

Joint submission: of Stephen Bain of 5/229 Curraghs Road, RD 5 Weedon and Simon Moore of 1/229 Curraghs Road, RD 5 Weedons, Christchurch.

In the matter of: An application by Fulton Hogan to operate a quarry, known as “Roydon Quarry”, Dawsons Road, Templeton.

Our submission is based on intimate knowledge of the submissions of a former submitter, Davina Penny. We acknowledge the work of Mrs Penny and are well aware of her research and extensive work on this matter. We fully endorse and concur with her submissions. We therefore do not intend to relitigate those submissions, but will highlight our concerns regarding the matters she has brought to your attention as well as introduce/discuss our concerns.

Our properties neighbour each others and as such we are less than one kilometre from the nearest boundary to the west of Fultons Hogans Roydon Quarry site.

We are therefore potentially amongst some of the nearest properties likely to be affected by this proposal.

We will highlight and summarise the aspects of this proposal that concern us the most as neighbours of this proposed activity.

We wish to say that we are acutely aware of the requirement for aggregate and the need for quarries, however we are objecting to having a quarry so close to a township and properties inhabited by people and their families whose lifestyles are likely to be affected by such activities and whether this is an appropriate activity in such a location.

WATER ISSUES

[1] Fulton Hogan's intent is to quarry to a depth of 9.9 metres. It is known that a quarry floor cannot extend past one metre from the highest recorded ground level also known as the “HRGWL”.

[2] At page 31 of the “Golder” report: *“According to the CRC well database there are two active bores within the site (not including the four new monitoring bores installed on the site boundary), **M36/0257** and M36/2743 with depths of 63.4 and 24m respectively”.*

[3] It is without any doubt that well M36/0257 exists and is on the land owned by Fulton Hogan and appears on correspondence, particularly that of Fulton Hogan’s water expert Van Nieuwkerk, who in his submissions dated 23 September 2019 included bore data for this well showing that its HRGWL was 7.95 metres. The fact that this well holds the most historic information regarding HRGWL, this must be the well that the HRGWL should be taken from. Subsequent readings of 9.55m and 9.39 metres in the mid to late part of 2017 should not be taken as evidence of “current ground water level” as the requirement is the HRGWL, and we all will be aware that varying factors can affect groundwater levels such as the season, weather events

and irrigation. We consider that to ignore the HRGWL is foolhardy, as potentially catastrophic matters such as sea levels rising and the CPW scheme, that the HRGWL could in fact be breached.

[4] Other wells on the site, excluding those bored by the applicant, do not have sufficient, if any data, that would justify ignoring the data from M36/0257. We believe that the oldest and most reliable data comes from this well and the HRGWL must be taken at 7.95m.

There can be no justification in ignoring or discounting the HRGWL of an existing historical bore with historical data in preference for bores that were established later with no data. That is particularly so when data is being quoted from wells 2.5 km from this property. One has to wonder why the applicant and their experts have even mentioned these bores and yet a bore in the middle of the property with reliable reporting is almost ignored? We believe that the commissioners should be looking at the “worse provable case scenario” when it comes to the potential for groundwater to be breached and or contaminated, especially given the proximity to Christchurch City and its aquifers. There is potential for catastrophic consequences in our opinion, and the opinion of others, should groundwater be contaminated.

Fulton Hogans experts quoting other than onsite historic well data seems perhaps a little mischievous and worrying in our view. The enthusiasm for the applicant to take readings from other wells that may well suit their perspective, as opposed to data from M36/0257 throughout this process, is also concerning to us. We remain extremely concerned about the possible consequences if the applicant is allowed to excavate below the HRGWL which is the reading from well M36/0257, for that property.

Simon Moore has owned his property since 2001 and has noted that the moisture in his land varies from year to year. His property is often the last to dry off and since the CPW scheme commenced, the pooling of water in wet conditions has become more noticeable, especially when this has not happened before. The only reason this can be is due to groundwater levels, particularly when the land his property is situated on has free draining gravelly substructure. He knows this due to excavating land to install an inground swimming pool to a depth in excess of 1.3 metres. Gravel and rock was situated at about one metre below ground level.

[5] We believe that it is the proposal of the applicant to apply “seasonal” groundwater levels is dangerous and wrong, as they could already have breached groundwater levels if previous HRGWL are taken into account. We believe that if successful, a set level must be used and that level never be breached. The level we believe must be one metre above the HRGWL of 7.95m as per well M36/0257. However, there are other factors that need to be taken into account regarding the one metre “rule” we will discuss those concerns below.

[6] It is our understanding that the district plan only allows excavation within one metre of the HRGWL, under normal circumstances. We have read other decisions relating to nearby similar activities to those proposed here as part of our research into the possible effects of quarrying on groundwater, and note the following from some of those decisions:

- Canterbury Aggregate Producers Group August 2016 - *“We consider a 1m buffer between excavation activities and groundwater provides only a minimal level of protection and this should not be reduced. We are firmly of a view that at least 1m of undisturbed material is critical to provide some level of treatment of bacterial contamination and to enable time for a response (e.g. removal of material) in the event of an accidental spill of hydrocarbons.*
- *This indicates to us that maximum excavation depths have been exceeded and the 1m buffer to groundwater has been widely breached.*
- *We view the 1m buffer between excavations (and hence backfilling) and groundwater to be a critical environmental bottom line that should be adhered to 100 percent of the time and strictly enforced by the consent authorities*
- *....any adverse effects on groundwater quality are unacceptable given the importance of the groundwater resource to the community”.*

[7] In terms of this decision, there are a number of factors that we wish to bring to your attention. As discussed above, we believe that the HRGWL of 7.95m must be the level that is used. There cannot be any justification for it not to us. Highest reported groundwater level is just that “highest reported” – and the highest we have recorded/reported with any accuracy is 7.95m, that is an undeniable fact. We are not aware of any precedent that would allow a consent to go below the HRGWL? In Mr Van Niewkerks evidence in chief, he states that seasonal high water table is “meaningless” and “HRGWL would be more appropriate” and that information should come from the “site”.

In the above decision, the IC’s were absolutely correct that the 1m buffer is an “at least” figure, as it provides a buffer in the event that there is a spill or the likes. In this application, we are aware that the applicant is proposing to suppress dust with some of the “best dust suppression measures” (their words not ours) available and in summary the proposal is to use what could be best described as enormous amounts of water. There is course is some scepticism as to whether they will be able to use the amounts of water they are proposing, and its critical to their application, as its accepted that a point of contention is going to be the ability to suppress dust. The use of such an important natural resource for spraying on dust is in itself wasteful, but it leads to a much bigger issue in our opinion.

The proposal as we understand it is that the applicant proposes to use in excess of around 1100 cubic meters of water per day, and it is not clear if this includes watering bunds etc. This is if the quarry is only 6ha at one time. That is a lot of water to be pouring into a small area daily. That water has to go somewhere, and in short it could only leach through the 1m buffer zone and into the groundwater.

Not only does this pose a risk of contamination never seen before, as this quarry is so called “state of the art” for dust suppression, and we can clearly establish that will be almost solely by the use of water, but almost certainly with the amount of water seeping into the groundwater it has to have an effect on the aesthetics and quality of the groundwater, which would presumably become murky i.e. siltation and turbidity. Heavily dust/silt laden water could not possibly be sufficiently filtered through a 1m buffer when it is being poured through it at the rate proposed.

Reducing or adversely affecting the water quality through accidental contamination, turbidity or siltation caused by quarrying activities, is a threat to the outcomes outlined in the Selwyn District plan which under the heading “Water Quality (B1 Natural Resources)” it states:

- The Plan focuses on maintaining and improving water quality because:
 - It is the most significant water issue in Selwyn District; and
 - It is not easily managed through controlling discharge permits alone
- The Plan does this by:
 - Requiring any proposed activity to demonstrate that it can be supplied with water supplies (see above) and effluent and stormwater treatment and disposal without adversely affecting the environment.

[8] Also from the above quoted decision is the following:

- *“We note general agreement between the experts that the revised predicted rise in groundwater levels at (Miners Road) from the implementation of the CPW scheme would be in the range of 0-1.5m. All experts agreed that allowance for a 1m rise was appropriate for the purposes of our consideration. We consider that HRGL in the existing environment is that level, as of the date of this decision, plus 1m for the CPW scheme. We accept this level is the highest level groundwater can be expected to reach on the records to date.*
- *On reflection, we agree with (Mrs Chapman) and record that had we decided to grant these consents we would most likely have adopted the HRGL plus a 1m buffer as well as a 1m allowance for CPW...”*

Therefore, it appears that experts believe that another 1m buffer should be implemented in applications such as this, to take into account the expected groundwater level rises from the CPW scheme. This is in addition obviously to the 1m buffer as mentioned above.

I refer you to Point 99 of the s42 report from Lisa Scott on this application states:

“Within the limits of uncertainty of our projections, most of the time there should be more than 3 metres of undisturbed material above the groundwater”.

I am not sure if Dr Scott has taken into account the effect of large volumes of water being used for dust suppression (if there is sufficient water available), most of which will fall to the ground eventually in her calculations, but we believe that at least a 3m buffer is warranted, and that is 3m above the HRGWL of 7.95m, i.e. 4.95m.

[9] Section 8 of the RMA requires that the potential of natural resources are sustained to meet the needs of future generations, the life supporting capacity of water is safeguarded, and adverse effects on the environment are avoided, remedied or mitigated.

The high quality of Christchurch's mostly untreated aquifer sourced drinking water is one of cities most valuable and precious natural resources. Given that this proposed quarry is upstream of the Christchurch City aquifers, the potential for contamination of the downstream water systems without a sufficient buffer is enormous. This is even more so if the 7.95m HRGWL is ignored or negated for whatever reason. Added to this is the complexity of our underground aquifer systems. Can we take the risk? We believe that this is the single biggest area of concern because once we break it we are unlikely to easily fix it – and by the time the contamination is noticed, the time to establish its source and a way to fix it will be significant.

Whilst the applicant may be able to make a case in accordance with Section 7 of the RMA for the “efficient use and development of natural and physical resources (land and gravel)” will they be able to “maintain and enhance the quality of the environment”?

[10] Another concern is backfill aka cleanfill. This activity has been highlighted in previous applications and hearing and poses significant threats to groundwater. Predominately backfill is left to the folly of both the quarry operators/owners and landfill suppliers. There is little if no resourcing to monitor compliance by both parties and by the time resourcing may be available, the fill is often covered over and hard to test, and also by that time leeching from the likes of asbestos has already occurred and entered into the aquifers. Too late then.

I wish to bring to your attention from the S42 report of Lisa Scott:

“Management of fill quality is the most important mitigation measure for the long term protection of ground water quality. Decision makers need to be confident that compliance with the proposed cleanfill management plan is achievable and enforceable”.

At a meeting organised by the Templeton Residents Association (TRA) when the proposed quarry was first mooted, the acting COO (CEO?) of ECan, Tania Harris, stated that although consents often carried at time substantial conditions, ECan did not have the resources to monitor or police those conditions, leading to operators often flouting the conditions, which is a known and provable fact. This practise is hugely reliant on self-monitoring and honest record keeping. I suggest this is not anywhere near enough to prove or give assurance this activity can be enforceable.

In the decision of the abovementioned resource consent application by the Canterbury Aggregate Producers in August 2016, the commissioners noted the following:

- *We also note that the whole proposal depends on diligent observation and performance of a complex suite of conditions for 100 percent of the time, over*

a long period of time. We accept that non-compliance from time to time are very likely. We noted with concern the bland admission by (Mr Warren for the applicants) that operators already ignore the limits on hours of operation and operate at night when it suits them, and the clear and obvious failure of the consent regime relating to dust that is occurring, regardless of who or what is at fault....As well as our reservations over individual conditions we are simply not confident of the ability of the quarry operators to consistently adhere to such a complex set of conditions for a long period”.

In terms of backfill, one does not only have to trust the quarry operators and their staff, but also the suppliers of cleanfill (backfill). It is a known fact that in Canterbury suitable clean backfill is in very short supply, and there does not appear to be any chance of that improving in the foreseeable future. The applicants should have to prove that they have the ability and resources to source adequate and suitable backfill.

Referring back to Lisa Scotts S42 from point 106:

"Making sure that cleanfill materials do not leach high levels of contaminants is, in my view, the most important measure for protecting groundwater quality from long-term adverse effects. Keeping all imported fill at the site above a level where it could be saturated by a rising water table will help to mitigate the risks. But rainfall will still infiltrate down through the fill, so the fill itself must be clean".

The potential risks associated with self-monitoring poses to great a risk to the groundwater in my opinion, given the “history” of quarry operators in our region. Remember just one lapse could be catastrophic to our most precious natural resource.

[11] One of our other concerns as it relates to water, and is somewhat related to groundwater, is the effect on wells. Many residents in this area rely on a well (bore) as their only water source, for both households and stock. Many domestic bores are close to the site, some down gradient, as are the Christchurch City aquifers. Therefore, the applicant is fully aware that their actions could have very serious consequences, as outlined in reports from their “experts”. I refer you to Mr Bligh's statement from page 52 of his report:

"In conclusion, any adverse effects on groundwater quality from the extraction activities themselves are considered to be less than minor given the nature of the proposed quarry operation, and proposed mitigation measures".

“Less than minor” is not “will not”, and nothing less than a guarantee of **no** adverse affect on groundwater is simply not acceptable, and should not be accepted. The current government is clear that water quality must be protected at all costs. For an expert to concede that there is even a small risk, then this should be ringing alarm bells. Nothing short of an absolute guarantee should be acceptable in our view and we believe the wider communities view.

[12] This is further highlighted in the “evidence in chief” of Mr Van Niewkerk. At paragraph 68 he states “I consider the potential risk to water quality in downgradient water supplies wells from the quarry activities as “low”. He goes on to say “...appropriate mitigation measures taken if a groundwater plume develops from the site” and “...assist in identifying groundwater changes caused by quarry activities”.

Once again, an expert who cannot guarantee the safety of well and or groundwater quality from quarry activities and acceptance that if something does happen then there will be a simple fix, without considering the potential disruption to peoples lifestyle and health.

He further states “**Only** water supply wells downgradient from the site could potentially be affected by groundwater contamination from the site...any risks can be minimised through appropriate management...I consider the risk of contamination of downgradient wells to be small”.

In other words, Mr Van Niewkerk believes that as there would only be a small number of peoples wells affected that’s somehow OK? He also believes that its somehow worth the risk of contamination because the risk is small?

There must be no compromise on this – there cannot be **any** risk and of there is no consent should be given as it contravenes Section 8 the RMA as mentioned earlier.

Mr Van Niewkerk appears untroubled by the fact that it is likely some peoples wells will be “drawn down”, and noticeably so in some wells, and could affect the ability to draw water from these wells at time of low groundwater thereby reducing the reliability of the well. He provides little if any solutions to this noting that the existing well on Fulton Hogans property, that at least he acknowledges, allows them to take the consented amount of water so in other words “oh well”, “who cares”, “never mind” about the people potentially affected by this. That’s all very well for Mr Van Nieukerk, but the disruption to peoples lifestyles and ability to inhabit their homes should be at the forefront of any considerations.

[13] Mr Van Niewkerk makes several references to “low risk” in his evidence in chief, and more so in his response to Dr Scotts Section 42a report where he states at paragraph 84:

- *I consider it unlikely that any downgradient well would be affected by an increase in turbidity caused by quarry activities, **however I cannot dismiss it either**....If turbidity effect do occur beyond the site, I recommend the applicant commissions the sampling and testing of the affected wells water supply...the applicant could potentially provide for an alternative water supply of install a deeper well.”*

Once again there is an admission that there is a “possibility” that a downgradient well could be affected by at the very least an increase in turbidity, and the solution is a deeper well or alternative water supply (there isn’t any unless its “trucked” in). The process of testing and agreement on remedy, likely to be contested, would mean no water supply for the party affected, which in this district would almost certainly mean having to move out of your house.

His comments about alternative water supplies indicate a lack of knowledge about living in the country with no town water supply to rely on. It would have severe consequences for a house owner and their family to have no or an unsafe water supply.

There must be no compromise on water quality and the effect - small, minor or otherwise. It must be without **any** risk.

[14] Finally, in Mr Van Niewkerks report he states that he recommends groundwater monitoring over the lifetime of the quarry, and that in the event of an issue that it is remedied in a “timely manner”. If one looks at other recent events where water supplies were contaminated, it is often too late by the time the incident is reported and “remedied”. It also trusts an organisations to self monitor as this is unlikely to be done by the likes of ECan who already state they cannot police conditions due to a lack of resources.

He states that if turbidity or other effects do occur in downgradient wells the applicant could possibly provide a water treatment option etc, but there is history in Canterbury that this will not happen and companies such as this will deflect responsibility. It comes at a huge cost to the well owner who is reliant on that water supply 24 hours per day and anything short of immediate remedy makes there house almost inhabitable. Those of us that could not use wells during the earthquakes know that only too well. We believe that Mr Van Niewkerk and other “experts” has underestimated the consequences for homeowners of contaminated or quality affected downgradient wells.

To basically dismiss the potential effects on homeowners who may be affected by quality issues with wells as a result of these types of activities is unacceptable. There is plenty of evidence in other nearby areas to show the reluctance and or total denial of quarrying companies when it comes to responsibility for the degradation and or contamination of water supplies, and by then its often too late and remedies are both expensive and or ineffective.

DUST ISSUES

[15] We will start our comments on Dust by showing the following video of the Fulton Hogan quarry on Barters Road, Templeton at 8:31am on 27 November 2019, and a photo the week earlier. This quarry is on the same side of the road as Ruapuna. As you can see there is significant dust coming over bunds and over the large row of pines. It is blatantly obvious that the dust mitigation measures used here are ineffective, or non-existent as the dust is going over into a residence and causing a significant traffic hazard, not to mention a health risk and nuisance to neighbouring properties. It has to be said that the wind on these days whilst brisk was not significant in terms of North West winds encountered on the Canterbury Plains.

[16] At the proposed Roydon site, which is significantly larger, the same prevailing wind will send dust across a newly built cycleway, Jones road, the railway line and

SH1, the gateway into Christchurch. This will be a very dangerous hazard and a considerable blight on the district's landscape. If dust was to blow in this quantity over SH1, it is questionable as to whether the road would need to be closed as it would pose a significant risk to traffic. Wind would also make mitigation difficult as the wind would be likely to blow water the same way it blows dust?

[17] Davina Penny has already highlighted this site does not have enough water consents for the basic running of the quarry. Therefore, Fulton Hogan will not be able to mitigate/stop dust leaving the site. It appears that this is a site that is vastly under resourced in the valuable and highly contentious commodity of water. There is no evidence that water supply will increase at this site, so pressure for the next forty years will be to minimise the use of water. Hence the desire will be to minimise dust mitigation, not extend it.

[18] Fulton Hogan has also gone to great lengths to describe and promote the spraying and fogging technologies they intend to use. Whilst in a perfect and nil wind situation mist and fog can be directed on a certain target, e.g. conveyors, we believe on the days there is wind and high wind, these suppression methodologies are flawed and potentially useless. You only have to witness the masses of irrigators in Canterbury to watch how wind diverts the water significantly from its target, and we believe the same will happen to the equipment delivering mist and fog.

[19] We are also very concerned regarding the makeup of this dust. Significant testing in Canterbury identifies the predominate stone Greywacke contain in excess of 40% silica. Worksafe has in the last 6 months released significant information on the dangers of silica and the lung diseases it causes. The latest information being November 2019. See attached. With the inability to suppress dust within and exiting this site, how can Fulton Hogan guarantee that cycleway, footpath and road users will not be exposed to silica dust? How too will they ensure their workers are not subjected to silica dust?

[20] It is obvious that with the proposed dust mitigation, which is almost totally by way of water, the aggregate loaded onto the trucks will be wet. If dry and dusty aggregate is placed onto trucks then the dust mitigation is clearly not working. That being the case, as the trucks leave the quarry the wash will continue to leak from the trucks leaving a residue on the roads. This residue will of course dry and that will then become a source of dust.

We acknowledge that wheel washers will be used apparently, but this is to wash material from the truck wheels that is picked up from within the quarry floor. It is the wash from the truck decks that we believe will cause the residue on the road that will dry and become dust. There is evidence of this on Miners Road as well as Yaldhurst Road daily.

[21] Of grave concern too is the comments from the then acting CEO of ECAN at a community meeting regarding this quarry as mentioned on the heading "Water Issues" where she explained to the attendees that ECAN "do not have the resources to monitor dust from quarries or follow up complaints". Fulton Hogan will be fully

aware of these shortcomings too, hence their obvious lackadaisical approach to dust mitigation at their two quarries in the same vicinity. This too was highlighted in the Resource Consent Application by the Canterbury Aggregate Producers' Group dated August 2016.

[22] Also, as previously suggested, whilst Fulton Hogan have said that only limited quarrying area will be exposed any given time, this is however determined by the rate of remediation. In both the recent cases, this is totally reliant on the amounts of cleanfill available for such purposes. In the Yaldhurst Quarries Joint Action Group appeal in October 2017, Mr Francis for the appellant "acknowledged that larger than planned areas may be exposed and NOT remediated as proposed, due to lack of cleanfill available, and this makes dust mitigation considerably more "difficult". In the Resource Consent Application by the Canterbury Aggregate Producers' Group dated August 2016 the commissioners stated on page 84 they were "not confident the quarry operators would adhere to dust mitigation processes".

In conclusion, we believe that due to all the pressures and obstacles as mentioned above, Fulton Hogan cannot, and will not, sufficiently mitigate all the issues associated with dust whatever they propose otherwise.

TRAFFIC ISSUES

[23] Fulton Hogan have gone to great lengths in their submission to say where the traffic will go when vehicles leave this site. This is farcical in our opinion. They have neglected to inform you they will only ever have control over their own vehicles and all other contractors, drivers, suppliers and customers will do exactly what they want, when they want. These alternatively owned vehicles we estimated to be over 50% of the traffic in and out of the site. It is preposterous to believe that Fulton Hogan will, or are even permitted to tell a customer where they must drive on a public road. The customer will, not so politely, tell them to mind their own business. In fact, I don't believe FH will even attempt to tell them. FH are in the business of selling aggregate and will not enforce any inconveniences that may dissuade customers from purchasing from them. We simply do not believe that Fulton Hogan has the power to insist on where a private operator drives, and therefore cannot guarantee the flows of traffic it reports to.

[24] From Fulton Hogan's own vehicle perspective, over several iterations to their application and rebuttals to submissions recently, FH have now left it very unclear as to the operating relationships between their Pound Road and Yaldhurst quarries. If there is to be any operating synergies needed between these sites, this will turn Curraghs, Dawsons and Maddisons Roads into thoroughfares for a very large number of heavy vehicles between the sites. None of these roads are capable or suitable for these types of vehicles. Please see the attached recording of an uncovered Maugers

truck that left FH Pound Road site full of aggregate crossing over the white line on Maddisons Road. Notice when it is within the white line, it is on the berm of the road. Also imagine two trucks alongside each other traveling in opposite directions. Currags and Dawson are both narrower than Maddisons Road.

We are avid walkers of the block Currags, Maddisons, Wilds and Newtons Roads. As reasonably long term residents, we have noticed the significant overuse of particularly Maddisons Road by heavy vehicles which struggle to pass each other. This is highlighted in the recent changes to the speed limit on Maddisons Road from 100km/h to 80 km/h. It is also highlighted by the significant number of serious, at time fatal, motor accidents on these roads. The intersection of Dawsons and SH1 is registered as the most dangerous intersection in the Selwyn District.

[25] Fulton Hogan have proposed that almost all vehicles exiting their site will turn left onto Jones Road, right onto Dawsons Road, cross the railway line and utilise Main South Road. As we have said above, this is farcical. The new motorway has no access for Christchurch bound vehicles at this intersection. The most likely route to the city will be to turn right out of the site, head south on Jones Road to Weedons Ross Road (a route uninterrupted by intersections), and enter the Christchurch bound lanes where they can again have an uninterrupted approximately 25 km trip to Brougham Street in the city, as well as the ability to utilise any of the conveniently placed motorway exits as required. Jones Road is in no way suitable for, or capable of, supporting up to 1200 heavy vehicles movements per day.

[26] Point 32 of the FH "Provision for Public Transport, Cycles and Pedestrians" section is already outdated. The cycleway is now completed and being used by city bound cyclists. FH acknowledge this will be extended and cycleways are a priority of the government. Consequently, there will be no ability to widen Jones Road, and all forecasts propose an exponential growth in the use of cycleways. It will be very dangerous to have 1200 heavy vehicle movements per day opposite this cycleway. We need to remember FH want this quarry and truck movements from it for 40 years. If history is to repeat itself, within 12 months of an approval they will apply to extend this. What is applicable today, will most definitely **not** be applicable in 40 years. They have chosen not to comment on the future suitability of a quarry here. Point 31 re. school buses is unreliable, un-researched and misleading. Everyone knows that school bus routes change annually depending on population growth and demographic makeup. Just because a bus does not stop on the mentioned roads today, this does not mean this will not change annually for the next 40 years, especially with the sort of population growth the Sewyn District and our local district have been and will experience moving forward.

[27] Fulton Hogan go to great lengths to suggest most of the aggregate will be used in the city. I strongly dispute this. The western areas of West Melton, Kirwee, Darfield

are all growth areas, as are the associated tourist highways going west. Access routes to these areas will be predominately by Curraghs, Dawsons and Maddisons Roads, again unsuitable for these heavy vehicles.

[28] Anyone who lives in the area of the proposed quarry site will confirm the easiest route to the northern suburbs of inner Christchurch (e.g. but not limited to Avonhead, Fendalton, Harewood, Redwood, Northwood) and further afield to the Waimakariri suburbs and North Canterbury, commences on Maddisons Road to Barbers Road, onto Buchannans Road, to Pound Road then onto Yaldhurst road to join the main arterial roads north. Again, many of these roads are not suitable for the proposed number of heavy vehicles. FH are being very misleading suggesting most vehicles will utilise SH1. They will utilise whatever roads are the fastest to the destination and FH cannot regulate otherwise. We suggest that 50% plus will actually use roads other than SH1.

[29] Fulton Hogan have made many comments about a roundabout at the Dawsons/Jones Road intersection. However, due to land ownership issues this roundabout may not be possible. FH are now suggesting this can be reviewed again after consent is issued. This is unacceptable. That intersection will be flawed even with a roundabout, without a roundabout it will be too dangerous and impossible for heavy vehicles to safely and routinely access SH1 at that intersection. Furthermore, its likely to be forgotten once a consent is issued. For example, with the new cycleway has anyone thought about how cyclists are going to cross one let alone two roundabouts servicing 1200 heavy vehicle movements per day? We would not let our children anywhere near this cycleway as it is already hazardous now, let alone running alongside a quarry. Its utter madness to put cyclists and walker in so much danger in our opinion.

[30] Fulton Hogan have neglected to acknowledge this is a rural area that still has farming and horse training close to the roads. How will farmers move stock and horses be trained on tracks with the prolific numbers of heavy vehicles on the local roads? It will be impossible. Whilst quarrying is an “acceptable rural activity” so is farming, horse training and housing.

LANDSCAPE AND LIFESTYLE ISSUES

[31] We would like to show you some photos taken from a plane on Friday 6 December 2019 by Mr Moore. The plane was approaching Christchurch International airport via the North East runway. The North East runway approach is the most used approach to the airport. This is the view of the Yaldhurst quarrying area as you enter

Christchurch. Since the Christchurch earthquakes there has been significant population and housing growth in the areas of Hornby, Templeton, Prebbleton, Weedons, Broadfields, West Melton. See map attached. Much of this growth is within metres of this proposed quarry. The quarries in Yaldhurst are destroying the health, landscape and lifestyle of their neighbours. As Mr Francis from Harewood Gravels says in the Yaldhurst Quarries Joint Action Group appeal in October 2017, “the bigger the area the more difficult it is to manage dust”. I simply ask, why would you put a quarry in the middle of these high growth areas that will operate for 40 years and leave the land ruined. It is ludicrous and as ridiculous as suggesting Halswell should be opened up for quarrying again. Commissioners will be acutely aware that East Christchurch was red-zoned after the earthquake and will remain so. This has contributed to exponential growth in the above-mentioned suburbs and this is forecasted by the SDC into the foreseeable future. The landscape from the air is a scourge on this city.

[32] One has to question why we would want to use land that will never be inundated by the sea due to climate change and earth movement, that will never have the effects of liquefaction, has proven to be some of the most reliable land in the event of large earthquakes, is so close to the city and some of the best agricultural land available. That property has almost all year round grass growth, and does not require irrigation. That is evident by the vast amounts of bailage being taken from this land by Fulton Hogan’s contractors. To turn this into something that will likely never be inhabited is almost criminal in our view given the events of the Christchurch earthquakes and the fact that we need good land for our growing population. The Mayor of Selwyn, Sam Broughton has recently told us that Rolleston is almost at capacity, therefore we should be looking to this land.

[33] There is already evidence that the proposed quarry is having an effect on peoples consideration regarding this area. There are more properties on the market than either of us have seen in the years we have lived here. Two of our immediate neighbours have sold their houses below RV and were disappointed with that. We are aware that Mrs Holmes was offered \$190,000 below RV by Fulton Hogan and this must reflect that they know that the value of her house will be severally affected by the proposal and thus the offer. It is not because they cannot afford to pay her the true value of her house. So for that company to use economics as a reason to establish a quarry so close to the city is a bit rich given the impact on the locals economics. They simple don’t care and that is reflected in that insulting offer to their elderly “neighbour” who is one of the longest residents of Weedons. So much for Fulton Hogans claims that they want to be a good “resident”.

[34] As we mentioned earlier, we are avid walkers but already feel that the Maddisons Road section of our walk is too dangerous, predominantly due to trucks. We are forced to walk as far away from the road as possible which is often dangerous

due to the unevenness of the surface of the berm. Mr Moore was an avid cyclist in the area but has given that up due to the dangers posed to cyclists, particularly from trucks. He knows that after spending 16 years in the NZ Police and having to clean up the carnage of trucks v cyclists. Horse riders are at significant risk also. It must be remembered that the road code allows for other road users, not just trucks. Its inconceivable how people are going to carry on their current lifestyles with the obvious risks involved with a significant rise in heavy traffic movements that this is likely to cause.

[35] Both our families moved to this area as it was quiet and safe. We believe the biggest threat to our lifestyle is the proposed quarry. Fighting this proposal has consumed us since it was first mooted, caused us and our family's anxiety and we fear the resulting risk to our lifestyles by this proposal. It has not been a pleasant 18 months or more and probably the worst time we have had baring the earthquakes. Our land is solid and as a result when we do have an earthquake we feel it, therefore we are very concerned about the possibility of the vibration from the earthworks on our properties.

[36] We are also concerned about the issue of the identified "Robinsons fault" which will almost intersect Fulton Hogans land. The potential for disaster from a large earthquake if this fault line displaces could impact that land, yet I see no mention of it in any reports? This Faultline has been identified as the possible Faultline linking the Greendale Faultline and the Christchurch Faultline. We have grave concerns about this if the land has been taken to 5 or more metres below ground level.

CONCLUSION

[37] The proposal by Fulton Hogan to quarry this land is flawed in so many ways. FH themselves highlight many risks associated that their experts can only say are low. There are far too many maybes and assumption without evidence or absolute conclusive expert opinion. FH have chosen to take a snapshot of the current situation regarding water, landscape, lifestyle, health concerns, etc. and propose a quarry for 40 years based on that snapshot, without being absolute there are no negative effects for the full 40 years. Unlike all other rural activities, as an area grows that land can most likely be reused and converted to housing and human use. 180 hectares of quarried land is useless, just like the Yaldhurst land seen in the photos from a plane. It is simply the wrong place for a 40 year long quarry.