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(SECTION 96 RESOURCE MANAGEMENT ACT 1991)

TO: Consents Hearings
Environment Canterbury
P O Box 345
CHRISTCHURCH 8140

Email: hearings@ecan.govt.nz
Ph: (03) 353 9007 Fax: (03) 365 3194

OR: submit by completing an on-line form at:

<https://www.ecan.govt.nz/do-it-online/resource-consents/notifications-and-submissions/notified-consents/>

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FILE: CRC192408, CRC192409, CRC192410,
CRC192411, CRC192412, CRC192413,
CRC192414, RC185627

Closing Date: **5.00pm Thursday 6 June 2019**

Person(s) /Group /Organisation Making the Submission

Full Name of Submitter(s): Dr Kelvin w Duncan (DCL Limited) _____

Postal Address For Service: _____

Contact Phone No(s): _____

Fax/Email _____

Please tick this box if you do not want to receive any communication via email

Contact Person: Kelvin Duncan

Name of applicant: Fulton Hogan Limited

Applications to Environment Canterbury

All of the applications as listed below OR only those as ticked.

- CRC192408 Land use to excavate material
- CRC182409 Land use to deposit cleanfill
- CRC192410 Discharge contaminants into air
- CRC192411 Discharge contaminants into water from industrial processes
- CRC192412 Discharge stormwater into land
- CRC192413 Discharge contaminants into land associated with deposition of cleanfill
- CRC192414 Water permit

I / We support the application I / We oppose the application I / We are neutral to the application
(neither support or oppose)

I / We **do** wish to be heard in support of my/our submission*
(Note: this means you wish to speak in support of your submission at the hearing)

*If others make a similar submission, I will consider presenting a joint case with them at the hearing Yes No

OR

I / We **do not** wish to be heard in support of my/our submission
(Note: this means that you cannot speak at the hearing, however you will retain your right to appeal any decision to the Environment Court on any decision made by the Council.)

Application to Selwyn District Council

RC185627 Land use for gravel extraction and processes

I / We support the application I / We oppose the application I / We are neutral to the application
(neither support or oppose)

I / We **do** wish to be heard in support of my/our submission*
(Note: this means you wish to speak in support of your submission at the hearing)

*If others make a similar submission, I will consider presenting a joint case with them at the hearing Yes No

OR

I / We **do not** wish to be heard in support of my/our submission
(Note: this means that you cannot speak at the hearing, however you will retain your right to appeal any decision to the Environment Court on any decision made by the Council.)

2. The reasons for making my submission are: *(state in summary the nature of your submission, giving reasons)*

Bunds are deprecated in USA studies and legislation as they cause the invisible dust <50 µm to be transported up further into the air and thus the dust is able to travel further.

There are numerous errors in the application and no mention of good practice in other parts of New Zealand and overseas: sealing of haulage roads, disposal of fines, covering of trucks to name a few.

Setbacks are inadequate for the protection of neighbouring properties (including residences).

The size of these setbacks should depend on the type and size of dust being emitted by the quarry. No evidence of the distance that the dust travels is presented (though I have some measurements).

The details of the effects of dust are held to be "less than minor" and standards for workers are presented to support this.

But since about 1990 the effect of dust <100 µm on residents has been come to the fore in many studies (not reference in this application) and in legislation.

In general the effect on residents who are exposed on a 24 hour, 7 day, and 52 weeks basis are held to be a serious problem if the WHO recommendations, which are for healthy workers exposed for only 2000 hours per year, is that the PEL should be divided by at least 8 µm.m³ to take into account the much greater duration of exposure, and the likelihood of the affected people being especially susceptible, though being old, or young or just susceptible! Quarry workers have to be fit and healthy and are closely monitored as to their health status and provided with advice and protective gear. Not so residents.

All sizes of dust below 100 µm can cause medical problems, but particles smaller than 16 µm can penetrate the narrowest of the lung air spaces from which the body finds it difficult to clear. It is these that cause the very serious, lethal and untreatable diseases caused by RCS in silica dust. Greywacke dust contains up to 65% silica and has at least 35% rcs.

The claim is made that particles of size 2.5 µm are important, but this isn't the case. All small particles are dangerous. My direct measurement of RCS in Canterbury gravel dust averages about 4 µm and these are just as potent in causing disease as the slightly smaller ones.

Furthermore, the diseases caused by RCS are chronic – conditions do not become apparent for 10 years or more, but by then the condition is untreatable.

So, the usual testing is done on annual averages of total exposure. I have used the data in the applications and shown that the average exposure to residents is far too high for health – they are well above the limits allowed in other jurisdictions.

So we can estimate the risk to residents and in my opinion based on many volumes of work and overseas legislation there is an unacceptable risk to residents if the application is successful. The Precautionary Principle in the RMA must be applied in judging whether or not the application should be granted resource consents.

I can provide evidence for all this at the hearing, but I apologise for the haste in which this is written,; I am just back from overseas.

My last objection is that there is no mention of radon emissions. It is a decay product of uranium and thorium. Radon is the second greatest cause of lung cancer after smoking. It is emitted from processed rocks. There have been two studies of radon levels from ground and both found high levels in houses in Canterbury. Unfortunately, out-of-date critical limits were applied and the Health Department conclude there was no problem. But the limits are much lower than those assumed and there is an indication that, as in many regions overseas, there is a problem.

3. I wish the consent authority to make the following decision: *(give details, including the general nature of any conditions sought)*

Declined until further proper investigations are presented _____

Please attach additional pages if required

5. I/ **am not** a trade competitor for the purposes of section 308B of the Resource Management Act 1991. I **am not** directly affected by an effect of the subject matter of the submission that (a) adversely affects the environment; and (b) does not relate to trade competition or the effects of trade competition.

K W Duncasn _____
Signature of submitter or duly authorised agent on behalf of submitter

Date 06 / 06
/2019

Notes to the submitter:

- 1. The person making this submission must send a copy to the applicant as soon as reasonably practicable after serving Environment Canterbury
- 2. A list of all submissions received will be provided to the applicant.
- 3. Please be aware that third parties may request a copy of submissions received and that request is subject to the Local Government Official Information and Meetings Act 1987.

The address for service of the applicant is:
Fulton Hogan Limited
c/- Golder Associates
PO Box 2281
Christchurch 8041
Attn: Kevin Bligh / Geoff England

Email: submissions@golder.co.nz