



Aggregate News

AGGREGATE & QUARRY ASSOCIATION OF NZ

Welcome to the spring edition of Aggregate News

I'm delighted to start this spring edition of Aggregate News by announcing the Aggregate and Quarry Association (and MinEx) have appointed a new Chief Executive.

Denise Mackay brings extensive executive leadership experience across local and central government, public affairs, stakeholder engagement, advocacy, strategic communications, governance and organisational transformation. She has joined AQA and MinEx following senior leadership roles in New Zealand and most recently Australia.

Denise replaces retiring AQA CE Wayne Scott who has also served as CEO of MinEx. We are fortunate Wayne has agreed to stay on as an adviser to MinEx, working with Denise, over the next year. Our Board is confident this will assist Denise as she locks in the gains achieved under Wayne's tenure and builds on these for our industry's future.

Details of Denise's appointment on page 45.

Meanwhile, the AQA is dealing with issues around over-spec aggregate and over-demanding testing requirements.

At the QuarryNZ Conference in Invercargill in July, I joined a presentation with AQA Technical Adviser Mike Chilton on the challenges for many quarries around the new M04 and M03 specifications.

What we are now pressing New Zealand Transport Agency to do is to hold more regional roadshows like the recent one in Napier. There, NZTA was immediately able to rectify a gap in its statistical acceptance spreadsheet, which could not handle Napier's regional aggregate variations. We now need other regional variations to be accepted.

Please read our story in this Aggregate News which spells out the wider issues with the new specs that are causing members such stress. Be assured we will continue to advocate strongly on your behalf.

We also carry another story with a Napier connection. The Hawke's Bay Expressway project is one of the first large-scale applications of lean mix concrete (LMC) as a pavement base layer for a state highway. Using LMC as the primary structural base layer beneath an asphalt pavement is common on Australian highways.

NZTA expects the LMC pavement between Napier and Hastings



to provide a more durable foundation, reduce future maintenance requirements and support a longer asset life. Given how much politicians focus on potholes, it won't be the only organisation keenly watching this project.

Our outgoing CEO, Wayne, takes the opportunity in this publication to assess our current 'dog paddling' economy and what it holds for our sector. He urges politicians to end the stop/go cycles and cement an enduring bipartisan approach to infrastructure projects.

Mike picks up the commentary on the specs issue in his Technical Update. It also carries a reminder that you might not actually own the rights to some of the materials you are quarrying! Mike's worked with several quarries in recent months, which are among those that contain Crown-owned minerals. In these cases, a mining permit is required to remove them from your quarry. As ever, he gives some useful guidance to you as AQA members; that and strong advocacy continues to be our key role on your behalf and our new CEO will deliver that in spades.

Jayden Ellis
Chair, AQA. **AQA**

New CEO for AQA and MinEx

The Aggregate and Quarry Association (AQA) and the Mining Extractive Health and Safety Council (MinEx) have appointed Denise Mackay as their new Chief Executive.

Denise brings extensive executive leadership experience across local and central government, public affairs, stakeholder engagement, advocacy, strategic communications, governance and organisational transformation. She joins AQA and MinEx following senior leadership roles in New Zealand and Australia, most recently with the Town of Port Hedland in Western Australia's Pilbara region.

Denise replaces retiring AQA CE Wayne Scott who has also served as CEO of MinEx. He will remain as an adviser to the health and safety organisation over the next year.

AQA Chair Jayden Ellis says Denise's appointment marks an exciting step forward for the organisation and its members.

"Denise is an accomplished and highly respected leader with a proven track record of delivering results in complex environments.

"Her experience working across government, industry and community sectors, combined with her strong strategic and advocacy capabilities, make her exceptionally well-placed to lead AQA as we continue to strengthen the profile and influence of New Zealand's quarrying and aggregates sector."

Denise has held senior leadership positions with organisations such as the Town of Port Hedland, the Ministry for Regulation, Te Puni Kōkiri, Wellington City Council, The Treasury and the Department of the Prime Minister and Cabinet. Throughout her career she has successfully led organisational transformation, government relations, policy development, stakeholder engagement and complex change programmes.

She also has significant governance experience through board and membership organisations here and in Australia, including serving as Chair of the Public Relations Institute of New Zealand, where she successfully led the organisation through a period of strategic renewal and financial sustainability reform.

Denise says she's excited by the opportunity to champion an industry that plays a critical role in this country's economic and infrastructure future.

"Aggregates are fundamental to the homes we build, the roads we travel on and the vital infrastructure that supports communities across New Zealand.

"I am looking forward to working alongside AQA members, industry partners, government agencies and stakeholders to ensure the sector's contribution is better understood, recognised and supported."

"The quarry industry has an essential role to play in enabling growth, productivity and resilience. I am excited to help tell



Denise Mackay brings on-the-ground experience in advocacy and engagement leadership and a little underground too – this from a 2023 caving experience in Motueka.

that story, advocate for practical and effective policy settings, champion ongoing community engagement and stringent planning, environmental and operating conditions."

MinEx Chair Josie Vidal says Denise is also strongly committed to ensuring the ongoing commitment by mines and quarries to health and safety best practice through her dual role as the CE of that organisation.

"Wayne will provide invaluable support to Denise over the next year, including running MinEx regional workshops, which provide important health and safety advice to quarry, mine and tunnelling operators and their staff."

"These workshops, alongside Wayne's advocacy over the last decade, have lifted health and safety performance in the extractives sector, leaving a strong platform for Denise to build on.

"At a time when advocacy around health and safety is as important as ever, we know that Denise brings a strong skill set to effectively represent MinEx to the next Government, to be elected in November."

During her most recent appointment in Western Australia's resource-rich Pilbara region, Denise worked closely with major resource industries and developed a strong appreciation for the importance of extractive industries to economic development, regional prosperity and community wellbeing.

She also engaged with the AQA Leaders Forum prior to her position being confirmed.

As Chief Executive, Denise will lead the implementation of AQA and MinEx's strategic priorities, strengthen engagement with central and local government, grow industry influence, support members and work closely with industry partners to advance sustainable, safe and responsible quarrying across this country.

Denise started her new roles on 30 September. **AQA**

Give us “Green light, go!”

As I head towards semi-retirement, I'd love to be doing so during boom times. Instead, after 40-plus years of riding the economic waves our sector has faced, there are bright spots in the economy but we are, at best, dog paddling.



Wayne Scott

There are a whole number of contributing factors. Some are outside New Zealand's control like United States President Donald Trump's so far failed effort to oust the Iranian regime with resulting oil price impacts, as well as his nonsensical tariffs.

But others can be sheeted home to successive Governments here. State spending ballooned under the previous Labour administration. Some was appropriate in combating an international pandemic, but even former Finance Minister Grant Robertson agreed spending got beyond appropriate, announcing \$4 billion worth of savings and “reprioritisations” in his last Budget.

The Coalition Government has also been a mixed bag. Yes, quarries have benefitted from the fast-track legislation and reform of the Resource Management Act. However, the previous Government had introduced versions of both. It would have been much saner if the current Government had retained and adapted what was in place rather than starting from scratch.

Similar bipartisanship would also have meant not ditching most of Labour's infrastructure projects, which has happened with successive governments over many terms. The recent *Cost of stopping report* identified constant changes to infrastructure planning by politicians cost an estimated \$11.8 billion over 25 years.

The latest Ministry of Business, Innovation and Employment *National Construction Pipeline Report* indicates the downturn bottomed out late last year, with the combined value of building and infrastructure work set to recover to about \$65.4 billion by 2030. That's, however, an increase of just 3.8 percent on 2023 levels.

In its most recent annual report in August, one of our biggest businesses, Fletcher Building, said ongoing economic and political

uncertainty will likely affect its businesses through to the end of this year.

Its portfolio includes Winstone Aggregates, Golden Bay Cement and Firth. The company reported a 26 percent lift in underlying full-year earnings in the year ended 30 June, but some of that likely reflects demand brought forward ahead of looming price increases. A meaningful recovery in underlying volumes isn't expected until 2027.

Fletcher Building Chief Executive Andrew Reding also urged caution about the improved level of residential consents – back above 40,000 for the first time since 2023.

“We are not yet seeing those translate into project starts. It is too soon to say whether the recent improvement will be sustained.”

Commercial construction remains weak, but roading infrastructure and hospital projects are starting to come on stream.

So, there's the mixed picture for our sector. If housing permits turn into builds, demand for aggregate will rise along with that required for infrastructure projects. A wider economic recovery is likely alongside that.

But as economist Shamubeel Eaqub asked us at the QuarryNZ conference: “When the recovery comes, where are we going to find the people?”

Not many of those 15,000 people who lost their jobs in construction through 2024 onwards are waiting for the phone to ring.

And whatever shape of Government is in place after November's election, it had better be truly bipartisan. We as an industry and nation can't afford a repeat of wasteful spending identified in the *Cost of stopping report*. Give us “Green light, go!” **AQA**

**Wayne Scott, Outgoing CEO
Aggregate and Quarry Association**

The Aggregate & Quarry Association appreciates the support of our members

aqa
THE AGGREGATE & QUARRY ASSOCIATION OF NZ



Over-spec requirements spike costs and supply

Unintended consequences from the update to the M04 basecourse spec are causing big problems for quarries.

Aggregate and Quarry Association Technical Adviser Mike Chilton and Technical Committee member (and AQA Board Chair) Jayden Ellis gave a detailed presentation on the issue at the QuarryNZ conference in Invercargill in July.

Jayden says it was part of what the AQA is doing after feedback from frustrated members. It's now pushing for more New Zealand Transport Agency roadshows so quarries around the country can provide feedback on issues with the new specifications.

"By international measures, we have high per capita demand for aggregate because our small population requires roads to every corner amid challenging topography.

"Trucking aggregate any distance adds huge cost, and Kiwis need locally sourced aggregate to be able to afford to build their roads and homes.

"Our members will deliver aggregate very cost-effectively to their communities if sensible planning and rules provide for local quarries."

Mike says significant compliance costs for quarries are emerging from differences between what the new specs intended – and their interpretation.

Examples include a roundabout in Whakatāne where Class 1 aggregate was specified, and subdivisions where Class 2 aggregate was specified.

"Premium rock is getting harder to find and it's being used inappropriately. We need to save it for where it is really needed. We've also seen the spec getting misinterpreted or changed by designers."

As a result, quarries previously able to supply local work are being excluded, even for aggregates with strong in-service performance. This means more imported aggregate and higher overall project costs.

Quarries also face an additional six tests and costs to meet the specs for M04 Class 1 aggregate.

Currently, only three accredited laboratories do the required Repeated Load Triaxial (RLT) tests on aggregate; all in Waikato/Bay of Plenty. Turnarounds can be up to 12 weeks, costing \$1,800



Mike Chilton, Aggregate and Quarry Association Technical Adviser.

a sample. This is a barrier to entry for smaller quarries hoping to supply Class 1 or 2 M04 and a gamble for those that haven't completed that test before.

"Quarries are asking: Why go through \$5,000–\$10,000 worth of testing for a few thousand tonnes when it might not pass the RLT? And if it sits longer than six months, I have to get more tests done?"

Mike called Class 1 quarries so an online register could be formed. Of the 20 quarries across New Zealand saying they could meet the new specification, he found only three fully compliant to produce M04 Class 1 aggregate (now seven, as of 31 August).

Jayden says it's clear from AQA members' feedback that quarries are struggling to comply with all the spec requirements and meet the additional testing regime.

The AQA is calling on NZTA to repeat the recent well-attended roadshow in Napier on the new specifications around the country. This highlighted the agency's statistical acceptance spreadsheet could not handle regional variations. To its credit, NZTA quickly fixed the Napier issue.

A regional variation for Northland is currently being pursued by AQA. It wants NZTA to also align M03 and reconsider M04's requirement for aggregate producers to operate a certified ISO 9001 quality system. This can impose significant compliance cost unrelated to the physical performance of their aggregate. **AQA**



Lean mix concrete paves the way

One of the first large-scale applications of lean mix concrete as a pavement base layer for a state highway is taking shape on the Hawke's Bay Expressway.

Traditionally, state highways commonly use crushed aggregate layers, with asphalt layers and surfacing placed above. Concrete and cement-treated aggregate layers have been used elsewhere on the SH network, including sub-bases and urban motorway pavements.

Using lean mix concrete (LMC) as the primary structural base layer beneath an asphalt pavement is not common practice here but has been widely adopted on major highway projects throughout Australia.

New Zealand Transport Agency says the pavement design and construction methodology for the Hawke's Bay Expressway draws on this experience and have been tailored to suit local ground conditions and traffic demands.

Project Director Scott Garrett says future projects will continue to follow NZTA's established design processes, with pavement solutions selected to suit the specific conditions of each project.

"This material is well tested in Australia, and we will continue to monitor performance of this innovative product to inform the suitability of it for other projects in other parts of the country."

The \$600 million Roads of National Significance project on SH2 widens a 6.5-kilometre section from two to four lanes on the main transport corridor between Napier and Hastings. More than 80 percent of the LMC pavement layer is now complete across the section of the Expressway currently under construction and more than 11,000 tonnes of asphalt is already in place.

The main benefits seen from using LMC are:

- It gives a robust pavement solution suited to the corridor's

ground conditions while providing the structural capacity required for high traffic and freight volumes.

- It provides a strong and consistent foundation designed for long-term performance.
- The increased structural capacity allows less depth of conventional granular pavement layers while meeting required performance outcomes.
- It helps with a broader value-for-money approach.
- It uses specialised paving equipment and provides a consistent and efficient foundation for the placement of asphalt layers above.

"Lean mix concrete provides a much stiffer and more durable foundation than traditional granular pavement layers," says Scott. The increased stiffness helps spread vehicle loads more effectively through the pavement structure, reducing deformation and improving long-term performance.

"Greater resilience is provided in areas of high traffic volumes, where variable ground conditions may affect conventional pavement designs," he adds.

"As a result, the pavement is expected to provide a more durable foundation, reducing future maintenance requirements and supporting a longer asset life."

Lean mix concrete is a low-cement, lower-carbon content concrete with a high proportion of aggregate, designed specifically for use as a structural pavement layer.

A specialised slipform paver machine was brought to Hawke's Bay from Auckland, where it is typically used on airport runway projects.

Operating continuously, it can place around one metre of the new northbound lanes every minute, delivering in one day what would traditionally take around a week.

"There is a strong sense of shared ownership across designers, contractors, suppliers and project staff, with everyone focused on delivering a high-quality outcome that will benefit the region for decades to come," says Scott. **AQA**

AQA Technical update

Technical seminar and update

- The M03/M04 seminar at Napier attracted about 30 attendees and discussed the new specifications and unintended consequences, including the limited access to Class 1 M04 around the country.
- At the QuarryNZ Conference in Invercargill in July, about 200 attendees showed up for the technical session where we discussed the M04 Class 1 map, repeated load triaxial testing, dealing with lab disagreements, quarry production data and the dodgy spec of the year.
- Look out for technical guidance on the technical section of our website, including the lab disagreement flowchart.

M04 producers

- Again, we are getting lots of enquiries for quarry capabilities from pavement designers working on next season's renewals/replacements.
- Please email me your test results so I can publish your quarry class on the online quarry database: tech@aqa.org.nz. This is particularly important for owners of Class 1 quarries.

Document refresh

- BPG05 review is three-quarters through its Aggregate and Quarry Association/Civil Contractors New Zealand industry review. It's expected to be ready to send out for comments at

the end of September.

- AQA will have its Lab Disagreement Protocol advisory sheet published shortly on the technical section of the AQA website.

Inspiring Futures – Quarry Products and Testing

- Keep an eye on the AQA YouTube page for the quarry products and testing videos, to be released shortly.
- An "Understanding Critical Construction Materials" quarry products and testing training day (pilot) was due to be held in Matamata on 17 September for up to 30 people.

Crown-owned minerals

- A reminder to all AQA members that you might not actually own the rights to the materials you are quarrying. This has been the case with about five quarries I have worked with in the last couple of months. In total, about 15 percent of quarries contain Crown-owned minerals and a mining permit is required to remove them from the property.
- Checking mineral rights is a straightforward process. Start with looking at the Certificate of Title and look for references to the Land Act. If you see something registered on the CT, you can get a Land Mineral Status (LMS) report done to check ownership. As always, contact us if you need help. **AQA**

Mike Chilton, AQA Technical Adviser

AQA works for the quarry industry – join us today

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AGGREGATE & QUARRY ASSOCIATION OF NZ
 Supporting New Zealand from the ground up

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