

INQUIRY INTO 2019 REVIEW OF THE DUST DISEASES SCHEME

Organisation: Maurice Blackburn Lawyers

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The Secretary
Legislative Council Standing Committee on Law and Justice
Parliament of New South Wales

By email: law@parliament.nsw.gov.au

Dear Sir/Madam,

We welcome the opportunity to provide feedback in relation to the 2019 review of the Dust Diseases scheme.

Please do not hesitate to contact me and my colleagues Timothy McGinley and Ronny

if we can further assist with the Working Group's
important work.

Yours faithfully,

Dimitra Dubrow
Principal Lawyer
MAURICE BLACKBURN





**Maurice
Blackburn**
Lawyers
Since 1919

**Submission in Response
to the 2019 review of the
Dust Diseases scheme**

(August 2019)

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Introduction

Maurice Blackburn Pty Ltd is a plaintiff law firm with 32 permanent offices and 31 visiting offices throughout all mainland States and Territories. The firm specialises in personal injuries, medical negligence, employment and industrial law, dust diseases, superannuation (particularly total and permanent disability claims), negligent financial and other advice, and consumer and commercial class actions.

Maurice Blackburn employs over 1000 staff, including approximately 330 lawyers who provide advice and assistance to thousands of clients each year. The advice services are often provided free of charge as it is firm policy in many areas to give the first consultation for free. The firm also has a substantial social justice practice.

Our Submission

Maurice Blackburn welcomes the opportunity to contribute to this important and timely review.

We note that the current inquiry is drawn from the outcomes of the 2018 review of the NSW Dust Diseases Scheme.¹ Paragraph 2.31 of the report from that Review reads as follows:

The committee proposes that in the new Parliament the Law and Justice Committee review the Dust Diseases Scheme with a focus on the issue of silica and silicosis, particularly in the manufactured stone industry, closely considering safe handling methods, exposure levels as well as from an education and prevention perspective and ensuring there is effective screening and diagnosis. (p. 19)

To this end, we have structured our response under four main headings:

Silicosis in the Artificial Stone Industry – we provide some historical context to workplace culture in relation to silicosis, and how, in our experience, the current crisis in the diagnosis of silicosis differs from the historical experience of asbestos related diseases.

The Increased Costs Associated with Silicosis – we note that there is likely to be an increase in claims related to silicosis, and the importance of ensuring that the Dust Diseases Authority is adequately resourced to cope with this influx. We also note the current gaps in coverage, where injured workers may be left significantly out of pocket.

Safe Handling and Exposure Limits – we discuss the efficacy of current limits across Australian jurisdiction and internationally. We believe that Australia is ranking behind other developed nations in the limits we set on exposure to crystalline silica. We also note that NSW is lagging behind other States in their requirements in relation to risk mitigation.

The Need for Effective Screening and Early Diagnosis – we explore the importance of learning from international and interstate models relating to screening, and the difference that consistent data collection can make in the lives of workers.

Our comments and recommendations are drawn directly from our experiences in working with those impacted by these dreadful, yet preventable diseases.

¹ <https://www.parliament.nsw.gov.au/lcdocs/inquiries/2512/Final%20Report%20-%202018%20review%20of%20the%20Dust%20Diseases%20Scheme%20version%202.pdf>

It is their stories, and their experiences with 'the system' that drive our push for a better, more compassionate approach to improving the lives of these workers.

We present our recommendations in the spirit of process improvement, and would welcome the opportunity to discuss our experiences and expertise with the Committee.

Silicosis in the Artificial Stone Industry – Not the New Asbestos

Silicosis is one of the oldest recognised and studied occupational diseases in Australia. In NSW exposure limits and regulation of high-risk industries has occurred since the 1920s, and to great effect.

Traditionally, a vast majority of workers diagnosed with silicosis in NSW worked in the following industries:²

- Mining and quarrying;
- Excavation and tunneling;
- Brickworks;
- Stonemasonry; and
- Foundries.

Improvements in occupational health and hygiene, as well as the decline in the size of these industrial sectors meant that rates of silicosis plummeted throughout the second half of the twentieth century.

The Dust Diseases Authority documented over 800 cases of silicosis caused by occupational exposure to silica in NSW during the 1920s and 1930s. However, only a few decades on, fewer than 150 cases were attributed to occupational exposure in the 1960s and 1970s.

By 1993, the National Occupational Health and Safety Commission estimated there were fewer than 30 new cases of silicosis being diagnosed in Australia each year.³

This downward trend in new cases of silicosis suggested that the disease could eventually be eliminated as a workplace hazard in NSW. Accordingly, many were alarmed in 2018 when an audit by WorkCover Queensland uncovered a hidden epidemic of silicosis in the state's stonemasonry industry. As of May 2019, the audit had identified 100 new cases of silicosis in Queensland, at least 16 of which were deemed to be terminal.

The recent spike in cases of silicosis in Australia appears to be linked to the growth in popularity of artificial stone products (also known as 'synthetic' or 'engineered stone').

Artificial stone is composite material which was introduced to the Australian market place in the early 2000s. Since then, it has become the most popular material used to manufacture kitchen and bathroom benchtops, displacing traditional materials such as granite, marble, and timber.

Artificial stone poses a risk to health when it is cut, drilled, polished, or undergoes any process that generates airborne dust. For this reason, the biggest threat is posed to the factory workers who manufacture the product, the stonemasons who install it, as well as any others working in their vicinities.

Maurice Blackburn submits that artificial stone represents a bigger hazard to health than traditional products for two main reasons.

² Rogers A et al, 'Silicosis in New South Wales: An Historical Review of Occupational-Industry Sources With Application to Contemporary Australian Industry', pp. 3-4.

³ National Occupational Health and Safety Commission estimated there were fewer than 30 new cases of silicosis being diagnosed in Australia each year.

Firstly, the sheer amount of crystalline silica contained in artificial stone eclipses traditional products. Whereas marble and granite typically contain about 5 and 30 per cent crystalline silica respectively, artificial stone products generally contain more than 90% crystalline silica.⁴

Secondly, cutting artificial stone creates much more respirable silica dust than traditional products. Artificial stone is manufactured by finely grinding quartz, and then suspending it in a resin. When artificial stone is cut, the finely ground quartz easily becomes airborne, where it can be inhaled by workers.

Of particular concern is that many workers in who have developed silicosis as a result of exposure to artificial stone have developed a rarer and more severe subset of the disease known as 'Accelerated Silicosis'.

Research suggests that Accelerated Silicosis differs from the more typical forms of silicosis in 3 main ways.

Firstly, the duration of occupational exposure to artificial stone products in cases of Accelerated Silicosis are often significantly shorter than traditional silicosis. An overwhelming majority of cases of silicosis diagnosed in NSW have been associated with periods of occupational exposure to silica in excess of 20 years.⁵

In contrast, workers are developing Accelerated Silicosis with less than 10 years of exposure to artificial stone products, with cases reported of as little as 4 years of exposure.⁶ This may be a result of artificial stone products causing a higher level of exposure to crystalline silica in a shorter period of time.⁷

Secondly, Accelerated Silicosis has a shorter latency period, meaning workers are being diagnosed at a younger age. Traditionally workers who contracted silicosis did not develop significant disability for 20 to 30 years following their exposure to silica.⁸ This meant that many workers did not develop a disabling disease until late in their working lives, or often when they were already in retirement.

In contrast, workers in the artificial stone industry who develop Accelerated Silicosis on average tend to be in their 40s, although there have been many cases of workers diagnosed in their 20s and 30s.⁹

Finally, Accelerated Silicosis tends to progress faster than other forms of silicosis, leading to a poorer prognosis. Traditional forms of silicosis tend to progress very slowly over many years. In some, cases there can be no discernable progression for years. This meant that most cases of silicosis were not immediately fatal, with many patients living for years with only moderate impairment.

⁴ Ophir N et al, 'Artificial stone dust-induced functional and inflammatory abnormalities in exposed workers monitored quantitatively by biometrics' *ERJ Open Research* (2016);2:86–201

⁵ Rogers A et al, 'Silicosis in New South Wales: An Historical Review of Occupational-Industry Sources With Application to Contemporary Australian Industry', p. 4.

⁶ Hoy R F et al, 'Artificial stone-associated silicosis: a rapidly emerging occupational lung disease', *Occupational and Environmental Medicine* (2018);75:3-5

⁷ Leso V et al, 'Artificial Stone Associated Silicosis: A Systematic Review', *International Journal of Environmental Research and Public Health*, (2019) 16(4):568

⁸ Rogers A et al, 'Silicosis in New South Wales: An Historical Review of Occupational-Industry Sources With Application to Contemporary Australian Industry', pp. 3-4.

⁹ Hoy R F et al, 'Artificial stone-associated silicosis: a rapidly emerging occupational lung disease', *Occupational and Environmental Medicine* (2018);75:3-5

Accelerated Silicosis on the other hand, as the name suggests, tends to progress more quickly, with some cases showing severe progression of disability in just a couple of years.¹⁰

It has been tempting for some to dub silica the “new asbestos”. However this comparison is flawed, as it fails to recognise the unique challenges silicosis (and in particular Accelerated Silicosis in the artificial stone industry) poses to workers and regulators.

The Increased Costs Associated with Silicosis

In recent decades, a vast majority of workers who have been paid compensation by the Dust Diseases Board of New South Wales have suffered from asbestos-related diseases, specifically malignant pleural mesothelioma.

Mesothelioma is a rare cancer caused by inhalation of asbestos fibres, on average does not develop until 30 to 50 years after a person was exposed to asbestos. As a result, 79 per cent of persons diagnosed with mesothelioma in Australia are over the age of 65, and are usually retired.¹¹

Mesothelioma is almost always terminal, with an average life expectancy of 8 to 14 months.¹² There is no cure, and so treatment tends to be limited to palliative care. Even then, the amount of treatment that a person diagnosed with mesothelioma requires tends to be limited to months.

Under the *Workers' Compensation (Dust Diseases) Act 1942* (NSW), workers who suffer from compensable conditions have been eligible to receive benefits from the Dust Diseases Authority of NSW, including:

- Payment of their medical and pharmaceutical expenses;
- Provision of equipment and physical aides; and
- Provision of in-home domestic assistance and nursing care.

Workers' eligibility to have their medical and pharmaceutical expenses paid for by the Authority has been significant because it has included the ability for workers to claim for treatments and procedures not currently covered under Medicare or the Pharmaceutical Benefits Scheme. However because there are no effective treatments for conditions such as mesothelioma, medical benefits claimed by workers suffering from mesothelioma have traditionally been limited both in type and duration.

Similarly the period over which workers diagnosed with mesothelioma have required the provision of in home domestic services and nursing care has tended to be limited by the relatively short life expectancy associated with the disease.

This is one of the ways that silicosis poses different problems to those posed by asbestos-related diseases. An influx of cases of silicosis has the potential to put a heavy strain on the funding and resources of the Dust Diseases Authority of NSW.

¹⁰ Hoy R F et al, 'Artificial stone-associated silicosis: a rapidly emerging occupational lung disease', *Occupational and Environmental Medicine* (2018);75:3-5

¹¹ Safe Work Australia, 'Mesothelioma in Australia: Incidence 1982 to 2008, Mortality 1997 to 2007' (2012), Canberra: Safe Work Australia.

¹² Moore, Alastair J, Robert J Parker, and John Wiggins. "Malignant Mesothelioma." *Orphanet Journal of Rare Diseases* 3 (2008): 34. PMC. Web. 5 Jan. 2017

The prognosis for a person diagnosed with silicosis will depend upon the progression of the disease. Classical forms of silicosis tend to progress slower, however even cases of Accelerated Silicosis tend to have life expectancies measured in years. Regardless of whether a sufferer's condition is terminal or not, silicosis often causes severe disability, meaning that those diagnosed are often unable to work, and may require years of ongoing medical treatment and nursing care.

The entitlement of workers to be able to claim medical expenses from the Dust Diseases Authority of NSW may allow workers to access life-saving treatments that may not otherwise been available to them. An example for this is the option for last-stage silicosis sufferers to receive a lung transplant, a radical procedure sometimes used to treat late-stage terminal silicosis. The procedure has an average price tag of \$134,000.00 in NSW¹³ not including the cost of the ongoing medications and care the patient requires after the surgery, which is also significant.

In our experience, one of the criteria the transplant team considers when determining a patient's eligibility for the disease is whether the patient has the financial means to afford the life-long medications, therapies, and care the patient will require to keep the transplanted lung viable.

Future treatments for silicosis may include new anti-fibrotic drugs which aim to slow or halt the progression of pulmonary fibrosis. Many of these drugs may not initially be covered by the Pharmaceutical Benefits Scheme. Accordingly workers who wish to access the drugs may be required to pay out-of-pocket. The cost assisted with these drugs is likely to be significant and ongoing.

The challenge for the Dust Disease Authority of NSW into the future is therefore the potential cost impacts associated with a large number of injured workers whose medical, pharmaceutical, and nursing costs will be significantly larger than historical comparisons.

Recommendation #1:

That the Committee satisfy itself that the Dust Diseases Authority of NSW has adequate funding and resources to meet the needs of workers, should an influx of cases of silicosis occur in NSW.

Recommendation #2:

That the Authority should abolish any current caps on the total amounts of medical expenses that workers can claim, as these caps are not reflective of the particular needs of workers presently being diagnosed with silicosis.

Safe Handling and Exposure Limits

Another reason why the current epidemic of silicosis should be distinguished from the challenges traditionally posed by asbestos-related diseases is that, whilst Australia was successful in implementing a blanket ban on asbestos in 2003, we are not likely to ever ban the use of crystalline silica.

¹³ Figure provided by the New South Wales Department of Health.

Silica is found everywhere modern society, from the concrete that holds together our skyscrapers to the microchips which power our smartphones.

Accordingly, rather than an outright ban, prevention of silicosis will have to be achieved by employing and enforcing stringent occupation health and safety standards in the workplace to protect workers from exposure to silica.

Despite this it appears the current regulatory framework and hygiene standards relating to crystalline silica may be insufficient to protect against the current wave of silicosis in the Artificial Stone industry, even when properly enforced.

The current Australian respirable crystalline silica exposure limit is 0.1 mg/m³ (8-hour time-weighted average).¹⁴ This limit, however, is double the legal limit in both the United States and the United Kingdom.

In 2016 the United States Occupational Safety and Health Administration advised that the rate of 0.1 mg/m³ was associated with significant risk to health. The 8-hour standard was developed in the context of traditional industries where silicosis was a risk. It does not provide guidance as to the risk associated with less traditional, high-intensity, short-duration exposures, such as cutting artificial stone.¹⁵

Even with improved occupational hygiene standards, there are some processes that cannot be conducted safely.

Dry cutting of artificial stone with a masonry saw is the simplest way to cut the product. This practice is common amongst workers who perform cutting work onsite. Despite a requirement that dust extraction suppression equipment be made available, often this is not the case.

Dry cutting of Artificial Stone products can result in workers being exposed to levels of respirable crystalline silica in excess of 44 mg/m³ (over a 30 minute sampling period).¹⁶ Such a level of exposure is an unjustifiable risk to workers.

Accordingly, Maurice Blackburn submits that a total ban on dry-cutting of Artificial Stone Products should be implemented.

Whilst wet-blade cutting of artificial stone products is associated with a vastly improved dust standard (4.9 mg/m³ over a 30 minute sampling period)¹⁷, this level of exposure still poses a risk to health, albeit lower than that associated dry-cutting.

Research would indicate that best practice involves wet blade cutting in combination with local exhaust ventilation, which has shown to reduce respirable crystalline silica exposure to as little as 0.6 mg/m³ over a 30 minute sampling period.¹⁸

Maurice Blackburn understands that such processes require specialised equipment, and means that cutting usually has to take place in a workshop environment, rather than onsite. These precautions will add to the cost of doing business, meaning they

¹⁴ Safe Work Australia, 'Workplace Exposure for Airborne Contaminants', 27 April 2018

¹⁵ Hoy R F et al, 'Artificial stone-associated silicosis: a rapidly emerging occupational lung disease', *Occupational and Environmental Medicine* (2018);75:3-5

¹⁶ Cooper H L et al, 'Respirable silica dust suppression during artificial stone countertop cutting', *Annals of Occupational Hygiene* (2015) 59:122-6

¹⁷ Ibid.

¹⁸ Ibid

are unlikely to be popular with business owners. We prioritise the health of employees over these concerns.

Recommendation #3:

That the NSW Government should immediately lower the legal limit exposure of respirable crystalline silica to 0.05 mg/m³ (8-hour time-weighted average).

Recommendation #4:

That the Committee recommend an immediate ban on dry-cutting of artificial stone, without exception, in line with similar changes made in Queensland.

Recommendation #5:

That the NSW Government advocate for the above adjustments to be adopted as national benchmarks.

The Need for Effective Screening and Early Diagnosis

Maurice Blackburn suggests that there is an urgent need for an audit of the workplace practices of artificial stone fabricators and the screening of at-risk artificial stone workers for silicosis in NSW.

As discussed earlier, WorkCover Queensland conducted a state-wide audit which commenced in November 2018. Workplace Health and Safety Queensland inspected approximately 140 artificial stone fabricators and issued 552 compliance notices relating to inappropriate workplace cleaning practices, uncontrolled dry cutting, failures to undertake health monitoring for workers and failures to provide appropriate respiratory protective equipment.¹⁹ Fines were issued for failures to comply with improvement notices. This state-wide compliance campaign had 22 specially-trained inspectors aiming to audit all 160 artificial stone fabricators in Queensland.²⁰

As of May 2019 about 810 artificial-stone workers registered for health screening funded by WorkCover Queensland at a cost of about \$3 to \$4 million.²¹ About half of these workers were screened, and the results were alarming. They revealed 100 confirmed cases of silicosis, 15 with progressive massive fibrosis, and workers as young as 23 years old with over 6 years of exposure.²²

In May 2019 the Victorian Government announced a plan to enforce a compliance code for over 300 businesses working with silica and offer free health screening for Victoria's 1400 stonemasons.²³

¹⁹ T Kirby, 'Australia Reports on Audit of Silicosis for Stonecutters' (2019) 393(10174) *The Lancet* 861, 861.

²⁰ Queensland Government, 'Statement from Industrial Relations Minister Grace Grace' (Media Statement, 18 September 2018).

²¹ Queensland Government, 'Statement from Industrial Relations Minister Grace Grace' (Media Statement, 12 March 2019).

²² G Edwards, 'Accelerated Silicosis— An Emerging Epidemic Associated with Engineered Stone. Comment on Leso, V. et al. Artificial stone associated silicosis: A systematic review. *Int. J. Environ. Res. Public Health* 2019, 16 (4), 568, doi:10.3390/ijerph16040568' (2019) 16(7) *International Journal of Environmental Research and Public Health* ii.

²³ The Hon Dan Andrews (VIC Government), 'Protecting Victorian Workers from Deadly Silica Dust' (Media Statement, 1 May 2019)

Maurice Blackburn submits that, similar screening of at-risk artificial stone workers is necessary in New South Wales. Additionally, these workers and their workplaces need ongoing monitoring, auditing and screening. There are issues regarding the diagnosis of silicosis which warrant more effective screening than what currently exists.

Maurice Blackburn notes the observation by physicians that the majority of at-risk artificial stone workers had minimal to no symptoms and did not manifest respiratory function at or below the lower limit of what is considered normal.²⁴ Without an audit and ongoing screening the majority of at-risk artificial stone workers may continue to be cumulatively exposed until reaching the lung burden necessary to trigger silicosis.

Researchers and physicians are working to develop a better understanding of the cumulative lung burden necessary to trigger silicosis – which to date remains relatively unknown – and to establish a reasoned and evidence-based index of exposure risk for the application of a targeted health surveillance program using low-dose chest high-resolution computer tomography (HRCT).

In spite of this, clinicians have set an exposure threshold to trigger investigation with HRCT as:

- at least 3 years since the worker first worked using dry processes; and
- dry processing in the work environment constituting at least 25% of 6 months work.²⁵

Assessment by HRCT has demonstrated an International Labor Organisation (ILO) standardised chest radiography (CXR) false negative rate significantly greater than 10%.²⁶ This means that a significant number of asymptomatic at-risk artificial stone workers will fall through the cracks in spite of all steps that may be taken to screen them at a point in time.

Hence, ongoing measures to audit workplaces and screen workers over time is necessary to enable early diagnosis of artificial stone related silicosis.

Researchers have also noted that the screening program undertaken by the Queensland Government should be promoted and encouraged worldwide for the purposes of:

- obtaining reliable and statistically consistent epidemiological data;
- establishing the prevalence of silicosis in the artificial stone industry; and
- defining the correlation between the occurrence of silicosis and any shortcomings of preventative or protective measures in the workplace.

Maurice Blackburn submits that combining health screening programs with workplace audits would enable the collection of high quality data on artificial stone related silicosis that will:

- inform risk assessment and management strategies, administrative controls, health and safety policies, training and information courses;
- guide effective health surveillance programs; and

²⁴ As above n 22.

²⁵ Ibid.

²⁶ D Weissman, 'Role of Chest Computed Tomography in Prevention of Occupational Respiratory Disease: Review of Recent Literature' (2015) 36(3) *Seminars in Respiratory and Critical Care Medicine* 433.

- assist with the clinical management of at-risk workers.²⁷

Specialist physicians trained in occupational and environmental medicine have only noted a handful of cases of artificial stone related silicosis in NSW.²⁸ However, clinical assessments have often overlooked current and previous employment. Furthermore, accurate occupational histories are critical to avoid reported misdiagnoses of sarcoidosis.²⁹

Maurice Blackburn suggests that an effective and ongoing audit regime and screening of at-risk workers will promote greater awareness of artificial stone related silicosis among physicians that will assist with early diagnosis.

Researchers from the UK have noted that artificial stone has been commercially available in the UK for about the same time period as Australia and yet there were no published cases of accelerated silicosis or artificial stone-related silicosis. It was noted that it was possible that these cases had occurred but could not be identified because they were reported using non-specific terms.³⁰

These same researchers emphasise that it is crucial for clinicians to have a heightened level of awareness regarding artificial stone related silicosis to avoid the dreadful outcomes that have been reported in Australia.

The inconsistent approach to the audit of workplaces and screening of at-risk artificial stone works between the States and Territories of Australia and abroad is concerning.

Given the entirely preventable nature of this disease it is strongly recommended that the NSW Government initiate an effective *and* ongoing audit of workplaces and health screening of at-risk workers to enable the early diagnosis of artificial stone related silicosis and prevention of future cases of accelerated silicosis.

We note that the Dust Diseases Authority of NSW is well placed to perform this operation, as it already possesses substantial screening facilities and personnel which it has used to monitor at-risk workers for decades.

Early identification of at-risk workers will be paramount to controlling the current epidemic of silicosis in the Artificial Stone industry. This will both reduce the human and financial toll associated with the disease.

Recommendation #6

That the Committee recommend that the NSW Government and SafeWork NSW should urgently undertake a targeted audit of the Artificial Stone Industry in NSW, followed by a screening of at-risk artificial stone workers by the Dust Diseases Authority of NSW.

²⁷ V Leso et al, 'Reply to Accelerated Silicosis—An Emerging Epidemic Associated with Engineered Stone. Comment on Leso, V. et al. Artificial Stone-Associated Silicosis: A Systematic Review. *Int. J. Environ. Res. Public Health* 2019, 16(4), 568, doi:10.3390/ijerph16040568' (2019) 16(7) *International Journal of Environmental Research and Public Health* 1201.

²⁸ Ibid, above n 19.

²⁹ R Hoy, 'Occupational Lung Diseases in Australia' (2017) 207(10) *Medical Journal of Australia* 443.

³⁰ See also, for example: P E J Baldwin et al, 'Exposure to Respirable Crystalline Silica in the GB Brick Manufacturing and Stone Working Industries' (2019) 63(2) *Annals of Work Exposures and Health* 184.