolved Zinc</td>
<td>1.5 g/cm²</td>
</tr>
<tr>
<td>Total Petroleum Hydrocarbons</td>
<td>Any detection &gt;0.1 g/m³</td>
</tr>
<tr>
<td>Dissolved Aluminium</td>
<td>0.1 g/m³</td>
</tr>
<tr>
<td>Dissolved Arsenic</td>
<td>0.005 g/m³</td>
</tr>
<tr>
<td>Dissolved Boron</td>
<td>0.7 g/m³</td>
</tr>
<tr>
<td>Dissolved Cadmium</td>
<td>0.002 g/m³</td>
</tr>
<tr>
<td>Dissolved Chromium</td>
<td>0.025 g/m³</td>
</tr>
<tr>
<td>Dissolved Copper</td>
<td>1 g/m³</td>
</tr>
<tr>
<td>Dissolved Lead</td>
<td>0.005 g/m³</td>
</tr>
<tr>
<td>Dissolved Manganese</td>
<td>0.04 g/m³</td>
</tr>
<tr>
<td>Dissolved Nickel</td>
<td>0.04 g/m³</td>
</tr>
<tr>
<td>Nitrate-Nitrogen</td>
<td>No testing</td>
</tr>
<tr>
<td>Dissolved Sodium</td>
<td>200 g/m²</td>
</tr>
<tr>
<td>Sulphate</td>
<td>250 g/m²</td>
</tr>
</tbody>
</table>

*Note: all salinity concentrations in mg/L and g/m³ are generally interchangeable, but I have made them all g/m³ for consistency.*
CRC192414182422A – Water permit to use groundwater (new use)

New conditions

1) The volume of water taken in terms of this permit from bore M36/02/57 shall be in accordance with CRC182422 and at a rate not exceeding 9.5 litres per second, with a volume not exceeding 752 cubic metres in any one day and 5,267 cubic metres in any period of seven consecutive days, and 12,976,274,842 cubic metres between 1 July and the following 30 June.

   Water shall only be used for quarrying activities including

2) :  
   (a) dust suppression;
   (b) truck washing;
   (c) staff amenities; and
   (d) irrigation of vegetated bunds and rehabilitated areas.

At 107 Dawsons Road and 220 Jones Road, Templeton, legally described as Rural Section 6475 and Rural Section 6324, Lot 1 Deposited Plan 4031, Rural Section 6342, Section 7 Survey Office Plan 510345, Rural Section 6381 and Section 8 Survey Office Plan 510345, at or about map reference NZTM2000 1565350mE, 5179132mN. As shown on Plan CRC192414A, attached to and forming part of this resource consent.

Water used under this permit shall be used for dust suppression, quarrying operations and ancillary activities and irrigation of rehabilitation areas; and shall only be applied to the area of land between Curraghs, Dawsons, Maddisons and Jones Road, legally described as Rural Section 6475 and Rural Section 6324, Lot 1 Deposited Plan 4031, Rural Section 6342, Section 7 Survey Office Plan 510345, Rural Section 6381 and Section 8 Survey Office Plan 510345, at or about map reference NZMS 260 M26 65058-3630, shown as the area inside the site boundary in red on the Site Location Plan prepared by Golder Associates, dated November 2018, which is attached to these conditions.

3) The Canterbury Regional Council, Attention: Regional Leader – Monitoring and Compliance, shall be informed within five days of first exercise of this consent by the consent holder.

4) The Canterbury Regional Council may, once per year, on any of the last five working days of May or November, serve notice of its intention to review the conditions of the consent for the purpose of:
   a) dealing 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) requiring the adopting of the best practicable option to remove or reduce any adverse effect on the environment.
CRC192411 and CRC192412 - Discharge permit to discharge of stormwater to land where contaminants may enter groundwater and; Discharge of contaminants which may enter water from an industrial or trade process

Description

1) The activity shall be limited to the discharge of stormwater and contaminants from hardstand surfaces and roofs to land at 107 Dawsone Road and 220 Jones Road, Templetown, discharge of contaminants and of stormwater shall only be from quarrying activities located on the land between Currahega, Dawsone, Muddicote and Jones Road, legally described as Rural Section 6475 and Rural Section 6324, Lot 1 Deposited Plan 4031, Rural Section 6342, Section 7 Survey Office Plan 510345, Rural Section 5381 and Section 6 Survey Office Plan 510345, at or about map reference NZTM2000 1565356E, 6177132mN. As shown on Plan CRC192411A and CRC192612A, attached to and forming part of this resource consent, NZMS 260 M26:6506-3830, shown as the area inside the site boundary in red on the Site Location Plan prepared by Golder Associates, dated November 2018, which is attached to these conditions.

Stormwater

2) Stormwater that falls on unsealed surfaces will infiltrate to ground. Stormwater runoff from road surfaces shall infiltrate to ground along the road edges. Stormwater runoff from roofs and other hardstand surfaces shall be discharged into land via conveyed to stormwater detention basins.

3) All stormwater detention treatment systems to be installed at the site shall be designed and installed in accordance with a Stormwater Management Plan (SMP) to be developed and submitted to the Canterbury Regional Council for review and technical certification. All stormwater detention basins shall be designed as 'dry ponds' in which stormwater will infiltrate and no ponding occurs for more than 48 hours, in accordance with the approved SMP.

Stormwater detention ponds

Stormwater retention ponds are proposed treatment works shall be lined with soils to ensure the removal of contaminants. The removal efficiencies of these systems shall be in accordance with the Ministry for the Environment On-Site Stormwater Management Guidelines (NZWERF 2004).

- (a) 
  - Declared of total suspended solids
  - Declared of phosphorus in water
  - Declared of E. coli in water
  - Declared of heavy metals (iron, copper, lead)

Soils referred to in condition (a) shall not be sourced from contaminated land or potentially contaminated land.

For the purpose of this consent, contaminated land is defined as land that has a hazardous substance in or on it that:
(a) has significant adverse effects on the environment; or
(b) is reasonably likely to have significant adverse effects on the environment.

For the purpose of this consent, potentially contaminated land means that part of a site where an activity or industry described in the list in Schedule 3 of the Canterbury Land and Water Regional Plan, attached to and forming part of this resource consent, has been or is being undertaken on or where it is more likely than not that an activity or industry described in the list in Schedule 3 of a site has been completed and reported and which demonstrates that any contaminants in or on the site are at, or below, background concentrations.
Hazardous Activities

41. A truck washing shall be undertaken on a roofed wash pad formed of hardstand. Truck wash water shall be collected in holding tanks and transported off-site to be discharged as trade waste. Concrete and bunded truck wash pad shall be located close to the site workshop and shall be designed and constructed so that any contaminated water from the washdown process is collected in an appropriately sized holding tank with a water-oil separator. Both the oil and separated water shall be discharged as trade waste, and shall be collected in holding tanks and trucked off-site, to be appropriately disposed in accordance with the relevant environmental guidelines. The truck wash pad will be roofed and stormwater runoff from the roof will be conveyed to stormwater detention ponds.

51. All sediment collected from the sump of the washdown pad shall be periodically excavated and disposed of at an approved offsite facility. All stormwater outlets and intercepting drains shall be filterable in accordance with the relevant rainfall-runoff design guidelines. Excess sediment shall be diverted through the filterlayer or intercepting drains to prevent sediment SMF.

71. No concrete barrels shall be washed out on site.

Advice note:
For the avoidance of doubt, this discharge permit does not authorise:
(a) The discharge of wastewater from staff amenity blocks; or
(b) The discharge of concrete washwater; or
(c) The discharge of truck washdown water.

81. When any mobile tankers are used on site, refuelling with such tankers shall take place well above the boundary of the quarry pad area and in roofed facilities with spill management provisions. Mobile tankers shall not be present on site outside of refuelling areas. This condition does not apply to the refuelling of generators associated with mobile plant.

61. The management and inspection of all fuel tanks shall be undertaken in accordance with the Spill Management Plan developed for the site, as required under Condition 11.

Spills

91. The consent holder shall take all practicable measures to prevent leaks and avoid spills of fuel or any other hazardous substances in accordance with a Spill Management Plan developed for the site, as required by the conditions of CRC192408 and CRC192409. In the event of a spill of fuel or any other hazardous substances:
(a) The spill shall be cleaned up as soon as practicable, and measures taken to prevent a recurrence;
(b) The Canterbury Regional Council, Attention: Regional Leader - Monitoring and Compliance shall be informed within 24 hours of a spill event exceeding four litres and the following information provided:
(i) The date, time, location and estimated volume of the spill;
(ii) The cause of the spill;
(iii) The type of hazardous substance(s) spilled;
(iv) Clean up procedures undertaken;
(v) Details of the steps taken to control and remEDIATE the effects of the spill on the receiving environment;
(vi) An assessment of any potential effects of the spill.
(vii) Measures to be undertaken to prevent a recurrence.

(a) A Spill Management Plan shall be developed for the site, which is to incorporate the
management and inspection of fuel tanks, including fuel reconciliation, spill management and
containment, and visual inspection of the tank.

(b) The Spill Management Plan shall detail appropriate contingency measures in the form of operational
practices, spill kits and staff training that will be in place to manage any hydraulic oil or fuel leaks.

(c) The spillage of any hazardous substances shall be dealt with in accordance with the Spill
Management Plan for the site.

Reporting and Review

10. The consent holder shall maintain a complaints register at the Roydon Quarry site office and
make this available to officers of the Canterbury Regional Council on request.

11) The Canterbury Regional Council may, once per year, on any of the last five working days of May
or November/September, serve notice of its intention to review the conditions of this consent for
the purposes of:

a) Dealing 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) Requiring the adoption of the best practicable option to remove or reduce any adverse effect
on the environment.

13) The lapsing date for the purposes of section 125 of the Resource Management Act 1991 shall be
5 years from the date of issue of this consent.
CRC192413 – Discharge to land where contaminants may enter groundwater associated with the deposition of cleanfill for site rehabilitation

1) The activity shall be limited to the discharge of contaminants into land, where contaminants may enter groundwater as a result of cleanfilling activities at 107 Dawsons Road and 220 Jones Road, Templeton, discharge of contaminants shall only be from quarrying activities located on the land between Curra goes, Dawsons, Mordtisons and Jones Road, legally described as Rural Section 6475 and Rural Section 6324, Lot 1 Deposited Plan 4031, Rural Section 6342, Section 7 Survey Office Plan 510345, Rural Section 5381 and Section 6 Survey Office Plan 510345, at or about map reference NZTM2000 1555366mE., 5177132mN. As shown on Plan CRC192413A attached to and forming part of this resource consent, NZMS 260 M26:6505-3830, shown as the area inside the site boundary in red on the Site Location Plan prepared by Golder Associates, dated November 2018, which is attached to these conditions.

2) The deposition of cleanfill shall be undertaken in accordance with CRC19240813.

2a) Where additional fill is required to be brought to the site for rehabilitation purposes, the consent holder shall ensure that all material deposited in the excavated area is:

a) Only material defined as ‘Cleanfill’ as set-out in the advice note attached to this condition;

b) The material is not deposited into groundwater; and is at least one metre above the seasonal high-water table recorded at the site, subject to Condition 5);

c) Material is deposited in accordance with a Cleanfill Management Plan (CMP) which has been prepared in accordance with Section 8.1 and Appendix B of “A Guide to the Management of Cleanfill”, Ministry for the Environment, January 2002;

d) Strictly assessed against the fill acceptance criteria and inspected in accordance with the procedures contained in the draft Roydon Quarry Cleanfill Management Plan (submitted as Appendix F of the AEE and revised (V2) as at 12 March 2019); and notified from the site if load description is contrary to actual content in truck;

e) Checked by the site manager or nominated person prior to deposition in the pit. If the material is not classified as Cleanfill, the consent holder shall immediately remove the material and arrange for its disposal at an appropriate location;

f) And recorded by an electronic weighing system. The record shall include a detailed record of all materials deposited into the Cleanfill site and shall be provided to the Canterbury Regional Council upon request. This record shall include the following information:

i) The name of the company delivering the material;

ii) The date of deposition;

iii) The physical address of the land the material was sourced from;

iv) A description of the material;

v) Any laboratory reports;

vi) Any authorisation under which the material was removed from the source site (e.g., resource consent); and

vii) The weight or volume of the material deposited.
g) Copies of this documentation shall be made available to the Council on request.

Advice note: ‘Cleanfill’ is defined as:

Material that when buried will have no adverse effect on people or the environment. Cleanfill includes virgin natural materials such as clay, soil and rock, and other inert materials such as concrete or brick that are free of:

- combustible, putrescible, degradable or leachable components
- hazardous substances
- products or materials derived from hazardous waste treatment, hazardous waste stabilisation or hazardous waste disposal practices
- materials that may present a risk to human or animal health such as medical and veterinary waste, asbestos or radioactive substances and liquid waste.

3) No cleanfill material shall be deposited at the site which has been sourced from a site defined as ‘potentially contaminated’.

For the purpose of this consent, ‘potentially contaminated’ means a part of a site where an activity or industry described in the list in Schedule 3 of the Canterbury Land and Water Regional Plan, which is attached as Attachment 4 and forms part of this resource consent, has or is being undertaken on it or where it is more likely than not an activity or industry described in the list in Schedule 3 is being or has been undertaken on it, but excludes any site where a detailed site investigation has been completed and reported and which demonstrates that any contaminants in or on the site are at, or below, background concentrations.

4) Any mixed fill arriving at the site shall be thoroughly inspected to ensure it contains no unacceptable materials or shall otherwise be rejected. This inspection shall include a review of the fill disposal application and information related to the material source and site use, a visual inspection to identify unacceptable material, and adequate analytic testing guided by potential sources of contamination to confirm the material meets the relevant acceptance criteria.

5) All cleanfill stockpiles shall be inspected and pushed over the working face on a regular basis.

6) Any contractor depositing material at the site shall have a written contract with the consent holder and shall be provided with a copy of this consent prior to entering the site. Site inductions shall be held on a quarterly basis for contractors using the site, and records of these inductions shall be kept and made available to Council on request.

7) At least one month prior to the commencement of any cleanfilling activity authorised by this consent the consent holder shall submit a CMP to the Canterbury Regional Council, Attention: RMA Monitoring and Compliance Manager. The CMP shall include but not be limited to the following:

a) Describing the content and purpose of the CMP;
b) Detailing the operation of the site including details of staging of works, area, depth and proposed start and finish date of deposition of cleanfill material;
c) Discussing the actions to be undertaken to ensure compliance with the conditions of this resource consent and actions to be undertaken in response to any incident that may adversely affect the environment;
d) identifying and providing contact details of the staff member responsible for each action;

e) discussing the steps to be undertaken to correct incidences of non-compliance;

f) identifying timelines for site rehabilitation;

g) the specific location of the cleanfill placement area;

h) a description of operational procedures and monitoring that will be implemented to prevent unauthorised material from entering the site;

i) how rejected material will be stored pending disposal to an authorised landfill;

j) where rejected material will be disposed of;

k) the maximum length of time that rejected material will be stored on site pending removal;

l) construction procedures to ensure the long-term stability of cleanfill areas;

m) timetable of works and re-vegetation measures;

n) procedures for improving and/or reviewing the CMP;

o) a list of all material accepted in the cleanfill; and

p) procedure for responding to complaints.

The consent holder shall ensure that a copy of the CMP is held at the site and all personnel working on the site are made aware of and have access to this consent document and the CMP.

8) The CMP shall be:

   a) reviewed and updated at least once every two years for the duration of the consent; and

   b) retained on the site at all times.

Any updated versions of the CMP shall be forwarded to the Canterbury Regional Council, Attention: RMA Monitoring and Compliance Manager, within 30 days of completing a review.

9) Specific staff training as required under the CMP shall be provided in accordance with Section 9.2.2 of "A Guide to the Management of Cleanfils" (MfE Guide), Ministry for the Environment, January 2002. All records of staff training shall be retained on site and provided to the Canterbury Regional Council on request.

10) Annual refresher training shall be provided by a Suitably Qualified and Experienced Practitioner (SQEP) as part of the training programme as specified in the MfE Guide. The consent holder shall maintain a complaints register at the Roydon Quarry site office and make this available to officers of the Canterbury Regional Council on request.

11) The Canterbury Regional Council may, once per year, on any of the last five working days of May or November, September serve notice of its intention to review the conditions of this consent for the purposes of:

   a) dealing 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) requiring the adoption of the best practicable option to remove or reduce any adverse effect on the environment.
The lapsing date for the purposes of section 125 of the Resource Management Act 1991 shall be 5 years from the date of issue of this consent.