

There's much to GAIN

As the first-ever international quarry industry meeting concluded in Queenstown I confessed there had been a question mark for me about the value of the AQA hosting the event.

I told the GAIN attendees (Global Aggregates Information Network) that any doubts had been more than answered; the challenge now was to try and summarise all the many learnings and pass on these to you as our AQA members.

It was great that our follow-on QuarryNZ conference gave many of you the opportunity to hear from and mingle directly with people like GAIN convenor Jim O'Brien and Aggregates Europe's President Antonis Antoniou Latouros and Secretary-General Dirk Fincke.

Europe is the scene-setter the rest of the quarrying world needs to follow on becoming more sustainable and engaging with decision-makers and communities. We've tried here to get our message across on aggregate use by the truckload (one each a year); the Germans have

cleverly converted that into a kg an hour (see story page 2). I think this is one of the many learnings we need to pick up.

But Europe isn't the only place doing extraordinary things with quarries.

I was gobsmacked at the presentation from the China Aggregates Association on a 'factory quarry' where everything was automated and enclosed; not to mention that China has one quarry which alone produces twice NZ's annual production.

We learned that Not in My Backyard is not unique to NZ; many GAIN members (collectively representing nearly four-fifths of world production) face the same challenges. (See story page 3).

As an organisation, the AQA, like its counterparts around the globe, is working hard on these issues but as GAIN's American representative put it, quarries themselves can't hide behind their bunds. It is incumbent on all of us – at every one of our sites – to reach out to our communities and local decision-makers and meet NIMBYism head-on.

It was encouraging therefore to see at least one MP attending the QuarryNZ



political panel saying our industry needed to get every MP to visit a quarry. By the time you are reading this it will be no more than 10 weeks from the election. If you can't get your local MPs or candidates on site before October 14's poll, book your new or re-elected representative to come as the next Parliamentary term starts.

One other presentation I watched with particular interest at QuarryNZ was that from Grant Bosma from Waka Kotahi updating us on the new M04 specs. It's been a marathon for the working group who've produced no fewer than eight versions. I'd like to say we are there but there are still issues to be worked through on the new tests – and who pays. See AQA Technical Adviser Mike Chilton's report on page 6.

Finally, it was a great start to QuarryNZ with agreement on a Memorandum of Understanding (MOU) between the AQA and IOQNZ. While we both serve different aspects of the quarry industry – and that will continue – we need to be more aligned in our strategies and communications. I'm sure there's no question mark on that from either organisation; rather, there is much to gain for our industry.

Jayden Ellis
Chair, AQA



Nearly 80 percent of the world's aggregate production gathered around the GAIN meeting in Queenstown hosted by the AQA.



Might NZ match Europe in promoting ourselves? Aggregates Europe President Antonis Antoniou Latouros outlined how they do it at the GAIN meeting and again at QuarryNZ.

Time to become a rock star?

Did you know the average consumer uses about a kilogramme of aggregates an hour?

That's the basis of a campaign by the German aggregates industry shown to those attending the Global Aggregates Information Network (GAIN) meeting in Queenstown.

A German comic features in a social media campaign, holding a plastic jar with 1kg of aggregate and sand. He asks people in video clips if they realise they use that much quarried material every hour of the year – $24 \times 365 = 8.7$ tonnes a year. (Rather close to the New Zealand per capita figure).

Aggregates Europe, which represents the 3b tonne industry across 25 countries, has picked up the advert and the 1kg an hour line and is re-using it as part of an increasingly active campaign on social media channels.

Its President Antonis Antoniou Latouros told the GAIN meeting (and later the QuarryNZ conference) that quarries are often considered by the wider community to be "the bad guys. But just think of our lives without aggregates. We have an industry that supplies humanity with an essential product."

Quarries in Europe are changing their business model to now include increasing amounts of recycled materials. Some sites are now producing renewable energy such as through solar or wind generation.

The European industry has committed to carbon neutrality by 2050 and to deliver net gains for biodiversity in quarries. The EU Commission has meanwhile acknowledged the 'massive' need for sand and gravel to achieve its Green Deal objectives. It supports Aggregates Europe's high-profile Sustainability Awards which challenge entrants to "Become a European Rock Star."

Mr Latouros says after engaging with some environmental

NGOs on its goals, the European quarry sector was being hailed by them "as not part of the problem but part of the solution."

At a more local level, one Malaysian quarry reported at GAIN that it grew vegetables on site for the local community and even gave them a share of its profits.

In a Canadian town where there's a small levy on each tonne of locally extracted product, the money was used to refurbish a building as a new medical centre and retain the town's doctor. The project later won an award for the community.

The National Sand, Stone and Gravel Association (NSSGA) based in Washington DC regularly engages with politicians and their staff.

It analysed social and traditional media coverage of the quarry sector and identified five main points of community concern – blasting, dust and environmental/health concerns. Blasting was the most mentioned in social media followed by environmental and health concerns. Trucks, dust and noise were also identified.

The NSSGA works to get its members more active in engaging with its communities to provide information and address misconceptions. Hiding behind a quarry's bunds was not seen as an option in today's environment.

GAIN Convenor Jim O'Brien, in wrapping up the Queenstown meeting, identified better public relations and community engagement as a key lesson for quarries across the world.

He also noted the need to plan for the demands of the future amid increasing urbanisation, population growth and surging demand for infrastructure, housing and climate change requirements that quarries would be essential in meeting. **AQA**

NIMBYs the world over

The difficulties New Zealand quarries face with getting resource consents are mirrored the world over.

That was one of the key learnings for industry members attending their first meeting of the Global Aggregates Information Network (GAIN) which the AQA hosted in Queenstown in early July.

GAIN's 20 members represent nearly 80 percent of global production of aggregate, rock and sand.

AQA CEO Wayne Scott says the word NIMBY – not in my backyard – was repeated a lot at the GAIN meeting.

"We heard it from representatives in Europe, in Asia and the Americas. It's clear that opposition to quarries is getting stronger around the world even as the budgets for infrastructure built on quarry materials get bigger."

The GAIN meeting heard the US had a US\$1.2 trillion infrastructure bill passed in 2021. India is spending a similar amount including 4500 kilometres of expressways alone. China extracted 17.4 billion tonnes from its quarries last year. One site on the Yangtze River alone produced 100m tonnes – twice New Zealand's annual consumption.



AQA Board member Tony Hunter with GAIN Convenor Jim O'Brien and AQA CEO Wayne Scott at the GAIN meeting.

Wayne says quarry industry leaders from around the world are experiencing the same choke on getting access to resources for infrastructure.

He told the GAIN meeting that New Zealand's huge infrastructure deficit demands more quarry materials even before those needed to repair and mitigate climate change.

"Cyclone Gabrielle was a wake-up call. We have a lot of rock accessible to do repairs to the homes, roads and seawalls that are increasingly needed. But nobody wants a quarry in their backyard – here or overseas."

He says some bigger companies may have more capacity to fund resource consent processes but only five NZ quarries produced more than 1m tonnes a year and perhaps only 7-8 were doing more than half a million tonnes.

"Like many other countries, most NZ quarries are small to medium size, often family-owned operations producing fewer than a few dozen truckloads of materials a week," says Wayne. "They are members of their own communities but can still face five years of costs to get a consent or a renewal, if at all."

Wayne says GAIN members report they often face having to move away from population centres. Sydney's nearest quarry, for example, is now 175km away.

"That just adds costs and emissions; every quarry knows – but not enough consumers – that much of what you pay for quarried materials comes from transporting it."

He says as climate change takes effect, the New Zealand Government, councils and particularly communities will have to decide if they want local quarries producing affordable building materials – or huge cost and carbon increases.

"Equally, quarries here and overseas are increasingly accepting that they need to work more with their local communities and show they are reducing their environmental effects and being more sustainable. There are some win-wins to be had for everyone." **AQA**

AQA works for the quarry industry – join us today

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The busloads of delegates were able to view Road Metals' crushing operations.

Three quarries and a beer

QuarryNZ attendees usually get a field trip but the Christchurch conference saw them treated to three in an afternoon.

Prior to departing, there were profiles given on the Isaac Group's McLeans Island site and Fulton Hogan's new quarry near Templeton.

Isaac Group CEO Jeremy Dixon says the 1100ha site had begun in 1950 with owners Sir Neil and Lady Isaac setting it up with a 'world class' conservation ethic. As the tour buses crawled through, you saw ample evidence of the bird-rearing and extensive native planting that have been going on for decades. Isaac Group also owns Dunedin's Saddle Hill quarry and Simcox Construction which operates two quarries near Blenheim. The trust which owns the group funds conservation work in those areas as well as educational scholarships.

Nick Hornblow, an A-grade involved with the development of the Roydon quarry for Fulton Hogan, outlined how the 170ha block had been bought eight years ago to develop a premier site for supply to nearby Christchurch.

One of the 240 resource consent conditions sees a high bund around all of the 5.3km boundary and funding a major traffic interchange which you circle when entering the quarry. There are separate roads for trucks and light vehicles. Material is already being excavated and stockpiled and the crushing site, 500m from the road, will be operational by the end of the year. History note: Roydon is named after the two sons who inherited the long-gone McKenzies department store chain – Roy and Don McKenzie. The block includes some of the family's former stud farm property.

At Road Metals' Rolleston quarry, the buses were able to view the extensive conveyor belt which brings material to the crushers. Then it was inside the company's extensive

headquarters which includes a museum for the former truck fleet operated over the years.

Road Metals' Managing Director Murray Francis welcomed the six busloads of QuarryNZ delegates, telling them he was proud of his team and its achievements. Many enjoyed seeing the old trucks all in pristine condition – and the beer. **AQA**



Murray Francis.



AQA Chair Jayden Ellis (left) and IOQNZ President Tim Kennedy.

AQA and IOQNZ to share strategies and lift communications

A new draft Memorandum of Understanding has been agreed by the AQA and IOQNZ to cement their existing relationship and take it to the next level with a particular, early focus on training.

At a joint meeting of the two quarry organisations' boards at the QuarryNZ conference venue, there was a strong view that a better sharing of strategies and information would benefit both of their memberships and supporting businesses.

IOQNZ President Tim Kennedy opened discussion saying a closer relationship had been talked about for a while.

"It's especially important as we are getting more funding opportunities."

At its AGM, IOQNZ advised it will partner with the Construction Centre of Vocational Excellence – ConCove – on a research project on quarrying industry trends and practices to inform vocational education directions.

It also announced it is partnering with the Inspiring Futures Foundation (IFF) to develop five CPD courses on Worker Health, Emergency Management, Extractive Planning, Quarry Consenting and Safety Management Systems.

The AQA also recently won a \$32,000 grant from IFF to establish a one-day training course on quality product and technical training. It also allows some short online videos to be made summarising various quarry products' production, testing and usage.

All these courses will use Institute of Quarrying Australia (IQA)

materials and IOQNZ will be involved in the roll-out of the one-day course as well as the CPD courses.

IQA's outgoing CEO Kylie Fahey told the QuarryNZ conference that her organisation had focused on developing a competency framework to deliver targeted education to quarry managers, supervisors and operators. She says the IQA is discussing content with IOQNZ and looking to include that in the framework. The IQA is also developing an online platform and after it's been rolled out in Australia it will be shared with NZ.

AQA Chair Jayden Ellis says his organisation and IOQNZ needed to ensure that a 'no surprises' approach was in place to take advantage of the emerging opportunities.

IOQNZ Vice-President Chris Gray says strategic goals should be shared along with improving communication so there was better understanding between the organisations – and more clarity for businesses which provided most of their financial support.

"It's not around the day-to-day stuff. There's a need to be seen to be delivering value as organisations and working together."

The draft MOU is close to being finalised and the intention is that it will be reviewed in the next 6-12 months to ensure it is working as both organisations intend. **AQA**

AQA Technical update

M04 Basecourse Specification

After 150 comments were received on the M04 Specification (draft version 7) and Notes (draft version 2), the M04 working group met in June to discuss the feedback. It was able to resolve all the comments and a Version 8 has now been developed. It seems likely a pilot project may now emerge, possibly on the North Island East Coast, to test the benefits of the updated spec. Among the issues to be worked through and assessed are the likely costs that will apply for testing the new specs.

The Maximum Dry Density (MDD) test – typically done every 5,000 of basecourse produced, is a cost which traditionally has been borne by the contractor, not the quarry. An MDD could cost \$600. The Ethylene Glycol test required every 10,000m³ costs \$900 and takes four weeks to complete; it would apply on higher class 1 and 2 material.

The Sand Grading Exponent (SGE) is an assessment rather than a test but this will require calculation so a reporting fee or time taken needs to be considered.

- Waka Kotahi sent a representative to QuarryNZ to discuss the new version of M04 and its implementation. This talk was received with interest by delegates.
- AQA is drafting a guide for members, highlighting the changes between the current and new versions. If you have any questions, contact AQA Technical Adviser, Mike Chilton – tech@aqa.org.nz.

Want to join the AQA Technical Committee?

- Our Technical Committee is open to nominations for a new member to replace Greg Arnold. We have had three nominations so far. You can self-nominate – or have someone nominate you. Please send nominations to Mike Chilton.

NZIHT / NZTA Pavements Conference

- AQA attended the Pavements Conference in New Plymouth at the end of May. We contributed to a panel discussion about some challenges in providing aggregates to roading projects that other parties may not have been aware of. The presentation was well received, with several questions afterwards, particularly on by-products and co-products.
- The main theme of the conference addressed the Government's 2030 emissions goals – to decrease transport CO₂ by 40 percent by reducing freight km travelled by 35 percent, light vehicle km travelled by 20 percent and fuel CO₂ by 10 percent. This included efficiency measures e.g. clusters of road maintenance instead of multiple single sites, reducing rework and moving towards a digital spatial model of the roading network.
- There was interest in including spatial locations of quarries and products they could produce in the national spatial model.

Annual Production Returns to NZP&M

- New Zealand Petroleum and Minerals has launched the annual production survey for 2022 data. This will close at the end of July. Please get your figures in.
- AQA stresses the importance of this survey each year – it allows us and our sector to better plan and engage with Government and councils if we have accurate data on how much is actually being produced by quarries. AQA will again be helping NZP&M chase up data. If you would like assistance with your reporting or have a question about your returns, please contact AQA Technical Adviser, Mike Chilton tech@aqa.org.nz. **AQA**

Mike Chilton, AQA Technical Adviser.

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