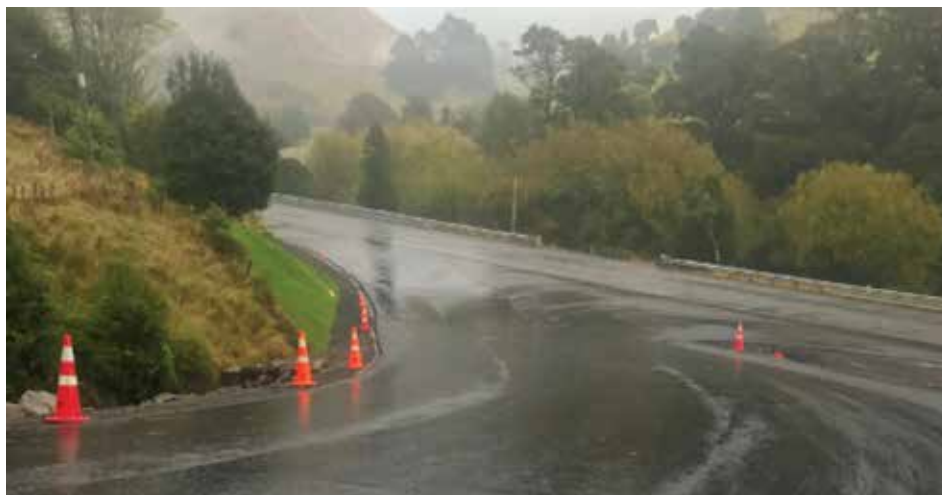


After the rain comes the repairs



How Matawai quarry dealt with its rain and water issues might be an example to us all.

I don't know about you but I'm sick of the rain. Auckland normally gets around 1200mm or about twice that of supposedly rainy London, but I reckon we've almost had that already this year.

The rain brings much more than frustrating days when it's harder or impossible to get work done on your sites (or your backyard).

We are now regularly seeing roading infrastructure destroyed and houses slipping down hillsides.

For decades we've been warned about such events happening with climate change and now it appears to be taking hold. All of this is going to require more aggregate, rock and sand – just as we approach limits on our capacity to supply it.

I've been on the AQA Board now for 10 plus years. Every year we've warned successive governments that they needed to clear the decks and allow new quarries to be opened and existing ones to expand.

Perhaps that is starting to be recognised – we've certainly got a strong ally in Te Waihangā – our Infrastructure Commission – though changes in policy will take years to implement.

Meantime, the need to meet increasing demand for aggregate and sand – including off our coasts – is now being frustrated at a local and national level as our CEO Wayne Scott comments on page 2.

It seems to me that some people want it all; the infrastructure for life in the 21st century without any trade-offs. Our industry is so often only portrayed for its environmental impacts (like holes in the ground), rather than the environmental and public

amenity benefits we create (such as lakes and gardens). We also often plant thousands of native trees and shrubs and do pest control at our sites whether required to or not.

Certainly, the often-prevailing negativity makes our efforts at engaging with the next generation more important. There were over 100 entries to this year's Rock our Future competition and many of you were able to see the posters and vote at the QuarryNZ conference. Read about our 2022 primary school winners on page 3.

One other issue I'm pleased to see progressing is the work of the

Pavements Systems Delivery Group, which included Wayne Scott as a member. This followed on from the Crossen review and was given the task of prioritising and recommending how the findings were best implemented.

I'm a techie by training so I know how critical it is to get the right mix of product in a pavement but that's only the start. You need a skilled workforce and strong industry capabilities, quality control, sound procurement policies, a whole of life approach – all aspects covered by the review.

Let's hope the good work of the delivery group is quickly matched by policy and procedural changes that gives us durable roads – even able to deal with rain events – into the future.

If you want a model of how to plan for ever-increasing rainfall, have a look at the details of Fulton Hogan's MIMICO award entry.

The company's Matawai site, located halfway between Gisborne and Opatiki, gets enough rain to make Auckland look quite dry by comparison.

The Matawai Quarry's approach to water management in developing the site might be something we all need to take account of if the past few winters are any indication.

Stay dry.

Jayden Ellis
Chair, AQA





From the land to the sea

AQA CEO Wayne Scott says our industry's challenges on land are now spreading to the sea

The quarry industry has warned successive governments that continuing to allow vocal activists to hinder or halt quarries operating close to where essential building and roading materials are needed, will see shortages.

These are now starting to impact, adding to the price of new homes and roads, and causing unnecessary emissions.

Now there's an effort to halt the only other local source of sand and aggregate – from the sea.

An application for continued sand extraction from coastal waters near Mangawhai was rejected by Auckland Council on the recommendation of commissioners. This decision alone means from early next year, half of Auckland's sand needs will have to come from outside the region. Other North Island sand producers already face high demand, so we may see sand imported from Australia – some of it likely coastal sourced – with major cost and emissions consequences.

We also face two worrying bills drawn from the private members' biscuit tin.

Maori Party co-leader Debbie Ngarewa-Packer has the Prohibition on Seabed Mining Legislation Amendment Bill. She claimed a recent turning point in world opposition with French President Emmanuel Macron declaring; "we have to create a legal framework to stop high seas mining".

He was referring to deep-sea mining in international waters, not off a nation's coast.

A dozen European nations including France extract off their

coastlines under the EU's high environmental standards. More than half of London's sand and gravel comes from coastal extraction. Britain dredges just 0.014 percent of its seabed.

As with any economic activity, there are some managed and regulated environmental impacts but marine extraction in Europe is growing faster than that from the land, partly because it is more sustainable.

Much of what is on the seabed comes from the land. Sand has been sourced and barged from the Mangawhai coastline for more than 80 years with a vastly lower carbon profile than digging it out and trucking it to Auckland.

Also pulled from the 'biscuit tin' was the Crown Minerals (Prohibition of Mining) Amendment Bill. Green MP Eugenie Sage aims to stop any mineral exploration or mining on public conservation lands and waterways.

Previously Conservation Minister, she knows much 'conservation land' is without high conservation values. Under her watch, DOC chose local river rock (from such land) to repair Franz Josef's walking track, rather than truck it in and quadruple the cost. Her bill would halt such sensible practices and any search for precious minerals such as those powering electric cars and cellphones.

I think most New Zealanders want affordable homes, roads and infrastructure delivered in a sustainable and sensible way rather than random policies pulled from a biscuit tin. **AQA**

Rock our Future winners north and south

Children from an urban Auckland school and a rural Otago school are the winners of the Rock our Future competition for 2022.

Twelve finalists were selected from over 100 entries, and delegates at the July QuarryNZ conference in New Plymouth voted, resulting in winners being selected from Owairoa School in the Auckland suburb of Howick and from Lee Stream School.

AQA CEO Wayne Scott says the quality of entries was fantastic and has lifted each year since he launched Rock our Future for primary schools in 2019.

"This year we asked the children to research and create a poster of an activity at the quarry, why the quarry is needed, and the benefits the quarry provides to the community. They all did well but the winners were stand-outs."

Pupils from Owairoa Primary School won two of the four awards despite having not been able to visit a quarry due to the Covid restrictions. Instead, they did their own research on four quarries; Hunua, Drury, Brookby and Manukau.

The Year five winners were Hailey Leslie and Nicole Wang.

Year six winners were James Vaipan and Raiyan Shikder. Both sets of Owairoa winners worked in pairs, so got \$50 vouchers each as it was \$100 per prize. The pupils won a total of \$2000 for their school.

Lee Stream School, which is more than 40 kilometres west of Dunedin, was able to visit two quarries – Blackhead and Logan Point.

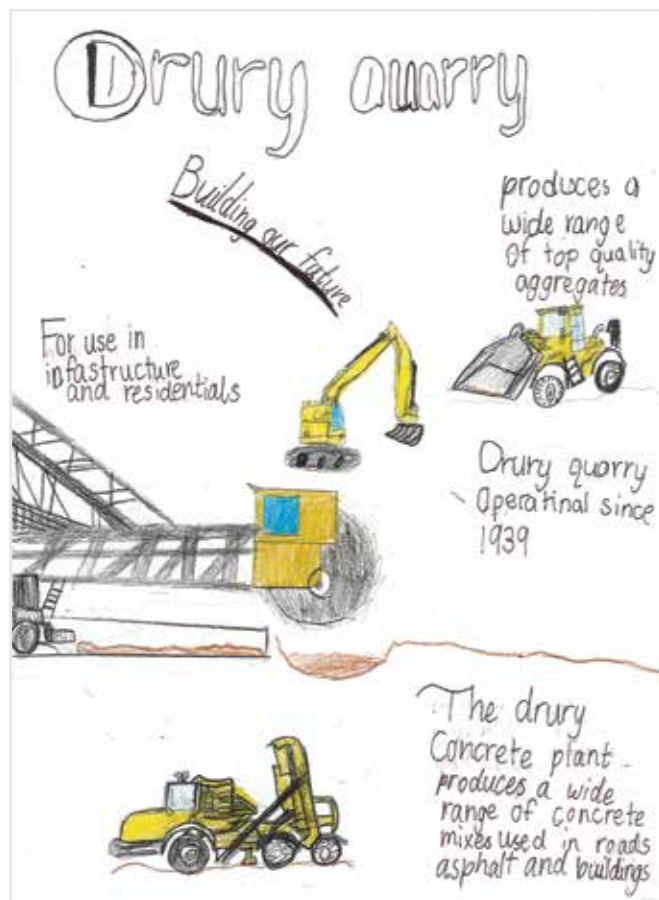
This resulted in winning entries for Rebecca Vaughan winning the Year eight category and Year seven winner Ruby Gray. Each won a \$100 prize and the school got \$2000. **AQA**



Rebecca Vaughan and Ruby Gray from Lee Stream School in Otago produced the winning Year 8 and 7 Rock our Future competition entries.



School entries on display at QuarryNZ 2022.



James Vaipan and Raiyan Shikder shared the Year 6 winning entry.



Lee Stream School pupils at Blackhead quarry.



An aerial view
of the Matawai
quarry.

Managing water at monsoonal Matawai

Matawai Quarry, 70 kilometres from Gisborne and almost half-way to Opotiki, receives monsoon-like rainfall.

The surrounding area gets a yearly rainfall of 2160mm, nearly twice that of Auckland. Daily falls can be up to 240mm and flooding events are not unknown.

The quarry produces 230,000 tonnes of aggregate a year and is the only supply of high quality M4 roadbase in the area.

When it came to planning recent upgrades to the quarry, there was a considerable focus on water management.

Sean McIntyre, East Coast manager for Fulton Hogan, says the quarry sits on top of a steep hill with one side dropping off onto a road parallel to the Motu River.

"This was the first New Zealand 'wild and scenic' river to win protection from a Water Conservation Order in 1984. It says the river should be preserved as far as possible in its natural state. The Motu River carries great weight within the local community both spiritually and recreationally.

"As such, the quarry is required to control and treat the water run off before it enters the Motu because the steepness of the hill and its large catchment area means it has the potential to transport a lot of sediment."

To protect the Motu River the quarry has installed a complex system of water treatment systems including four silt retention dams, two decanting systems and four flocculent sheds and dosing points.

"All of these have been over engineered to ensure that they deal with the high rainfall and will do so for many years to come" says Sean.

"This is a benchmark system for the industry in the region with the Matawai Quarry being the first to start using flocculent to help settle the water."

The area surrounding the water treatment systems has been planted in native bush instead of pine which comes at an

economic cost but provides environmental improvement for the native ecosystem. The surrounding region is mostly pine trees or farmland.

The quarry's 700 metre entrance way has been re-graded from an average of 1:6 to 1:8 and sealed with 100mm deep asphalt at seven metres wide. This provides easy access for road trucks which burns less diesel and decreases the sediment that water run-off can transport. The roading improvements include a widening of the entrance way to allow vehicles to safely pull off and onto the state highway.

In 2020, Matawai Quarry applied to renew the operational consents for a 35-year term with 24/7 operation. Fulton Hogan committed to establishing infrastructure that would service the quarry for this duration.

"The quarry could have chosen to go with the cheapest option but instead chose to invest into the future of the quarry and become industry leaders in the region as the benchmark," says Sean.

"The quarry didn't just do what was required to meet resource consent; we chose to do what is beneficial for the environment even if that cost more. The quarry understands that they operate as part of the community."

• *Matawai Quarry was one of the entries to this year's MIMICO Environment and Community Award and we are featuring one in each AQA publication. The 2022 MIMICO Award was won by Winstone Aggregates for its Environmental Product Declaration. Big thumbs up for both the win – and the donation of the \$3000 prize to KidsCan which provides food, shoes, jackets and basic health items to NZ children living in poverty. You too can make a donation here: www.kidscan.org.nz/.*

Paving the way to better pavement

AQA CEO Wayne Scott has been part of a steering group that will soon report on how best to address issues with state highway pavement performance.

Wayne is chairing a panel discussion at the Future Roads conference in Hamilton in early November that is likely to discuss some of the group's work.

It follows the need for repairs to newly-constructed state highway projects, notably parts of the Waikato Expressway and Mackay's to Peka Peka expressway, only months after construction. These repair costs were in excess of \$60 million on the Waikato surface and at least \$25 million on the Kapiti highway.

Waka Kotahi commissioned an independent review into performance issues with state highway construction. The Crossen report released in early 2020 made nine recommendations. The Transport Agency established a Steering Group to prioritise and implement the recommendations in collaboration with industry.

The Steering Group worked to bring together seven workstream reports. These covered:

- Technical Matters, chaired by Stacy Goldsworthy, Civil Contractors NZ;
- Whole of Life issues, chaired by Ross Peploe, Bartley Consultants;
- Procurement, Strategic Risks and Quality of Project Delivery workstreams, chaired by senior Waka Kotahi staff;
- Industry Capability, chaired by John Turnbull, HEB Construction; and Cross Industry Communications, which Wayne chaired.

He says the working groups had identified several responses to deliver on the Crossen report's recommendations.

The Steering Group will be seeking change across three areas



Pavement failure on the new Waikato Expressway helped lead to the pavements review.

to ensure the necessary improvements in pavement delivery:

- Knowledge base – access to complete technical information, specifications and standards;
- Our People – a well-trained, highly competent, and respected workforce;
- Industry collaboration – shared ownership of a successful pavement delivery system.

These responses will form the basis of an Implementation Plan that Waka Kotahi will lead.

Wayne says these are comprehensive responses and the roading construction industry will work closely with the Transport Agency to implement the recommendations.

"Like pavements, we need to fit together many individual parts to ensure high-quality roading outcomes. A series of required responses are called for across pavement design, quality assurance, training, procurement, project delivery and endurance."

Wayne says he's confident that when these changes are made, New Zealand will benefit from having the durable roads it needs for future prosperity.

"As Steering Group members, we are all keen to play our part to see our report implemented and progress measured against milestones to be agreed with Waka Kotahi."

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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AQA Technical update

Inspiring Futures Foundation

- The Inspiring Futures Foundation is the result of the MITO Charitable Trust's work.
- The Foundation provides financial support and educational advancement opportunities for those working and studying in the automotive, transport and logistics, drilling, mining and quarrying, and gas industries.
- Grants are available from the Inspiring Futures Foundation for advancing the education and training of those working and studying in our industries.
- Applications are open in September-October and March-April annually.
- For more information and to apply, visit www.inspiringfutures.nz/grants

Aggregate Production Data

- Last reminder for submitting your production data to NZPAM for 2021.
- Please contact AQA Technical Adviser Mike Chilton if you need assistance – tech@aqa.org.nz

Hi-Lab Production Specification

- The information note for Hi-Lab aggregate suppliers created by the AQA Technical Committee has not been published just yet.
- A new version of the Hi-Lab production specification (was expected at the end of August) may require it to be tweaked slightly.

Aggregates for Asphalt Information Note

- AQA Technical Committee chair Clare Dring was presenting on The Cost of Inconsistency at the Black Art – Sustainable Surfacing Conference in late August.

National Pavements Technical Group Members

- John Hallett from BECA, William Gray from WSP and Ross Peploe from Bartley Consultants have recently retired from the group.
- New members of the NPTG are Andrew Deakin from Bartley Consultants, Sarah Patrick from GHD and Riaan Theron from BECA.

Revised Quarry Regulations

- The changes to the quarry "MOQO" regs have been much publicised and came into effect in July.
- Quarries are now required to have a documented Health and Safety Management System (HSMS) and report incidents under Schedule 5 and quarterly reports under Schedule 8.
- If you would like guidance around these changes, please refer to www.worksafe.govt.nz/moqoregchanges or contact AQA or MinEx. **AQA**

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