

# Silicosis lung disease: Dangerous, dusty conditions found at engineered stone workshops, damning Ministry of Health-ordered report reveals

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Nurses visiting engineered stone workshops discovered dangerous conditions including dust on floors and surfaces, which when breathed in can cause deadly disease.

Engineered stone is a man-made product that dominates the kitchen and bench-top market. There is [growing awareness](#) that prolonged inhalation of its dust can cause silicosis, an incurable and sometimes fatal disease that scars the lungs.

Absorbed dust can cause other diseases, including cancer.

To see how more stonemasons could be tested, the government funded a pilot study, in which occupational health nurses visited workshops.

An evaluation report was done for the Ministry of Health, and has been obtained by the *Herald* under the Official Information Act.

It delivered a highly critical verdict of how New Zealand agencies responded once the danger from engineered stone dust became clear, and highlighted ongoing gaps in regulation.

The same systemic failures puts workers in other industries at unacceptable risk, warned the report, written by occupational health nursing experts.

“We have the expertise and right people, but our systems are not always fit for purpose. The end result is that workers are being missed and bear the brunt of the health risks because they work in the front line with significant exposure,” it stated.

“We urgently need a national occupational health surveillance service and strategy that is parallel to the health system, to preserve the human right of safe and healthy work.”

Tradies overseas have died horrible deaths from accelerated silicosis, and others - including New Zealand workers - are disabled by severe shortness of breath.

Other common symptoms, which don't appear until after disease develops, include a persistent cough, fatigue and weight loss.

Silica is found in stone, rock, sand, clay and many building materials, but dust from engineered stone is more dangerous, because the products have contained up to 95 per cent silica, compared to 2 to 50 per cent in natural stones.

Workers should be protected by strict safety measures, including cutting the stone only when it is wet, to stop dust being created, powerful ventilation systems, and top-line masks.

In 2018 a "dust diseases taskforce" was formed, bringing together clinicians and WorkSafe, ACC and the Ministry of Health. It recommended funding occupational health experts to visit workplaces, to talk to, enrol and assess workers, book off-site tests and assessments, and follow workers over time.

That approach ultimately wasn't followed. Instead, the model relies on WorkSafe educating employers, and asking anyone concerned about dust exposure to get their GP to lodge an application with ACC for possible assessment through an official "pathway".

Takeup has been low - 190 people have lodged claims for assessment, with four accepted for probable accelerated silicosis, and others covered for conditions including chronic silicosis.

(One expert estimates around 1000 current and former stonemasons are at risk).

The pilot programme involved senior occupational health nurses visiting five companies in Auckland and Wellington that had been recruited by WorkSafe inspectors, with 20 workers signing up for assessment since January this year.

Some of the unnamed businesses that volunteered to take part were accredited through an industry-led programme that specifies minimum safety guidelines including wet-cutting of stone with appropriate PPE and dust-extraction systems.

The nurses reported "evidence of a significant amount of dust", the report stated. Dry-cutting was happening in a worksite that had been "gold" accredited, with "visible dust present on surfaces in all areas of the workshop".

Inadequate disposable masks were used at another site. One was observed to have changed from white to grey in colour, because of repeated use. Other workers went maskless when wet-cutting the stone.

There were also good safety-measures observed, but the shortfalls were significant because "any exposure is bad for health ... the problem with respirable crystalline silica (RCS) exposure is that there must be rigorous separation of dust from humans, and the margin of error is tiny, measurable in micrograms".

Conditions are likely to be problematic at companies that didn't volunteer to be part of the pilot programme, the evaluation report noted: "What we are missing ... are the worst-performing engineered stone workplaces that are carrying out high risk practices without anyone knowing the health effects.

"There are currently no drivers that compel them to test their workers ... worker health exposure information currently stays within the business or with the worker."

The report recommended a national occupational health surveillance system, including a registry of hazardous materials, places where these are used, with workers referred to occupational health services, and data held centrally.

Paying and getting time off work for GP visits was off-putting to engineered stone workers, the report found, and getting ACC to confirm cover for follow-up testing including chest x-rays could be difficult and time-consuming.

"The workers often did not receive any communication or notice from their GP to undertake the tests. In other cases, the GP asked them to come for an appointment but was then unable to determine which tests were required," the report stated.

"Occupational health nurses had to rely on worker reports for this communication because we were not able to obtain information from ACC on behalf of the worker, and the worker did not have the knowledge to ask ACC the right questions.

"Workers verbalised that they were struggling to find their own way through the [accelerated silicosis assessment pathway], and this was leading to anxiety, distress, frustration and time delays."

The ministry is unhappy with the report. It says it unsuccessfully sought unspecified revisions "to address concerns regarding standard reporting conventions around project scope, objectivity and levels of evidence provided to support findings".

"The report does not follow the usual convention of seeking a response from the agencies, groups, businesses and people it critiques," the ministry stated.

"Our view is the report goes beyond the scope of the brief commissioned ... agencies involved continue to assess the report and its findings, but at this stage no next steps have been agreed to regarding the report or its findings."

Australia could soon become the first country to ban engineered stone. A decision by state and federal governments was due last week, but has been delayed.

Engineered stone manufacturers and suppliers, including in New Zealand, have moved towards [providing only products that have less than 40 per cent crystalline silica](#), and argue that step and more education and monitoring of safety measures can protect stonemasons.

Major manufacturer [Caesarstone](#) has launched a lobbying and advertising campaign in Australia, warning a total ban is "unnecessary" and "excessive".

However, the Safe Work Australia government agency [recommends a total ban](#), concluding, “there is no toxicological evidence of a ‘safe’ threshold of crystalline silica content, or that the other components of lower silica engineered stone products (e.g. amorphous silica including recycled glass, feldspar) do not pose additional risks to worker health”.

In New Zealand, the Ministry of Business, Innovation and Employment and WorkSafe will report to the new Workplace Relations and Safety minister on regulatory options here by the end of this month.

Occupational health nurse researcher Heidi Börner co-authored the evaluation of the pilot programme, and told the *Herald* change is badly needed.

“This goes much wider than just engineered stone. We have got people exposed to dust, chemicals, and all sorts of substances - and not just workers, but the public as well - and a lot of those people are at risk.

“And our frameworks don’t pick that up, at the moment.”