

6 November 2020

SOL Quarries Limited  
PO Box 36343  
Merivale  
**Christchurch 8146**

**Customer Services**  
**P. 03 353 9007 or 0800 324 636**  
  
200 Tuam Street  
  
PO Box 345  
Christchurch 8140  
  
E. [ecinfo@ecan.govt.nz](mailto:ecinfo@ecan.govt.nz)  
  
[www.ecan.govt.nz](http://www.ecan.govt.nz)

Dear Sir/Madam

### **Compliance Monitoring Report**

Please find enclosed your compliance monitoring report for the following activity. It contains important information which needs to be read carefully.

**Consent number:** CRC184072  
**Location:** 81 Conservators Road, Christchurch  
**Description:** To discharge contaminants to air

**Overall Inspection Compliance: Non Compliance Action Required**

One or more of the conditions of your resource consent have not been complied with. Please see the reasons below for non-compliance.

**Important:** *The Overall Inspection Compliance grade above relates only to the conditions monitored as part of this inspection. It does not change the status of previous grades received for other consent conditions. If you have received a non-compliance grade for other conditions, please continue to take appropriate action to achieve or maintain compliance.*

**Reason(s) for non-compliance:**

If you would like to discuss this report, please contact me on (03) 365-3828.

Yours sincerely



**Jana Hayes**  
RMO II Compliance Monitoring - Selwyn Waihora

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**Consent No:**        **CRC184072**

**Description of consent**

To discharge contaminants to air

**Date Consent Number Issued**

18 Jun 2018

**Location**

81 Conservators Road, Christchurch

**Expiry Date**

22 Feb 2031

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**Conditions & compliance**

1        The discharge of contaminants to air shall only be particulate matter from:

1. The site remediation,
2. Site preparation and overburden removal;
3. Construction of earth bunds;
4. Extraction of material;
5. Processing and crushing of material;
6. Stockpiling of material;
7. Loading and transportation of material; and
8. Site rehabilitation works;

associated with a quarry located at Lot 2 DP 82891, 81 - 83 Conservators Road, Yaldhurst, Christchurch, as labelled on Plan CRC184072A, attached to this consent.

For the avoidance of doubt, no blasting is authorised by this consent.

**Compliance Report:**

**Complies**

At the time of my inspection, discharge to air was very minor. Dust was generated from truck movements and dumping of cleanfil. All of the dust settled quickly and did not leave the property boundary.

Very minimal dust was generated from crushing and loading transportation material due.

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2        The discharge shall not cause suspended or deposited particulate matter, which is offensive or objectionable, beyond the boundary of the property on which the consent is exercised, as shown on Plan CRC184072A.

**Compliance Report:**

**Complies**

SOL quarries have gone beyond the requirements of this consent and installed a dust monitor on the (new) Northern boundary of the property.

**Daily average:** From the period of 23/09/2020 - 22/10/2020, the PM10 ( $\mu\text{g}/\text{m}^3$ ) ranged from lowest  $0.575\mu\text{g}/\text{m}^3$  to  $12.37\mu\text{g}/\text{m}^3$  based on a daily average. I note that on the highest day (18/10/2020) the wind was coming from NE, IE: away from surrounding residents.

On the day of our visit, (22/10/2020). The PM10 daily maximum was  $7.22\mu\text{g}/\text{m}^3$  with a wind direction of NE.

During the above dates, only one formal complaint came into Environment Canterbury: on the 28/09/2020. *The complaint was not specifically regarding dust leaving the property boundary*, but rather that none of the four quarries in the area were undertaking dust suppression activities. I note that the highest PM10 reading of the day was at 11:00am at  $5.1\mu\text{g}/\text{m}^3$ . The caller did mention that SOL began dust suppression activities at 3:30pm.

Because the complaint was not regarding dust specifically leaving the boundary and no formal investigation was undertaken to check compliance with this consent on this day, this condition has been graded as compliant.

In section 3.1.1 of the MfE Good Practice Guidelines for Dust (2016), Table 3, exists the NZ and WHO standards for Ambient air quality standards and guidelines for particulate matter. For PM10, the standard for a 24hr average is  $50\mu\text{g}/\text{m}^3$ . During the months of September / October, SOL quarries did not go over this Standard.

It is important to note at the standard is not a green light to allow for discharge "up to" this limit. Please read the MfE guidelines for more information regarding this.

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- 3 The consent holder shall maintain a record of any complaints relating to suspended or deposited particulate matter discharged from the quarry. For each complaint, the record shall include:
- a. The location where the particulates were detected by the complainant;
  - b. The date and time when the particulates were detected;
  - c. A description of the wind speed and wind direction when particulates were detected;
  - d. The most likely cause of the particulates detected; and
  - e. Any action taken by the consent holder

#### **Compliance Report:**

##### **Complies**

A record of complaints have been provided and can be found C20C/179945. The community does not complain to SOL directly, but to ECAN or CCC. Therefore, SOL do not have any further complaints to report.

- 4 Works shall only occur between the hours of 06:30 and 18:00 Monday to Friday and 07:00 to 12:00 on Saturdays. There shall be no works on Sundays or public holidays.

**Compliance Report:**

**Complies**

SOL Quarries only operate between the consented hours. As stated in the previous report, 1 or 2 staff members sometimes remain on site to prepare the site for the nightly shutdown, but this does not involve quarrying activities

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- 6 The Site shall be bunded as follows:

- a. A three metre high, 15 metre wide continuous bund shall be formed using the topsoil and overburden stripped from the site;
- b. The bund shall be grassed or planted as soon as practicable after construction;
- c. The bund shall be watered to suppress potential particulate matter discharge until the grass or plant cover has been established;
- d. The grass or plant cover shall be maintained through the duration of the consent and shall be replanted in any areas which die-off or are destroyed;
- e. The bund shall be in place prior to the excavation of aggregate
- f. The bunds shall be located as shown on Plan CRC184072.

**Compliance Report:**

**Complies**

Please see attached photos for photographic evidence noting compliance with this consent.

- a. The bunds have been built as required
  - b. Bunds are mostly planted and grassed. There are some areas where soil has been exposed due to cattle being present in the area and walking up and down the bunds. The purpose of the cattle was to keep the area maintained; however an unexpected result is that cattle can expose soil. On a call dated 05/11/2020 at 2:10pm, Ben Dormer has explained that the cattle have already been removed (04/11/2020) and Ben Dormer has seeded the exposed areas already. Rain is expected for the upcoming week and as such the seeds should germinate in the very near future. I have graded this consent as complies as all actions to remedy the situation have been undertaken.
  - c. Watering is not required currently as all vegetation has been established
  - d. Grass / vegetation is mostly well maintained. Please refer to (b)
  - e. Not relevant on this site visit
  - f. Bunds are in the correct location
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- 7 Prior to the exercise of this consent, the consent holder shall install and maintain equipment onsite that accurately monitors and records wind speed and direction. The

consent holder shall keep accurate records of wind speed and direction throughout the period when quarry activities occur at the site.

The anemometer shall be installed at a height of 10m above ground level in accordance with the guidance for siting weather stations in AS 3580.14, except where otherwise approved in writing by the Canterbury Regional Council.

When wind speeds measured by the on-site anemometer exceed 5 m/s (1 hour average) the applicant shall begin watering down all unconsolidated surfaces hourly, and apply dust suppressant during the hours of operation if additionally required.

The record of wind speed and direction shall be provided to the Canterbury Regional Council on request.

**Compliance Report:**

**Non-compliance action required**

This condition is graded non-compliant, action required due to the lack of anemometer present on site.

The old anemometer was knocked over by cattle and is not in use.

Simon Apperley (Managing Director, SOL Quarries) has provided evidence that new equipment is on order to remedy the situation.

In a phone call with Ben Dormer and Simon Hedley (Technical Director - Planning at Elrick & Co), it was stated that SOL is currently using the Airport wind speed readings and have set up alerts and implement processes around the partial and full ceasing of works, based of this recorder.

Because SOL cannot currently use their own recorder as stated by this condition, I have graded a minor non-compliance. Please make contact when the new equipment has been installed so this condition can be reviewed.

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8 Prior to the exercise of this consent, the consent holder shall either;

- a. Install automated water sprinklers at all areas with potential to discharge windblown dust, which shall be activated when wind speeds measured in accordance with Condition 7 exceed 5 m/s (1 hour average); or
- b. If wind speeds in excess of 5 m/s (1 hour average) are forecast outside of the working hours specified in Condition 4, the consent holder shall apply dust suppressant.

A sign shall be posted on the site entrances at Conservators and Guys Roads with contact details, including mobile telephone number, of the site manager.

**Compliance Report:**

**Complies**

SOL have chosen to go with option b. There is a water cart on site which sprays exposed areas throughout the day.

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- 10 The consent holder shall ensure that any access road used for the transportation of heavy machinery associated with the quarry, within Lot 2 DP 82891 or Lot 1 DP 70568, is sealed for at least 100 metres from Guys Road, prior to first use of the access road.

**Compliance Report:****Complies**

The distance from the entrance to the weigh bridge is sealed, which is approx 1.6km. There is very minimal tracking on the sealed areas and the truck movements did not kick up any of the dust on the sealed road. The water cart is also active on this area if required.

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- 11 Excavation of material shall be undertaken in three stages as follows:
- a. Aggregate extraction shall commence in Region A, then Region B and finally Region C as shown on Plan CRC184072C, which forms part of this consent. Extraction in future Regions shall not commence until all aggregate authorised to be removed from the active stage has been extracted and remediation of active stage has been completed.
  - b. The preparation of the following Region shall only commence once quarrying on the active stage is nearing completion.
  - c. The quarry operation areas consisting of any areas under quarry operations, stockpile areas, areas stripped in preparation for excavation and areas under rehabilitation until they are returned to pasture, but excluding the Heavy and Light Vehicle Access Roads, shall not exceed nine hectares in total.

**Compliance Report:****Complies**

- a. Region A has been completed and works are being undertaken in Region B
  - b. Preparation only occurs when the currently active area is near completion. On site there is a line been dug (less than 1m deep) to demarcate the next stage.
  - c. At time of writing there is only 6.5ha of land opened with the activities described in condition11(c)
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- 12 The consent holder shall take all practicable measures to prevent the discharge of particulate matter from stockpiles. This shall include but not be limited to:
- a. Limiting the height of stockpiles to no more than five metres with no more than 15,000 cubic metres at any one time;

- b. After the initial site preparation, locating the base of stockpiles at least three metres below natural ground level;
- c. Oversowing with grass seed of any long term overburden stockpiles; and
- d. Spraying stockpiles with water and/or additional dust suppressant as required.

Advice Note: 'Long term' is defined as the stockpile not being moved for at least two months.

**Compliance Report:**

**Complies**

- a. It was estimated that the stockpiles were less than 5000 cubic meters
- b. The stockpiles are 3m below the natural ground level
- c. Overburden piles have not all been grassed, but that is because they are being progressively spread in areas that have been completed, as cleanfil fills the site
- d. The water cart discussed in previous conditions also wets down the surfaces of stockpiles

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

- a. Minimising the areas of exposed ground;
- b. Regrassing or revegetating bare areas such as bunds, overburden stockpiles, and rehabilitated areas as soon as practicable;
- c. Carrying out land stripping and land restoration during favourable weather conditions and at times of least vulnerability to neighbouring properties;
- d. Taking wind conditions into account in planning and carrying out work to minimise dust dispersion;
- e. Using water and/or dust suppressants on all disturbed surfaces including extraction areas, roads and stockpiles when required;
- f. Applying a speed restriction on all internal and access roads of 15 kilometres per hour at all times;
- g. Minimising the drop heights and not overloading when transporting material;
- h. Maintaining internal roads on a regular basis so that they are free of pot holes and have a surface cover of clean chip containing minimal fine material; and
- i. No more than two processing crushing and screening plants located on the site;
- j. The sealed portion of the access route from Guys Road as shown on Plan CRC184072A, shall be washed and swept each day to ensure the accumulation of dust is kept to a minimum.
- k. A rumble strip shall be installed on the 100m sealed access route from Guys Road.

- I. Using industry standard water or mist sprayers fixed on the crushing and screening plants when the processing of aggregate products generates fugitive dust, subject to the appropriateness of applying water or mist spray to the specific aggregate product. In circumstances where fugitive dust is generated and the use of water or mist sprayers is not appropriate for a specific aggregate product, production shall cease in accordance with Condition 14(e).

**Advice Note:** Excessive water use can affect the ability of aggregate products to meet the required engineering specifications, and can affect the ability of screening and crushing plant to process gravel.

**Compliance Report:**

**Complies**

- a. Only ground that is being worked on, backfilled and haul roads are opened as required
- b. All areas that have been backfilled to a suitable level and overburden piles that will not be used for some time are vegetated. Not all piles are vegetated as they are being used in a short period of time
- c. Works only occur in favourable weather so as not to effect neighbours in the area
- d. As above. Also see condition 7
- e. As above. A water cart is kept on site and filled up from water tanks (fully contained) on site. This cart is used when required and also once in the AM and once in the PM even on days it is not windy.
- f. Internal haul roads have a speed limit of 15km/hr. There is a speed sign which activates to inform drivers of their current speed
- g. Haul truck/trailers are not overly filled, and the drop height of the digger driver was very low. Minimal dust was generated when transferring from the stockpile to the haul truck
- h. Internal haul roads are in good condition. The potholes discussed in the last report have since been repaired
- i. One crusher was being used at our site visit, but there are two kept on site.
- j. The road is washed and swept daily by an external contractor.
- k. There are 2 rumble strips on the road. I have spoken with Ben Dormer regarding the potential to install cattle stops, as these would work better than two "rumble" strips (which are essentially narrow speed bumps). SOL is open to the idea and may install them in the near future.
- l. In the last report I had stated misters had been installed and were used. Misters are installed and are used, but due to a missing pump - water is supplied to the crusher by a second water tanker.

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- 14 Potentially dusty activities, except for dust mitigation activities, taking place on the site shall cease when average wind speed (ten-minute average), exceeds ten metres per second during two consecutive ten-minute periods during dry weather conditions such that dust is being lifted from the site. Potentially dusty activities include, but are not limited to:  
Stripping of topsoil;
    - a. Stripping of topsoil;
    - b. Formation of bunds;



- c. Formation of soil stockpiles;
- d. Spreading of topsoil; and
- e. Crushing and screening of aggregate in circumstances where fugitive dust is generated and no water or mist sprayers are used on the crushing and screening plants in accordance with Condition 13(l).

**Compliance Report:**

**Complies**

When the average wind speed for two consecutive 10 minute periods, exceeds 10m/s (36km/hr) SOL quarries cease the activities that are listed in this condition.

Note that this condition does not mean that the site must shut down. Loading of aggregate and truck movements can still occur as long as dust is not leaving the property boundary.

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- 15 The consent holder shall compile and maintain a 'Quarry Environmental Site Management Plan' (QESMP). The QESMP shall include, but not be limited to:
- a. The actions required to ensure compliance with the conditions of this consent;
  - b. Identification of the persons responsible for carrying out all actions in relation to meeting the requirements of this consent;
  - c. The frequency and triggers for water spray application and water cart operation;
  - d. Details of actions to be taken in response to non-compliance with condition (2) of this consent.

**Compliance Report:**

**Complies**

The QESMP (CMP) has been provided historically, It can be found on ECAN internal systems C20C/179800

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- 16 The QESMP shall:
- a. Be reviewed and updated at least once every five years for the duration of the consent;
  - b. Be retained on the site at all times; and
  - c. Be forwarded within one month prior to the exercise of this consent to the Canterbury Regional Council Attention: RMA Compliance and Enforcement Manager (The Manager). Any updated versions of the QESMP shall be forwarded to The Manager within 30 days of completing a review.

**Compliance Report:**

**Complies**

The CMP was last reviewed in 2017 by Simon

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17 The consent holder shall keep a record of:

- a. Times when operations occur on site; and
- b. The type of operations undertaken.
- c. The daily number and type (class) of heavy truck movements to and from the site.

This record shall be provided to Canterbury Regional Council on request.

**Compliance Report:**

**Complies**

- a. The weigh bridge keeps a record of incoming and out-going traffic. Including times and dates
- b. SOL operates everyday that this consent allows.
- c. All truck movements to and from the site (sale of aggregate and incoming cleanfil) is recorded. Truck class is not recorded but licence plates are, which can be used to check online.

I would recommend recording all days / times when SOL ceases activities because of the wind. A log book of activities undertaken on the pit floor should also be kept and I believe this may have been the intention of this condition. Please including (but not limited to) days when crushing, preparing of new quarrying areas, remediation works on completed areas.

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18 A record of all complaints relating to contaminants discharged to air from the site and associated activities shall be maintained and shall include:

- a. The location where the contaminants were detected by the complainant;
- b. The date and time when the contaminants were detected;
- c. A description of the wind speed and wind direction when the contaminants were detected by the complainant;
- d. The most likely cause of the contaminants detected; and
- e. Any corrective actions undertaken by the consent holder to avoid, remedy, or mitigate the effects of the contaminants detected by the complainant.

The record shall be provided to the Canterbury Regional Council on request.

**Compliance Report:**

**Complies**

A record of complaints have been provided and can be found C20C/179945.

The community does not complain to SOL directly, but to ECAN or CCC. Therefore SOL do not have any further complaints to report.

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19 The Canterbury Regional Council may, once per year, on any of the last five working days of May or October, 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;
- b. Complying with the requirements of a relevant rule in an operative regional plan; or
- c. Requiring the consent holder to conduct monitoring instead of, or in addition to, that required by the consent.

***Compliance Report:***

**Not monitored**

There is currently no intention to review the conditions of this consent

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20 The lapsing date for the purpose of section 125 of the Resource Management Act 1991 shall be the 31 December 2020.

***Compliance Report:***

**Not monitored**

This consent was correctly exercised before the lapse date.

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***General comments***

A site visit was undertaken on the 22 October 2020. In attendance was Marty Mortiaux (ECAN - Technical Lead) and Ben Dormer (SOL Quarries - Founder/Owner).

The purpose of our visit was to address concerns by the council regarding some conditions that the community believe to be non-compliant.

The first of which was the type of aggregate used on internal roads. The community is concerned that the chip used on the staff access road is not clean and generates dust. While the aggregate used on site is not "clean" (ie: does not go through a washing process) there is minimal loose material which would generate dust, which is the purpose of this condition. When we drove on the track with Ben Dormer, no dust kicked up from the vehicle. We were driving approx 30km. When we later took our own vehicle, still no dust kicked up behind us.

What we did witness is the next-door neighbor entering his farm track, which did generate a significant amount of dust which may be where the issue regarding dust on the access track comes from - as the farm track is right next to the access track for SOL. The next time a complaint is called in, an investigation into the exact location of where the dust was generated from should be undertaken to determine who is responsible. This could also be where the dirt on the road is tracking from.

The second concern was that the bunds have not been grassed or vegetated. All of the bunds on the property have been grassed. There are some areas which appear to be bare soil, but this is due to cattle being present on site and the repetitive movement of those cattle over certain areas. Ben Dormer has since removed the stock (04/11/2020) and has grass seeded the bare areas. Grass should soon strike as rain is predicted for Christchurch in the next few days.

Another concern was the anemometer and how this works / where it is installed. Upon arrival at the site where the anemometer is installed, it was found the anemometer is not in place at the correct height. Simon Apperley sent an email confirming that the anemometer was knocked over by cows. A new anemometer has been ordered and will be installed where the dust monitor is placed, which is ideally a better location for the monitor.

Simon Handley has explained on the 5/11/2020 that SOL have since been using the Airport wind monitor in place of their own for the time being.

Non-compliance, no action required has been graded for condition 7, as SOL has done everything in their capacity to quickly re-order the parts that are required for the replacement anemometer. SOL is using a near by wind monitor (Christchurch Airport) to monitor conditions and still undertake cessation of certain activities when required. I do not believe there are any further actions to take.

On the day of our visit, the site was in full operations and trucks coming from off site to take aggregate, cleanfill arriving to site and the crusher was working. From all of these activities, only very minimal dust was being generated.

Overall I am pleased with the work that SOL is undertaking and their activities themselves are not cause for concern. Issues have been identified and remedied (cattle removed, anemometer ordered as soon as issue arose) and SOL has also gone above their consent and installed a dust monitor and tar sealed the haul road for approx. 1.6km.

Thank you for agreeing to the site visit on such short notice, and for showing us around the site.

**Date Inspected:** 27 Oct 2020

**Monitored By:** Jana Hayes



Signature: \_\_\_\_\_

RMO II Compliance Monitoring - Selwyn Waihora

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## ***General information***

### **Canterbury Regional Council Obligations**

Under Section 35 of the Resource Management Act 1991, the Canterbury Regional Council has a duty to monitor all resource consent exercised within its region, to make sure all the conditions are being complied with.

### **Monitoring Frequency**

The frequency with which your consent is monitored will vary according to the type of activity your consent authorises, the conditions imposed and the extent to which you have complied with these conditions on previous visits. **If you fully comply with all conditions then frequency will reduce to the minimum set for the activity.**

### **Costs**

It is the Council's policy to recover all actual and reasonable costs of compliance monitoring of resource consents.



*Figure 1 Staff access road*



*Figure 2 Example of the bunds around the property which are grassed / planted*





*Figure 3 in alignment with 6d, an area which has been regrassed.*



*Figure 4 Remediated Area A which has been filled and seeded.*



*Figure 5 Grassed bunds around property*



*Figure 6 Pit floor. Stockpiles are not within 3m of NGL. Very minimal dust generated from loading of aggregate into trucks.*





*Figure 7 West of the pit floor*



*Figure 8 Bunding required by this consent is in place. There is one break to the west of the property to allow stock access between the stock water race and area A grazing.*