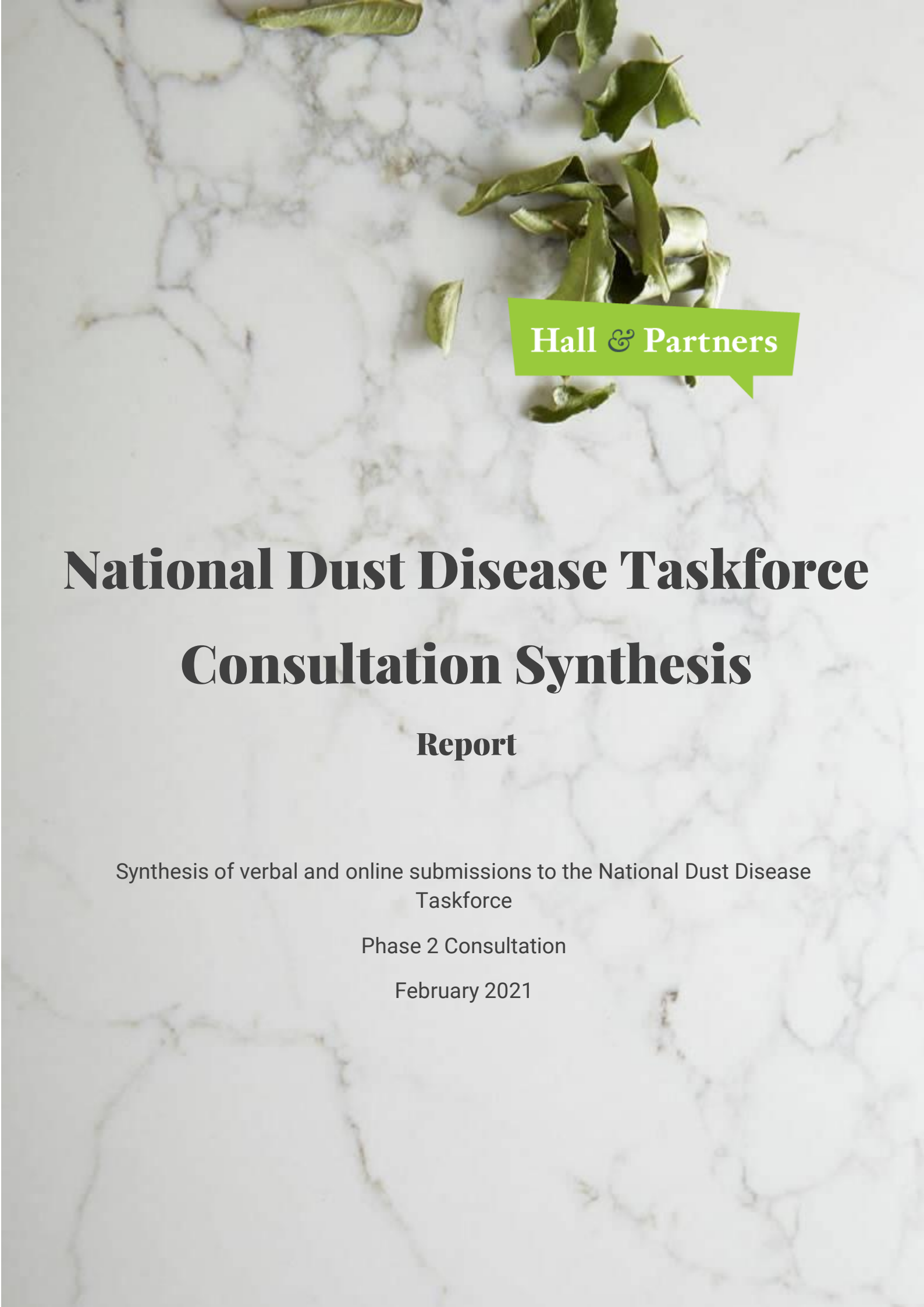

Hall & Partners

National Dust Disease Taskforce Consultation Synthesis

Report

Synthesis of verbal and online submissions to the National Dust Disease Taskforce

Phase 2 Consultation

February 2021

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RESEARCH CONTEXT AND BACKGROUND

On July 26, 2019, the National Dust Disease Taskforce (the Taskforce) was established to understand the issues underlying the re-emergence of silicosis, and the emergence of accelerated silicosis, with the aim of developing a national approach to the prevention, early identification, control and management of occupational dust diseases in Australia.

In 2019 the Taskforce undertook an extensive first stage consultation with a range of stakeholders from governments, industry, individuals, unions, regulators, medical practitioners and insurance bodies. The Taskforce presented interim advice in December 2019. The interim advice included five early recommendations around awareness raising, data capture and information sharing, research priority areas, national guidance on screening, and a national approach to detection and response. A number of findings were also provided which the Taskforce wanted to explore further.

Following the delivery of this interim advice the Taskforce conducted a second round of consultation from October to December 2020. This Phase 2 consultation comprised 11 consultation sessions with stakeholder groups, and an online consultation based on a consultation paper comprising 17 guiding questions across four topic areas.

The Findings from this Phase 2 consultation will be provided to the Taskforce to consider when developing a set of recommendations, which will be delivered in a final report in June 2021.

RESEARCH OBJECTIVES

This Phase 2 consultation seeks to collect feedback on the Interim Advice, and further investigate a number of areas identified by the Taskforce as key, to further investigate early findings and progress early recommendations, and ensure all key issues and initial findings are considered prior to delivery of the Taskforce's Final Report to Government.

Findings from the stakeholder consultations and the online submissions received are synthesised and outlined in this report, which follows the structure of the Phase 2 Consultation Paper in considering the following four areas:

- Regulatory and Governance
- Workforce Organisational Culture
- Resourcing and Capability
- Research and Development

RESEARCH DESIGN

This report consolidates the information and feedback provided in all 39 stakeholder submissions received, and 11 stakeholder consultations conducted, during this Phase 2 consultation.

The team at Hall & Partners have read, interpreted and analysed the responses in terms of content, tone, depth of knowledge, and other factors. These findings are synthesised and reported thematically, based on all 17 questions. Where there are exceptions to themes, for example, if one stakeholder group has a different point of view or approach, these exceptions are highlighted.

The synthesis process has taken into consideration each stakeholder type, representative groups and any differing views based on the perceptions and actual experiences of these groups and stakeholders.

INTERPRETING FINDINGS

Importantly, the findings delivered herein, based on the 17 questions the submissions were written in response to, are structured under the key areas of:

- Regulatory and Governance
- Workforce Organisational Culture
- Resourcing and Capability
- Research and Development

This report is not structured according to specific question number. Rather responses have been consolidated, by theme, underlying sentiment, and key area.

Additionally, it is important to note that all views expressed in the body of this report are those of stakeholders via submissions and consultations, not those of Hall & Partners.

EXECUTIVE SUMMARY

Phase two consultations have highlighted the role of the National Dust Disease Taskforce and the challenges the Taskforce faces. At an overarching level there are four key components to be addressed:

1. **A phased approach to enable change**
   Stakeholders are unified in their submissions that action is required now, and are comfortable with phased approaches to ensure there is a balance between short-term action and long-term strategic objectives being achieved. With this in mind, the view of stakeholders is that the short-term imperative is prevention, while the longer-term imperative is systemic change in how the industry operates, interacts with regulators, Government and consumers.

   In terms of prevention, there is discussion around banning man made stone, however presently there is little support for this from industry given the potential market and consumer impact of implementing a ban. Other stakeholders, predominantly medical professionals, support groups, charities and unions, strongly support a ban on engineered stone. Beyond individual stakeholder views in relation to a ban, enhanced regulation of the industry is recommended by all stakeholders.

   Communication focussing on a phased approach will help ensure momentum, and that the issue remains front of mind for all. A phased approach should be detailed so that all stakeholders can understand the short and long-term strategy to enable change.

2. **The needs and desire for regulation and structure behind the strategy**
   There is a strong desire from all stakeholders for effective and swift regulation of the industry at a national level. This is needed to help ensure all stakeholders understand their role in managing this challenge and the required actions. This takes a number of forms:
   a. *Regulation* – to help educate all as to their obligations and responsibilities be they a business owner, full time worker, casual worker or governing body. Regulation creates optimal compliance protocols and enforcement practices, and a consistent approach irrespective of location. This is a central requirement to protect the workforce and will impact all aspects of the industry (including price to consumers), however is necessary to ensure a safe work environment. A component of this regulation should include a clear definition of engineered stone.
   b. *Licencing* – ensuring operators are licenced will improve adherence to correct behaviours at the risk of their business being de-registered. Licencing will ensure practices are in place to obtain the licence and these same practices are maintained to ensure they keep their licence. This structure also provides an opportunity for mandated professional development programs as best practices evolve to once again ensure business are able to keep their licences. A licencing scheme that is tiered in terms of function (e.g. tasks performed) and materials permitted for handling might help to accommodate the variation in business size within the industry. Licencing premiums might also be scaled according to the tiered system, enabling businesses of all sizes to operate under such a scheme.

c. *Enforcement* – ensuring that regulations are adhered to with consistent monitoring of work environments and safety policies in practice. Regulation without enforcement lacks veracity and this is desired at all levels. This enforcement would ideally adhere to a national code of conduct that would set the safety standards for the industry.
d. *Education* – educate at all levels on the risks associated with engineered stone, improper practices, and the strategies and behaviours to put in place to reduce the risk of exposure. There is also a role to be played in educating medical professionals, such as General Practitioners and imaging specialists, on the topic of silicosis, its variants, and early diagnosis of the disease.
e. *Data collection* – the creation of a National Dust Disease Registry to monitor and analyse cases. This will help identify situations where further education is required as well as providing a way to better understand the landscape through analysis of cases and identification of trends. Consequently, a stronger knowledge base will enable specific issues to be addressed, potentially via the introduction of new regulatory practices. There is evidence to suggest this has been effective in like industries.

3. **Ongoing communication**

There is a strong desire for ongoing and consistent communication on silicosis. Communication should be:

a. *Phased* – highlighting new news and steps employers and workers can seamlessly add to their routine to reduce the risk of exposure and improve safety standards;
b. *Clear and concise* – using a language that is easily understandable with a clear message. This also needs to account for the fact that the industry includes a large proportion of culturally and linguistically diverse (CALD) workers;
c. *Authoritative* – concern was raised over the momentum of the Taskforce in educating and informing stakeholders and workers on progress made. Consistent communications will highlight the importance that Government and jurisdictions place on the issue;
d. *Easily available* – determining the most appropriate way to reach a diverse (in both geography and backgrounds) workforce and ensuring communications are targeted and accessible. It is imperative that the Taskforce (in a directive tone and manner) make it easier for businesses to understand and know what they should be doing; and
e. *Broaden the remit to create consistency* – current perceptions are that the recommendations to date (particularly in regards to research) have focussed on clinical responses. The industry is craving tangible recommendations to inform behaviour change at all levels. Potentially to gain greater traction, this could extend beyond the issue of silicosis into other respiratory dust based diseases and beyond the stone benchtop industry to other industries that are exposed to occupational dust.

4. **Momentum**

While there is acknowledgement that 2020 has been a year like no other with a large scale public health crisis, there is a perception that the tone of the approach, thus far, lacks urgency and that the education and behaviour change program has stagnated. There is a clear lack of

understanding of what has been done and what has been achieved to date. There is a need for tangible information that will both educate and change practices. The issue is pressing and this is acknowledged by industry stakeholders of all levels, from casual workers through to Government bodies.

The industry is in need of a firm national directive in 2021 to regain momentum and, through a phased approach, drive better practices for the immediate and long-term benefits of the industry and their workforce. There is universal agreement that this must be driven at a national level, ideally led out of Government.

RECEPTION TO THE INTERIM ADVICE

Overall, there is support for the interim recommendations, however stakeholders express concern for the perceived 'narrow focus' of the interim recommendations. Hence, there are expectations of the Taskforce to consider the longer-term plan in the final recommendations

> *"We do not underestimate the work the Taskforce are doing for the workers of Australia. However, we want and need to do more now because it is such an important issue, but the work so far we are pleased with and believe in what you are doing." Medical professional*

The interim recommendations put forward by the Taskforce in December 2019 garnered broad support and positivity from stakeholder groups who participated in the first phase of consultations. There was wide commendation of the Taskforce in seeking further contribution from stakeholder groups in a second phase of consultations, and a sense of heightened anticipation from stakeholders to build on their comments to progress the final recommendations.

Whilst it is acknowledged that progress has been slowed and final recommendations delayed due to COVID-19 in focus, the nation's swift and unified response to COVID-19 has bolstered confidence across stakeholders as they hope to see a similar united front in efforts against silicosis and other occupational dust diseases.

> *"COVID-19 has demonstrated that Australia can work in a united and collaborative way. It has shown the strengths of a multi-disciplinary approach, and the need to have as many different heads and specialised opinions involved in these matters of national importance." Medical professional*

Stakeholders express concern for the 'narrow focus' of the interim recommendations. This stems from the research recommendations focussing on improving clinical response (thus focusing on treatment), and the recommendations for reform which are singularly addressing accelerated silicosis, related to engineered stone in benchtops and not extending to other industries.

There is a strong call for attention and priority to be placed on prevention if we are to make real headway in addressing this issue, voiced most strongly in the submissions by occupational hygienists, medical professionals, unions, and legal representatives.

> *"… interim recommendations – which are largely focussed on education and research for the purpose of improving clinical responses to silica-related diseases – are grossly inadequate and fail to prevent exposure at a worksite level. Whilst education and gaining an advanced clinical understanding of silica-related diseases is vital – this should not supplant the need for urgent and concrete action being taken to prevent exposure in the workplace." Union*

> *"I understand the tendency to focus on one disease but don't agree with it. It would be strange not to include the other [dust diseases] as it would feel limited to focus on one when they are similar." Medical professional*

Across stakeholders, there is a tension between the need for immediate action and the opportunity for broadening the scope to accommodate occupational dust diseases other than silicosis. Sentiment in favour of a focus on accelerated silicosis in the engineered stone industry is supported under the premise that gaining support to drive short-term action will be better accomplished if the focus is narrow, however there is concern that a narrowing of focus will elevate complications in extending the scope at a later date.

Notably, an emphasis on being inclusive of all occupational dust diseases is prevalent in response to the interim recommendations and in the second phase of consultation. Reference to asbestosis as a missed opportunity in promoting understanding of a broader range of occupational dust diseases (including respiratory silicosis) is translating to pressure on the current Taskforce to be inclusive, not exclusive.

Specifically, researchers involved in asbestosis identify a missed opportunity in not collecting health surveillance data, nor setting up ongoing identification and analysis of risk and exposure. This is seen as placing us 'on the back foot' in terms of silicosis; it is now deemed the responsibility of the current Taskforce to not make the same mistake. This perception is fuelling strong opinions in relation to the requirements of establishing a National Dust Disease Registry and the desire for it to have the capability to be used across occupational dust diseases.

> *"I think it'll be a painful process to get any register up and running. I don't see why it would be limited to the stone benchtop industry, so if it were just to be silicosis then I hope it would cover all." Charity*

There is a call for the Taskforce's recommendations to be focused on the long-term, future-proofed, and having the ability to capture emerging risks. It is hence broadly agreed that on matters of reform, data collection, and work around safeguarding, a broader lens should be adopted. A targeted focus on silicosis relating to matters in response to workers already afflicted (including treatment) is not opposed in the immediate short-term, but should have the capabilities to be broadened to other occupational dust diseases. If this is the intention, then clearer communication in the final recommendations is required.

> *"If we are truly to have full buy in, our preference is to have an environmental lung disease registry with using silicosis as a scaffold to ladder up. So we need to go through collection of data more broadly, but use silicosis as the case study. We want to avoid a situation where they are too narrow in focus and collection which may risk leaving it in a pilot phase for silicosis." Medical professional*

> *"What is glaringly obvious to us is the narrow focus on other industries impacted, not just the stone bench industry. There are other industries that are impacted by silica dust, so any recommendations coming from the Taskforce should not be just focused on one industry as the issue is not confined." Union*

Clearer communication from the Taskforce is required to alleviate a perceived lack of urgency and low awareness of what has been done since the interim recommendations were issued

> *"When we looked at interim report we were surprised that it didn't feel to reflect the urgency of the issue. There is little by way of specific direction on what needs to happen in the short term… can these immediate changes required subvert some of the longer timelines of the final report?" Legal representative*

> *"It would be useful to know, and more broadly communicate, that the earlier research was clinical focus and that there is more work to be done/ the Taskforce has intentions for funding to go into these other areas [epidemiology, maximising effectiveness of control measures, changing behaviour, prevention] in the next stages." Medical professional*

It was clear from the targeted sessions (consultation) in the second phase of consultation that awareness of activity and action off the back of the interim recommendations, was limited. Questions were raised about what action has been, and is being, taken to protect the most vulnerable workers in the short term.

Equally, there was limited awareness of education and communication campaigns other than those of individual health and safety regulators aimed at workers in the industry. The only clear progress identified and noted across stakeholders was in relation to many jurisdictions having moved to a Workplace Exposure Standard (WES) of 0.05mg/m3 Respirable Crystalline Silica (RCS), down from 1.00mg/m3.

Industry, however, do point out that they have taken action, particularly over the past 18 months. Specifically, industry self-reports an increase of available information in this period, such as product labelling and tailored safety data sheets on sites.

> *"There has been a significant positive change in practices and behaviours arising from raised awareness [due to the increase in information made available]." Industry*

The targeted sessions helped to inform and update stakeholders of the progress made, specifically on activity that is being actioned outside of the specific talking points from which the interim findings and Phase 2 consultations were based, alleviating some of the concern and frustration felt on perceptions of inaction. It will be paramount for the Taskforce to establish pathways to actively communicate progress and action with stakeholders in the lead up to the final recommendations, and ongoing, to reflect the seriousness in addressing this issue, reassure that the Taskforce is outcome oriented, and to secure continued buy-in and support from stakeholder groups.

> *"[We are] pleased with many interim recommendations, notably the focus on education and research. We feel a greater focus on stricter regulation and enforcement needs more attention and priority. We are concerned about the timeline of all of this given the seriousness. There is a pressing need to expedite some of the recommendations more quickly – from our clients' perspectives, there are scores of workers who are in risky environments now and will develop silicosis based on the workplaces they are currently working in." Legal representative*

Stakeholders are unified in their submissions that action is required now, and are comfortable with phased approaches to ensure immediate on-the-ground response is not trumped by

longer-term factors that may take more time. They are looking to see a clear, direct and firm plan in the Taskforce's final recommendations that looks beyond silicosis in the stone benchtop industry, and addresses both immediate action and longer-term strategy

> *"We hope that the Taskforce's final report will provide a strong imperative and guidance on how best to achieve early identification, optimal treatment and management of workers suffering from accelerated silicosis and other dust diseases across all Australian jurisdictions." Medical professional*

> *"We would like to see a timetable to see how the Taskforce's activities will be actioned." Medical professional*

RESPONSE TO QUESTIONS

REGULATORY AND GOVERNANCE

The re-emergence of silicosis has taught us that not enough is being done to reduce worker exposure to silica dust

It is clear from the submissions that general recognition of workplace occupational health and safety is still limited to physical or acute injury, with chronic occupational diseases remaining largely in the shadow. Whilst there is some public attention being drawn to chronic or occupational diseases through media, this does not appear to be translating to the systems that protect vulnerable workers in a proportionate response to the prevalence of these types of injury. This has reinforced the need to collect data on workplaces and workers (dust exposure levels on sites, work histories, health surveillance of workers) in a consistent and centralised manner, and understand the disease through inputs that are not limited to WHS data, as is presently the case.

> *"Currently, only around 10 per cent of all workers compensation claims are classified as occupational diseases even though we know that occupational disease is a far more important cause of morbidity and mortality than workplace accidents." Medical professional*

The re-emergence of silicosis has highlighted that having legislation and regulation in place does not guarantee compliance. It is observed that current regulations place significant burden on industry to interpret, action, adhere to, and to fund the current measures recommended to reduce workplace dust exposure. It also relies on Small to medium-sized Enterprises (SME's) to have ongoing and comprehensive knowledge of emerging risks and knowing when and how regulations are implemented based on changing and evolving information. There is a need to appropriately distribute the responsibility to allow for a 'path of least resistance' to enable compliance. There is a broad view that placing too much autonomous responsibility on industry, coupled with self-regulation, is setting businesses up to fail, with workers being the ones who ultimately suffer.

> *"The major lesson from the re-emergence of accelerated silicosis as an occupational health and safety risk is that having legislation and regulation in place*

does not guarantee compliance. Workers in the engineered stone sector mostly work for micro and small businesses which have limited understanding or resources to conform with regulation. Overall, the re-emergence of accelerated silicosis has demonstrated dangerous gaps in the health and safety environment in Australia." Medical professional

"The re-emergence of accelerated silicosis, and the similarly surprising spike in disease from respirable coal dust, shows the dangers of complacency. Complacency does not necessarily derive from a careless attitude, it can result from the fact that the challenge of managing WHS has expanded significantly. PCBUs are required to contemplate more risks including long term diseases and mental health; they are required to engage in more formal collaboration and consultation with both workers (employees and others) and other PCBUs; and they have infinitely more material to consider when evaluating the body of knowledge about risks as the internet removes any excuse of ignorance." Industry

Whilst examples of progress in addressing silicosis or other dust diseases (e.g. asbestosis) in some states, and abroad, provide hope and signs of progress, it also brings frustration to the surface; there are perceptions the national response is not adequately leveraging elements we could use to hasten our response to the re-emergence of this issue

Individual state or organisational efforts are not enough to properly address the issue of silicosis in isolation. Whilst stakeholders recognise there are best practices, initiatives and some developments being made in starting to understand the prevalence of the disease, these feel siloed between jurisdictions. It is clear from the re-emergence of silicosis that a coordinated effort is required for traction.

There are concerns among stakeholders who have been largely involved with asbestosis (researchers, legal professionals, unions, occupational health and safety, and asbestos support groups) that industry and regulators have not learnt from asbestos outcomes, for example attitudes to banning of products, compensations schemes, return to work schemes, and a national approach to data collection and integration. Leveraging models that have demonstrated success should see progress being made sooner rather than later. Further, a perceived lack of learning from case studies, such as asbestos, raise concerns toward what the next imported product will be that carries potential health hazards, and Australia's ability to identify these early and address emerging issues in a swift manner.

Additionally, occupational hygienists and unions reference a body of international trends and literature related specifically to occupational health diseases, including developments in air monitoring and new product innovation, that appear to be omitted or ignored from Australia's consideration in its response to date regarding silicosis. It is suggested that if these learnings were considered, we would see more action being taken in the fight against silicosis.

Stakeholders recognise that further details and recommendations on best practice models to adopt may be addressed by the Taskforce in their final recommendations, and that a core

component of the second phase of consultations was to collate models, frameworks and systems that have demonstrated success. Stakeholders have been forward in their contribution to the consultation questions requesting this opinion, and as such there is a desire to see clear and specific direction in the final recommendations, including the specification of models or frameworks to be adopted or leveraged.

A clear, consistent and national definition of engineered stone is needed to effectively manage regulations now and into the future

> *"A consistent national definition of 'engineered stone' in the Code, supported by the model WHS legislation, will be critical to the effective management and regulation of engineered stone." Government*

Defining engineered stone to discriminate it from natural stone is seen as vital to ensure regulations encompass the correct products. Across all submissions there was consensus that any definition of engineered stone in this context should qualify that it is an artificial stone made up of composite material bound together with an adhesive, such as resin, and containing silica content.

Whilst many stakeholders refer to the definition as outlined by WHS regulators (for example, WorkSafe Victoria defines engineered stone as *"reconstituted, artificial and or manufactured stone, and quartz conglomerate, which is made up of composite stone bound together by resins and contains at least 80% silica"*), specifying level of content is deemed contentious by some. The concern is that specifying the quantity of silica or quartz content, even specifying ingredients (e.g. 'resin'), may lead to a slippery slope for regulations and enforcement.

Specifically, whilst there is desire for the definition to be clear and delineate from natural stones that contain vastly lower silica concentrations (e.g. marble, slate, granite), it cannot be too constrictive, which would risk regulations becoming defunct at the first sight of potential alternative products that may also pose severe health risks, essentially creating a 'loop hole' for manufacturers and suppliers to avoid compliance. There is a view that organisations may knowingly manufacture alternatives, or substitute ingredients that are known not to be safe but would circumnavigate the regulated definition. However, a more pragmatic view articulates that a limited definition is short-term in its thinking, and does not adequately account for alternatives and new product development that is also being proposed as part of the solution to the silicosis crisis.

Further hesitation to endorsing a definition specifying a threshold of 80% silica content arises from a belief that this could lead to misconstrued perceptions that stone containing less than 80% crystalline silica is a safe product, when it is not known if this is the case. This threshold is deemed arbitrary.

> *"While the C&G Division largely supports definition [by WorkSafe Victoria], it is hesitant to endorse a definition that suggests that engineered stone containing less than 80% crystalline silica is a safe product... A potential consequence of adopting such a definition is that manufacturers of engineered stone – largely*

based overseas – could foreseeably formulate a product with marginally lower silica content and in doing so, PCBUs at all stages of the supply chain could avoid having to comply with the health and safety standards that would otherwise apply." Union

"We have seen this view when white asbestos was classed not as dangerous as blue or brown - we all know that was rubbish - so in considering what constitutes less or not as dangerous becomes a point of contention - really it is all dangerous to human health. Have we not learnt from the past yet?" Support group

Control-banding is offered for consideration to account for these challenges in definition. It is perceived that a multi-tiered classification covering all levels of the dangerous substance would help to inform proportionate controls and ensure a range of products (existing and alternatives) are captured in the definition. One occupational hygienist refers to a paper[1] that discusses the success of a control-banding approach in the Americas for consideration.

Many stakeholders call for a complete ban of high silica-content engineered stone material

Support for a complete ban is underpinned by the premise that regardless of regulations, there is limited demonstration that we can trust the materials to be handled safely; the re-emergence of silicosis as a case in point. Those in support are pragmatic. These views are predominantly expressed by medical professionals, support groups, charities and unions.

"We are (Australia) signatories to WHO and WHO has designated that silica is a carcinogen and "not to be used" and here we are still allowing the usage of a banned material, so federally we have an agreement with WHO and we are not enforcing the illegal use of the material. What is the good of a federal agreement with WHO when we continue to be in breach of our agreement?" Sufferer

"The small and mid-end of town do not have the knowledge, willingness or capability in controlling silica dust – there is no practical way of having manufactured stone and being able to do it safely. We found there was no safe way of dealing with asbestos so we banned it. I think the Taskforce should argue for banning the imported product and put in place a process to use Australian stone, and there is a lot of it, that would be safe to use." Occupational hygienist

Those who counter a complete (or even partial) ban of high silica content engineered stone material are vocal in their response.

[1] Beaucham, C.C., T.J. Lentz, and F.L. Rice, *Expanding control banding for workplace silica exposures throughout the Americas.* Int J Occup Environ Health, 2012. **18**(4): p. 344-7.

This opinion is dominant among industry and regulators. At the core of this viewpoint is the assumption that the product does not pose risk if it is handled correctly; it is the controls and regulation that ensure safe handling that needs to be addressed, not the product itself.

> *"We do not believe that a ban on the importation or processing of engineered stone to be a proportionate or practical response. Silica is found in 80% of building products and state and territory regulators must increase their enforcement of safe working environments in stonemason factories.*
> *Many stonemasons have for a long time worked safely, with no workers acquiring dust diseases due to them being professionally and safely run businesses. This shows that it can be achieved, and the whole industry should not be shut down due to a small number of rogue operators who flourished due to poor state government oversight of the industry." Industry*

Further rationale against a ban is one of economic standing; it is claimed that a complete ban would decimate one of Australia's largest industries resulting in mass unemployment due to lack of financial viability for businesses to operate at profit. From this perspective, a ban is deemed a last resort.

> *"Whilst there is much R&D going on around the world, to date nothing has been developed that can commercially substitute in the required quantities for engineered stone at this time. Further, it should be recognised that Australian customers continue to see great value in engineered stone and purchase the product in high volumes for use as benchtops." Industry*

> *"If the Australian market for engineered stone is to change so dramatically then we need to be pursuing those alternatives which are low in silica and can be produced at an equivalent price in order not to harm one of Australia's most important economic sectors (construction)." Industry*

Whilst the potential disruption of a complete ban in the short term is acknowledged, the economic argument is not seen as justifiable as an excuse for longer-term deferral of a complete ban, predominantly among those stakeholder groups in support of a ban, for the following reasons:

- The industry has **demonstrated their capacity to innovate** and adapt to change when enforced, and in response to regulatory pressures when required, as demonstrated in the case of banning asbestos products;
- It is the understanding of stakeholders who are in support of a ban that the majority of Caesarstone used in Australia is manufactured overseas and imported. Long term, this **does not align to supporting or developing the local economy** and makes it difficult for local products to be competitive; and
- Supporting the **promotion of Australian alternatives should be done in conjunction with a ban to elevate the Australian industry**, increase local demand of alternatives, and grow employment opportunities onshore. Engaging the whole supply chain, particularly those that are public facing (such as architects and designers) should play a role in this engagement and promotion process to educate locally made products.

"Industry has proven they can do it – such as Caesarstone: their product is usually 90% [silica]. And now they have brought out a product that is 65% [silica]. So if they can do that as soon as we raised some concerns, then I think they can sharpen their pencils even more and make some big moves." Union

"The Government recognises that bans are considered to be a last resort, when effective risk controls are not available. In NSW, field observations by SafeWork NSW have evidenced that exposure can be managed with appropriate risk controls in place. An example of this can be seen in the Government's ban of the practice of dry cutting. This came into effect on 1 July 2020... SafeWork NSW has been enforcing compliance on uncontrolled dry-cutting of engineered stone by issuing prohibition notices and on-the-spot fines whenever it encounters the practice, and to ensure that workers are working safely with engineered stone in general." Government

In order for a complete ban to be more widely considered across stakeholder groups, it must be demonstrated that there is a quantifiable risk that current policy and control measures, when correctly implemented, are not adequate to mitigate the danger to workers

The current data in Australia on silicosis does not paint a sufficient picture for current control measures to be deemed inadequate at protecting workers. At this stage, lack of compliance in the industry is clouding the ability to understand if safe handling of the materials is reducing worker exposure to dust, and limiting interpretation of any data that is collected on exposure levels in a meaningful way.

Capturing data to address the question 'do the current control measures work?' needs to start now if a ban in the near future is to be reasonably considered: Specifically, data on air monitoring (dust exposure levels) to understand efficacy of exposure controls and health surveillance data. Delays in this process only limit the ability to understand if a ban is a viable national response. Union groups and legal representatives reiterate that workers have died from claimed failings in the current control measures and will continue to do so if understanding the efficacy of control measures (as one part of the strategies and interventions required) is not promptly addressed.

"A ban could be reasonable, if it was justifiable." Regulator

"… we urge the NDDT to consider the recommendations contained in this submission and advocate for improved safety standards at a workplace and site level, which need to be robustly enforced by well-resourced and proactive regulators. A failure to do so will inevitably result in the continued deaths of workers from debilitating and preventable diseases." Union

Given the enormity of the consideration on risk elimination, a joint submission (including representatives from union, charity, medical/health association, medical professional society,

and health and safety association groups), suggest the Taskforce recommend the establishment of a committee or working group focused on risk elimination.

It is proposed that the remit of such a group address how the product responsible for the problem might be banned, modified or otherwise controlled, and to ensure contingencies for evaluating emerging products for similar risks (e.g. alternatives). The recommendation should stipulate that the group include representatives with a cross section of expertise to achieve outcomes that are translatable in practice; representatives with expertise in relevant regulation, from the engineered stone industry, causation epidemiology, health and safety, and the union movement.

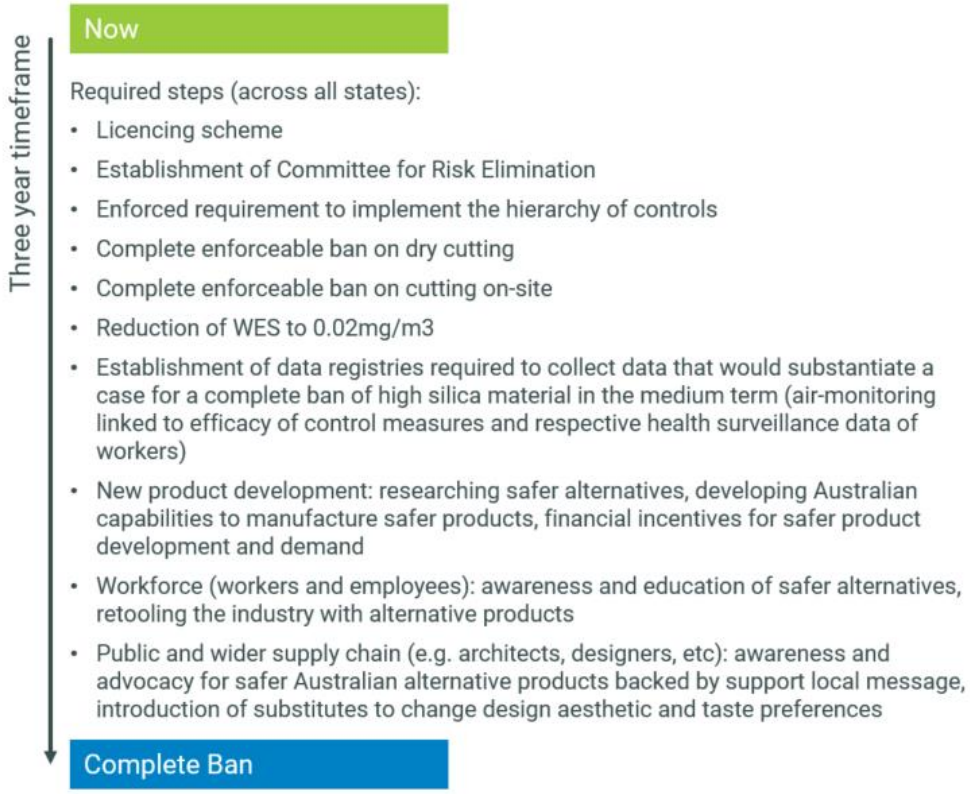
On any matter of policy development pertaining to occupational health issues, there is a cry for specialist physicians to be brought to the table to ensure policy developed reflects the real work environment and therefore is useful. It is felt that this is a gap in the Australian system, with one occupational and environmental physician noting that Safe Work Australia currently does not have any occupational physicians as part of their board. Stakeholders across sectors stress that an approach where specialists are absent from the development of policy has to change, and cite other government organisations (e.g. Civil Aviation and Security Authority) who have involved specialist GP's in decision making.

> *"There is a perception among public servants that any person can advise and inform. This is just not the case. You need specialists who understand the conditions intimately and understand how policy can be properly developed in relation to this. It's a major gap in our systems generally at the moment. We are well behind other countries. I think the Taskforce can make changes in this area." Medical professional*

A phased approach is welcomed as a proportionate and practical response to the reduction of dust exposure. This would satisfy the majority of stakeholders who want to see immediate steps taken to reduce worker exposure to dust whilst the correct information is gathered to understand if a ban is valid

> *"We echo and are in favour of the ban but we need a sensible grandfathering date so workers are not disadvantaged by their chosen occupation. So there will need to be efforts for subsidies to ensure adequate retraining for workers. We would suggest three years, supported by re-tooling and re-training to ensure young men are not thrown on a scrap heap at times like this economic crisis." Charity*

Stakeholders in greatest support of a ban view a three-year time frame where steps are made toward a ban as acceptable. The below chart reflects a collation of recommended actions from stakeholders specifically in relation to a phased approach. A phased approach over this period would include, at a minimum:



Licencing is seen as a positive step to banning and a priority. Over time, it needs to span the supply chain to be most effective, but fabrication and installation are requiring immediate attention

Given the lack of compliance in the industry, licencing is considered necessary to ensure WHS standards are followed, enforced, and the risk to workers is reduced.

Submissions from unions, occupational hygienists, and legal representatives articulate that WHS is insufficient in offering protection to workers when industry is left to its own devices as it requires the establishment of duty-of-care within the business. This is noted to be particularly problematic for small businesses or Persons Conducting Business or Undertakings (PCBUs) who may not have access to easy-to-understand and applicable WHS resources that clearly explain this responsibility. It is mentioned that because the duty-of-care is typically placed onto one individual in the business, there are two common reasons for the model to fail:

1. The PCBU is unaware of their workplace risk (i.e. the initial risk state may not be identified in the first place); or
2. The PCBU is aware of the risk but is decidedly negligent (e.g. anecdotally it is observed that some managers ignore the risk due competing priorities such as cost, time, resourcing, threat of being shut down).

As such, it is strongly suggested that a licencing scheme where oversight is shifted into the hands of regulators is the only way to ensure the intention of the WHS Standards is realised and maximised.

It is noted that there is a role for licencing throughout the supply chain, however **priority given to the fabrication and installation stages** in the first instance would support the identification of main users of the material, and facilitate regulator surveillance of premises most at risk of dust exposure; these are the stages where dust exposure is considered at its highest given the cutting processes that occur.

Licencing schemes that are targeted to the start of the supply chain – importation and distribution – should also be under consideration given the majority of engineered stone is imported. There is sentiment referencing that longer-term sustainable strategies to reduce worker exposure to hazardous materials (silica products or another substance in the future) cannot truly be achieved without stricter controls at the start of the chain.

Unions, occupational hygienists, and one medical professional are particularly vocal about the risk of allowing products into the country as importation marks the first tick of approval that the product is fit for handling. Restricted importation and distribution, coupled with enforceable repercussions for misconduct or incompliance would help close the gap on hazardous products making it into the hands of workers.

The way that import regulations currently work is flagged as problematic: Engineered stone, while containing silica, is perceived to be stable and therefore not hazardous prior to specific handling activities, such as cutting. For this reason, engineered stone is not restricted from entering Australia. This is despite the fact that RCS, in all likelihood, will be produced when working with engineered stone. A review of the current import legislation for engineered stone is called for, and is an important step to ensure future alternatives allowed into the country are safe for handling. As an immediate step, it should be mandated that all imported products display clear labelling of the contents (substance and silica content percentage) and a 'hazardous' label where the silica content is high (e.g. one submission suggests this should be the case wherever silica content is greater than 60%).

This action is considered a practical stepping stone to raise awareness through the supply chain, particularly among employers and workers, of the danger of these materials by increasing the 'visibility' of the risk.

> *"Generally, community members, including the workforce, believe that if a product is available for sale, someone will have checked that it is safe. This is not an unreasonable assumption but contributes to many behaviours which would be appropriate if the assumption was correct." Union*

> *"We consistently see border force and government fail in preventing products from coming into the country that have asbestos in them. If there is a ban it has to have more teeth than the current asbestos bans which are failing. A recent example some of members experienced is electrical products imported where the insulation product within it contained a lot of asbestos... [the product] had to be cut to put a switchboard in place. The workers identified [the asbestos] straight away. The border force either don't know what they are looking for or they don't care and let it through. It's easier letting it in than sending it back. In this case the unions had to go have an argument with the end user because the Australian regulatory bodies have let it through, yet workers don't want to work with it (and shouldn't have to). But who pays for the product? Who rectifies whether the end user gets the product*

or not?" Union

"We know that if the board is not cut it is classified as not dangerous and cannot have a sticker placed on it say it is a danger." Support group

Consideration for licencing schemes regarding re-surfacing, renovation and disposal should be a secondary priority. Whilst it is acknowledged that as alternatives are introduced, and quartz or Caesarstone go out of fashion, this will become an increasing issue (similar to the case of asbestos). Priority should first be given to parts of the supply chain where the greatest quantity of dust is currently being generated and directly affecting workers.

Stakeholders are adamant that national consistency should be at the core of any licencing scheme, regardless which part of the supply chain it governs. A **concurrent roll out of licencing schemes across states** is paramount to avoid undermining the scheme's intent. It is the view of some occupational hygienists that inconsistent licencing across states would risk businesses moving their practices to jurisdictions which do not operate under a licencing approach.

Licencing schemes can provide a platform to mandate other areas requiring attention, in particular those relating to reporting and training

Support for the introduction of licencing schemes for engineered stone is at its peak among stakeholders who see this as a mechanism to accomplishing multiple objectives in overcoming the issues posed by occupational dust diseases:

- Mandated routine dust sampling, monitoring and reporting of worksites;
- Health surveillance of staff with national reporting requirements;
- Training, education and certification requirements for workers and employers; and
- Recourse to prosecute non-adherent businesses.

A licencing scheme, it is noted, would require businesses to adhere to, and collectively elevate, the standards within the industry if they wish to continue operating. They would have no choice but to adhere to best practice, removing the discretion and variability in processes that currently occur across businesses, and inevitably levelling the playing field.

"This system could be linked with regulatory checks/ visits to ensure that appropriate safety measures and training are implemented in the workplace." Medical professional

"VIC is talking about licencing, and if that happens you know where your factories and business facilities are, and you can require them to meet certain standards. Licencing and data collection go hand in hand. You also need to understand the types of equipment and tasks to fully understand exposure, and this data can be collected in this same way." Occupational hygienist

Stakeholders offer examples of licencing schemes, within the industry and from other industries, which they believe can steer the Taskforce in their recommendations on this matter:

- Licencing schemes currently being developed in Victoria which restrict supply to only businesses or individuals who hold a valid licence;
- Pesticide Regulations which include provision for 5-year training, licencing, supervision and exemptions offering a proportionate response. If a tiered licencing scheme was implemented, then the regulations and requirements could reflect levels of hazard. Irrespective of the idea of a ban, this model recognises a difference in risk, and could better facilitate a phase-out approach of substance over the short-medium term. For example, there would be incentive to work with product that has lower risk (lower silica content for example), and account for the type of businesses operating. Smaller businesses may not be subjected to all levels of regulation that would apply to larger businesses; and
- Ozone regulations on A/C gases, under which only businesses can purchase them who are properly equipped and trained.

It is the view across industry, unions, occupational hygienists and medical professionals that any licencing scheme introduced for the sector would be government led, with the role of enforcement being the responsibility of regulators

This poses a challenge, as the perspective of regulators and some state governments is that there are already mechanisms in place to ensure controls, and therefore the roles of leading and overseeing a licencing scheme is an unnecessary burden on their resourcing.

In the case of NSW, the NSW Government refer to the efforts of SafeWork NSW, such as knowing the location of all engineered stone fabrication sites (via notices to importers); educational, compliance and enforcement activities as outlined in the 2017-22 Strategy to ensure PCBUs on engineered stone fabrication sites are fulfilling their WHS duties (including air monitoring where appropriate); and supporting Safe Work Australia's development of the Code which aims to provide guidance on the content of health and safety duties at engineered stone sites, including existing obligations to conduct air monitoring.

If licencing is to be recommended by the Taskforce as actionable in the short term, and a practical and proportionate response to reduce worker exposure to occupational dust, it will need to address the question of responsibility by providing regulators with quantifiable evidence that control mechanisms are not working effectively.

Stakeholders offer an extensive list of practical measures that could be introduced to reduce worker exposure to silica dust, as summarised below

- Ban on all on-site cutting, and allowing cutting only on licensed grounds, e.g. at a licenced fabrication site;
- Reduction of the WES for RCS to 0.02 mgm/m3;
- Immediate importation, supply and distribution ban on all engineered stone with a silica content of >80%;
- Raising the cost of engineered stone (e.g. through taxing) to de-incentivise the use of engineered stone;
- Introduction of a small business rebate through Safe Work Australia for the purchase of dust extraction units for fixed and mobile cutting tools. One industry submission

notes its disappointment that in NSW, rebates on dust control investment has had low uptake, pointing to the requirement of more prescriptive legislation. Alternatively, an occupational hygienist submission suggests a temporary increase in rebate in conjunction with an industry targeted campaign to illustrate how adopting engineering controls have lower long-term costs and higher efficacy in protecting against dust exposure, rather than solely relying on PPE;

- Product design regulations that require cutting tools to be designed with in-built control measures;
- Increased inspector numbers on sites for enforcement and education;
- Regulation to be adopted that requires the application of the hierarchy of control for silica and other inorganic dusts, to apply where elimination of the work is potentially not feasible (e.g. tunnelling, demolition work);
- Dust suppression using other substances (e.g. foams or alternative detergents where water is not available should be considered as Australia suffers from lack of water in many places);
- Businesses that fabricate and process stone benchtops to develop a written 'respirable crystalline silica dust control plan', as currently required by Queensland's *Managing respirable crystalline silica dust exposure in the stone benchtop industry Code of Practice 2019* (Stone Benchtop Code), to identify all potential tasks that may result in exposure, and to outline the control measures to be used to prevent or minimise the exposure to workers;
- Raising prevalence and frequency of training and awareness programs in workplaces, including 'refresher' courses;
- A central register of all businesses which work with silica and a certification system to ensure that training occurs before use, linked with checks to ensure that appropriate safety measures are correctly implemented in the workplace on a daily basis;
- Requirement of inspections to extend beyond fabrication sites (e.g. inspections of installation sites);
- Further reduction of the acceptable level of WES to 0.02mg/m3 time weighted average for RCS across all jurisdictions; and
- Labelling requirements of all imported stone showing the percentage make-up of each substance it contains.

Broadly across submissions, the Queensland Code of Practice is currently felt to be the industry best practice. Numerous submissions comment that the QLD register is frequently updated and provides comprehensive information. The data is published and is open and transparent, whereas information is not published in other states.

> *"We will be advocating for a national Code of Practice that equals or exceeds the existing best practices… The current draft code is shameful and undermines best practice that is happening in QLD and VIC." Union*

There is a need to ensure this information is up to date and publicly available across states, so that work can be done to understand the scale of the issue.

Regulation is only one side of the equation in moving towards safer work places. The current reliance on self-regulation by industry is not the way forward and regulators need take an oversight role in ensuring real change

Compliance with the current WHS standards is currently self-regulated by industry. Submissions from unions, legal representatives, charities, medical professionals and occupational hygienists highlight the issue of self-regulation, and convey their dissatisfaction that this is considered by regulators, and some jurisdictions, as an appropriate system.

Those not in favour of self-regulation point out the following reasons to support their position:

- There is no requirement to report exceeded levels of RCS. Understanding the hotspots and magnitude of risk is therefore reliant on the discretion and will of the business who may have a disincentive to report;
- Increasing the burden on industry is shown not to be effective; regulations are currently in place yet lack of compliance is evident;
- Smaller businesses most often lack resources to comply to the regulations (e.g. funds, staff resourcing, knowledge gaps) or are not aware that regulations apply to them. Regulations have been noted to be in complicated or technical language that is not communicated in a way that is targeted to these businesses;

  > *"Almost every single site is confused about how to meet their obligations – jurisdictional differences, language in the guidelines being overly technical… often the audience is small businesses (e.g. 4 people) and the format is not easy to understand and not simple to implement straightaway." Occupational hygienist*

  > *"The issue at the SMEs is the lack of funding to buy new equipment, reluctance to change and language barriers. The Code of Practice in VIC is two separate monitoring events over two days… of those who are participating, most are opting for just one visit to save money. People do not see the value in spending on monitoring, which is wrong given the potential cost of somebody getting silicosis." Occupational hygienist*

- It relies on the recognition of risk by PBCU's to trigger the actions for monitoring, reporting, and where applicable, implementation of additional control measures. This risk is not always recognised;
- It allows larger businesses to cut corners as there is a disincentive for big businesses to accurately monitor, capture and report data. Larger businesses in the industry discuss the burden that self-regulation places on them in terms of costs they have to wear, resourcing requirements to conduct, or hire the appropriate occupational hygienists, as well as associated administrative tasks
  - Overall it is felt there are not sufficient mechanism across states to cover the downstream cost of health monitoring, surveillance and compliance to minimise cost of compliance for employers and workers and encourage adherence in a self-regulated approach;
- It is left to the discretion of businesses to determine how air monitoring is conducted, whether an occupational hygienist is employed, and the qualifications of the occupational hygienist to carry out the technical procedure. It is a current concern that regulators do not mandate use of properly qualified hygienists to advise employers

(e.g. those accredited by the Australian Institute of Occupational Hygienists). This requirement for qualified and competent hygienists has been recognised in Queensland under mining legislation, and there is a desire for this to be mirrored for air monitoring of all dusty workplaces under WHS legislation in all states and territories; and

- Not all sites fall under the remit of a single organisation, reducing the propensity for PBCU's to regulate these areas (e.g. construction sites). It is noted that even though construction sites registered under the Protection of the Environment Operations (POEO) Act must be licensed to generate dust, most sites do not fall into this category. Additionally, non-scheduled construction sites are regulated by local government, who have limited clout to influence the dust controls used at these sites.

> *"Looking at our own jurisdiction, all fabricators to our knowledge have avoided both monitoring and health surveillance, most likely due to the risk of huge insurance premiums following a diagnosis. Talking with insurance companies we have been made aware of the premiums being expected of stone fabricators to be as high as twenty percent with no claims insurance premiums following a diagnosis. From the perspective of operating a business this is an extremely high overhead to operate on any large scale fashion when competing with interstate operators who are paying a minimum due to a levy and who have, up until now, had no particular regulatory incentive to do the right thing, further reducing overheads due to a lack of investment in safety." Industry*

A key finding in the first phases of consultations pertained to the under-resourcing of regulators to perform checks and audits on worksites. As such, there are claims that adequate regulation 'falls down' based on an inadequate level of resourcing among regulators. In the current phase of consultations, it was suggested by industry that consideration of outsourcing regulation is made to address this. Outsourcing regulation may help to increase numbers of staff/auditors on-the-ground, and to devote expertise to a single body as, "with no disrespect, Governments can get distracted, with things like Covid".

> *"I think we should consider outsourcing regulation to make up the numbers, people and expertise so we have the right resource around Australia." Industry*

Without enforcement, regulations are powerless

> *"It is perhaps fallacious to argue that a reduction in the exposure standard automatically equates to a safer place of work… The real issue is one of lack of enforcement of exposure standards by WHS regulators." Occupational hygienist*

It has been noted that the current guidelines are often not adhered to.

Observations from 'on the ground' stakeholders and reported anecdotally by workers, paint a picture of tolerance or active ignorance in the face of non-compliance. Regulators are critiqued for not wielding the hand of authority to punish non-compliance, however there are mixed opinions on what is driving this inaction.

Some suggest that the regulators appear not to have the means for enforcement required to appropriately fine and take action to enforce regulation, as regulators are working from

guidelines, as opposed to mandates. Others suggest that regulators choose a 'path of less resistance', whether that is turning a blind eye or giving businesses a warning about upcoming site audits.

Regardless, it appears to be a resourcing issue that is limiting the regulators' ability to enforce compliance: to conduct spontaneous auditing of all sites (not just fabrication), to support regulators and give them the backing to persecute non-compliance, to ensure reports of non-compliance (e.g. air monitoring exposure levels) are followed up, and to enable the reporting of site audits adequately, particularly when businesses are failing to follow the code. The reporting of site audits is viewed as inadequate at present, and a contributor to the incomplete and limited use of exposure level data that is monitored and reported in many jurisdictions.

> *"There are shortcomings in audits to date and we are not seeing what is happening at the installation stage. QLD and VIC are a little better at this." Union*

> *"Larger organisations are often notified and activities done so they can put their best face forward for review. Spot checks need to happen that are not pre-notified." Legal*

> *"There is a significant power imbalance between workers and industry. A way to bring some balance to the relationship is to broaden the powers of health and safety regulators (HSR) by providing them the same rights and powers as a SafeWork Inspector […] including the power for workers and their representatives to prosecute employers directorly for non-compliance with minimum safety benchmarks. This will also assist State Regulators who are resource stricken and unable to attend most sites to carry out audits, enforce compliance with current WHS laws/regulations or prosecute repeat offenders." Union*

One consultation discussed a perceived lack of action relating to 'Strategies being put in place by Safe Work Australia' as referenced in the Taskforce's Interim Report. Updates from the Secretariat of the number of stone sites visited, improvement and prohibition notices issued, and roll-out of compliance campaigns, were considered surprising given the observations around a consistent lack of action towards compliance.

The importance of enforcement to support regulatory compliance is highlighted by Queensland's Office of Industrial Relations' (OIR's) industry wide re-audit of all known stone benchtop fabrication businesses to verify compliance in line with Queensland's recent Stone Benchtop Code (2019). Despite the development and roll out of the Stone Benchtop Code, this re-auditing campaign, scheduled for completion by December 31, 2020, identified non-compliance in relation to matters including air monitoring requirements, correct use of PPE, and workplace cleaning.

> *"While these audits have shown there has been a significant reduction in hazardous dry-cutting and improved monitoring of workers' health, audits so far have resulted in the issuing of 265 enforcement notices for a range of matters, including inadequate air monitoring, incorrect use of respiratory protective equipment, and inadequate workplace cleaning methods." Government*

To ensure effective enforcement, a national Code of Practice to empower regulators and reduce ambiguity or denial across businesses on best and acceptable practice has been recommended

Additional mechanisms to be developed or implemented to ensure effective enforcement include:

- Abolishment of self-regulation via a Government led, and regulator enforced, Code of Practice to be implemented nationwide. Should states already have a Code of Practice, amendments to individual state or territory's Code of Practice should reflect equal or better outcomes to the current best practice;
- State or federally provided resources and funding for regulator assessments to be carried out, removing the cost to industry;
- Worker/employer targeted awareness campaigns on Codes of Practice and associated fines (whilst no specific examples are provided in submissions, the Taskforce may wish to consider the Australian Government Department of Agriculture's 'Don't be sorry, just declare it' biosecurity ad for a clear articulation of what is acceptable and not acceptable, and associated fines for those who do not comply); and
- The consideration of 'enforceable undertakings': commitments by non-compliant parties to perform particular duties within a particular timeframe and accepted by a WHS regulator as an alternative to a prosecution.

> *"Regulations have always been there, so it's frustrating that some just don't fall in line, for whatever reason it is they just don't follow regulations. I'd love to see some of these non-compliant fabricators be closed for 3 months, we need to send the right message and clamp down on behaviour." Industry*

Data collection on a national scale needs to start now if it is to inform the future. Robust data will be required to address the question of whether a ban (complete or partial) on engineered stone is a justifiable action in the medium-long-term, and understand the efficacy of current WHS practices in action

There is a view that this type of data does not exist on a national level and, with the exception of Queensland, does not exist at a state or territory level either.

Without adequate usable data that represents the complete 'picture' of silicosis exposure (rather than at a single point in time), there is a significant limitation in the nation's ability to link exposure with health outcomes, understand progression of the disease, identify trends emanating from exposure in high-risk environments or sites, and support workers' claims against employers.

There is a call for regulation to mandate exposure notification to a central registry. Stakeholders discuss the importance of two key types of data to be collected: air monitoring data that reports workplace dust exposure levels, and health surveillance monitoring data.

An accessible and targeted summary of key players in regulatory and governance matters to accomplish desired outcomes

Group	Role in matters on regulation and governance
Government	• Drive implementation of regulatory procedures and licencing schemes across industry
Regulators	• Enforce licencing schemes • Frequent site-audits and monitoring of industry compliance along the supply chain • Record-keeping of all instances of compliance and non-compliance • Development and monitoring of a compliance register, updated at regular intervals • Mandate use of properly qualified occupational hygienists
Occupational hygienists	• Presence on boards or working groups pertaining to jurisdictional policy and regulation • Implementation of monitoring procedures and controls in workplaces
Medical professionals	• Utilisation of knowledge of disease progression and exposure risk to inform regulatory bodies in terms of implementing controls to adequate levels • Presence on boards or working groups pertaining to jurisdictional policy and regulation
Unions	• Inform dissemination of training and awareness campaigns • Involvement in committee or working group focused on risk elimination
Employers	• Strictly monitor compliance on-sites in line with regulatory procedures
Workers	• Follow compliance procedures in place at their place of work
Industry	• Follow and comply with regulations in place • Involvement in committee or working group focused on risk elimination
Legal representatives	• N/A
Charities/ support organisations	• N/A
Academic/ Education	• N/A

In the table above, where a group is without an allocated role in regulation or governance, submissions have not designated or recommended a role to be imparted on them.

WORKFORCE ORGANISATIONAL CULTURE

There is no 'one size fits all' approach: Supporting a diversely structured workforce requires scaled and tailored strategies and supports to protect workers

"There should not be a blanket approach to all forms of exposure. The engineered

stone industry has a unique risk profile and should be managed accordingly." Occupational hygienist

To drive a culture of compliance in the industry, the following should be considered when developing ongoing strategies:

The dynamics of business size: Small businesses require greater financial and governance support to adhere to adequate control measures

Business size is currently preventing a consistent approach to the implementation of control mechanisms, from SMEs to large multi-national operations. As SME businesses tend to run on significantly lower operating margins than larger corporations, they are often inclined to seek imported engineered stone over local alternatives.

Various submissions highlight that the abundance of SMEs in the industry adversely impacts compliance to WHS standards. These SMEs were found to have greater limitation in:

- Available capital to purchase PPE;
- Monitoring equipment and technology, but importantly; and
- Resources, to oversee the safe handling of materials which ensures effectively implementing control and measurement mechanisms.

Charitable organisations posit that in this environment, there is a singular reliance on PPE in the workplace as a preventative mechanism.

> *"[We] believe there should be a focus on higher level engineering and administrative controls (such as more sophisticated dust extraction systems and exploration of different ways of working) rather than the sole reliance on the use of PPE to protect workers… the banning of processing of engineered stone should be considered." Medical professional*

A tiered licencing system could work to accommodate the workplace diversity in the sector.

Culturally and linguistically diverse (CALD) workplaces: Movements and employment of CALD workers in the industry require particular attention as they face additional language and foreign legislation barriers

The construction industry employs a large contingent of CALD workers. There is evidence that this group is less likely to be aware of the risks inherent in dealing with unsafe materials, or their rights when exposed to unsafe materials in the workplace.

Union bodies have suggested that this group is more likely to be given inadequate training (due to a lack of understanding of, or inability to interpret, training materials provided), and might therefore be at greater risk in the workplace.

A young, casualised and mobile workforce: This workforce need impactful, consistent and early familiarisation to the severe risks of dust exposure to adequately deliver the gravity of the situation early in their careers

Younger staff entering the sector, it is suggested, may be more aware of latent health issues and risks. This does not reconcile with employee-hierarchy on job-sites, as those overseeing the handling of materials containing silica or dust may be less likely to:

- Take risks seriously;
- Delegate work to those who have an awareness; and
- Place emphasis on the risks.

This dynamic creates a culture of risk-acceptance; there is an expectation, in some workplaces, that there are risks of getting sick in the chosen profession, driving a fear among younger workers to speak up if they identify risks in their work environment:

> *"The occurrence of accelerated silicosis highlights a lack of awareness in the construction industry around what are typically chronic health risks. Changing this culture will be hard, but it is similar to how attitudes to smoking have changed generationally. In my experience I do find that younger workers have more of a perception of latent health risk, so further emphasis on occupational health should apply across all levels of training for construction industry participants." Industry*

> *"We have a large number of workers who are too afraid to raise a concern. Our members say that if [their employer is] not following correct ventilation practices or [they] are not providing the right PPE "I have a target on my back". Worker voice needs to be strengthened." Union*

Further, the casualised nature of the work, and the workforce, sees workers moving frequently and freely between organisations and jurisdictions, often to 'follow' work. This poses great challenges relating to tracking (accurately monitoring exposure touchpoints), regulation, health and demographic data collection (including underlying or pre-existing medical conditions and biomarkers, fundamental to understanding prevalence of Silicosis across people with different risk-factors), and continuous or regular health monitoring across those at risk.

Union bodies desire silica awareness training packages to be "recognised, enforced and replicated nationally", concluding that this training should be a mandatory component of White-Card induction training for workers that fabricate and install engineered stone at a minimum, and a condition of obtaining (and retaining) and engineered stone license. Existing workers should, they state, regularly undergo refresher training.

> *"If unions, with limited resources, can take action, any claims of lack of resources or personnel by governments, its agencies and regulatory bodies is hollow indeed. These training packages need to be recognised, enforced and replicated nationally." Union*

As an example, the ACT has established a training course, developed by the Construction, Forestry, Maritime, Mining and Energy Union (CFMMEU), which has since obtained the support of the Construction Industry Training Council and BLOC ACT Pty Ltd (a Principal Contractor operating within the ACT) and been further adopted by the union's QLD/NT branch.

The course covers:

i. Identification of crystalline silica containing products
ii. The relevant legislation, guidelines and standards
iii. The consequences, hazards and risks to health due to exposure
iv. Exposure standards
v. Safety data sheets
vi. Hierarchy of controls
vii. Systems for prevention of exposure
viii. Risk assessments and hazard prevention; and
ix. Safe Work Methods Statements

The ACTU state that such training could be given formal support through the relevant industry training councils.

Initiatives from other jurisdictions include the Queensland Government Injury Prevention and Management Program (IPaM), an initiative formed within the OIR, which provides free and tailored advice to employers to manage safety at work sites.

> *"IPaM undertook a comprehensive engagement and awareness initiative, and stone benchtop fabrication employers were directly offered the opportunity to work with an IPaM advisor to understand the requirements of the Stone Benchtop Code, reduce risks associated with exposure to silica dust, and improve their safety management systems. As a result of this awareness initiative a significant increase in IPaM participation in this industry sector was observed." Government*

State regulations vary: Varying state level regulations and support inhibit progressing the matter in an effective way

Adding to the inability to provide a consistent standard across workplaces and workforces is a variance in regulations across jurisdictions. For example, some states enable funding for health monitoring, but not all. There is interest for this to be considered at a federal level.

> *"I recommend… the increased provision of health monitoring services such as the mobile lung screening service available within NSW to be adopted as a National model." Occupational hygienist*

Not all states operate a state funded insurance scheme, nor a dust diseases levy. This is creating:

- A disincentive for large businesses to take out insurance, with premiums as high as 20% for stone fabricators (with no claims history); and
- Substantial overheads, and reduces competitiveness against interstate operators who might be subject to a levy.

To address this, there is interest for all jurisdictions to operate under one insurance levy scheme, encouraging stronger incentives around compliance among large businesses, maintaining competitiveness in the process as the competitor market would be, in essence, operating under a single scheme with similar insurance premium overheads.

> *"Fabricators to our knowledge have avoided both monitoring and health*

surveillance, most likely due to the risk of huge insurance premiums following a diagnosis." Union

A long and complex supply chain: A supply chain of this nature calls for significant improvement and diligence in documentation and clear nomination of responsibilities

From fabrication through to jobsite, there is an array of touchpoints where exposure to harmful dust can occur, and multiple tasks that occupy varying levels of risk of harmful exposure (e.g. installation, cutting, polishing). This presents an additional barrier to consistency of standards across jurisdictions and organisations.

There are differing opinions on who should be responsible for worker protection and this is stifling positive and immediate action. Unifying the perceptions of responsibility is required

Presently, there is a recognition that employers and industry do not consider it their responsibility to provide protection to workers from diseases resulting from long-term exposure, over multiple years and workplaces.

On this basis, while monitoring, compliance checks and enforcement does occur when regulators visit sites and fabrication facilities, in the moment, and during the handling of materials containing silica, oversight is lacking.

Some government bodies also acknowledge that the onus is on industry employers to conduct health monitoring, while non-regulatory or government stakeholders suggest this invariably leads to inadequate health monitoring, and a substantial risk that the disease is not diagnosed early (particularly given the asymptomatic properties of chronic silicosis in its early stages).

To promote consistency in the standards by which employers monitor and enable adequate worker protection, it is suggested that an independent regulatory body impose standards on industry, supported by government funding, to afford SME's suitable PPE in all settings and environments where there is a risk of exposure. Furthermore, and as previously mentioned, there is a desire for funding for health monitoring, for current, retired and post-exposure workers, to be implemented federally.

To date there is no clear and consistent identification of where the onus of responsibility lies. Greater regulation and education will help inform and understand the responsibilities of employers and workers to ensure access to, and adherence of precautions are in place. All stakeholders are looking to a higher level (ideally a national regulatory system led by the government that dictates roles and obligations).

Returning to work poses immense challenges, and lacks a best-practice framework. Current procedures are deemed to impact sufferers on multiple fronts, however learnings from asbestos offer insight to strengthen return to work schemes for silicosis sufferers

Current state and limitations of available return to work schemes

Return to work initiatives, overall, are viewed as inadequate. Stakeholders note an abundance of inadequacies inherent in current return to work programs:

- *Condition-risk*: many workers are incapable of returning to work because of their ongoing condition, with current schemes attempting to place them in work they cannot physically endure. For example, they may have reduced lung capacity, or coughing fits due to scar tissue damage resulting from silicosis;
- *Skills-risk*: a positive diagnosis may limit the worker's ability to return to dusty environments, posing a problem for many who may not have skills outside of industries where exposed occurred. Anecdotally, some workers are reluctant to screen in case of a positive diagnosis, fuelling a culture of denial and avoidance. Further, waiting lists are extensive under the current schemes, and participants feel as though the outcome (placement) may not align with their skills, leading to risk of menial or administrative placements, and substantially lower incomes; and
- *Mental ill-health-risk*: Profound mental-health concerns emanate from current return to work schemes and processes. It is observed that current programs enable industry to defer the responsibility of future employment opportunities on to the worker. This dynamic often leaves those diagnosed feeling 'owed', as they consider exposure to have been no fault of their own. A sense of abandonment ensues when they are unable to pursue work in industries they know and are skilled in. Requirements around re-training, particularly for lower-paying roles, exacerbates declining mental health in these circumstances, leading to anger, depression and anxiety. Further, due to labour market conditions in higher-risk occupations (for dust exposure), many who are diagnosed have young families. If they are the primary provider for the family, the impact on self-esteem and confidence can be severe.

> *"Unfortunately for many workers the current options are limited, and workers' compensation systems are not designed to support those with chronic disease or provide comprehensive vocational training and redeployment to safer work." Legal representative*

> *"The AWU has members who after contracting silicosis have been refused alternative employment. These workers who are mostly from regional Victoria are now at home, without any clear pathway or future employment options. They describe what they are going through as a "never ending dark tunnel for them and their families"." Union*

> *"An AWU member who works for a Boral quarry was advised by her superior that "they were going to get rid of her" after she contracted silicosis. The company has now offered her alternative employment, but the alternative employment is 2 hours' drive from her home, hence it will mean a 4 hour commute each day. This will make her life as a parent to 2 young children extremely difficult to manage." Union*

One government submission concedes that regulatory bodies support injured people recovering at work, however this does not often extend to those diagnosed with a dust-related disease:

"The NSW State Insurance Regulatory Authority (SIRA) offers programs to support injured people recovering at work, such as funding for retraining, but claimants under dust diseases legislation are not eligible." Government

Recommendations for improvements to current return-to-work programs and processes

A number of recommendations have been suggested to improve on current return to work schemes, in a format that accommodates many of the risks outlined above. There is a desire to see these schemes upgraded urgently.

Further, Government identifies a significant portion of workers who enter the scheme following a positive diagnosis, and the clear need to implement robust return to work programs.

"In Queensland, approximately 75% of workers diagnosed with silicosis move onto a return to work program due to treating doctors recommending that the worker leave the engineered stone industry. In order to progress towards nationally consistent results, it is suggested that robust return to work programs are implemented, including:

- *Effective work trial programs to assist workers with silicosis in obtaining suitable duties with a new employer where they will not be exposed to respirable crystalline silica;*
- *Peer-to-peer programs to support workers throughout their return to work journey;*
- *Education and information promoting the positive benefits derived by workers who participate in return to work programs – targeted at relevant stakeholders including medical professionals, legal representatives, unions and support groups;*
- *Vocational support programs where prospective employers are incentivized to provide suitable duties for workers with silicosis; and*
- *Introduction of harmonised workers' compensation legislation across Australian jurisdictions." Government*

The Asbestos model, and support requirements

The Asbestos Compensation Industry Fund is considered a model to learn from to improve the efficacy of return to work programs for other dust related diseases, such as silicosis. Under this model, industry contributes an annual levy to compensate those diagnosed with an asbestos-related disease in Australia.

"The important issue is medical support. Some of them retraining is not an option. It's not about an employee quick fix, the majority of these people are not going to be in a position to return to the work force. Whether it is the James Hardie Fund, or workers compensation, these people need to be financially supported for their rest of their life. The industry needs to be the ones kicking the tin ensuring these people are not left on the street without." Union

Given the likelihood of workers requiring retraining, or deployment in industries or environments markedly different to those they are skilled in, unions and support groups propose that a lifetime pension should be available befitting the trade or industry the worker was in. Support organisations note that any successful return-to-work stories are among those who had prior (to diagnosis) qualifications or training.

> *"There are small pockets of those who have successfully returned to work. But these cases have largely depended on training they had done prior to getting into the industry. We hear from clients that there are a lot of those diagnosed waiting to be retained and the frustration is mounting. They are highly skilled and want to work but when their skills can't transfer to like environments it makes them feel stuck." Legal representative*

> *"Weekly payments should be set at a level equivalent to an injured worker's pre-injury average weekly earnings irrespective of their fitness for work and should not be subject to any caps or step-downs." Union*

> *"[We recommend] a reduced earnings allowance (plus links to compensation in the meantime) to make up the difference between the former salary and that of a worker who has had to be moved to a less well-paid job. This needs to be available from first diagnosis until long-term employment in a suitable other occupation has occurred. Patients who become TPD should receive similar support, including:*
>
> - *Health care support (medical, nursing, physiotherapy, occupational therapy)*
> - *Cardiopulmonary rehabilitation*
> - *Psychological support*
> - *Social work support." Medical professional*

Beyond income, a restoration of worker rights, indeed human rights, has been cited as not evident under current return to work schemes. Union bodies state that compensation schemes can only go so far in supporting workers livelihoods, and often do little to counter adverse mental health impacts following a positive silica-related disease diagnosis.

> *"Workers [should] be provided with funded independent support mechanisms, rather than 'system' support arrangements through workers comp. Many currently registered through Silicosis Support Network are reluctant to access mental health support nominated by WorkCover." Support group*

The question of funding return to work schemes and on-going health surveillance of workers is challenging; few stakeholders have a clear view on how best to address this need. Broadly, there is agreement that there is a role for government (through workers compensation schemes) and industry (perhaps through insurance premiums or contribution to a fund as in the case for asbestos) in funding return to work support, but the sustainability on solely relying on those stakeholders is unknown. Additionally, it is observed among industry stakeholders that there is an added complexity of where to draw the line – should adjacent industries contribute to the return to work and retraining efforts of the stone bench top industry? It is proposed that further discussions to explore the realistic options for funding are required.

"It's a difficult one. Ultimately, it's likely that if it falls to industry it will be passed on to the homeowner or end user commissioning the work as no doubt the expense will be wrapped up into levies etc. I feel this needs more consideration and discussion of what the options might be." Industry

"The support and assistance provided to workers diagnosed with a silica related disease must not be limited to return to work programs. Workers, must also receive (i) financial compensation by industry for the damage that the industry has done to the workers' health and way of life and (ii) ongoing health and medical support, including mental health support. The mental health assistance must also be extended to a worker's immediate family." Union

Retraining and rehabilitation standards

Stakeholders propose that at a minimum the following retraining and rehabilitation supports should be considered as essential:

- Provision of economic security through workers' compensation arrangements;
- Comprehensive and quality rehabilitation services and to return to suitable and decent employment. Further, injured workers are entitled to compensation that restores them to the position they enjoyed prior to their injury, including full access to superannuation and leave entitlements;
- Constant upgrades and improvements in terms of rehabilitation, return to work programs and compensation;
- Introduction of genuine rehabilitation options, including full technical or tertiary retraining;
- Removal of time limits and step downs on weekly payments that effectively shift the injured worker onto social security benefits;
- Return to work should be elevated as a central tenet of workers compensation by placing an absolute obligation on employers to provide suitable duties; and
- Consideration of a worker's functionality should be properly addressed as part of their rehabilitation plan.

"The return-to-work programs as a minimum must make it mandatory in the first instance for employers to provide alternative employment to workers. The alternative employment must ensure safety from dust, not result in the worker being financially worse off, allow for career progression and to be within a close proximity of workers' primary residence. Under the current system AWU members who have contracted silicosis have not been able to return to work." Union

It is the view across many stakeholders groups that there are unique challenges in achieving successful return to work outcomes for workers with a diagnosed lung condition (as detailed previously), and whilst leveraging existing frameworks and models is prudent, more could be understood about the impact of occupational lung disease on return to work. Some jurisdictions report proactive efforts of this nature, for example:

- WorkCover Queensland has commissioned research to *"develop an evidence-based approach to return to work and vocational rehabilitation support for workers suffering from silicosis. The aim is to identify factors, principles or limitations that need to be considered in designing tailored return to work plans for workers to ensure they achieve a safe and early return to work."*
- A tripartite working group, chaired by the OIR, is developing guidance to facilitate more positive return to work outcomes for workers with a diagnosis of Coal Workers' Pneumoconiosis or other coal mine dust lung disease.

Shifting the dial on how workers perceive silicosis will require consistent messages that make the issue real in the short term

As previously discussed in this report, the duty of care in working environments, often rests with tenured workers. It is anecdotally commented that these typically older supervisors may not be as readily adopting of compliance protocols, which might gradually impact younger workers' propensity to adherence, leading them to get swept into an 'old mindset' culture. Evidently, younger workers susceptible to this influence have joined the labour force and often possess a knowledge or understanding of the latency of dust diseases that is greater than their superiors. With such dynamics at play in workplaces around Australia, it is critical to empower workers to combat complacency with effective communications and messaging.

Learnings from asbestos and overseas offer clues to designing effective communications that will help to re-frame and drive relevance of the issue among workers. It is commented that dust-related disease risk messaging typically centres around 'death'; 'Death', a long-term prospect, is removed from a young and healthier worker's perceived reality. The latency of the disease and lack of immediate visible indicators (e.g. compared to a broken arm workplace injury) further clouds the perceived relevance of the issue.

Consideration of communication strategies that incorporate smaller, more relevant messaging around the immediate impacts of a positive silicosis diagnosis; the psycho-social ramifications of life at home, or implications that the severity of chronic silicosis only increases over time (e.g. next 6 months, 12 months, and so on), has the potential to further engage and lead to behaviour change. For example, conveying the notion of, perhaps, a young father unable to provide for his family, or not being able to attend important events (birthdays, or graduations).

Further, consistency in messaging is seen to be effective to help the issue remain top of mind for those in the industry, notably the USA campaign "If it's silica, it's not just dust" which has been in-market for years nationally, and consistent across jurisdictions. Such a message is simple and effective if consistent across industries, workplaces and communities (i.e. to alert the general public, not just workers).

> *"Australian regulators have taken a fragmented messaging approach which results in a dilution of the overall simple message. Given that the majority of the affected population would obtain their information from the internet, a consistency of messaging for Australian workers would be beneficial." Occupational hygienist*

Within Australia, some jurisdictions are taking action to communicate best practices and regulatory changes to the workforce on the basis that consistent and reiterated messaging is needed to promote compliance with safer behaviours. For example, the Queensland Government describes a 'Statewide Information Roadshow' that accompanied the rollout of the Stone Benchtop Code of Practice in the state, and more recently the OIR has been using the re-auditing campaign as another opportunity to continue to drive home key safety messages for stone benchtop fabrication businesses in Queensland. Additionally, the OIR dedicated an awareness and engagement campaign to accompany the implementation of the revised WES for RCS of 0.05mg/m3 from 1 July 2020.

> *"Queensland is of the view that codes of practice and other regulatory measures must be supported by targeted awareness and engagement activities to ensure key messages are understood by the relevant industry." Government*

In efforts to keep workers safe from dust exposure, stakeholders detailed best practice dust exposure workplace monitoring processes. Several of these processes described reflect the perception that effective monitoring should account for variations in tasks, sites, business size and employee make-up

It is suggested that the Taskforce take into account the following examples or considerations when determining a recommendation for dust exposure workplace monitoring:

- The introduction of a **standard for the deployment/use of a qualified and competent occupational hygienist** has been recommended by all stakeholders, with measuring activities and assurance of accurate and consistent reporting conducted only by qualified hygienists. It is suggested that this removes the risk (and present reality) of under-reporting exposures or unsafe dust levels;
- Recommended is a **minimum exposure monitoring reporting timeframe**, as implemented (claimed) by the QLD regulator, which obligates industry to report exposure data on a quarterly basis. This enables analysis on exposure prevalence by industry and industry risk-profile. In addition, recommendations have been put forward to mandate un-notified regulator site visits;
- There is a desire for **an 'on the ground' tool that can be used to measure dust exposure levels** (even indicatively) to supplement air-monitoring. It is thought that this would help to drive awareness among PCBU's who are currently disinclined to conduct air-monitoring due to a perception that their workplace may be at risk. There is a presumption that air monitoring is expensive, a lengthy process to get results, and that part of a lack of action in some organisations is based on a denial that their workplace is at risk. The NSW Centre for WHS is currently collaborating on development of a portable, real-time RCS detection unit;
- Occupational hygienists and medical professionals desire the introduction of **a Short-term Exposure Level (STEL) and peak exposure standard**;
- Implementation of a **process whereby SME's are kept informed on guidelines based on a variety of frequent or infrequent tasks**, and indications of what exposure or dust levels might be depending on these respective tasks; and

- Some have recommended the **adoption of the European standard**, creating a culture of control monitoring as opposed to exposure monitoring, while still implementing exposure monitoring processes. This approach drives a focus on preventative and protective measures, rather than a focus on air monitoring, acknowledging that dust levels may fluctuate at any given time.

> *"The current methodology for RCS exposure monitoring requires collected samples to be analysed in laboratories, which ultimately leads to a delay in getting results. On a tunnel construction project, I supplemented my exposure monitoring program with using direct reading instruments. Currently there are no direct reading instruments for RCS, but existing technology can be used in an indicative manner to enable real-time evaluation of the efficacy of controls. SafeWork NSW Centre for WHS is currently collaborating on the development of a RCS direct reading instrument." Industry*

Further, one submission from industry outlines a specific and detailed approach to air-monitoring that is adjusted to reflect different environments, site locations and working environments. This approach is summarised as follows:

- For manufacturing operations, where conditions and processes are relatively consistent and controlled, air-monitoring should focus on a combination of:
    - Systematic monitoring to enable mapping of typical exposure levels, by area and task, across the operation, and enable implementation of control measures in accordance with the hierarchy of controls to ensure compliance with the WES and reduce exposure to ALARP; and
    - Ongoing monitoring to be performed according to a scheduled program to ensure nothing has changed and that all controls are still operating effectively, and whenever a change to the facility or manufacturing process occurs that could impact exposure levels (e.g. installation of new equipment, change in raw material or other material changes to the working environment).
- For construction or building sites, where conditions are highly variable due to weather, trade types involved, stage, type and scale of project:
- The use of industry-based testing regimes and studies to provide objective data in support of the use of specific practices or workplace controls for reducing RCS exposure to ALARP, below the WES.

> *"As long as the tasks, practices, equipment and working conditions at a particular site are within the scope and variability of the study that produced the relevant objective data, working in that manner can be deemed a rebuttable presumption of compliance with the WES. This would avoid the need for extensive monitoring on every construction site, which can be an unrealistic expectation. However, exposure monitoring can and should be undertaken by exception if practices, equipment or conditions deviate materially from the scope of the study." Industry*

RESOURCING AND CAPABILITIES

Some consider Australia to have the existing resources and capabilities to increase worker protection through implementation of control measures and educational procedures, however it is suggested that these are not always available to businesses, nor supported by financial incentives. Additionally, a lack of a coordinated national response can lead to inefficient use of resources - inconsistency and a duplication of initiatives, where they exist.

Tailored resources that are easily accessible are required to support SME's so they are informed of the availability and correct use of control methods, including how to apply the guidance for safe handling

Stakeholders unanimously outline an urgent need for clear, unambiguous guidance written specifically to the level of SME's. There is a sense that the existing guidance and communication for current regulatory Codes of Practice are *"too scientific, with unclear actions… mixing technical, regulatory and control advice, and failing to [provide] simple control advice to those who will need to implement it".* This complexity presents a barrier to correct interpretation and implementation across SME's.

Industry are strong in their view that regulators are failing workers if they do not take one step further to ensure the information available to SME's is clear on how to apply the guidelines in a straightforward manner. Industry and unions comment that in lieu of 'usable' communications materials for SME's from regulators or government, some have taken their own action to support workers with best practice communications and collateral. However, these stakeholders believe that if principle based legislation is to be effective and applied on a wide scale, regulators need to step up and provide necessary measures for application to support the guidelines.

Further, it is suggested that tailored resources should extend to training materials, and must be designed to cater for CALD workers in order for them to engage with and understand the content; indeed, for them to comprehend the risks inherent in working with hazardous materials, and practices to reduce their risk of exposure at work. Training collateral should be offered in a multi-lingual format, and if seminars or classes are a requirement of training, these should be conducted with CALD audiences separately. At a minimum, translated languages should include Arabic, Mandarin, Hindi, Greek and Vietnamese to reflect the cultural make-up of the industry.

> *"Information… must be written in a way that is easily understood, including by workers whose first language is not English. In informal discussions with small, independent and often self-employed tradesmen it has been impressed upon me that these workers do not actively seek out information from sources such as safety data sheets, WHS regulators or WHS databases." Occupational hygienist*

> *"The workforce is culturally and linguistically diverse and appropriate support should be given to these individuals to better understand their rights and industry best practice. At a minimum, safety materials should be translated into Arabic, Mandarin, Greek and Vietnamese to support these individuals." Industry*

Although regulators claim that CALD employees are catered for through the provision of mutli-language factsheets and the ability to change the language settings on Safe Work's website, it is observed that these are not the channels that workers are turning to for information and guidance. Whilst it could be argued that the resources are available and that it is up to the employers and their workers to access them, it is suggested that further understanding to identify the channels which are most effective to engage CALD and SME workers would be advantageous and reduce barriers to information access, thus applying a fundamental principle of behaviour change: the desired action has to be made easy.

> *"Publications, radio advertisements and video safety alerts have been translated into various languages. In addition, the entire SafeWork NSW website can convert to languages by using the button located in the top right corner of the webpage 'select language." Government*

> *"In informal discussions with small, independent and often self employed tradesmen it has been impressed upon me that these workers do not actively seek out information from sources such as data sheets, WHS regulators or WHS websites." Occupational hygienist*

Engaging workers with risks needs to be done on an individual workplace and task-based basis. A 'Job Exposure Matrix' is offered as a recommendation to elevate awareness of workplace risk among SME's

Industry and medical professionals propose the introduction of a 'Job Exposure Matrix'; a system by which workers can easily engage with, and understand the potential for, the risks they may face based on their specific job, task, or working environment. This might be communicated in work environments through a 'flashcard' system, or any other simple, visual communications on-sites. Anecdotally, this is particularly important as the prevalence of exposures vary greatly depending on these variables.

> *"I recommend the development of a job exposure matrix to identify the need for measurement of dust exposures (crystalline silica, asbestos and total respirable dust, and whatever others are relevant to each worker)." Medical professional*

Such a system might aid risk-awareness in two ways:

- *PCBU behaviour-change* : If a worker is deemed to be performing a task considered high-risk in the matrix, they may be encouraged to change their behaviour and how they approach this task in the future; and
- *Bridge the gap between awareness and control mechanisms*: Some businesses consider air-monitoring to be an expensive overhead, too difficult to implement, or lack the knowledge to effectively implement this control. A Job Exposure Matrix feels more in reach for those who consider air-monitoring to be 'out of the question', particularly when the risk-perception is low (applies predominantly to SME's).

Another suggestion to heighten worker awareness and engagement with risks in dusty environments is the development of an accessible reference guide listing the content of all stone types used in Australia.

> *"There are more than 200 of these and it is currently difficult to get information about the content of each." Medical professional*

There is an opportunity to leverage mandatory induction training as a platform for education on silicosis prevention to engage workers with the risks of occupational dust

It has been observed by industry that worker's qualifications mostly comes from on the job experience. Implementation of a mandatory induction training would provide a forum for education on silicosis prevention, and ensure only those who are educated on the risks and correct application of control measures are handling the materials, thus reducing the issue of 'low risk awareness' among workers in the industry.

Submissions also propose that the Taskforce partner with expert bodies to disseminate education programs that exist presently, combining trusted expertise with educational materials already to hand.

> *"The single, most effective approach to getting information to the majority of tradesmen in the building and construction sector, is through the general construction industry induction training, the 'white card'." Occupational hygienist*

> *"Working with engineered stone does not require the same training [as stone masonry] and therefore does not require trade trained and certified workers. A new trade TAFE course could be developed, e.g. cutting engineered stone safely, or working with engineered stone safely." Regulator*

> *"There is also benefit in connecting with a broader range of trusted expertise. For example, AIOH, state regulators and industry associations, who have relevant knowledge and, in many cases, existing education programs. AIOH's Breathe Freely Campaign is a good example of this. The Breathe Freely program was launched in 2019 and focussed on dust-related occupational lung disease prevention. Breathe Freely utilises education and awareness programs to share safe work practices to control exposures. CME supports the development of a targeted education and communication campaign and recommends the Taskforce consider partnering with trusted bodies, such as AIOH and state regulators, who have relevant expertise and, in many cases, existing education programs." Industry*

Safeguarding the validity of air-monitoring relies on the capabilities of qualified occupational hygienists

> *"The success of workplace health and safety systems relies on their effective implementation by competent professionals. It is the absence of this which has*

> *led to the re-emergence of accelerated silicosis in recent times." Occupational hygienist*

A disparity in the level of experience and qualifications of occupational hygienists conducting air-monitoring and inspections has been highlighted as a real issue by medical professionals, charities and certified hygienists.

Underqualified hygienists are known to fail to operate the measurement equipment effectively, resulting in data that cannot be used or a false read on exposure levels, and jeopardising the health of workers on-site. The recommendation from occupational hygienists and medical professionals is that to monitor and inspect workplaces, there should be a requirement for standardised accreditation to ensure consistency and accuracy.

> *"A further concern is that regulators do not mandate the use of properly qualified and competent hygienists to advise employers on issues such as silica dust control. This opens the field to 'cowboy' service providers claiming to be hygienists, to undercut genuine service providers who possess appropriate skills, knowledge and experience, and who are bound by their professional Code of Ethics. It is distinctly possible that by providing poor advice, these 'cowboys' may have actually contributed to cases of silicosis." Occupational hygienist*

Adjacent sectors have already made steps to this effect with Queensland mining legislation clearly defining the qualifications required:

i. Full member of Australian Institute of Occupational Hygienists (MAIOH); or
ii. Hold and equivalent competency under an international certification scheme; or
iii. Hold and Australian Qualifications Framework (AQF) Level 8 or above qualification (i.e. bachelor honours degree, graduate certificate, graduate diploma, masters degree, or doctoral degree) in occupational hygiene with a minimum of 5 years' experience in the field of occupational hygiene.

Therefore, it is recommended that this requirement be applied to all dusty workplaces under WHS legislation in all states and territories.

> *"Workplace monitoring programs are more than just "putting a few monitors on workers". Rather, they are informed through a health risk assessment, coupled with control verification, undertaken in line with recognised standards, and involve active consultation with the workforce." Occupational hygienist*

Educational support is required to narrow the gaps in knowledge among medical professionals that are involved in the diagnosis of silicosis

Specialist respiratory medical professionals are unified in their recommendation for the need to develop capability and awareness of medical professionals more broadly – any clinician who is likely to encounter a patient who may be at risk of contracting silicosis, or those involved with diagnosis (e.g. radiologists).

Foundationally, some suggest that there is a need for medical professionals to have better access to occupational data to adequately understand exposure and progression. Without such data (for example, prevalence of chronic silicosis among specific age ranges), and intricate knowledge, referrals may be inappropriate or incorrect.

Knowledge required by medical professionals extends to:

- **Diagnosis of the disease** when patients present outside of screening programs;
- **Danger and nature of respective types of silicosis**, to know what to look for when interpreting CT scan results; and
- **Understanding of workplace obligations**, to know if a patient has undertaken high-risk work with materials containing silica.

> *"In QLD and VIC there is a need for visual training as general radiologists are not aware or able to pick up the present disease (as shown by an audit of coal scans)." Medical professional, Radiologist*

> *"When we met previously it is clear that the referrers are not asking the right questions (e.g. age ranges) necessary to prompt general radiologists to look at this properly. We have had very little response from the college of GPs even about raising awareness with their members. This is where the national approach will be helpful – we need a multidisciplinary approach to education." Medical professional, Radiologist*

There is grave concern that a lack of knowledge among a range of medical professionals who do the initial consults, provide referrals, conduct screening and review imaging, and diagnose is leading to misidentification of this type of silicosis; workers going undetected or told there is no issue when that is not the case. It is suggested that to develop capabilities in this area, the establishment of an image library (historical scan results), including case histories, would be a valuable tool for radiologists to look up and test and learn markers for diagnosis.

Closing the knowledge gaps among medical professionals should be supported by a register of approved medical providers to ensure maintenance of knowledge and ongoing upskilling continues as more is understood about the disease

One example is the Resources Safety and Health Queensland (RSHQ) register of approved medical providers. These providers are audited and removed if quality requirements are not met, including all involved in diagnostic processes and protocols, such as radiologists, and doctors who subsequently read images. It is recommended that in reviewing any medical standards and capabilities for diagnosis should extend to the processes and equipment themselves, such as the standardisation of specifications for CT strength and imagery. Resources Safety and Health QLD, for example, are conducting a review into high-resolution computed tomography to determine whether the quality should be regulated.

Further, the Queensland Government has outlined the OIR's efforts in Queensland to promote the need for health practitioners to obtain clear guidance, through the development of the Practitioner Guidance for Silicosis Reference Group, which includes specialists from the

Thoracic Society of Australia and New Zealand, the Australasian Faculty of Occupational and Environmental Medicine, the Australian and New Zealand Society of Occupational Medicine, the Royal Australian and New Zealand College of Radiologists, and the Australian College of Rural and Remote Medicine.

The establishment of this group resulted in the development of the *Guideline for assessing engineered stone workers exposed to silica*; a guideline that Queensland has recommended to be adopted at a national level.

Further resources are required to support medical professionals in reaching remote areas to provide access to health surveillance

Worker mobility and disparate work sites raise concern for how to reach these workers from a medical point of view. Whilst few stakeholders discussed this issue in the second phase of consultation, those that did drew attention to the RSHQ initiative which will establish a mobile health service for former mine and quarry workers in regional Queensland that will have the capacity for initial surveillance procedures and also for more complex diagnostics like chest x-ray and spirometry.

Stakeholders point the Taskforce to several multi-disciplinary bodies that could form the basis for providing a coordinated national system for the identification and communication of emerging needs

Stakeholders are in unanimous support for a national mechanism to coordinate resourcing and capabilities to address emerging issues in relation to silicosis, and agree that to be successful requires input and harmonisation across *all* stakeholders. However, it is broadly felt that at a national level we are not there yet in terms of collaboration and integration.

> *"Despite the fact that several early warning systems are available in Australia, there is a lack of integration and collaboration between the systems and states. It is important to have a wide, national surveillance system, or a combination of existing initiatives, and interdisciplinary and international research and debate. In addition, expert collaboration is important to use limited resources in the most effective way." Occupational hygienist*

Notably, the Asbestos Safety and Eradication Agency is most cited as a model to inform design. A summary of current and in-development mechanisms to observe are as follows:

- **Asbestos Safety and Eradication Agency:** a coordinated national system for identifying and communicating emerging issues, echoing calls for a multi-disciplinary approach that binds communications responsibilities across different stakeholders;

  > *"A national body like the Asbestos Safety and Eradication Agency could be established." Government*

  > *"... an elegant model for providing a coordinated national system with*

representation across stakeholder disciplines for identifying and communicating emerging issues… It complements and enhances existing asbestos policies, plans and actions at all levels of government. It recognises that governments and regulatory agencies, along with businesses, unions, individual organisations, advocacy groups, researchers and members of the community, all need to work together to support coordinated and more effective asbestos management." Occupational hygienist

- **The Coal Industry's Standing Dust Committee**: a group established for the express purpose of reducing dust exposure, comprised of a tripartite of regulator, unions, and mining companies;
- **The Resources Medical Advisor Committee currently being established by the RSHQ**: intended to be a multidisciplinary committee to advise on medical issues in relation to occupational health;

  "The RSHQ is establishing a Resources Medical Advisory Committee (RMAC) to consider and provide advice on medical matters relating to the occupational health of Queensland resource sector workers. RMAC will include up to seven experts from the fields of occupational medicine, respiratory medicine, radiology, epidemiology and an international expert in one of these fields. It will engage with stakeholders to inform its agenda and provide advice to guide the development of policy and protective measures that evolve with advances in medical knowledge, technology, best practice and changes to occupational health risks." Industry

- **The UK Institute of Occupational Medicine (IOM):** recognised still as an independent charity since its inception in 1969. This body is comprised of occupational hygienists, toxicologists, occupational physicians and safety professionals. It is considered to be a guiding framework for the establishment of an Australian multi-disciplinary Institute of Occupational Health to serve the function of identifying and communicating emerging issues.

Stakeholders are divided in their views on the role of Safe Work Australia in relation to this matter. Industry are inclined to consider it well within the remit of the country's peak representative of regulation to lead awareness and communication of information throughout the nation. However, there are some critics (noticeably among occupational hygienists and medical professionals) who are of the opinion that Safe Work Australia failed to identify the emergence of the current silicosis epidemic and as such do not appear to be best placed to take this role.

And lastly, there is seen to be an important role for workers unions in facilitating the communication and dissemination of information as it arises in relation to emerging issues as it filters to employers and individual workers.

"Some of these workforces being covered by unions, micro and SME representation is low - this needs to be part of the discussion in changing workplace culture. One thing that unions are good at is communicating messages to their members. We need unions on board to communicate the changes or

anything that is legislation/ regulation - we need to involve them." Legal representative

RESEARCH AND DEVELOPMENT

A recurring theme in both the first and second phases of consultation has been the need for national consistency in the approach against accelerated silicosis.

It is the opinion of stakeholders that the **key pieces of information to be collected at a national level** are:

1. **Workplace dust exposure** (including crystalline silica and silicates, and ideally other occupational dusts), including exceedances and levels in different workplace environments.
2. **Prevalence of dust related diseases** reported annually and reflecting doctor-diagnosed diseases (rather than compensated cases).
3. **Actual numbers of dust-exposed workers** nationally and by jurisdiction, industry and ethnicity to provide an accurate understanding of the incidence of disease relative to the number of exposed workers.
4. **Health monitoring information for all workers**, including retired workers and after known exposures, in industries handling engineered stone (such as medical imaging results for lung screening, CT scans and X-rays, and other risk factors, e.g. smoking).
5. **Employment histories for workers** (e.g. time since first employment in these occupations, size of enterprise worker has been employed in, jurisdictions workers have been employed in, types of tasks conducted).
6. **Additional data based on regulator visits** and reports on the matter of compliance (including cases where enforcement notices have been issued) and control measures used, in part to understand the effectiveness of workplace controls.

Consolidating this information at a national level would:

- Quantify the prevalence of silicosis in Australia;
- Over time, identify trends on prevalence of disease and spread across jurisdictions which could be matched back to prevention interventions and treatment developments to understand impact;
- Contribute to epidemiological studies;
- Assist in diagnosis of silicosis and understand confounding influences;
- Allow for an early warning system to identify clusters of high risk workplaces and understand where pockets of intervention should be prioritised based on identified 'hot spots' (for example, prompt the health assessment of workers potentially exposed and early medical intervention if required);
- Help to understand efficacy of control measures, in relation to dust exposure levels corresponding to prevalence of diagnosed of silicosis;
- Help to inform and revise best practice manuals based on efficacy of controls;
- Enable horizon scanning for new and emerging occupational health threats;

- Reveal disease mechanisms and how they relate to bioactivity of workplace contaminants; and
- Across all specialisations and interventions, offer guidance on where resources need to be directed and deployed.

> *"This information could be used to benchmark performance across jurisdictions and enable more comprehensive research and sharing of emerging risks." Industry*

> *"We would like to understand what happens after diagnosis - we are lacking a consistent approach to follow up scanning and therefore we are not able to properly understand how the disease progresses. The VIC state system has the most comprehensive database for initial case finding exercise, and ongoing data is collected in the same database when people come back for scans. Other states are doing this more sporadically, and even the VIC program has been paused this year, leaving some people having their follow-up scan not happen until two years post diagnosis. In QLD there are no mandatory follow-ups, SA does not see that they have a problem, and NSW we are anticipating a lot of cases to be found and a sense that nobody is across what is happening here." Medical professional*

Even though there is a desire for these different pieces of information to be collected at a national level, stakeholders are not specific in their opinion about whether the information all needs to sit under one register. However, what is evident is the opinion that the different information streams need to be linked or have the ability to 'talk to one another' to enable meaningful analysis (e.g. being able to match up work exposure data with health surveillance data). This would further assist in addressing the challenge of linking workplace exposure with disease development.

Bridging the gap between workplace exposure level, cumulative development of disease, and latent diagnosis of occupational dust diseases requires traceable and trended data… right now

It is a substantial challenge to trace historical instances of workplace exposure to a disease which might not present symptoms until decades following exposure; one that starts with data, which is not yet consolidated or available at a national level. Stakeholders agree that to even begin to address this issue, a national dust disease register, and the availability of accurate exposure and screening data is the starting point. Little data currently exists to detail worker exposure 30-50 years before onset or diagnosis of silicosis, and laboratory methods previously utilised, it is claimed, were not adequately sensitive, limiting robustness of data.

Key challenges that threaten to inhibit the marrying of workplace exposure with disease development include:

- inadequacy or inconsistency in measuring dust exposure;
- changes in technology for measuring risk;
- asymptomatic properties or long latency of symptoms posing challenges in accurate data collection;

- limited information on potential confounding factors per individual workers (e.g. smoking history);
- a highly casualised, and often young, workforce adding complexity to exposure tracking; and
- lack of follow up health monitoring when workers leave the industry.

> *"Given the asymptomatic nature of the disease in its early stages, timely detection is important. Any viable treatment of future treatment is predicated on early detection of the disease." Support group*

Intensity of exposure versus concentration of exposure has also been recognised as a dynamic needing better understanding through research. Specifically, research into the following would enhance understanding of factors that may impact disease progression:

- Quantification of **levels of exposure from airborne concentrations** of dust generated over short periods associated with specific tasks (cutting, polishing), and how and if this differs during wet-cutting versus dry-cutting;
- Better understanding of **risks of residue** following wet-cutting; particularly important with large-scale concrete polishing in commercial buildings;
- A thorough assessment of the **risks posed by working longer shifts** (more than 40 hours per week, or more than 8 hours per day);
- Need to collect **greater amounts of adequate, lower-dose silica exposure data** to determine 'safe' levels of exposure, tested over long periods of time;
- Study to help determine if **lung cancer occurs due to silicosis**, or if it is a direct effect of silica itself. This will aid understanding of whether ambient exposure poses a carcinogenic risk to the general population (Clinicians suggest this requires prospective HRCT scanning); and
- Studies on effects of **ambient RCS exposure in populations not occupationally exposed** (require quality measures of ambient RCS levels and pop-based screening for early silicosis).

Outcomes from this research will enable an understanding of the efficacy of current preventative controls, and spur innovation in fields of biological or health surveillance techniques that might identify early onset of the disease.

Further, non-workplace-related diseases have the potential to confound the link between exposure and the onset of symptoms. To tackle this issue, and as outlined earlier, mandatory respiratory health surveillance is recommended prior to entering a dust-exposed industry.

> *"No worker should be recruited without a prior clear chest radiograph. This would also assist with community public health." Medical professionals*

Such data would also benefit the development of a national database of dust diseases.

A National Registry is the cornerstone to expanding the knowledge base of accelerated silicosis so that further meaningful action can be taken in response to

treatment and prevention of the disease. Slowness in set up and implementation only serves to bottleneck progress in eliminating the risk to workers

There is a pressing need to expand the capabilities of data collection in relation to occupational dust diseases in Australia. The proposition of a National Dust Disease Registry, as recommended by the Taskforce in the interim advice, is overwhelmingly supported as it is considered the core means by which our nation can develop a comprehensive knowledge base on the disease. The second phase of consultations dial up the urgent demand for such a registry and stakeholders are pleased to hear progress has been made with the establishment of a Steering Committee.

> *"The register has to be a priority so we can understand the picture among the bigger group. There don't seem to be any obstacles state-by-state to this, but nobody knows what they need to be doing." Medical professional*

It is anticipated that a National Register would play two roles:

- An ability to consolidate research at a national level of dust-related diseases, accessible to health professionals and regulatory bodies; and
- Ability to monitor instances of exposure at a national level to proactively enforce compliance and effectively intervene where necessary.

Further, such a registry will aid understanding of risk factors, and enable robust reporting on trends and incidences within workplaces; particularly important with a mobile labour force who are interacting with engineered stone in different environments, during disparate tasks.

> *"The development of a centralised Australian register for the reporting of dust-related lung disease and over-exposure to RCS above the WES is desperately needed." Occupational hygienist*

There are indications that stakeholders will be accepting if the National Register first focuses on silica dust across all relevant industries provided it has capabilities to expand in scope in the future

Ideally, the National Register would cover all occupational dust diseases and not be limited to a singular industry. As discussed early in this report, the opportunity for the National Register to be inclusive and act as an early warning system for other dust diseases is appealing given the battle with asbestos and re-emergence of silicosis. However, stakeholders are pragmatic and most are comfortable with an initial focus on RCS in all industries (not just stone benchtops), so long as there is a view to broaden to other occupational dusts in the future.

It will be important to clearly communicate the immediate scope, medium-term application, and longer-term potential of the National Register. This includes communication that reassures stakeholders of how the design of the National Register will integrate new data inputs later down the track in a seamless and integrated way.

> *"The [national notifiable dust disease system] was proposed to start with accelerated silicosis. We support this approach if there are clear mechanisms for*

this to be expanded to apply to all occupational lung disease on a staged basis." Joint Submission

At a minimum, the National Register should capture workplace dust exposure levels and diagnosed cases of dust related diseases and is recommended to demonstrate an outcome driven approach

There is a general sense from the consultations that engagement of Stakeholders with the National Register stems from a rich appetite for the intended outcomes of the register, more so than the inputs.

Although stakeholders suggest several types of information they see value in being collected at a national level, they are not forthright in specifying what information must be captured within the National Register versus being collected in another database (that is also readily accessible and up to date). Distilling the submissions, it is data on dust exposure levels in the workplace (e.g. exceedances and levels and the workplace environments/ tasks from which they occur) and diagnosed cases of dust related diseases that are most mentioned in specific reference to a National Register.

It is recommended that the Taskforce take a top down approach, starting with the outcomes of the Register which will then inform the data that needs to be collected.

Aligning state-based registries is required to coordinate a valuable National Registry

It was noted in the verbal consultation that some initiatives are presently underway, or established, at a jurisdiction level. It is broadly agreed that in the interest of progressing, it would be prudent to leverage state systems that are already collecting data in a valuable and usable way, such as the 'Queensland Health Notifiable Dust Lung Disease Register'. This register has been recommended to the Taskforce as a framework to adopt nationally, and for all dust related diseases. It is suggested that for states that are not yet collecting and disclosing data to the standard of this model, their respective registers are reviewed and developed to elevate standards and drive consistency. Additionally, any state that does not yet have a register (e.g. SA has announced funding for a registry) should model from the QLD framework to help align across jurisdictions and therefore supporting national consistency.

It will be essential for the Steering Committee to offer a clear outline on what data needs to be included in collection and the reporting requirements so that registers can be developed and refined accordingly. This should be considered a priority.

As such, effective and aligned state based registries may feed into a National Registry and aid the work to be done in coordinating this response at a national level.

"Data should be stored centrally, at least at the state/territory level, and be available for proper research and evaluation. Monitoring of airborne contaminants is required by law. In WA, monitoring results are submitted to the regulatory authority but this is not a requirement in other jurisdictions. Regulatory authorities should be

able to share the data with health departments on request." Government

"The QLD registry is more open and transparent: trends can start to be predicted, hotspots can be identified, it's updated on a monthly basis. We've had to dig around a lot more for this info in NSW and VIC, and other states have not released any data. Is there an interim consideration we can employ to require state based registries, work safe, health departments to release or publish this data on a monthly basis before a national registry is developed?" Legal representative

Many stakeholders would like to see more attention paid to research in the area of prevention

There is a strong desire to attack the root cause of silicosis underpinned by a belief that prevention in the long term will be the most effective defence to eliminating silicosis. Whilst it is noted that there is a need to balance the immediate requirements of those diagnosed or exposed (clinical or otherwise), this cannot be at the expense of resources put towards prevention. It is paramount that communications from the Taskforce do not appear single-minded in the focus towards either treatment or prevention.

"The interim advice only identified clinical areas for research. That excluded all research that could be undertaken in order to prevent exposure. If exposure was prevented then the clinical research would not need to be funded because workers would not get entirely preventable diseases. Preventing exposure and therefore disease would be a much bigger cost saving for Australia and of much greater benefit to the engineered stone worker." Educational institution

"A prevention framework must be linked to a systemic health surveillance system that detects early disease for both treatment and prevention purposes, i.e. detection of early disease must inform risk control measures." Union

In order to support research in this area, recommendations to aid prevention strategies and response include further developing clinical and non-clinical understanding:

Clinical understanding to be further researched:

- Study pathogenesis of engineered stone associated silicosis (exposure patterns and effect of particle size). To date there is little understanding of how this contributes to the pathogenesis of silicosis;
- Identification of biomarkers (disease severity, progression risk); and
- Impact of comorbidities on silicosis disease progression.

Non-clinical understanding to be further researched (some previously mentioned in relation to matters in this report):

- Incidence and prevalence of lung disease related to silica exposure, and level of impairment (acute, accelerated, chronic);

- Impact of concentration of exposure versus intensity of exposure (effect of ambient exposure, impact of exposure during longer shifts, impact of specific tasks);
- Current effectiveness of suggested prevention measures (e.g. wet cutting); and
- Accurate death, survival and severity rates.

Notwithstanding recent research efforts and promotion, namely the Queensland Government's commitment to provide $5 million over 4 years to support research into medical treatment as well as prevention initiatives, many stakeholders agree that there is a much left to do.

> *"Queensland would welcome a national approach to further research to better understand the links between workplace exposure and latent disease development." Government*

It is considered that the appointment of a National Dust Disease Registry will assist in avoiding a 'piecemeal' response to research and, ultimately, prevention. In tandem, this route provides an opportunity to engage stakeholders from industry, industrial relations, economic, social, psychological and medical disciplines at once, in a forum and process designed to bring all viewpoints together.

Occupational hygienists have suggested that this approach would be modelled along the lines of a successful framework adopted by the UK institute of Occupational Medicine (outlined previously in this section).

Activating the stone and construction industries to spur innovation might help to counteract those worried about the economic implications of a ban on engineered stone use in Australia. Through stimulating competition domestically, the local economy will benefit

> *"This is a fashion item that is making people sick." Educational institution*

Stakeholders recognise a number of alternative materials already available to be considered to phase out engineered stone, including:

- Geoluxe, a pyrolithic stone, Silica content 7%-25%;
- DuPont Corian, an acrylic polymer;
- Bettastone, made from recycled glass (<1% crystalline silica);
- Sintered Stone, a recycled stone;
- Timber in epoxy resin or lacquer;
- Natural Stone;
- Concrete;
- Porcelain; and
- Laminate.

Presently, alternatives are greater in cost than engineered stone, and making a case for the consideration of alternative materials in large-scale commercial construction is deemed

therefore challenging. Non-industry bodies and affiliates believe the profit-motive is inhibiting consideration of alternative materials.

Given a reliance on offshore supply of engineered stone (it is not produced in Australia currently), some argue that a ban on imported engineered stone would create a willingness to innovate in the domestic market, promoting competition and ultimately benefitting the local economy.

> *"The banning of engineered stone products would have an immediate effect in driving both innovation and also satisfy the preferred control method of substitution, i.e. use materials with no or lower percentage crystalline silica content." Support group*

Alternatively, some propose that Government could subsidise marble, dolomite, calcite or onyx to encourage demand and limit a reliance on engineered stone, or impose a tax on engineered stone with a high silica content.

> *"One means of driving innovation is through the Australian Taxation Office's research and development tax incentive scheme. At the same time, this should be complemented by taxing engineered stone with high silica content, so that it is financially prohibitive to fabricators and hence, a costly deterrent to prospective buyers. This is analogous to changing smoker's behaviour through taxation, or, the debate around tackling the problem of obesity through a sugar tax." Occupational hygienist*

Other innovations

There are recommendations that a separate working group be formed to address innovation in alternative materials, so as to not detract from fast action in assessing the efficacy of current control measures, or implementation of research to gather accurate longitudinal data of exposure histories, frequencies, and nuances in types of exposure (industry, time exposed, concentration of exposure).

With this in mind, some jurisdictions are moving forward with technology to monitor exposure in real-time. Specifically, SafeWork NSW, in partnership with the Centre for WHS, is undertaking research into the development of a real-time wearable silica exposure detection device, cited as "bridging the gap" between the onus on PCBU's to conduct health monitoring (non-regulated) and their capability to measure exposure levels.

> *"The research has reached a critical milestone with the testing of the prototype at Stage 1 proven to accurately measure the Australian Workplace Exposure Standard (WES) of 0.05mg/m3 (8-hour time weighted average) in a laboratory setting as well as at a number of worksites, including quarries, and brick production, tile processing and engineered stone processing facilities. The research is being conducted in partnership with Trolex Nome, whose UK parent company Trolex has 60 years' experience in developing safety technology for the mining, tunnelling, oil and gas industries. The project has built upon initial research conducted by Trolex in conjunction with the University of Hertfordshire." Government*

Charities outline that there are additional opportunities in utilising health surveillance technologies to *"measure individual response to exposure, and linking combined exposures to bushfire smoke, and COVID"*, in an effort to better understand biomarkers and disease progression.

SUMMARY OF PRIORITISATIONS

The below table outlines primary and secondary priorities for consideration by the Taskforce (and does not cover all issues discussed in this report):

	Primary priorities	Secondary priorities
Regulatory & Governance	• **National banning** of dry-stone processing to aid preventative measures on work sites • Creation of a **risk elimination steering committee** comprised of experts across disciplines, to initiate a multi-disciplinary approach to prevention • **Mandating health screening** for workers entering the industry, for those in the industry, and those who were in the industry, to aid early diagnosis and exposure tracking data • **Introduction of a licencing scheme** for the fabrication and installation of engineered stone, to drive accountability and enforcement at all layers • **Documented classification of imported stone substances** to reduce risks of hazardous exposure	• **Introduction of a licensing scheme at the beginning of the supply chain** to drive accountability and enforcement • **Mandate the deployment of qualified occupational hygienists** to inform correct procedures surrounding monitoring activity
Organisational Culture	• **Increasing awareness via training, induction programs and campaigns**, to drive clear, unambiguous guidance, and promote greater adherence to current Codes of Practice	• **Improve to existing return-to-work schemes and funding** for these schemes, to better outcomes for sufferers
Resourcing & Capabilities	• **Develop standardised register of professionals** to inform regulatory initiatives/developments • **Jurisdictions to release exposure data they have captured already**, if captured, to disseminate information while a national register is being established	• **Upskill medical professionals** to be able to accurately identify different types of silicosis in its early stages, and provide accurate imaging and diagnostic reporting to records • **Increase resourcing capabilities across regulatory bodies**, to promote optimal on-ground auditing processes and expertise • **Deploy qualified occupational hygienists** to bolster, and inform correct activity of monitoring procedures
Research & Development	• **Development of a national dust disease register for silicosis, but not limited to engineered stone,** to align data collected across jurisdictions at a national level. This can later inform enhanced epidemiological studies, and to be used as quantification, or otherwise, for a ban on imported engineered stone products	• **Assess viability of developing alternative products** to imported engineered stone, to minimise the use of hazardous materials

The clear communication to stakeholders of timelines and progress with respect to these priorities is crucial for all future actions taken.

APPENDIX A: CONSULTATION QUESTIONS

1. From a regulatory perspective, what should be considered 'engineered stone'?
2. Various jurisdictions have already banned uncontrolled dry processing of engineered stone. What other practical measures could be introduced to reduce worker exposure to silica dust?
3. Relevant to dust-related diseases, what mechanisms exist or could be further developed to ensure effective enforcement of regulations and codes of practice?
4. Hazard elimination sits at the top of the hierarchy of control measures. Do you consider a ban (either total or partial) of high silica content engineered stone material, a proportionate and practical response to the emergence of silicosis in the engineered stone benchtop industry in Australia?
5. The Taskforce is aware some jurisdictions are considering a licensing scheme for engineered stone. Do you consider this a proportionate and practical response in relation to the following:
    a. Restricted (under licence) or otherwise prohibited manufacture in Australia?
    b. Restricted (under licence) or otherwise prohibited importation and distribution?
    c. Fabrication and installation performed only under licence?
    d. Licence required after installation modifications or repurposing of installed engineered stone?
6. What learnings from the re-emergence of accelerated silicosis as an occupational health and safety risk can be applied to enhance workplace health and safety systems more generally?
7. Given the nature of the building and construction industry, and the increase in the number of smaller, often independent businesses and suppliers, what particular strategies and supports are needed to ensure that these businesses are able to provide adequate protection for workers?
8. What health and safety strategies can be improved?
9. What return to work support is available or should be considered to assist workers following a diagnosis of silica-associated disease, including for those who are unable to return to the engineered stone industry?
10. What are examples of good dust exposure workplace monitoring processes? (Where possible please provide evidence to support the effectiveness of these processes).
11. What specific resources (eg information, education, other supports etc.) are required, that are not currently available, for small to medium sized businesses, to ensure that owners and staff are fully informed of the availability and correct use of control methods, including by workers from non-English speaking backgrounds?
12. With a specific focus on dust related diseases, what mechanisms exist that could be used as a basis for providing a coordinated national system with representation across stakeholder disciplines for identifying and communicating emerging issues?

13. What industry mechanisms could be introduced to ensure workers have appropriate competencies for handling engineered stone or performing processes that generate silica dust?
14. What are the specific challenges related to linking workplace exposure with disease development (at a later date) and how should these be addressed?
15. What are three key pieces of information about dust disease that you would like to see collected at a national level? What are the three key uses of the information collected at a national level?
16. What alternative products are currently available which could replace high silica-content engineered stone? How could we drive innovation in relation to products?
17. The interim advice identified immediate research priorities which has led to a research funding grant opportunity announced by the Medical Research Future Fund and National Health and Medical Research Council. Are there other research priority areas that have not been identified in the interim advice that should be considered, and why? What research areas should be a priority following this first round of research funding?

Hall & Partners

Melbourne
650 Chapel Street
South Yarra VIC 3141
+61 3 9662 9200

Sydney
Level 2, Pier 8/9, 23 Hickson Road
Walsh Bay Sydney NSW 2000
+61 2 9925 7450