

Perfecting our vision

Welcome to the first **Aggregate News** of 2020 – which as well as a calendar entry means having perfect vision.

The AQA Board doesn't waste time pursuing what's perfect – we just want a vision of our country where quarries can get a fair crack at continuing to deliver reasonably priced, locally-sourced aggregates to all Kiwis who need them.

As a small organisation we have to set priorities; at the moment there is a welter of legislative and regulatory changes in the offing and we can't help influence all of them at the same time.

So at our last Board meeting for 2019, we confirmed for CEO Wayne Scott that the priority for his energies on input into Government documents was that guiding the Crown Minerals Act (CMA) review.

While not as obvious a risk to our industry's progress as the Resource Management Act (also under review), the revised CMA will emerge this year.

Part of the review is whether the legislation should continue to 'promote' the extraction of minerals. That's a no brainer.

And while we accept as an industry that we have to work harder with communities and iwi, the RMA already provides for this and we and others in our industry have submitted a loud NO to duplicating this

through the Crown Minerals Act. (See article page 39)

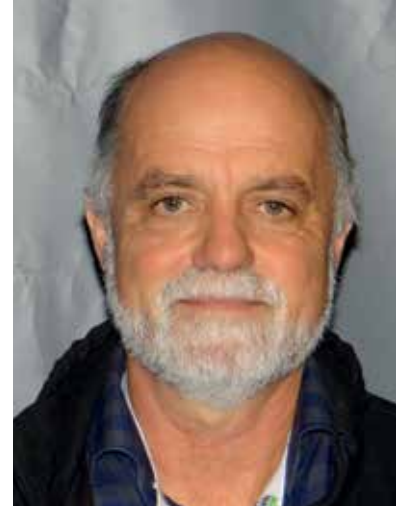
Meanwhile, I'm pleased to see in this edition a case put for the Roydon quarry which at time of writing was awaiting the outcome of its resource consent hearing in Christchurch.

As AQA Technical Adviser Mike Chilton observes, without new quarries such as Roydon, Christchurch is going to run out of aggregate in the next 30 years. (See article page 38)

Mike also provides his Technical Report (page 40), with a focus on the latest production statistics which suggest demand is rising. No surprise there given ongoing housing and roading programmes across Government and generally buoyant economy.

This of course is election year. The AQA is particularly interested in the infrastructure proposals of the two main parties and is bidding with our colleagues at IOQNZ to get up a political panel discussion at this year's QuarryNZ conference. www.quarrynz.com

Please ring your 2020 calendar now to be in Wellington from July 15-17. And consider getting started on entries for the various awards – details on the AQA website – including the MIMICO Environment & Community Award run



Peter Walsh.

by the AQA, and the Q&M magazine's Tomorrow's Leader's Award.

Expanding health and safety concerns also continue to present some challenges for our extractive sector. It's great to hear of people such as Christchurch Occupational and Health physician Dr Mary Obele, who is visiting quarrying and mining sites talking about the risks presented by respirable silica. (See article page 37)

At a Board level, our capacity to reflect on such environmental and health challenges has been assisted by us being joined late last year by Winstone Aggregates Environmental Manager, Ian Wallace.

As the article on page 41 outlines, Ian is driven by a wish to engage with people and communities to help resolve their issues while allowing quarries to become increasingly sustainable.

As we head into a new decade of challenges and opportunities, it's reassuring to have a Board with people like Ian who are determined to drive the changes that will ensure the extractives sector earns its place in the sun – and even increasingly be powered by it.

That's a perfect vision for our future.

Peter Walsh

Chair

Aggregate and Quarry Association



Be aware of the risks of silica

Christchurch Occupational and Environmental physician Dr Mary Obele wants to raise awareness for our workers at risk of exposure to respirable silica.

Dr Obele says MinEx is doing a great job, but the risks of exposure to respirable silica need to be widely promoted and adequate controls implemented.

She started work in occupational health working with coal miners and is visiting extractive work sites presenting on silica, its risks and how best to avoid or mitigate these.

Crystalline silica is found in soil, rocks, granite, sand, clay, minerals and mortar. It can be found anywhere we cut, sand, polish or drill silica.

This includes engineered stone, sand blasting, rock drilling, bricks, tiles, mortar, concrete, construction, road works, stonemasonry, glass manufacture, foundry work, ceramics, mining, quarrying and tunnelling.

Dr Obele says “respirable particles” are small enough to get deep into your lungs where they can’t be cleared with coughing.

“We’ve known about respirable silica for years but lately we found serious health problems for some Queensland workers cutting or grinding engineered stone, which can have up to 90 percent silica,” she says.

“WorkSafe New Zealand is now actively checking such workplaces, but we should be looking much more widely.”

She adds that any workplace where silica is present needs to be taking active steps with the control of dust, the most important via dust collection systems, extraction ventilation, in-cab filtration with HEPA filters, on-tool extraction and water suppression (not just a spray bottle).

Don’t use brooms to sweep up dust, or



Dr Mary Obele

compressors to blow it off. Use an H-class HEPA-filtered vacuum cleaner.

Also, limit the time you spend working with silica. Wear, use and store your PPE correctly. For working with silica, use overalls, gloves, respirators and sometimes goggles.

Wash your hands and face before eating, drinking, smoking and go home in fresh clothing.

Dr Obele also recommends using marble instead of engineered stone for kitchen benchtops and the use of slag or shot instead of sand for blasting.

More is being learnt every day about the health risks that silica poses, she adds.

“We know that huge doses of respirable silica may cause health problems quickly. Small doses of respirable silica over a long time may take longer.

“There may be no health effects at all.”

The main problem is Dust Lung Disease (called pneumoconiosis or silicosis) where respirable particles of silica (and other dust) can inflame the lungs and cause scarring.

Sometimes, patients can feel totally fine, or, they can have a chronic cough, get

short of breath or have other symptoms.

Silica can also affect your kidneys, immune system and even cause some cancers.

Dr Obele says It’s important not to panic.

Not every cough is bad news. If you feel ok, you’ve worn your PPE and your workplace always had the right controls, then you’re probably fine.

She recommends talking to your boss about what controls are in place. You can check out her advice on the MinEx website at www.minex.org.nz/assets/Uploads/Silica-article-Dr-Mary-Obele-Nov-19.pdf and the information on the WorkSafe website.

If you think you’ve been exposed to a lot of silica, over a long time, or if you have breathing problems, you should talk to your occupational health nurse or your GP.

Bring along any useful information, like dust monitoring tests, if you can.

If it helps, you can ask Dr Obele any health questions and she will answer them. Send these c/- office@minex.org.nz

Disclaimer – This is general advice.

If you have concerns, speak with your occupational health nurse or doctor **AQA**



Fulton Hogan's existing Miners Rd quarry in Yaldhurst is one of those that Roydon would help replace.

New quarries needed for Christchurch growth

Christchurch is going to need quarry land covering roughly twice the size of its CBD if it is to meet its 30-year future demand.

That was among the submissions on Fulton Hogan's Roydon quarry from Mike Chilton, appearing for FH as an industry consultant, who is also the part-time Technical Adviser to the AQA.

Mike told the hearing that aggregate use across greater Christchurch averaged 9.6 tonnes per person from 2000-2017 and this was the best projection for future use. The forecast population growth in Greater Christchurch between 2018 and 2048 was 150,000 people, meaning aggregate demand of between 5.1 million tonnes a year in 2021 up to 6.3Mtpa in 2048.

Noting that Christchurch's land-based gravel extraction is shallow (average depth 8m) to protect the underlying water table, he said this suggested that through to 2048, 1000 hectares of quarry land (or about twice the area of Christchurch's CBD) is required to meet expected aggregate demand.

Roydon quarry proposes to, over time, develop 150-170ha if consented and produce about 30 million tonnes of aggregate. This would add 5-6 years to the calculated 25-year aggregate supply for greater Christchurch before it ran out, if nothing else changed, he told the hearing.

"While this may seem like a short duration on its own, it increases the current supply duration by 22 percent and provides additional time for new resources to be found, consented and developed."

Mike Chilton is only aware of four local quarries getting fully consented since 2015 when consultant Richard English calculated 130Mt of aggregate resource remained in quarries in Greater Christchurch. The new quarries added just 17m tonnes or about three years of supply.

"If no further quarries are consented in Greater Christchurch and aggregate demand continues as forecast, the total supply of aggregate is likely to run out around 2044," says Mike Chilton.

"There'll be an imbalance as quarries with shorter lives are exhausted, those with larger reserves are put under pressure.

"The last two quarries supplying greater Christchurch would

have the highest sales volumes in New Zealand."

The area of Christchurch with the least proximate aggregate reserves was around its south west where housing demand is strongest.

Fulton Hogan's proposed Roydon site is in that area. The decision of the resource consent hearing was awaited at time of writing.

Mike Chilton told Aggregate News that quarry land areas were getting larger in Canterbury and elsewhere because of factors including long term security, certainty of resource for community and infrastructure growth and to reduce proliferation of small 'pothole' quarries dotted in amongst communities.

"Scale also enables the industry to continue to look at long-term site mitigation investment.

"We do need to be clear that large sites don't mean large open areas – these are controlled by consent conditions and dust suppression mitigation on site."

AQA Chief Executive Wayne Scott told the hearing that demand for aggregates is essentially driven by population growth and infrastructure development and maintenance; consented aggregate supplies were dwindling in part due to urban encroachment, requiring forward planning to identify and protect strategic resources.

Wayne Scott says Fulton Hogan was proposing best practice mitigation measures for the site and a detailed Quarry Rehabilitation plan.

"I understand that many mitigation measures have been developed and refined in consultation with the community and relevant stakeholders as the consent process has progressed.

"AQA is supportive of Fulton Hogan's proposed Roydon Quarry and the environmental measures proposed for the site.

"The quarry, if consented, will provide a valuable local aggregate source for greater Christchurch and Selwyn close to where they are required," says Wayne. **AQA**

Crown Minerals Act review underway

The Government's current review of the Crown Minerals Act (CMA) has been set by the AQA Board as its highest regulatory priority for input.



AQA CEO Wayne Scott says potential changes to the CMA could have considerable impacts on the quarrying sector and these will happen this year but reforms to the more contentious Resource Management Act (RMA) while in train, will not emerge until next year at the earliest.

Currently, Crown-owned (or vested) minerals includes all petroleum, gold, silver and uranium. Other minerals (including aggregates) have a mixture of Crown and private ownership depending on where they are sourced.

He says MBIE's CMA discussion document notes the original and current aim of the CMA was to promote the efficient and effective allocation of rights to prospect, explore and mine Crown-owned minerals.

"Now they note that: *'The regime has remained indifferent towards our domestic needs given our ability to export and import the minerals and petroleum we need.'*"

"As I warned publicly late last year, we could soon have to import aggregate if we don't sort out secure access to local supplies – and that some is on Crown-owned land."

Wayne worked with the AQA Planning Committee and industry to produce first-round submissions including that of the AQA to MBIE by late January. He's also now circulating a draft document for wider consultation.

"One of the things I pointed out was that the Government's recently released Resource Strategy says with a growing population: *'We need to make sure we have the aggregate required, or alternative replacement material, to build the foundations of our houses and roads.'*

"It's therefore disappointing that MBIE's discussion document for the CMA again mentions 'no new mines on conservation land' as a given, with no detail on the policy, other than another discussion document is pending."

Wayne Scott says while it's unclear how this policy would apply

to quarries, GNS has identified that 32 percent of future hard rock reserves are situated on DOC land.

"Any sterilisation of available quarry resources will impact heavily on iwi and regional communities in terms of jobs, availability and cost of aggregates and sand."

Wayne says one of the questions being asked is whether the CMA should be amended from promoting the prospecting, exploration and mining of Crown-owned minerals for the benefit of our country.

"The Government has redefined 'benefit' to a wider concept of 'well-being' as measured by the Living Standards Framework (LSF), which encompasses a whole raft of environmental, community and other benefits.

"I don't believe we need to change the purpose of the CMA. It may be appropriate however that when considering the benefit to New Zealand, the LSF be used rather than purely economic benefit."

Linked to this is the issue of community participation and that of Crown-recognised Maori tribal interests. Currently under the CMA, initial rights are allocated based on applicants' abilities to maximise economic recovery; before this can commence any impacts on local communities and the environment must be considered and all other legislative requirements be met.

"This discussion document questions whether there should be greater community participation in the CMA process, while acknowledging this adds complexity and time to decision-making processes.

"This would only duplicate the processes currently included in the RMA, which is the most appropriate mechanism for public involvement in the decision-making process.

"To include this in a revised Crown Minerals Act would also contradict the objectives listed in the Government's Resource Strategy which the AQA has acknowledged as positive," says Wayne Scott. **AQA**

Join our united voice!

The Aggregate and Quarry Association achieves workable and sensible outcomes for our industry.

Contact us today: office@aqa.org.nz www.aqa.org.nz

Benefits for members include:

- A voice on numerous national committees, including MITO and MinEx
- Access to information and guidance from both our expert Technical and Planning committee members plus our Board members
- AQA members also receive issues of **Contractor** and **Q&M** free of charge.

AGGREGATE & QUARRY ASSOCIATION OF NZ

Supporting New Zealand from the ground up

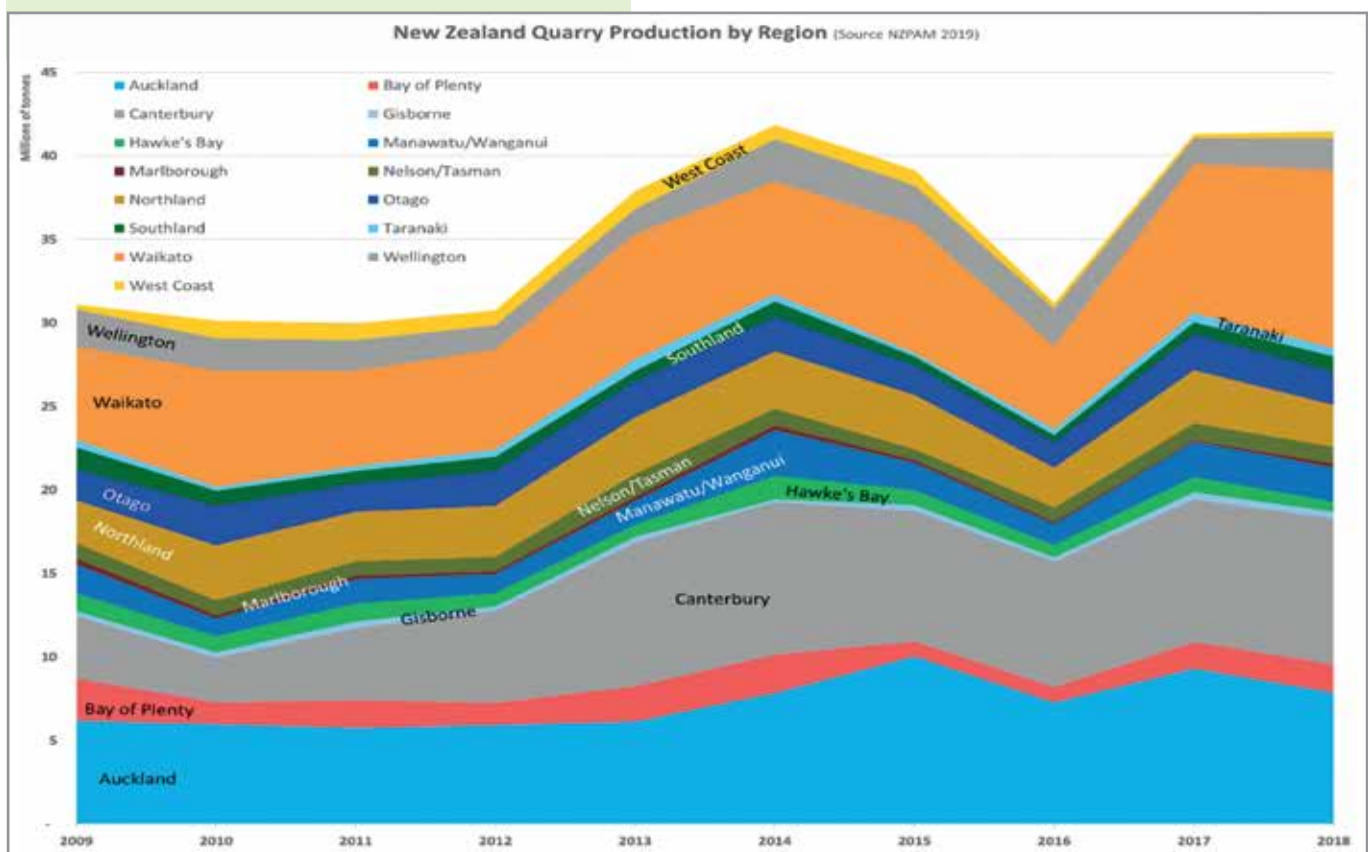
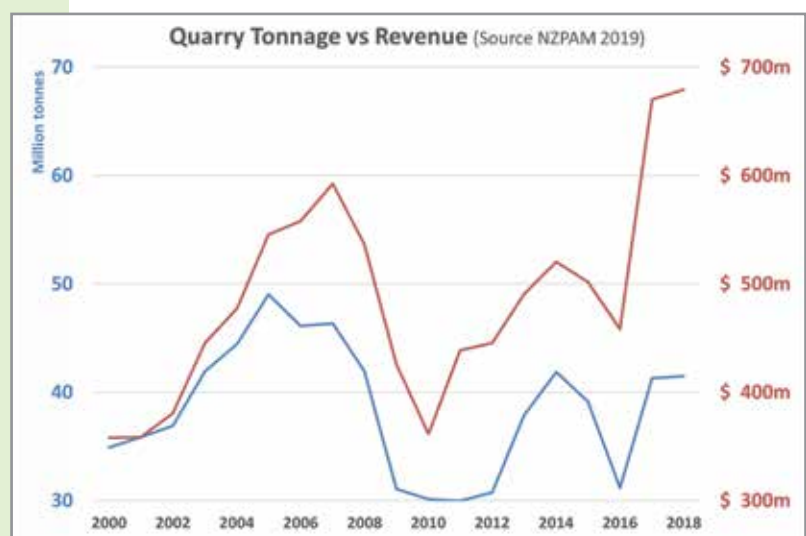
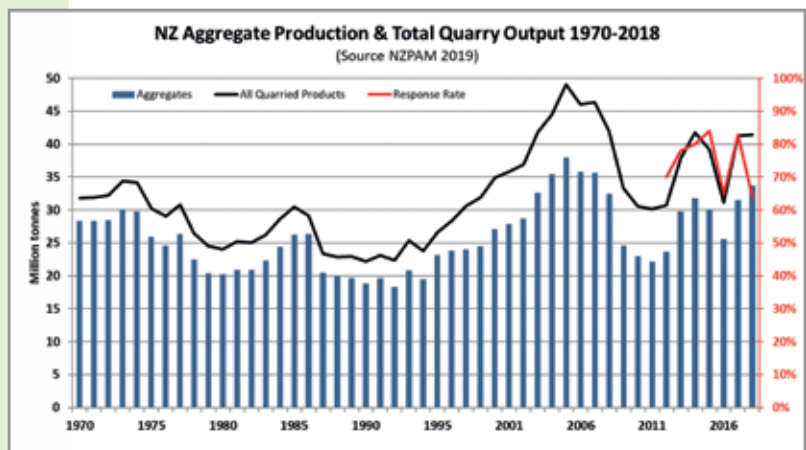


Technical update

AQA Technical Adviser Mike Chilton

Quarry stats show revenue rises

- The 2018 quarry statistics were published in mid-November.
- Sadly, there was a low response rate to the survey (64 percent). The lateness in publishing the statistics is related to trying to follow up companies who hadn't yet provided their annual returns.
- Total production was up slightly from 41.3 to 41.5Mt (8.6t per person).
- Using the response rate, we can assume an unofficial production figure of 65Mt.
- Total aggregate revenue was \$679 million.
- Good news that revenue has increased markedly in 2017 & 2018.
- In the regions, Waikato and Wellington saw good growth on the previous year, up 18% percent and 27 percent respectively.
- Waikato's 10.6Mt eclipsed Auckland's reported 7.9Mt and broke its own record (10.0Mt) set in 2007 as the highest producing region in New Zealand.
- AQA has produced a two-page A3 summary of statistics. If you'd like a copy email tech@aqa.org.nz **AQA**



People, planet and quarries

Engaging with people and doing the best for the environment are driving forces for Ian Wallace.

Appointed as Winstone Aggregates Environmental Manager in August, the 37-year old has now also joined the Board of the AQA.

Ian hails from a farm near Matamata which has been in his family for nearly 100 years but was encouraged to get an education and choose his own career.

So, after a science degree at Waikato University and Masters on how to control Californian thistles, Ian was keen to leave academic life for some real-world experience.

He joined the AWT consultancy in Auckland, working mostly for councils on resource consents which he'd studied at university before a role at Mighty River Power, now Mercury.

This Waikato-based job saw a lot of engagement over three years with iwi and community on projects including planting the banks of the Waikato River in native species.

Ian loved the work and brought that background into Winstone Aggregates seven years ago joining as Environmental Projects leader. One of his first jobs was with Belmont Quarry near Lower Hutt so quarrying could expand on the site. The resulting Private Plan Change required much planting in the adjoining Belmont Regional Park and the transfer of 40+ Ngahere gecko from the new quarrying site to predator-free Mana Island. The project won Gold in the 2017 MIMICO Environmental Awards.

Ian also worked at the Otaika Quarry which has long supplied 80% percent of high-grade aggregate in the Whangarei district. In 2016, at the start of a major consenting project to remove and place 2m of overburden, iwi wanted a relationship reset. This led to a new agreement to enable long-term iwi aspirations and alignment with the ongoing development of Winstone Aggregates and GBC operations. This effort was commended in the 2018 MIMICO awards.

Ian enjoyed the work over a prolonged period with a lot of stakeholders.

He stepped up to be Winstone Aggregates acting Environmental Manager when Andrea Cave went on maternity leave and was then confirmed permanently in the role. He now heads a team of five looking after Winstone Aggregate quarries from Otaika in the north to Yaldhurst and Wheatsheaf quarries near Christchurch.

Ian is delighted about the prospects for quarries to become more sustainable such as with the emergence of electric-powered trucks and machinery.

"It's something we are now focusing on. There's some very impressive equipment starting to appear. Being increasingly sustainable is important to everyone."

He, for one, catches a train to work most days to Winstone/Fletcher's Penrose HQ.

As for joining the AQA Board, Ian believes this is a great time to be able to contribute.

"We are starting to get heard by central Government about policies which impact on our industry. Decisions around the location of quarries and reverse sensitivity are not just issues for us – they are issues for New Zealand."

He says quarries operate over decades and need sensible policies that endure.

"There's lots happening. It's a really exciting time to join the AQA Board." **AQA**



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