

## John Hill re WMSL consent application

My reason for making a submission is to oppose the consent application by WMSL

I request that WCRC decline the application for consent by WMSL for the reasons outlined in my written and oral submission

I wish to make an oral submission

I have stated the conditions that must be met BEFORE a consent is granted.

## Submission To WMSL Consent Hearing –John Hill

### About John Hill

I am a West Coast Regional Councillor and a resident of Cape Foulwind who is affected by the proposed WMSL mineral sand mine. Accordingly, I wish to declare a conflict of interest for your consideration. The views expressed in this submission are my views only and do not necessarily represent the views of WCRC staff or my fellow councillors.

I have a degree in chemistry and have previously operated as an analytical chemist and have managed an IATA registered laboratory involved in testing scientific clean rooms, hospital operating theatres and infection containment laboratories in NZ. This activity embraced sound/noise testing and indoor air quality testing for particulates that may cause nuisance and/or compromise human health. **As a former Independent Qualified Person (IQP) I regard this experience as relevant to this submission.**

### Cape Foulwind Residences and Amenity Values

This section relates to the amenity effects of PM10 particles. These amenity effects will certainly be more than minor with regard to properties in close proximity to the WMSL mine site but the following suggests amenity effects may also be felt, as more than minor, several kilometres away from the site. (ref Road Dust Resuspension in the Vicinity of Limestone Quarries in Jordan –

Mahmoud Abu-Allabam et al 2006) as a result of activities such as heavy road freight. **It is likely that amenity values will be adversely affected by PM10 nuisance particles and this is regarded by me as more than minor NOT less than minor.**

The term “amenity values” is defined in section 2 of the RMA. It means: “those natural or physical qualities and characteristics of an area that contribute to people’s appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes.” Clearly, dust nuisance is covered under the RMA because of its potential to cause adverse impacts on amenity values.

My wife and I built our home 11 years ago in Cape Foulwind approximately 2 kilometres from a quarry operated by the cement company Holcim Lafarge. At that time Holcim had indicated their intention to close the cement site, which they did in 2017. Whilst the site was in operation dust was a nuisance and Holcim deployed water spraying of roads and equipment in an attempt to control the problem. At one stage I moved to Nelson for 3 years and rented my home to our neighbour, Holcim Lafarge. The occupier of my home was Holcim’s 2IC. During his tenure of my home Holcim’s 2IC complained to me via the real estate agent/property manager that nuisance dust was accumulating in the gutters and on weatherboard surfaces of my home and the origin of the dust was Holcim’s quarry operation. I advised Holcim CEO, that water spray was not controlling the dust levels and that sodium alkyl benzene sulphonate or acrylic polymer technology should be deployed. This advice was never taken up by Holcim/Lafarge Now we have a nuisance dust threat from another mine activity. **I seek assurances that WMSL will advise what the company intends to implement to mitigate loss of amenity from PM10 nuisance dust and the adverse health effects of PM2.5 dust should this mine site be consented.**

Section 108(1)(e) of the RMA makes provision for requiring a consent holder to adopt the best practicable option (BPO) to control any adverse effects caused by an activity. The BPO is also commonly included in the review clauses of consents; essentially as a “fall back” option should the other consent conditions prove ineffective in controlling the effects of an activity. The best practicable option was dealt with in some detail in *The Medical Officer of Health v Canterbury Regional Council and Ravensdown Fertiliser Co-operative Limited* (W109/94). The Environment Court stated that in its view the key word was “practicable”: “Practical effect is given to those requirements [the provisions of section 108] by ensuring that the contaminants discharged by the

applicant are at a level which on the best scientific and technical information available constitute the best practicable option of minimising adverse effects on the environment”.

Clearly Holcim Lafarge did not provide for the appropriate BPO at their Cape Foulwind site to control nuisance and respirable dust emissions therefore there was no “fall back” option when nuisance dust emissions posed a threat to amenity values and Cape Foulwind residential properties.

**The WMSL proposed mine activity threatens to recreate and repeat the problems of the past. These dust problems are not, in my view “minor or less than minor”**

### **Westland Mineral Sands Limited Consent Application**

WMSL has applied for consent to operate a sand mine in Cape Foulwind. Many of the submitters against this project actually supported the project in principle. However the decision by WMSL to use coastal route Okari Road, Tauranga Bay Road rather than inland route Woolshed Road, Wilsons Lead Road has turned full support into full opposition. **The question is why should 1 submitter, PAMU take precedence over many, individual submitters.**

Nuisance dust is likely to be a problem for many residents of Cape Foulwind particularly those closest to the mine site (ref: Ecan, CCC, CDHB 2018-2019. Working together to resolve quarry dust issues in Yaldhurst). As a minimum requirement and part of a site plan, field calibrated, Dustrack laser particle counters must be deployed at the mine boundaries as well as strategically positioned around the suburb housing the mine (ref Yaldhurst project 2018-2019). The particle sizes of interest are PM10 and PM2.5 being particles of 10 micron and 2.5 micron diameter respectively. **Water spraying does not resolve the problems associated with P10 nuisance dust or P2.5 respirable dust. More sophisticated dust control products and testing products must be adopted by WMSL to protect workers on site, to prevent dust emissions across the site boundary and to reduce resuspension of dust from truck activity on suburban roads and such steps must be taken by WMSL as a condition of consent**

### **Nuisance dust and Respirable Particles**

Currently National Environmental Standards Air Quality (NES-AQ) focus upon PM10 but refocussing on PM2.5 is imminent as part of a government directive.

The purpose of this review is to change focus from PM10 nuisance dust to PM2.5 respirable dust. ( ref: Proposed new measures to improve Aetoroa's air quality – Nania Mahuta Feb.2020). As an example It is expected that the outdoor air quality measurements soon to be adopted in Reefton and based around PM2.5 particles will result in the banning of newly installed coal fires in Reefton according to Minister Mahuta. If PM2.5 particles become the particle of interest in Sand Mines, in order to give effect to the reviewed NES-AQ then this should be considered as part of this hearing and the same logic that is applied to banning coal fires in Reefton should be applied to mine operations under consideration in this hearing. **In the same way that it is impossible to operate a coal fire within the limits that will be set for PM2.5 particles (ref: Nania Mahuta 2020) I believe that it will be impossible to operate a sand mine and associated freight activities within the limits set for PM2.5 particles.**

the average diameter of the alveolia of the lungs is nominally 2.5 microns PM2.5 particles are the particles that lodge in the lungs, causing serious injury then this should also be considered in this hearing. PM2.5 particles of any source are respirable and a threat to health and wellbeing. **This is not a less than minor issue. The characterisation of emitted particles from any proposed Cape Foulwind sand mine should be mandated as part of any consent issued** and such a requirement will necessitate sophisticated instrumentation such as Scanning Electron Microscopy and X ray Diffraction. Respirable Crystalline Silica (RCS) of nominal 4 micron diameter is a known human health risk and efforts are made to characterise this particle in the work place. **Has such a characterisation exercise been conducted by WMSL at the proposed Cape Foulwind site. If not, then why not when WMSL shareholders fully understand the threat of processed "sand particles" in the work place.**

Resuspension of nuisance dust by heavy trucks has been shown to be a problem with previous mining operations in Cape Foulwind (Holcim Lafarge) and in overseas quarry operations in Jordan where dust sampling taken 0.5 m above road surfaces were found to be in the order of 600micrograms/cubic metre average over 24 hours, significantly higher than in USA and Europe. Compare this with the limits set for PM10 particles in Reefton of 50micrograms/cubic metre averaged over 24 hours. (ref Road Dust Resuspension in the Vicinity of Limestone Quarries in Jordan – Mahmoud Abu-Allabam et al 2006).

WMSL intend to extract garnet from mined sand for export to satisfy global demand for safer alternatives to sand paper and sand blasting. **Industrial sanding operations result in dangerous levels of Respirable Crystalline Silica (RCS) in the workplace that would not be regarded as less than minor.** In the natural Cape Foulwind environment the strong prevailing southerly wind combined with garnet rich sand dust is likely to impinge upon the painted surfaces of Okari Road and Tauranga Bay Road homes. These homes have recently attained typical values approaching \$1million. WMSL considers this damaging effect to be less than minor. **The adverse effect of fugitive garnet/sand emissions from the proposed mine site and strong winds on \$1million residential properties is not less than minor. The adverse effect is significant and quantifiable**

### **Site Management Plan**

The Environment Court believes that “a Site Management Plan should be part of the consent submission and should be completed in advance, as a condition of consent” ( ref: NZ Rail V Marlborough District Council 1993)

It is not appropriate for a council to try and reserve the power to approve a management plan at a later date outside the formal resource consent procedure ( ref: Macraes Mining Company v Waitaki District Council and the Otago Regional Council (C14/94)). The applicant or requiring authority needs to know what is required when the decision is made. A Site Management Plan must be submitted by the applicant for consideration and assessment as a condition of consent.

### **Noise and dust from roads**

WMSL has advised that there will be up to 40 truck movements 24/7 from mine to port and that noise will be less than minor. It was stated at the Barrytown consent hearing that the greatest noise is produced by empty truck and trailers. **My personal experience of noise levels from empty trucks passing my property at 34 Tauranga Bay Road, just south of the junction of Lighthouse Road and the Holcim haul road at the legal speed limit of 100kph exacerbated by braking to reduce speed at the junction is not less than minor.**

Whilst the Holcim Lafarge cement works was in operation it was noticeable that roadside flora was heavily coated with nuisance cement related dust and this effect on amenity values was exacerbated by resuspension of road dust.

BDC's Roding Manager insinuates that loss of amenity values due to nuisance dust and noise, exacerbated by low grade rural roads and noise is likely to be less than minor. BDC's Roding Manager, in his previous position as a laboratory worker at the Holcim Lafarge cement site would be aware of the dust and noise problems in Cape Foulwind, and as a scientist would be aware that dust and noise is measurable and quantifiable (ref: Mahmoud Allabam et al 2006) and **therefore the unquantified and unqualified statement "the effects are likely to be less than minor" is totally inappropriate.**

### **History of Sand Mining in NZ**

There is no history of sand mining in NZ.

### **Suitability of shareholders of WMSL**

History indicates the unsuitability of WMSL shareholders in relation to this proposed business. One shareholder has an environmental abatement order against his name for illegally freighting and dumping 20 tonne lots of Christchurch earthquake waste into a residential site in Cape Foulwind and the writer involved the then Parliamentary Commissioner for the Environment Jan Wright in this episode. This shareholder has had charges against him for polluting a creek resulting in the death of fauna on more than one occasion. 2 WMSL shareholders are directors of a company that attempted to store municipal solid waste in Reefton pending the commissioning of a Waste to Energy plant and when this was unsuccessful, due to strong public opposition, applied to E-Can for a consent to store the waste in Belfast. The consent conditions in Belfast were breached and again an abatement notice was served. **In view of this environmental history there is a likelihood that consent conditions established in this hearing, as a condition of this consent may be breached at some point.**

Finally I refer to the statement of WMSL lawyer 7 September "It is not enough for general members of the public to speculate, to simply entertain, pose questions or to assert that something may be an outcome of this application to meet notification provisions."

In my view it is not good enough for "expert" witnesses and consultants to continuously use the unquantifiable statements such as "less than minor" in relation to aspects of this application that are quantifiable, measurable and will have a significant impact upon the environmental, social and cultural wellbeing of all Westport residents.

**I am gratified therefore that this hearing committee has publically notified this consent application despite the above comment of WMSL's lawyer.**

Thank you for giving your full attention to my submission.

**My final comment is that I, John Hill oppose the granting of a mineral sand mine consent, to WMSL, even with documented conditions, due to the poor record of consent breaches during the last 10 years.**

John Hill

Cape Foulwind resident

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