



Peter Walsh.

Very concerning approach to wetland management

Is a wetland simply a piece of land that gets wet occasionally and includes a few wetland plants? That appears to be the definition being imposed by the new National Environmental Standards for Freshwater Regulations.

Particularly contentious is Regulation 53 which prohibits any earthworks on "natural wetlands" as you'll see in our story on page 38. Our industry respects the environment and wants to find workable ways to protect it, with an emphasis on a flexible approach that allows for suitable mitigation solutions, providing acceptable ecological outcomes while allowing quarries to deliver products required for our economic future.

If you asked me to define 'natural wetlands' I'd say it needs to have more characteristics that can be interpreted as a small piece of land which might sometimes get wet and contain a few wetland plants. Regulations and the definitions used therein, need to be clear, giving the extraction industry greater certainty rather than leaving us to argue interpretations on a case by case basis with ecologists. Yet that's what the Ministry for the Environment is allowing in its regulations, which have a much more restrictive interpretation than that in the RMA.

MfE's view seems to be with NZ having lost over 90 percent of our original wetlands and the percentage continuing to increase, those that remain have to be protected – at all costs.

The RMA provides for off-setting and other mitigations which can deliver enhanced and increased environmental outcomes. New Zealand needs that sort of balanced approach, particularly as it

often enables quarries to come up with solutions that can result in net ecological gains.

Quarries occupy a very small portion of our country. Last year, Winstone Aggregates Meremere quarry manager Kerry Reilly won the international Caernarfon award for his design and construction over many years of a wetland to provide natural filtration of runoff from the quarry to protect the adjacent Whangamarino Heritage Wetland. At 7200 hectares, it's the second largest swamp / wetland in the North Island and has world heritage status.

Of course, to support and protect Whangamarino, Kerry had to do earthworks. More recently, he's gone out on his own to work with quarries, including developing engineered wetlands.

I trust post-election, whichever party is in Government, will ask the officials to re-look at the regulations, particularly Reg 53. If it stands, it will simply compound the problems to be faced getting sufficient aggregate to support the infrastructure projects being proposed by all major parties, projects which are supposed to help drive us out of the looming Covid-19's economic downturn.

Our QuarryNZ conference has already been a casualty of the pandemic and at time of writing it was unclear whether the Minerals Forum will proceed in person in October. Whether it remains a physical gathering or one held virtually, the contribution from Australian health and safety guru Michael Quinlan will be worth watching. A preview of his observations can be seen on page 37.

Elsewhere in this Aggregate News, there's the remarkable story about how some hardy Kiwis went to Antarctica to do the first serious quarrying ever seen on the world's fifth-largest continent.

As always, AQA's Technical Adviser Mike Chilton brings us up to date with all the latest on M/4 specifications, recycled aggregate and other issues that we as an industry need to stay up with, alongside all the other regulations and developments the AQA covers.

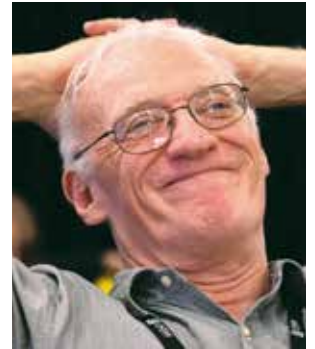
Lastly, and importantly, there's an obituary recording the passing of one of the quarrying industry's larger than life characters, Russell Vickers. Our sympathies to his family and colleagues for the loss of this man who built his Taranaki business over 60 years into one of the region's major players. Russell will be sorely missed at the annual conferences, where his generosity with corsages was always appreciated by the ladies, and his humour by all.

**Peter Walsh, Chair
Aggregate and Quarry Association**



Learn from your near misses to avoid fatalities

A leading Australian health and safety expert who was part of the Pike River inquiry says contract labour was a factor in the disaster and such a multiple fatality could happen in Australia.



Prof. Michael Quinlan.

In August, Prof. Michael Quinlan submitted a report and gave evidence to the Queensland Board of Inquiry into how five workers were seriously injured by a methane explosion at a coal mine.

Prof. Quinlan noted subcontracting had contributed to a number of disasters in high-hazard workplaces and the subcontracting of security services as part of the hotel quarantining of overseas returnees was also the source of Melbourne's deadly second-round outbreak of Covid-19.

"Another example of sub-contracting."

Prof. Quinlan is Director of the Industrial Relations Research Centre at NSW University, focusing on occupational health and safety and risks.

He's a speaker at the NZ Minerals Forum, scheduled for Hamilton in October. His presentation will be based on his book "10 Pathways to Death and Disaster" which learns from fatalities and is used in industry training in Australia.

Michael Quinlan's work has included inquiries, investigations and audits for governments in Australia and New Zealand including the Pike River inquiry.

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In his report for the Queensland inquiry, Michael Quinlan says health and safety risks increase with contracted labour and states that was evident at Pike River – and things haven't really changed in Australia to avoid such a disaster.

"Workplace fatalities and disasters entail multiple causes and may not occur immediately after risk factors change. Nonetheless, contract labour was seen to contribute to the Pike River coalmine disaster and a more significantly related incident could just be a matter of time," he told the Queensland inquiry.

Prof. Quinlan recommends labour hire organisations, major contractors and extractive site operators be required to keep detailed documentation on how health and safety risks are managed, with annual independent audits and a strengthened inspectorate giving industry specific guidance on what standards are expected.

His work for the Queensland inquiry follows on from the Brady report which tracked how fatalities fall after a fatality or sequence of them, then re-occur. Dr Sean Brady also found the State's serious injury rate in quarries is three times that for the extractive sector as a whole.

Michael Quinlan says the quarrying industry in some Australian states may have something to learn from recent New Zealand initiatives. He serves on the Extractive Industry Advisory Group run by WorkSafe and says post-Pike River we have embraced new health and safety legislation, supported by dedicated extractives inspectors – which isn't the case in all Australian states.

"You are probably a bit ahead of us."

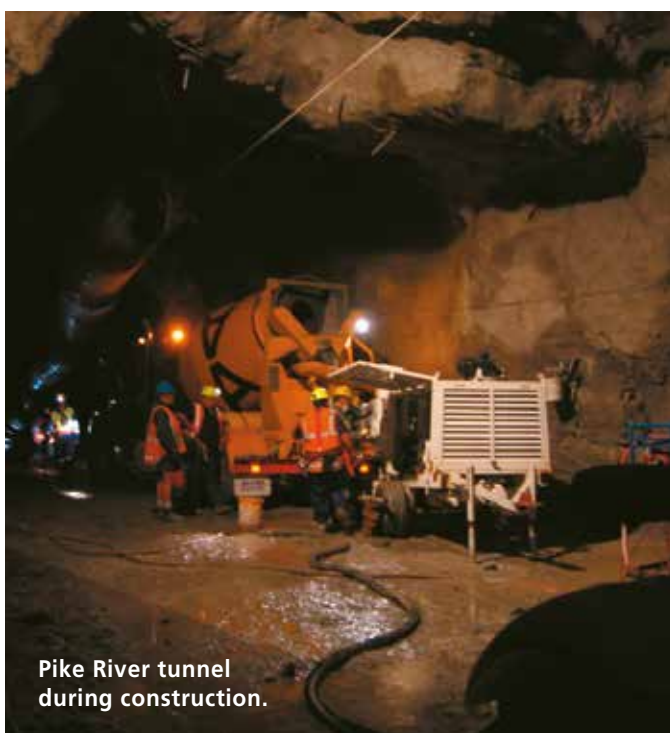
New Zealand also does not use contract labour to the same extent as Australia. He says high potential incidents are the best predictor of a major event.

"Very few fatal events occur without a warning signal."

He commends MinEx which encourages companies to report near misses to its staff so it can publicise these and help others avoid what may become serious injuries or fatalities.

Prof. Quinlan also notes the Brady report's observations that after a lull in fatalities, there is always an uptick.

"You must stay vigilant and have systems and controls in place that ensure that when any incident occurs, you take action to ensure it can never happen again." **AQA**

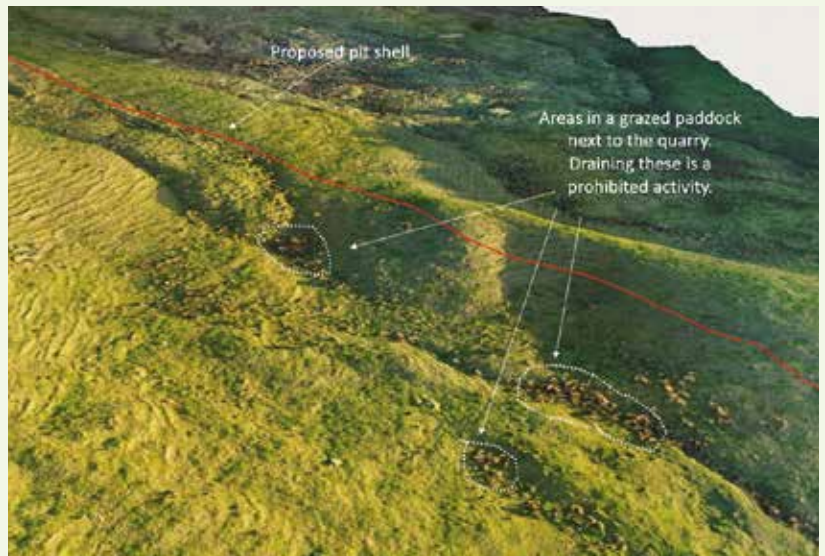


Pike River tunnel during construction.



Wayne Scott.

Blanket ban on wetland development will close sites



This is part of 'natural wetland' showing the broad reach of the new wetland definition which bans any wet land being disturbed even if it's ephemeral and within previously grazed grasslands. This is but one example of the sorts of 'wetlands' which will be prohibited under Reg 53.

New freshwater regulations will see quarrying and mining operations close if no changes are made, the Aggregate and Quarry Association has warned the Government.

The AQA and Straterra chose to address a late August letter to Environment Minister David Parker and Finance Minister Grant Robertson, warning of major economic disruption and job losses if Regulation 53 of the National Environmental Standards for Freshwater Regulations 2020 remains in place.

AQA CEO Wayne Scott says Regulation 53 essentially prohibits earthworks on "natural wetlands" – the definition of which is extremely broad.

"This will have a major impact on the extractives sector and other industries with activities involving earthworks. Reg 53 will result in premature closure of some quarries and mines where there are natural wetlands and prevent development of new mines and quarries in many areas of New Zealand."

He says an immediate example is OceanaGold's application to the Otago regional and Waitaki district councils for resource consents to continue mining at the Macraes operations.

"This Deepdell project will impact wetlands that ecologists assessed as natural. Luckily it escapes the new regulations by being lodged before they came into force on September 3. Around 500 jobs and annual export revenue of around NZ\$600 million would otherwise have been at stake.

Wayne Scott says it's possible the wording of Reg 53 is an oversight and not intended to prevent mining and quarrying.

"But that won't stop it preventing any quarrying or mining activity on land that can get wet."

He says the AQA/Straterra letter to Ministers Parker and Robertson was cc-ed to the Prime Minister and Resources Minister

Megan Woods as well as Federated Farmers and Business NZ.

The AQA continues to engage with Ministry for Environment officials to explain industry concerns over what we see as unintended consequences of the NES Fresh Water Management. At the centre of the problem is the uncertain definition of "natural wetlands" and how territorial authorities will interpret what are, at best, "highly interpretive" regulations.

Wayne Scott says the solution is to regulate activities in relation to natural wetlands as 'non-complying' or 'discretionary' rather than 'prohibited' activities.

"A non-complying status was in the draft regulations we were consulted on. It allowed a resource consent to be applied for on natural wetlands but set at a very high bar. Applicants would have to prove they could avoid, remedy, mitigate, offset or compensate adequately for the environmental effects of earthworks."

"Instead a blanket ban has emerged on operations that both contribute greatly to the economy and are able to be carried out with minimal net environmental impact."

He says Straterra has legal advice that there are strong grounds for judicial review of the regulations, based on mistake of fact, mistake of process and unreasonable decisions made.

"We've been offered the chance to talk to Ministry for Environment officials but we are likely going to court alongside Straterra to seek an urgent amendment to Reg 53, to enable responsible mining and quarrying to continue in areas of natural wetlands," says Wayne Scott. **AQA**



Russell Vickers hosts New Plymouth schoolchildren last year with granddaughter Georgie and sons Noddy and Kevin.

Industry loses a legend

Tributes continue to flow in for Russell Vickers, one of the quarry industry's legendary figures, who passed away in August just short of his 85th birthday after a long battle with leukaemia.

Vickers Quarries was started by Russell in Stratford in 1958. As the company celebrated its jubilee in 2009 he told his local newspaper he hadn't dreamed the business would still be going strong and supporting a wider community five decades down the track (now six decades plus).

The Stratford Press reported the business began on the family's Radnor Road farm, when they discovered a good supply of metal and a local need for it.

When the home site started to run out, Russell found the perfect site in Toko and later the York Rd site, established 20 years ago. Both sites sit under the shadow of Mt Taranaki.

Russell told the Stratford Press his dream of running a successful land-based business was only made possible because of his late wife Marie. "In the early days she would stay at home, run the farm and milk the cows, while I was away playing with my big toys."

Russell's devotion to Marie saw him establish a floral fund to provide corsages for wives and partners worn at the annual QuarryNZ Conference awards dinner.

AQA CEO Wayne Scott says Russell will be remembered for a much wider contribution to the quarrying industry.

"Russell was supportive all the way. When we launched the Rock our Future competition last year for school children to do a quarry project, Russell's sons Kevin and Noddy, who now operate the business, were the first to offer to host a visit."

As always Russell was on hand with his sons and

granddaughters Georgie and Harper to show two busloads of pupils from New Plymouth's Fitzroy School around the York Rd site.

Matt Webster, Chair IOQNZ Central Districts says Russell joined the IOQ in 1982 and attended every annual conference until 2016. He was President from 2001-2003 and received several accolades including being made an Honorary Fellow in 2006.

"I was lucky enough to visit him at his home on the side of Mt Taranaki where his passion for history and his beloved quarry industry are probably most stark, driving up his driveway alone was a journey into the world of global geology," recalls Matt. "Once he was engaged, Russell's enthusiasm often spilled into hours of discussion, tours and cups of tea, as he was so eager to pass on his knowledge."

Russell had told the Stratford Press in 2009 that he liked to do things the old way, and that is certainly the way Kevin and Noddy run the business today. "We base everything on trust and a handshake. I work face to face or by the phone, no mucking around" was the way Russell explained it.

Some clients had been with him for over 40 years and had become good friends. Sadly, Russell's passing during the second round of Covid-19 meant his funeral was only able to be attended by family. However, a memorial service is planned when restrictions ease and more than 100 people are able to gather and farewell him. **AQA**

Do you want ice with that?

You might think any American quarry operation would mean all the latest equipment but Gavin Hartley felt it was like stepping back a century when he saw what was being used in one US quarry; mind you it was in Antarctica.

Gavin, who manages Blackhead Quarry near Dunedin was part of a Fulton Hogan advance crew which went to the frozen continent to do a recce for a project to produce 50,000m³ of AP65 for the foundations for six new buildings that will replace the sprawling, aging cluster at McMurdo Station.

His qualifications as a geologist and experience with drilling and blasting saw him selected for the chance of a lifetime.

After various medicals and survival training, Gavin flew down from the US Antarctic base in Christchurch last October.

McMurdo Station has a population of 1200 people at its peak, compared to around 100 at New Zealand's nearby Scott Base.

Metso equipment had already been transported to the ice by an American contractor, the first quarrying equipment to ever go to Antarctica and able to produce any size aggregate the project requires.

Until its arrival, to produce the few hundred tonnes a year needed for road maintenance or drainage, a D8 bulldozer simply pushed broken basalt rock over static grizzlies; it could only push around 200mm in depth as anything below that was permanently frozen.

"It was like walking back into the 1800s," says Gavin.

"The entire base knew about us coming to site to help out with the aggregate production. Everybody without exception was friendly and extremely helpful. There is a real small community feel to the base."

Craig Upston who manages Blackhead Quarries Balclutha got chosen for the project to produce the aggregate on the basis



Gavin Hartley at Scott Base.

that he operated precisely the same Metso equipment. He went down to McMurdo in February for three weeks. While daytime temperatures were as warm as -5 or -10, this could drop to nearly -40 when the wind came up, as happened frequently.

"We spent a lot of time sitting in the diggers and loaders," he says.

In good weather you could walk to Scott Base about 1-2 km away in 24-hour daylight.

At McMurdo, both Craig and Gavin were able to visit the hut used by Scott as the base for his ill-fated expedition early last century. Inside there are still sheep carcasses hanging on the wall and intact onions and dog biscuits.

"There are no bugs down there – that and the cold, means nothing breaks down" says Craig.

Craig says the temperature inside Scott's hut was literally freezing and doubts the fires used – burning seal blubber – would have made a huge difference. "They must have been bloody tough buggers."

Visiting Sir Edmund Hillary's hut from his 1950's expedition was also a highlight for both men. The other stark reminder of home is Mt Erebus, site of the Air New Zealand disaster in 1979, which can be seen on clear days from both McMurdo and Scott bases.

A phase two aggregate production project is now left uncertain with Covid-19 but given the chance both Gavin and Craig would jump at the opportunity to return to Antarctica. **AQA**

AQA works for the quarry industry – join us today

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Technical Report

M/4 Spec 2020

- No progress on M/4 this month. Waiting on a new lead pavements advisor to be appointed at NZTA to continue the project.
- AQA is working on a straw man M/4 specification for comments and incorporating the work done so far on statistical acceptance.

MBIE

- MBIE is looking through NZS 4402 on soil testing as a potential standard to be updated as part of its maintenance of the Building Code. This could involve including the shear vane test and standardising the vibrating hammer.
- MBIE is collating the minerals-based research projects. AQA's Technical Committee is drafting a potential research item on densely graded basecourse versus open graded basecourse, as well as continuing to support the GNS Science aggregate work.
- The aggregate production survey is still live on NZPAM's website so please put in your returns for 2019 if you haven't done so already.

MITO Reform of Vocational Education

- Quarrying has been included in the Manufacturing, Engineering, Logistics and Technology (MELT) Workforce Development Council (WDC).
- MITO Board Chair Andrew Clearwater has been appointed to the Interim Establishment Board (IEB). The IEB will set up the WDC by the end of 2020.
- Normally industry working groups would be set up to form the WDC but the Tertiary Education Commission (TEC) realised industry's capacity and headspace to focus on this is now limited. AQA is still involved through Andrew's appointment.

Recycled Aggregates

- AQA provided briefing notes to officials on the options for recycling waste materials into aggregate in NZ, covering nine existing and potential waste streams.
- We are still working on the recycled aggregates guide for NZ.

General

- Greater Wellington Regional Council has set up a working group for river gravel extraction in the Wairarapa as gravel takes need to be significantly reduced. AQA has been supporting members and providing information to GWRC.
- After the work that Fulton Hogan performed on comparing an aggregate's Sand Grading Exponent to its Repeated Load Triaxial Test result, AQA is working through a potential "stage 2" of that investigation. The project will be written up next month. **AQA**