



## COVERSHEET

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### List of documents that have been proactively released

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| 4 December 2025 | Summary of Submissions: Work with engineered stone and materials containing crystalline silica | MBIE          |

### Information redacted

**NO**

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# **Summary of Submissions:** Work with engineered stone and materials containing crystalline silica



# Contents

|                                                                                           |    |
|-------------------------------------------------------------------------------------------|----|
| Executive summary .....                                                                   | 3  |
| The status quo is found inadequate .....                                                  | 3  |
| Consistent themes across submissions .....                                                | 4  |
| Introduction .....                                                                        | 5  |
| Submitter categorisation .....                                                            | 5  |
| Feedback on the criteria used .....                                                       | 6  |
| Analysis: Feedback on the options .....                                                   | 7  |
| Option 1: Status quo .....                                                                | 7  |
| Additional questions for businesses .....                                                 | 8  |
| Option 2: Specific mandatory requirements to reduce RCS exposures .....                   | 10 |
| Additional questions for businesses .....                                                 | 11 |
| Option 3: Licensing of workplaces that cut, grind, drill or polish engineered stone ..... | 13 |
| Additional questions for businesses .....                                                 | 16 |
| Option 4: Increased general duties and workers' exposure and health monitoring .....      | 17 |
| Additional questions for businesses .....                                                 | 20 |
| Option 5: Limit supply to or use in workplaces of engineered stone .....                  | 22 |
| Additional questions for businesses .....                                                 | 25 |
| Analysis: Closing questions .....                                                         | 27 |
| Glossary .....                                                                            | 29 |

## Executive summary

The consultation document ‘Work with engineered stone and materials containing crystalline silica’ was published on 18 December 2024, with consultation closing on 18 March 2025.<sup>1</sup> A total of 68 submissions were received from a range of submitters. The consultation document asked respondents about five options:

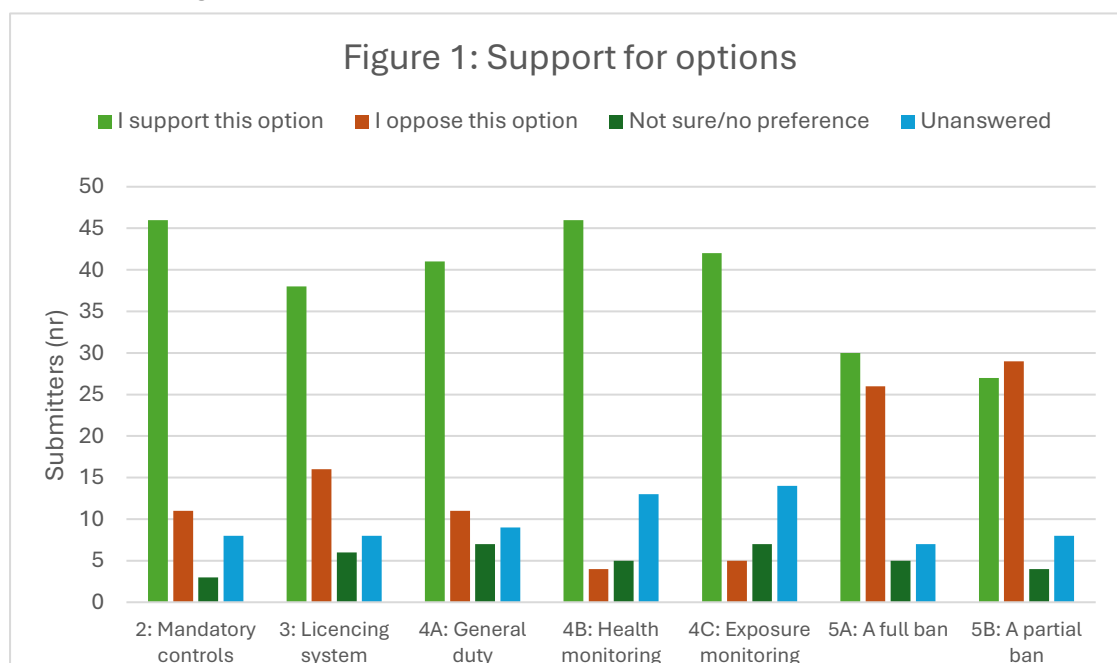
- Option 1: Status quo
- Option 2: Specific mandatory requirements to reduce Respirable Crystalline Silica (RCS) exposures
- Option 3: Licensing of workplaces that cut, grind, drill or polish engineered stone
- Option 4: Increased general duties and workers’ exposure and health monitoring
- Option 5: Limit supply to, or use in workplaces of engineered stone

### The status quo is found inadequate

Overall, submitters found the status quo inadequate. 90% of submitters responded that the status quo is inadequate, with only two submitters supporting the adequacy of the status quo.

Many submitters expressed simply that more could be done in a range of ways, supporting a number of the options presented in the consultation document such as improved controls and enforcement. Some submitters indicated that while they considered a lot of the industry is working hard to minimise risks to workers, there is a ‘grey’ market which is not, enabled by a lack of mandatory controls and effective enforcement. Other submitters considered the status quo to be inadequate primarily because their preference was to enact a partial or full ban.

The majority of submitters supported all other options presented in the consultation document, other than the partial or full ban which received support from slightly less than half of submitters. Mandatory controls (Option 2) and health monitoring (Option 4B) were the most preferred options, however not by a significant margin. A breakdown of support for the options is illustrated in Figure 1 below.



<sup>1</sup> [Work with engineered stone and materials containing silica](#)

## Consistent themes across submissions

### *The industry has already implemented a number of these options to varying degrees*

When discussing the options of mandatory controls, general duties and monitoring – most submitters in, or close to, the engineered stone industry indicated that these processes were already in place. Many considered their current approaches that were similar to the options presented to be effective in minimising the risk to workers of RCS exposure. These submitters were very supportive of the options becoming mandatory or better enforced because they wanted the entire industry to follow suit.

With regards to silica content, many industry submitters were quick to point out that a lot of the industry has already transitioned towards zero- to low-silica products. Many discussed this in relation to the potential costs and impacts of a ban, in that they considered a large proportion of the industry would be capable of adapting to such a change without significant disruption. In contrast, several submitters indicated that a partial or full ban would result in job losses and even possibly the closure of some businesses who primarily use engineered stone.

### *Enforcement is necessary to ensure any of the options are effective*

Most submitters agreed that stronger regulator enforcement was needed to ensure proper risk management of RCS exposure. Many submitters, including several within the engineered stone industry, stated that stronger enforcement without further legislative change would likely be insufficient to move away from the status quo. Regulator enforcement was emphasised for all options by submitters.

### *Submitters were supportive of a combination of options*

Submitters tended to agree that most of the options in the consultation document could not be implemented in isolation. For example, many submitters were supportive of mandatory controls (Option 2) as well as a licensing system (Option 3) to ensure compliance. Alongside this, many expressed a desire for health and/or exposure monitoring (Options 4B and 4C) as well, to maintain a focus on worker safety and outcomes for those already exposed. Other combinations were suggested, in particular by those who supported a ban – discussed in more detail below.

### *A partial or full ban would need sufficient lead-in time and a transitional approach*

Many submitters who preferred a partial or full ban supported the other options as ‘short term’ or transitional measures, recognising that engineered stone already installed in New Zealand (‘legacy products’) will continue to expose workers in the future regardless of a ban.

There was a mix within the industry of those who had already transitioned to zero- or low-silica products versus those who hadn’t. Those who had were supportive of the entire industry moving away from high-silica products, whereas understandably, those who still operated primarily with high-silica products were concerned that any significant restriction (such as a ban) would be detrimental to their business and the jobs of their employees. Overall, though, there was a consistent sentiment among submitters that there might be an uncomfortable period for the market, but it would recover and adapt.

### *Comparison to Asbestos*

Many submitters drew comparisons to how asbestos is managed in New Zealand. These submitters stated that we should draw lessons from the response to asbestos, and that crystalline silica should be treated the same way due to the risk it exposes to workers.

# Introduction

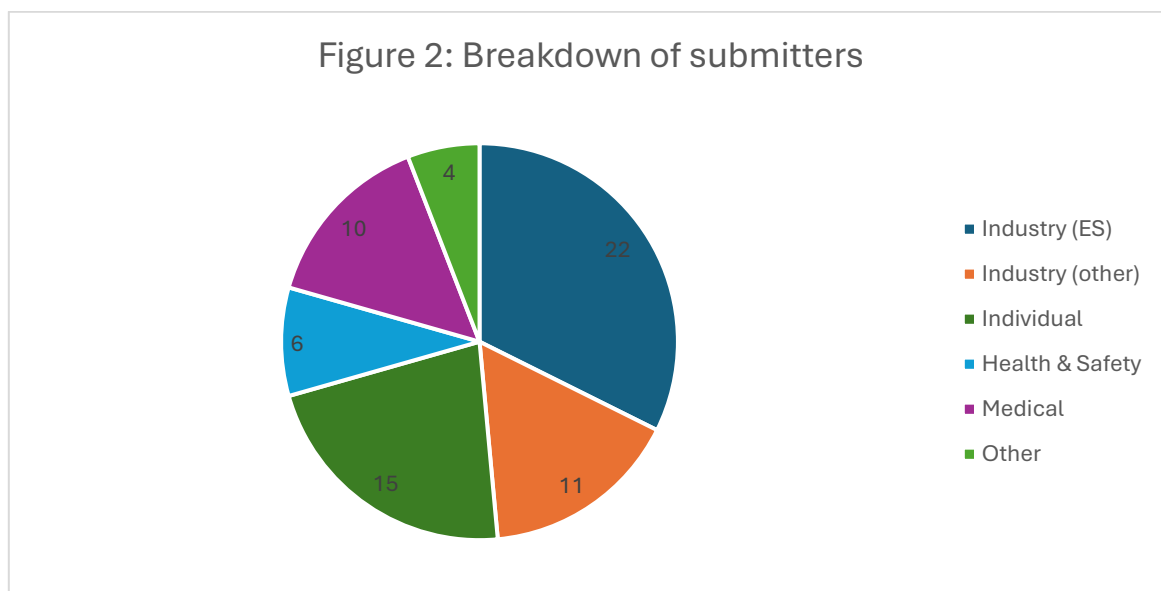
The submission period extended from 18 December 2024 to 18 March 2025. Submitters were asked to respond to questions and options laid out in the consultation document. There were multiple options available to provide a submission; 27 responses were submitted through templated forms or email and 41 via SurveyMonkey.

## Submitter categorisation

Submitters have been categorised as follows for the purposes of analysing the themes of submissions, based on self-reported associations and expertise:

- **Industry (Engineered Stone):** Organisations and businesses who work directly with engineered stone as a primary part of their operations. For example, manufacturing of engineered stone.
- **Industry (Other):** Organisations and businesses who work with engineered stone in the course of their work, or where RCS results from other processes in the workplace. For example, this includes the kitchen industry and construction industry.
- **Individual:** Submitted as an individual not associated with an organisation. This includes a range of individuals including those who have worked in the industry, members of the public, and those impacted by silicosis.
- **Health & Safety:** Organisations and individuals with expertise or roles in health & safety.
- **Medical:** Organisations or individuals submitting as medical professionals.
- **Other:** Organisations that do not fit into the categories above. This includes a range of companies and representative bodies such as unions.

A breakdown of submitters is in Figure 2 below. The majority of submitters belong to the 'industry' categories (48% of all submissions).



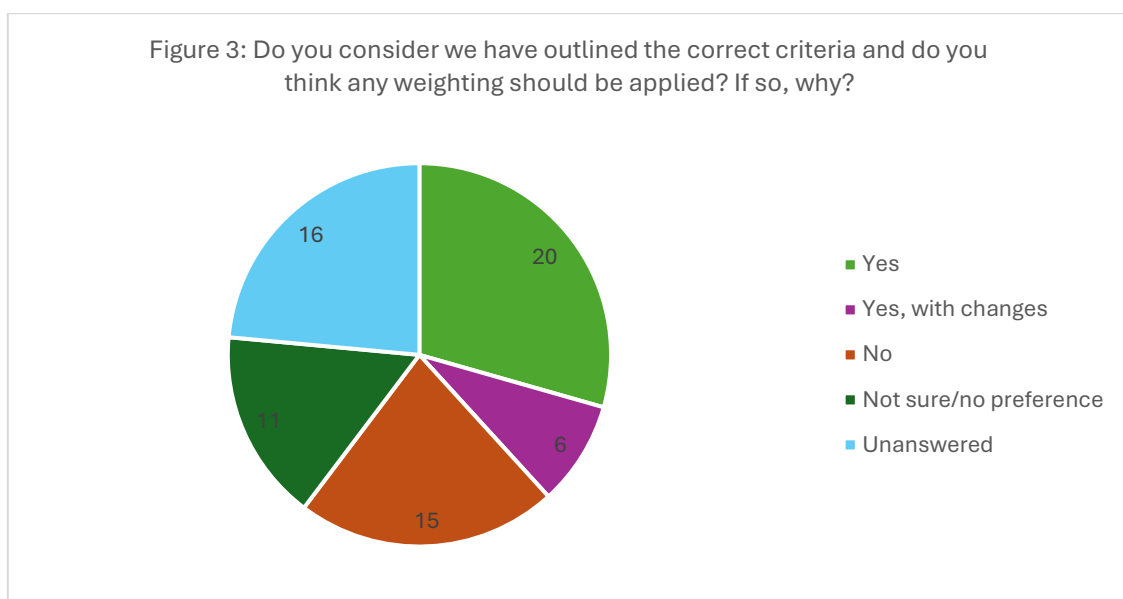
## Feedback on the criteria used

Submitters were asked about the five criteria proposed in the consultation document to compare the options to the status quo:

1. **Effective:** options will reduce harm arising from work and prevent regulatory failure.
2. **Proportionate:** options are proportionate to the risk and will target key risks.
3. **Clear:** options are logical, consistent, and easy to understand, provide sufficient certainty to support the duty holders to comply and the regulator to enforce, and provide assurance to workers of protection of their health and safety.
4. **Cost-efficient:** options will minimise compliance and transitional costs for the duty holders and for the regulator, for the benefits they deliver.
5. **Adaptable:** options are future-proofed to manage risks as there are changes in technology and ways of working.

**Q1:** Do you consider we have outlined the correct criteria, and do you think any weighting should be applied? If so, why?

76% of submitters answered the question. A breakdown of responses to the multiple-choice question is in Figure 3 below.



Overall, there was support from submitters for the criteria as outlined in the consultation document. 38% of those who responded to this question agreed to the criteria as outlined in the consultation document. The explanations by submitters supported this too. Submitters who disagreed with the criteria used mostly expressed discontent with the 'cost-efficient' criterion.

In relation to weighting, most submitters either did not comment on it in addition to discussing the criteria itself or said that weighting was unnecessary or too complicated to be worthwhile. However, there was a theme amongst individual submitters that the cost-effectiveness criterion should be weighted lower, to reduce the perceived sway towards business interests. Some discussed that the focus on the costs for the duty holder fails to account for the costs to workers and/or the health system.

## Analysis: Feedback on the options

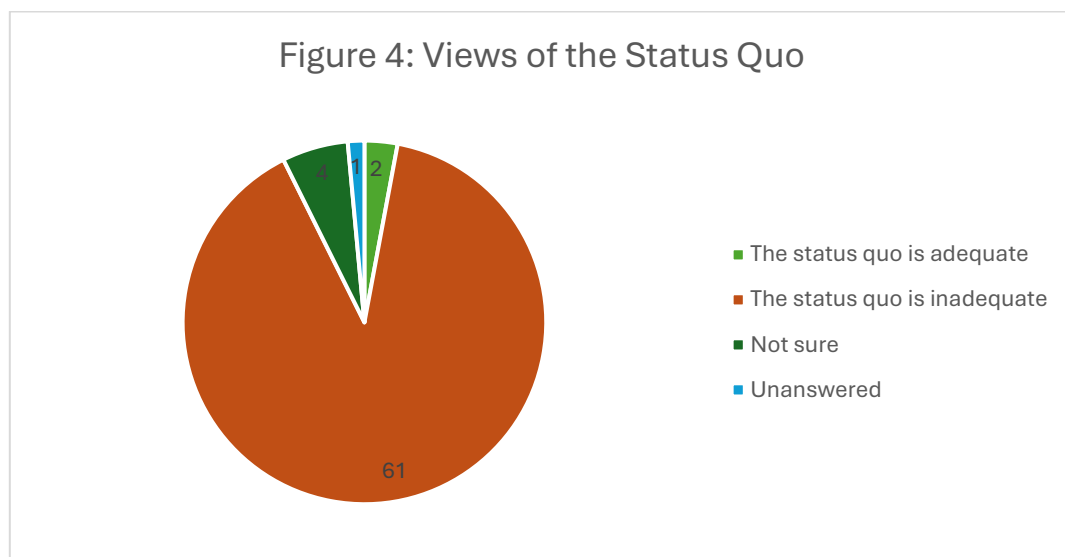
This section outlines a summary, the themes of submissions and examples of feedback for each of the five options in the consultation document.

### Option 1: Status quo

**Q2:** *Do you think the status quo is adequate or inadequate to address the risks involved in work where RCS may be present? Tell us why.*

The status quo is premised on the existence of the general duties on businesses and workers under the Health and Safety at Work Act 2015. These duties require Persons Conducting a Business or Undertaking (PCBU)s to eliminate or use controls to minimise worker exposure to the hazard and risks from RCS. The recently announced changes to the health and safety at work system, primarily of a shift to focussing on critical risk, would not have an impact on the status quo in respect of managing exposure to materials containing crystalline silica as that falls within the category of a critical risk.

**90% of submitters indicated the status quo is inadequate**, with only 2 submitters supporting the adequacy of the status quo. Figure 4 below summarises submitter views:



Many submitters consider current requirements are not being adhered to which is leading to exposure. This aligns with the consultation document outlining that MBIE has found inconsistent application of current safety practices. A common theme across submissions was an insistence that *most* of the industry is complying with current requirements but there are 'grey' areas of industry failing to control the risks of RCS.

**Q3:** *What, if anything, could the regulator do within the status quo to support businesses to address the risks without needing to change current laws and regulations?*

As most submitters consider the status quo to be inadequate, many found it difficult to suggest what the regulator could do within the current system. Despite this, three key themes emerged from the constructive feedback provided:

1. Improved industry-specific knowledge: Submitters suggested more industry collaboration, training and education.
2. Greater presence of the regulator: Submitters called for increased inspections, audits, and enforcement.
3. Prioritising consistency: Submitters emphasised the need for consistent advice and level of scrutiny across the industry.

For example, submitters who made suggestions said:

- “Take more enforcement action using the relevant sections of current legislation as it stands”. (Health & Safety submitter)
- “Greater enforcement, more interaction with the engineered stone industry”. (Individual submitter)
- “Increase in audits targeted at the engineered stone fabricators, proactive education of fabricators and more resource in market to use their enforcement tools such as improvement and prohibition notices. The end result would see an uplift in understanding of, and compliance with best practice”. (Engineered stone industry submitter)
- “More safety training and inspections, i.e. increased observation as a stick with training as the carrot”. (Other industry submitter)
- “[The regulator] should also seek to improve the education of workers and employers alike, and, at a bare minimum enforce current regulations strictly”. (Medical submitter)
- “Assist the industry in producing an approved code of practice for all businesses that work engineered stone benchtops”. (Other submitter).

## Additional questions for businesses

**Q19:** *What controls do you have in place to manage risks of RCS to your workers and how effective do you consider these controls to be? (Q19 – additional question for businesses)*

This question was for fabricators or those involved in cutting or processing RCS products, there were 12 responses. Most considered the controls they are currently using to be effective. The most common controls were wet cutting, use of water suppression, ventilation or filtering, and Personal Protective Equipment (PPE), including masks, overalls and laundering staff clothing onsite. Other types of controls submitters implemented included enclosed facilities, regular cleaning, air monitoring, staff health checks and training. Submitters emphasised that effectiveness requires consistency and monitoring. A minority of those who engaged in this question said they used low or zero-silica products and considered this to be an effective control.

**Q20:** *If you are able to quantify the cost, can you please provide figures for the costs of the controls you currently use? Do you see these as being reasonable?*

Only nine submitters responded to this question. Multiple of these respondents estimated hundreds of thousands of dollars spent on the capital for controls and tens of thousands ongoing operational costs. Note the response to this question was limited and costs are highly dependent of the size and role of an organisation.

Almost all submitters who engaged with this question considered these costs to be reasonable. For example, they said the costs of controls are: “high but necessary”, “the cost of doing business” and perfectly reasonable given the value of a human life. One submitter suggested the costs of control measures are simply part of accepted industry practise and therefore should not be considered an ‘additional cost’.

Some submitters expressed concern that while they consider the costs to be reasonable as part of responsible business practise and keeping workers safe, they think areas of the industry are forsaking controls to produce a cheaper product.

**Q21:** *Do you face any barriers to meet the current expected practices to manage risk? If yes, please explain.*

Almost all submitters who engaged with this question indicated that cost was a barrier. A small number said that there were no barriers.

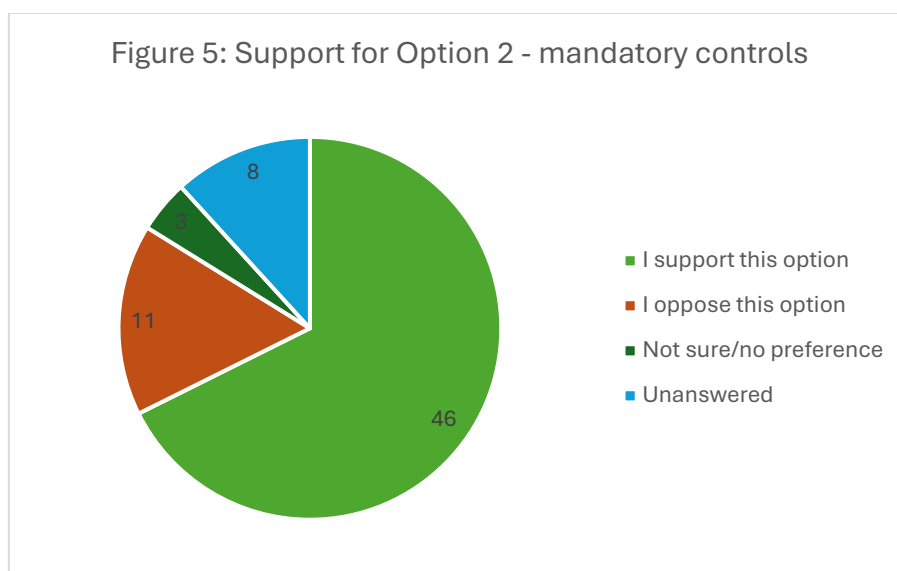
**Q22:** *Would you describe your interactions with the regulator as useful, reasonable, and timely? Please tell us why.*

A limited number of submitters engaged in this question targeted at businesses. Just over half the responses were positive saying that interactions with the regulator were useful, reasonable and timely. However, several submitters referenced the perceived under resourcing of the regulator in terms of both FTE and training. A couple of submitters referenced current requirements being low (such as lack of airborne testing) and this impacting the extent to which the regulator can enforce or provide consistency across inspectors.

## Option 2: Specific mandatory requirements to reduce RCS exposures

Option 2 would introduce measures to require that PCBU's must not process, direct or allow workers to process engineered stone, unless the processing and housekeeping are controlled.

**Overall, 68% of submitters supported Option 2.** The breakdown of responses is in Figure 5 below.



Submitters were asked to explain why they supported or opposed Option 2.

**Q4:** Do you support or oppose implementing specific requirements for working with engineered stone? Tell us why.

Several industry submitters said that they are supportive of Option 2 but consider the measures suggested to already be in use. For example, an engineered stone industry submitter said “We already carry out the requirements of Option 2. To me, this is the standard”. Similarly, an ‘other’ industry submitter said: “This seems like taking what a good companies' practices would look like and making them the norm”.

A significant proportion of those who supported Option 2 focussed on the impact that making requirements mandatory would have, in comparison to the status quo where most of these controls are industry standard but not enforced. Submitters said:

- “Mandatory controls will create a safer industry standard and ensure compliance across all businesses”. (Industry – Engineered Stone submitter)
- “By having mandatory and specific requirements for engineered stone all fabricators will have even clearer guidance on how to protect workers and comply with Regulations. This will also make it easier for WorkSafe to hold businesses accountable for non-compliance.” (Industry – Engineered Stone submitter)
- “Non mandatory controls are not effective. Even mandatory controls have their problems, but without them not much will be done in practice”. (Medical submitter)
- “We are still exposing workers to RCS from engineered stone so a legal approach might help”. (Health & Safety submitter)

Nine submitters, who supported Option 2, suggested mandatory controls should be implemented in conjunction with an eventual ban, i.e. a ‘staged approach’. For example:

- “I support this option as there will be legacy RCS products for years to come, much like asbestos, and specific controls should be expected to manage these”. (Individual submitter)
- “While implementing a complete ban on engineered stone products would eliminate risks to workers associated with new product, additional measures are necessary while a ban comes into effect”. (Medical submitter)
- “Despite the fact that [Submitter] supports a ban, specific requirements for working with engineered stone will need to be in place to ensure the protection of the health of the workers that will continue to have exposure to RCS due to the benchtops that have already been installed”. (Medical submitter)

11 submitters opposed Option 2, 10 of those provided the explanation of a preference for a complete ban on RCS products.

## Additional questions for businesses

Submitters gave feedback on implementing mandatory controls in the additional questions for businesses, discussed below.

**Q23:** *What do you expect the cost to your business to be to implement any outlined requirements, such as water suppression (wet cutting) systems or local exhaust ventilation systems?*

The majority of those who engaged with this question were in the ‘Industry (Engineered Stone)’ category of submitters, as expected. The strong theme across their responses was that the controls outlined for Option 2 are not new to the industry. One responder said regarding cost of implementing these requirements: “None. We are already using all of that equipment” – this sentiment was reflected across the majority of industry responses.

**Q24:** *How long would you or your business require to implement any outlined requirements?*

42% of those who engaged with this question said no time would be required as they have already implemented the requirements outlined in Option 2. For example, two Engineered Stone Industry submitters said: “Everything is in place mechanically to deliver a safe environment.” and “already implemented”. The remaining few responses were varied and ranged from one to five years of implementation time.

**Q25:** *Are there any controls on workplace practices that would not be practicable?*

Half the responses to this question indicated that there are no impractical controls. The other responses were varied, however. Some specific feedback on what controls were impractical included:

- “A 0% RCS air reading would be impracticable and less than the standard ambient levels on most construction sites.” (Industry – Engineered Stone submitter)

- “Mandatory respirators in an environment with safe air quality” (this submitter said respirators are uncomfortable and therefore not practical or necessary where the air quality has been tested as safe). (Industry – Engineered Stone submitter)
- “Banning of all dry cutting activity. There are a small number of fabrication tasks where there is no other way of doing. Adequate controls need to be acceptable i.e. fit tested respirators”. (Industry – Engineered Stone submitter)

**Q26:** *Do you believe that the controls you have in place are adequate without mandatory controls? Please explain.*

This question had a low response rate. Most responders to this question said yes.

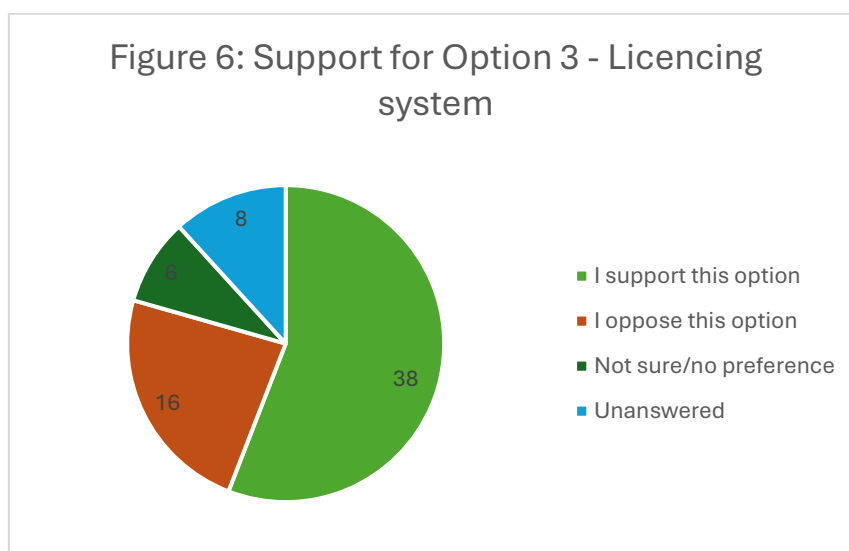
**Q27:** *How does Option 2 compare with what you are already doing?*

This question had a low response rate. Almost all responses said that Option 2 is the same as what they are already doing.

## Option 3: Licensing of workplaces that cut, grind, drill or polish engineered stone

Option 3 would introduce licensing of workplaces that cut, grind, drill or polish engineered stone. Licensing could include the implementation of mandatory requirements and monitoring as part of the requirements for obtaining a licence.

**Overall, 56% of all submitters supported Option 3.** The breakdown of responses is in Figure 6 below.



Submitters were asked to explain why they supported or opposed Option 3.

**Q5:** *Do you support or oppose a regulatory requirement for licensing of workplaces that cut, grind, or polish engineered stone? Tell us why.*

Support for a licensing system was the lowest compared to the other non-banning options presented in the consultation document. Despite this, a majority of submitters supported it.

The main reason submitters gave for opposing this option (other than supporting a ban instead) was that they did not consider this option would actually reduce risk and ensure compliance so it would be an ‘unnecessary’ additional cost to businesses. For example, one ‘other’ Industry submitter said: “Of all the options licencing is least likely to ensure safety and compliance. Licencing will place a significant cost burden on businesses and government, without the direct benefit provided by the other options”, another Engineered Stone Industry submitter commented “Business in this industry are already struggling; many fabricators are feeling the pressure of additional costs to their businesses, and we don't feel this is a necessary expense.” Similarly to the responses for Option 2, several submitters continued to refer to a full ban as their preferred option and did not engage directly with the proposal in the current option.

Those who supported Option 3 focussed their comments largely on the following benefits they consider licensing could bring: reassurance for staff and other trades, better enforcement and

tracking of those working with RCS products, and reduced ambiguity about how to comply. Submitters said:

- “Licencing would allow consistency in controls removing ambiguity from the industry. Licensing will ensure consistency in control application and ensure controls are maintained and effective due to routine auditing.” (Engineered Stone Industry submitter)
- “If you consider that Mandatory Controls are required (and I definitely do) then there must be some form of strict review of businesses to ensure the systems and controls are undertaken and maintained. You must either Licence (together with regular reviews) or allow businesses to be reviewed regularly by approved auditors” (Engineered Stone Industry submitter)
- “[In addition to a ban] We would also like to see a robust and tripartite licencing regime introduced for any business that works with engineered stone” (other submitter).

Many submitters focussed on the cost aspect of a licence in varied ways. For example, some (despite supporting the idea) shared a similar perspective as those who opposed it discussed above, that it will be an additional expense to business without significant gain compared to other options. Other submitters supported a licensing regime, and the potential costs associated as they suggested it might be a deterrent and encourage better compliance. For example, an individual submitter said: “Yes [support Option 3], to deter smaller less compliant companies from working with engineered stone, to encourage best practise, to make tracking of companies working with engineered stone easier to monitor”.

A number of submitters raised the comparison to how asbestos is regulated and requires a licence to work with/remove.<sup>2</sup> One ‘other’ submitter said “This [licencing regime] would ensure that fit and proper PCBU’s are engaging in this work – as with the removal and handling of asbestos, it would ensure that only the businesses that have the capability as well as the health safety maturity will be able to engage in this work”.

As with feedback on all the options, some submitters continued to suggest combinations of options or using Option 3 as part of a ‘staged’ approach towards a ban: “As before [Reference to Option 2], this is a short-term option pending a total ban” (Individual submitter) and “I strongly advocate for a ban. Alongside this, a well-designed, monitored and regulated licencing system would be beneficial for all workplaces working with RCS dust” (Medical submitter). One Medical submitter provided further detail that in addition to licensing, there should be “Phasing out over 12 to 24 months the manufacture, use, import and export of engineered stone products with >40% RCS content”.

Other feedback mentioned by a couple of submitters covered more specific implementation details of a licensing regime. There was a suggestion of licensing for only RCS over a certain threshold. Also, more than one submitter raised the need for clarity of what workplaces are covered, for example: “It is important that any licensing requirement is not limited to workplaces processing engineered stone. This should be extended to workplaces processing any crystalline silica material” (Engineered Stone Industry submitter).

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<sup>2</sup> [Licensing overview | WorkSafe](#)

**Q6: What should be the conditions of gaining and maintaining a licence?**

This question had comparatively high engagement (66% of submitters gave an answer). Across submissions the following themes emerged for conditions of a licensing regime:

- Evidence of compliance with current guidelines;
- Maintaining the relevant machinery/equipment;
- Consistent and regular air monitoring;
- Training and health checks for staff; and
- Regular review of eligibility for licence (suggestions varied from six months to two years and there was mixed feedback on who the issuer should be, mostly the Regulator but some suggested a third party and others advocated for a self-reported approach).

Some examples of what submitters thought a licensing regime should require are below, noting there was a range in terms of specificity of responses with some submitters providing long responses and a lot of detail in terms of the conditions for a licence that should be implemented:

- “Strict adherence to mandatory controls - wet cutting, extraction ventilation, PPE, education, and training.” (Medical submitter)
- “Mandatory Health and Exposure Monitoring with qualified Occupational Hygienists and Occupational Health Nurses (OHNs) with the support of Occupational Physicians to ensure the appropriate ACC Claims, Health Monitoring (through to High Resolution CT) are in place in addition to recommended controls” (Medical submitter)
- “High standards of enclosure, filtration and disposal of waste” (Individual submitter)
- “Wet cutting only with the majority of cutting done by machine. Air monitoring to confirm safe air levels. Laundered clothing. Respiratory Protective Equipment (RPE) for Hand Fabrication. Wet surfaces. Documented and audited processes.” (Engineered stone industry submitter)
- “Satisfactory annual workplace audit by WorkSafe plus airborne monitoring by a competent person [to less than]  $<0.025^3$ ” (Engineered stone industry submitter)
- “Adherence to enforceable codes of practice. A primary assessment for initial licensing and regular maintenance assessments as well as random checks.” (Engineered stone industry submitter)

13 submitters specifically referenced inspections or audits undertaken by WorkSafe or similar enforcement staff as part of the conditions of a licensing regime, for example:

- “Satisfactory annual workplace audit by WorkSafe plus airborne monitoring by a competent person” (Engineered Stone Industry submitter)
- “Work Safe or similar industry elected organisation inspections. It’s important that the inspectors understand the industry and the effects of cross contamination. Inspections need to be both planned and spot inspections.” (Engineered Stone Industry submitter)

Some other suggestions from submitters included:

- Making the licences public so people know
- The same as those for licensed asbestos contractors
- Regime should be developed closely with industry

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<sup>3</sup> Submitter is referencing the Workplace Exposure Standard of  $0.025\text{mg/m}^3$ .

**Q7:** *In your view, what are the benefits and costs of operating under a licensing system?*

The feedback was varied on this question, with the perceived costs and benefits reflecting whether a submitter was supportive of the option. Comments made by submitters strongly reflected the feedback already given:

- “Better monitoring of those contractors and ability to track workers. Ability to remove licences of poor performing contractors.” (Individual submitter)
- “A benefit would be safer work environments. (Individual submitter)
- “The cost would not be grossly disproportionate to control the risk” (Individual submitter)
- “A level playing field is required for all fabricators whereby all are required to meet the same safety levels. A level playing field does not currently exist – our overheads are significantly higher than those who do not operate at the same safety level.” (Engineered stone industry submitter)

**Q8:** *Do you consider a licensing system would be effective in reducing harm?*

Many submitters (about 61% of those who engaged in this question) agreed that a licensing system would be effective, however a large proportion of these responses were caveated. 40% of those who said it would be effective said this would only be the case with effective enforcement by the regulator, for example: “I believe any licensing system can help reduce harm. To ensure it is effective, spot checks would need to be undertaken and enforcement action taken against repeat offenders.” (Other industry submitter) and “It's only as good as it is being policed” (Individual submitter).

In comparison, 36% of submitters who responded to this question indicated that they either did not consider this option to be effective, or that it would only be effective as a short-term measure.

## Additional questions for businesses

**Q28:** *Do you believe that the current optional accreditation scheme is adequate without mandatory licensing? Please explain.*

Submitters who engaged in this question unanimously agreed that the current optional accreditation scheme is inadequate without mandatory licensing. Various reasons were given, all appear to stem back to the inherent ineffectiveness of a voluntary system – for example: “No as the grey market don't use it”, “No, as currently there is no consequences for not participating”, and “Optional accreditation allows for optional safety levels”.

**Q29:** *Have you already joined the accreditation scheme? If so, how did you find it? If not, why?*

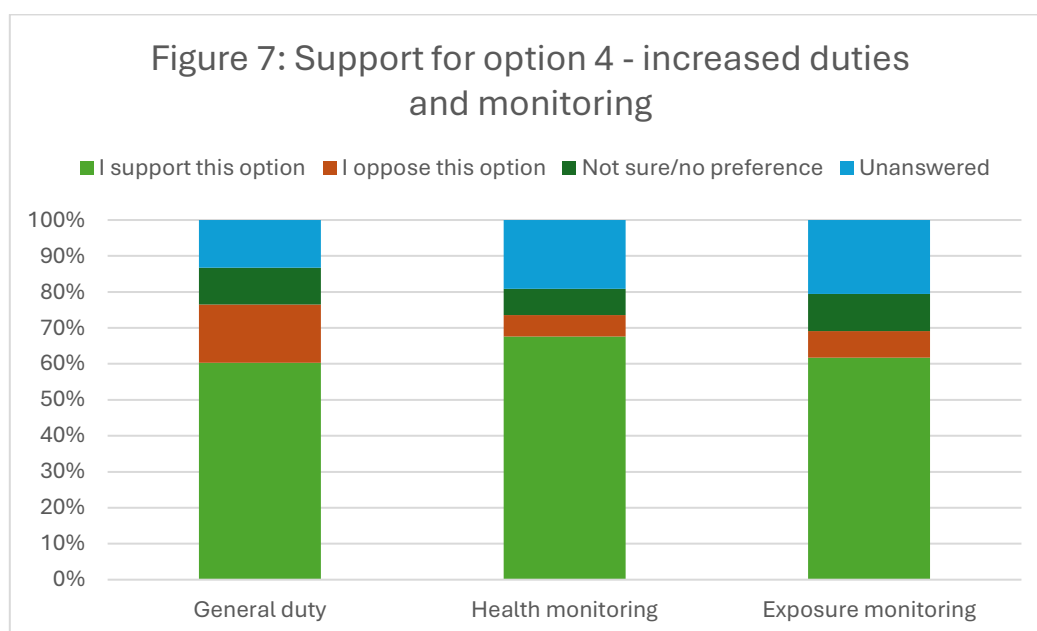
A small number of submitters indicated they had either joined or had previously engaged with the scheme. Most said it was costly, a very involved process and criteria was inconsistent.

## Option 4: Increased general duties and workers' exposure and health monitoring

Option 4 increases the general duties of PCBU's in all industries where workers are likely to be exposed to RCS, including but not limited to engineered stone fabrication. Option 4 is made up of three sub-options that fall into the category of mandatory requirements. Sub-option 4A introduces a general duty to reduce RCS exposures from work in all workplaces, while Sub-options 4B and 4C would introduce mandatory requirements for worker exposure and health monitoring for workers in all industries where there is a likelihood of exposure to RCS.

This differs from Option 2 as it would apply to all industries where a worker may be exposed to RCS.

***There was marginally more support for health monitoring (68% support) compared to a general duty (60% support) and exposure monitoring (62% support).*** The breakdown of submitters feedback is in Figure 7 below.



Submitters gave similar feedback across the Option 4 sub-options, with general support overall.

Medical submitters in particular were supportive of these options, with 80% supporting all three sub-options. Health & safety and individual submitters favoured health and exposure monitoring which reflected the overall trend across all submitters. Industry submitters, both engineered stone and 'other', were most in favour of health monitoring (Option 4B) with 70% support, compared to 55% support for both a general duty (Option 4A) and exposure monitoring (Option 4C).

As with previous options, numerous submitters emphasised their preference for a ban and any intervention being a short term/ transitional measure, or just to ensure safety around engineered stone that has already been installed.

**Q9:** *Do you support or oppose the introduction of a general duty to reduce RCS exposures from work in all workplaces where there is a likelihood of exposure to RCS? Tell us why.*

60% of all submitters supported this sub-option. Some submitters considered that the general duty under HSWA already exists, and others also queried what an additional general duty would add. Overall, though, most were supportive. For example, one medical submitter said: “We believed that this was already a duty under the NZ regulations. If not, then it certainly needs to be introduced as it is well documented that RCS exposures occur in a wide variety of employments.”

Submitters discussed overall support for increased prescription to ensure PCBU's can be clear about what they are expected to do, for example one submitter said: “greater clarity in the regulatory settings, and therefore would support a higher degree of prescription about work involving exposure to RCS”.

Feedback also indicated support for duties applying more widely across the industry, not just those who work directly with engineered stone, but any who might be exposed through the course of their work. A medical submitter raised this point: “RCS is a hazard that needs to be appropriately controlled in all workplaces and which is not unique to engineered stone workers.”

Views from those opposing this option varied but generally fell into the following three themes:

- PCBU's who do not comply with existing duties will continue to not comply without effective compliance methods
- This option may increase costs further to small businesses with limited benefit
- A complete ban is preferred.

**Q11:** *Do you support or oppose mandatory worker health monitoring for workers in all workplaces where there is a likelihood of exposure to RCS? Tell us why.*

Mandatory health monitoring was the most favoured of the sub-options within Option 4 and the most favoured option overall in the consultation document alongside mandatory controls (Option 2).

Many submitters emphasised that this option should be implemented alongside other options such as mandatory controls, for example, an individual submitter said: “[supportive] only when used with other requirements”.

Despite being supportive of Option 4B, some submitters raised concerns about how this option would be implemented and work in practice. For example, three submitters asked how ‘likelihood’ would be defined and emphasised the need for clarity on this so the industry would have certainty. Others asked about the extent to which the concept of health monitoring would be prescribed in the regulations or legislation, for example, whether providers and specific tests would be prescribed to ensure consistency and effectiveness. As with the other options in the consultation document, submitters continued to mention the need for enforcement to ensure compliance.

Only 6% of all submitters opposed this option.

**Q10:** *Do you undertake worker health monitoring currently? If so, what and how often?*

29% of submitters indicated they undertake worker health monitoring currently, most commonly this was once a year. This included 63% of engineered stone industry submitters, some 'other' industry submitters and individual submitters also responded affirmatively to this question. All other submitters who engaged on this question indicated that it was not applicable to them, i.e. no submitter said they *chose not to* undertake worker health monitoring.

**Q12:** *Do you support or oppose mandatory worker exposure monitoring for workers in all workplaces where there is a likelihood of exposure to RCS? Tell us why.*

A majority of submitters supported Option 4C. For example they said: "This is necessary for all workers who are exposed to RCS" (Health & Safety submitter) and "Knowing that our factory is operating at a high standard for WES [Workplace Exposure Standard] is vital to ensuring the safety of our workers" (Engineered stone industry submitter).

Another key theme of submitter responses was that mandatory exposure monitoring should be used in conjunction with other options, or used as an input to define how RSC exposure should be controlled:

- "Yes, however, not in isolation as this can potentially place emphasis on only one component of risk management" (Industry 'other' submitter)
- "If you don't know what the concentrations of RCS is in the workplace, how do you know the risk to health. If you don't know the risk to health, how do you know if controls are needed or sufficient." (Other submitter)

Only 7% of all submitters opposed this option. Very few submitters provided explanations for their opposition. Two submitters preferred a ban while several others focussed on the costs and practicality of implementing exposure monitoring. For example, some of those who opposed this option said:

- "This would need to occur even if a ban occurs. It needs to be ensured that the services of qualified Occupational Hygienists occurs (and consequences for those that don't)"
- "Current practices around health and exposure monitoring are NOT adequate, they are not clinically recommended, they seem to regularly be completed by non-competent people, and many workplaces are not compliant" (Medical submitter)
- "Exposure monitoring is imperative in assessing risk, although there are limited numbers of occupational hygienists/technicians to do such work." (Medical submitter)
- "We have concerns regarding the significant challenges which businesses would face in implementing and complying with this monitoring processes, and the burden of administrative cost, ongoing compliance costs, and people resources required to properly and meaningfully monitor worker health." (Industry 'other' submitter).

31% of all submitters selected 'not sure/ no preference': this was the highest incidence of this response compared to all options in the consultation document. Submitters provided varying explanations of their answers, mostly focussing on the feasibility of implementing the option. For example, one engineered stone industry submitter explained their answer by saying this option could be difficult to implement for small businesses or those working outside of controlled environments, and another submitter shared a similar view.

## Additional questions for businesses

Submitters were asked about their current approach to monitoring workers' exposure and health.

**Q30:** *Do you or does your business currently monitor workers' exposure or health in relation to RCS? Please explain.*

Six industry submitters said they currently undertake monitoring of workers' exposure and/or health in relation to RCS. One individual submitter said their employer does not do this. It is likely that only the industry submitters who do undertake monitoring responded to this question, given the strong skew towards businesses currently monitoring. Engineered stone industry submitters had varied approaches to monitoring: examples include:

- "We have Air Monitoring and Lung function testing" (Engineered stone industry submitter)
- "Annual RCS monitoring through the accreditation scheme but will be changing to a registered occupational hygienist who is accredited to do these tests." (Engineered stone industry submitter)
- "Yes, we monitor workers exposure. We have had annual independent air quality testing since 2017. We have annual health tests including lung capacity tests. We do not have annual x-rays or MRIs." (Engineered stone industry submitter)

**Q31:** *If you currently monitor workers' exposure or health, what is the current cost to the business of this?*

A small number of submitters responded to this question, the cost is hugely dependent on the size of the operation and the extent of monitoring undertaken. Of those who responded, all provided dollar amounts in the thousands (i.e. ranging from \$2,000 to \$12,000 per annum). One engineered stone industry submitter commented that the cost is "a small fraction of our turnover", while other respondents did not provide commentary.

**Q32:** *Do you think the current Workplace Exposure Standard (WES) of 0.025 mg/m<sup>3</sup> is reasonably practicable to detect and adhere to in your business?*

Submitters generally indicated the current WES of 0.025 mg/m<sup>3</sup> was possible but challenging to meet. Many drew a distinction between high and low silica engineered stone, explaining that the WES is more practical to meet with low silica stone. Industry submitters also discussed the capability of available equipment to detect the 0.025 mg/m<sup>3</sup> standard, some suggesting that detection methods are not necessarily reliable, or are dependent on the environment they are used in. Feedback below illustrates the views of submitters:

- "This is realistically achieved using low silica, wet methods, and a floor that is wet 24 hours a day." (Engineered stone industry submitter)
- "To consistently meet 0.025 with HIGH Silica Engineered Stone you need significant capital investment combined with excellent process controls. This is probably not reasonable for all fabricators. As the level is basically 0, it is at the limit of what testing equipment can reliably detect." (Engineered stone industry submitter)

- “The current WES of 0.025 mg/m<sup>3</sup> is extremely low, making it challenging for fabricators to ensure that personal exposures do not exceed this limit [...] The best methods currently used by accredited laboratories for crystalline silica analysis in filters have detection limits that are very close to the action level (half of the WES). At these concentration levels, the reproducibility and repeatability of the results are low, leading to uncertainty about whether the results are below or above the WES.” (Engineered stone industry submitter)

**Q33:** *Are there any practical constraints to your business which could limit your ability to monitor workers’ exposure or health?*

Just under half of responses indicated no constraints which could limit a business’s ability to monitor workers’ exposure or health. Two submitters raised concern with access to competent occupational health professionals who can carry out the relevant testing. Other constraints raised once each by submitter were cost, privacy and the difficulties of monitoring on-site exposure (as opposed to monitoring in managed facilities).

**Q34:** *Do you believe that current practices around health and exposure monitoring is adequate without making it mandatory? Please explain.*

Almost all submitters who engaged with this question said that current practises are not adequate. Various reasons were provided including the need for monitoring to be mandatory and the need for additional controls.

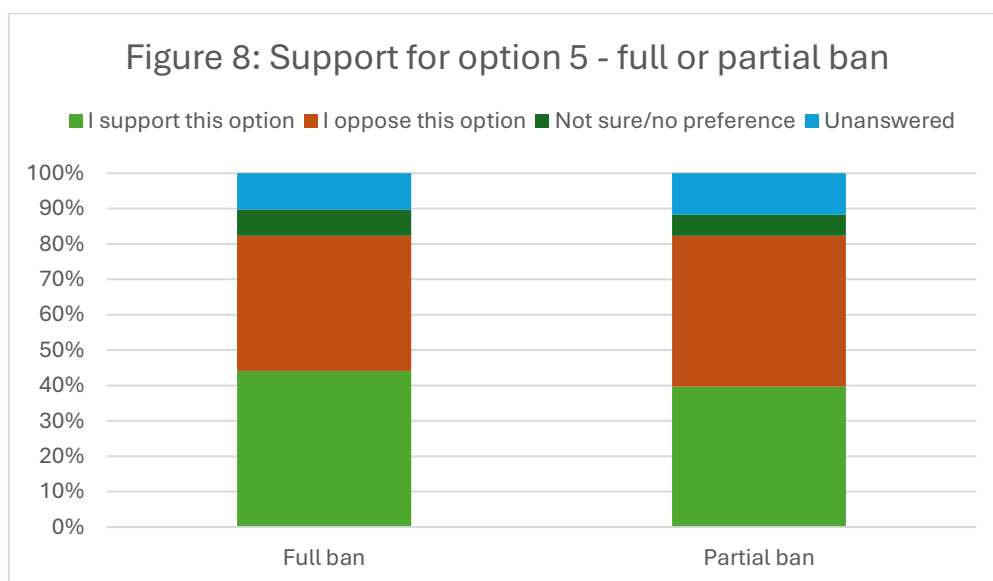
**Q35:** *How does Option 4 compare with what you are already doing?*

The majority of those who responded said they were already doing what was outlined in Option 4, noting that the response rate for this question was very low.

## Option 5: Limit supply to or use in workplaces of engineered stone

Option 5 would consist of establishing restrictions on the import, supply, or use of engineered stone in workplaces in New Zealand, similar to Australia’s decision to adopt a national ban on engineered stone. This option included two sub-options: a prohibition on the importation, use or supply of all engineered stone (i.e. a full ban) (Sub-option 5A) and a prohibition on the importation, use or supply of engineered stone containing 40 percent or more crystalline silica (i.e. a partial ban) (Sub-option 5B).

By a narrow margin, more submitters supported Sub-option 5A compared to those who opposed (44% and 38% respectively). By an even narrower margin, more submitters opposed Sub-option 5B compared to those who supported it (43% and 40% respectively). Compared to the other options in the consultation document, both sub-options of option 5 were the least supported options. Figure 8 below provides a breakdown of submitter feedback:



**Q13:** Do you support or oppose a full ban on import, supply, and use of engineered stone? Tell us why.

The most common justification for submitters supporting a full ban was to eliminate risks to workers of RCS exposure. For example, an individual submitter said: “This is the safest and simplest, cheapest and most effective method by which the health of workers can be protected.” This sentiment was echoed by other submitters. Similarly, others pointed out that some controls are effective but not necessarily enough: “While dust control is feasible in a factory setting, it is challenging to achieve the same level of control onsite” (engineered stone industry submitter). Likewise, other submitters continued to make comparisons to the approach we take with managing asbestos.

One third of those who supported Sub-option 5A referenced following the lead of Australia. For example, one submitter said: “We believe it is prudent to learn from the Australian experience and implement a total ban on engineered stone, increase protections for all work involving silica, and establish systems and pathways to protect and support workers in relation to occupational exposures” (Other submitter).

Another commonly raised explanation by those supportive of a full ban is the availability of alternative materials. For example:

- “Kitchen and bathroom bench tops can be made out of a number of different products” (Health & Safety submitter)
- “[...] there are many other materials available which have a reduced risk profile” (Engineered stone industry submitter)
- “The ban on engineered stone in Australia has already resulted in innovations by the sector to develop new products with no or very low crystalline silica content and these are available in Aotearoa NZ also.” (Medical submitter)

As with the other options, several submitters discussed the need for a staged or transitional approach towards a full ban, to account for the pivot required of the industry and the existing engineered stone in New Zealand. For example:

- “It is crucial that this ban should be brought in after a staged transitional period for existing installations and contracts, to allow for the completion of projects and the safe removal or modification of engineered stone products” (Health & Safety submitter)
- “It is also crucial that legacy materials and new replacement products continue to be monitored and regulated.” (Medical submitter)

Those who opposed Sub-option 5A primarily justified their stance by saying that mandatory controls and regulator enforcement are sufficient to manage the risk, if implemented effectively. This view was reflected by 40% of submitters who opposed a full ban. For example, some said:

- “Engineered stone can be worked with, if Option[s] 2,3,4 are followed and there is rigorous regulator enforcement” (Individual submitter)
- “With controls in Options 2 & 3 in place, risks to fabrication workers will be mitigated.” (Engineered stone industry submitter)
- “Banning a product should be the last resort, only when the regulatory framework is incapable of managing the risk” (Engineered stone industry submitter)
- “Silicosis and silica-related diseases are preventable. However, a persistent lack of compliance with, and enforcement of, the obligations imposed under WHS laws across the engineered stone industry at all levels have not protected workers from the health risks associated with RCS.” (Engineered stone industry submitter)

Other themes from submitters who opposed Sub-option 5A included:

- This would disrupt the market and risk job losses. For example: “Stopping the engineered stone will greatly impact the cost for the benchtops and impact on the fabricators/employers” (Engineered stone industry submitter)
- The industry is already using low silica products so this is not necessary. For example: “The industry is well underway transitioning to low silica or crystalline silica free formulations workers from the health risks associated with RCS.” (Engineered stone industry submitter)
- Alternatives to engineered stone also have risks to workers. For example: “Banning engineered stone does nothing to mitigate the risk from other sources of RCS.” (Other submitter)

**Q14:** *How would a full ban on import, supply, and use of engineered stone impact you or the industry you work in/support?*

More than a third of respondents to this question indicated there would be no or minimal impact of a full ban on them or their industry. Several submitters pointed to the benefits to worker safety and reduced exposure to RCS. However, a few submitters discussed the RCS risks that other materials would still pose in the market.

A few submitters focussed on the market impacts of this option. Six submitters indicated that a full ban would lead to job losses and/or the closure of businesses in the industry. Other market-related impacts raised by submitters included less choice for consumers, increased costs of alternatives, potential supply chain issues, and the need for a lead in time for the industry to have time to adapt and respond to the change.

**Q15:** *Do you support or oppose a partial ban on import, supply, and use of engineered stone, applying to engineered stone with crystalline silica content of 40 per cent or more? Tell us why.*

More submitters opposed Sub-option 5B, a partial ban, compared to those who supported it (43% and 40% respectively). Overall, both those in support and those opposed had a range of comments and questions on the option, more so than for the other options presented in the consultation document.

Interestingly, both those opposed and those in support raised similar themes in their feedback but used the explanations to reach different conclusions. An example of this is a preference for a full ban. One third of those who opposed Sub-option B of a partial ban did so because they preferred a full ban instead. Similarly, one third of submitters who *supported* a partial ban, did so only as a step towards a full ban, for example:

- “If a full ban is not possible this is next best option but then a mandatory licensing and monitoring system must be put in place” (Individual submitter)
- “I support this option as an interim step towards eliminating silica exposure.” (Engineered stone industry submitter)
- “There is well-documented evidence of health risks associated with respirable crystalline silica exposure at all levels. As such, a full ban is the best course of action. Otherwise, an intermediary option foreshadowing a ban, with increased regulatory measures, surveillance, and monitoring should be implemented immediately” (Medical submitter)

Some opposed to this option discussed the need for controls, risks of alternative products and potential continued non-compliance. For example:

- “[We] are concerned that a partial ban will result in inadequate controls. Workers may perceive low-silica engineered stone as significantly safer compared to full-silica benchtops, leading to complacency in safety measures.” (Engineered stone industry submitter)
- “Even a partial ban will still only focus on one product containing crystalline silica, while alternative materials such as granite and quartzite, which have more than 40% crystalline silica, could still be processed. Unless there is a general increase in compliance with the regulations and dust exposure controls, with a partial ban the risk of silicosis will continue to exist among stone fabricators and workers in other industries

processing crystalline silica-containing products.” (Engineered stone industry submitter)

Several submitters were supportive of Sub-option 5B but had feedback on the threshold of RCS content that the consultation document suggested the partial ban could apply to (40%). Some suggested that the 40% value had little to no backing evidence. Suggestions varied, with multiple submitters suggesting a better value would be 30%. For example, an engineered stone industry submitter said “I support a partial ban on the import, supply, and use of engineered stone with crystalline silica content of 30 percent or more. This approach strikes a balance between workplace safety and industry sustainability.”

Those in support raised a number of other points, including:

- Several said that the industry is already moving away from high-silica products, and low silica products are better. For example: “[The] majority of our suppliers offer this option. I would like it to be the standard, not a choice.” (Engineered stone industry submitter)
- This option would need to be in conjunction with other controls to be effective. For example: “Low Silica will help ensure worker safety. Current controls must still be used.” (Engineered stone industry submitter)
- A full ban would be inconsistent with the market or impractical. For example, one engineered stone industry submitter said “Zero is not consistent with other products in the market. So you'd have to take everything to zero.”

**Q16:** *How would a partial ban impact you or the industry you work in/support?*

Similarly to the full ban, over a third of those who answered this question said there would be minimal to no impact of a partial ban. For example, one industry submitter said there would be “Limited impact on day-to-day operations as viable options (products below 40% content) [are] currently available for both suppliers and fabricators.” Other submitters pointed out that much of the industry has already transitioned to zero or low silica products, for example: “No effect, the majority of the industry has already made this move.” (Engineered stone industry submitter).

Several submitters also raised the following similar themes in response to this answer:

- There will be fewer options/ choices for clients in the market.
- There may be some costs to businesses and the regulator to implement.
- This isn’t enough to protect workers.

## Additional questions for businesses

**Q36:** *Do you currently use alternative materials to engineered stone or engineered stone with lower crystalline silica content? If so, why?*

A majority of submitters who responded to this question said they use alternative materials or engineered stone with lower crystalline silica content. In response to other questions in the consultation document, several submitters commented that the market has already widely transitioned to alternatives. Products used include natural stone, laminates and porcelain.

**Q37:** *Has the ban in Australia and other measures taken overseas had any impact on your ability to import stone, or in the level of crystalline silica present in the stone you import?*

Most that engaged on this question said there have been no impacts. A couple of submitters said there was more difficulty in getting product into New Zealand, however, an equal number of submitters said the opposite – that the unused product from Australia has flooded to New Zealand.

**Q38:** *How long would it take you to transition your supply of engineered stone products to lower crystalline silica content containing products, or alternative benchtop materials (if possible for your business)?*

Most submitters said this transition has already happened or that it would be an easy transition that could happen in the short term. A minority expressed concern for existing stocks of high silica materials.

**Q39:** *What would you expect costs to be of a full or partial ban?*

Submitters responded similarly to other questions - most indicated that there would be no or minimal costs, however some were concerned about how investment in existing stock would be managed and the impact the loss would have on businesses. Some made a distinction between the costs of a partial and full ban and a few commented on the lead-in time having an impact on how big the costs might be.

**Q40:** *How does Option 5 compare with what you are already doing?*

Many submitters indicated that they are already moving away from high-silica products. Those who are not indicated that this change would be detrimental to them.

## Analysis: Closing questions

Finally, submitters were asked about their preferred option or package of options, and whether there are alternative options that we have not considered in the discussion document.

**Q17:** *Do you have a preferred option or package of options? Which option(s) and why?*

Not all submitters engaged with this question. Of those who did, most submitters supported stronger regulation of engineered stone, with mandatory controls (Option 2) and licensing (Option 3) being the most frequently preferred options. A smaller but significant number advocated for a full ban (Sub-option 5A), particularly among medical professionals and individuals. Medical professionals also supported enhanced health and exposure monitoring (Sub-options 4B and 4C). There was minimal support for maintaining the status quo (Option 1).

**Q18:** *Are there any other options to control RCS risks that we have not presented in this paper?*

Several suggestions were made of alternative options that were not listed in the discussion document. Health & safety and medical submitters emphasised the need for a national registry and ongoing research and monitoring. Individual submitters made limited suggestions, but included community exposure concerns and lifecycle risks during installation/removal.

In summary, alternative options that were suggested include:

- Occupational lung disease registry: Widely recommended, especially by health & safety and medical submitters, to track and support workers exposed to RCS.
- National occupational health services: Medical submitters strongly advocated for a coordinated national service to support exposed workers, including mobile clinics and specialist access.
- Shift length restrictions: Several medical submissions suggested limiting shift durations and introducing dust-free recovery periods to reduce cumulative exposure.
- Licensing and auditing: Industry submitters proposed detailed frameworks for licensing fabricators, mandatory audits, and compliance thresholds, including for testing and verification of silica-content of engineered stone.
- Ethical sourcing and safer alternatives: Some suggested promoting low- or zero-silica alternatives and ethical sourcing standards.
- Community exposure monitoring: A few individuals raised concerns about RCS exposure beyond the workplace, especially near residential or school areas.
- Financial incentives for businesses to move away from high-silica products.

**Q19:** *Is there anything else you would like to add to your submission?*

Engineered stone industry submitters expressed a strong willingness to work more closely with WorkSafe. They emphasised their proactive efforts to reduce silica content and implement safety measures, and called for recognition of these efforts.

In contrast, many submissions from individuals and medical professionals highlighted the devastating health consequences of exposure to RCS. Personal stories, including those of

family members affected by silicosis, were shared to underscore the urgency of action. Several submitters also reflected on their experience of family members affected by asbestos, and concerns of repeating past regulatory failures.

Several submitters used this question as an opportunity to emphasise their preference for a total ban on engineered stone, citing the availability of safer alternatives and the precedent set by Australia. These were often accompanied by concerns about ongoing exposure risks and the inadequacy of current controls.

A few comments reiterated the need for better data collection, including registries and exposure tracking, to inform policy and support affected workers.

Submitters also indicated their frustration with inaction. There was a recurring sentiment that regulatory delays and lack of enforcement have contributed to preventable harm, and that clearer, faster action is needed.

Some submitters considered a need for ethical sourcing standards and international collaboration to ensure safe working conditions in countries exporting engineered stone.

## Glossary

| Term                            | What it means                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HSW Act                         | The <i>Health and Safety at Work Act 2015</i> (HSW Act) provides a balanced framework to secure the health and safety of workers and workplaces. A guiding principle of the HSW Act is that workers and others should be given the highest level of protection against harm to their health, safety and welfare from work risks so far as is reasonably practicable. The HSW Act places a primary duty on a person conducting a business or undertaking (PCBU) to ensure, so far as is reasonably practicable, the health and safety of workers who work for the PCBU, and workers whose activities in carrying out the work are influenced or directed by the PCBU while carrying out the work |
| PCBU                            | PCBU means a 'Person Conducting a Business or Undertaking'. This is a broad concept that describes all types of modern working arrangements which we commonly refer to as businesses. Most New Zealand businesses, whether large corporates, sole traders, or self-employed, are classed as PCBUs.                                                                                                                                                                                                                                                                                                                                                                                              |
| RCS                             | Respirable Crystalline Silica                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| WES                             | Workplace Exposure Standard                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| WorkSafe New Zealand (WorkSafe) | WorkSafe is New Zealand's primary work health and safety regulator, established by the WorkSafe New Zealand Act 2013. In addition there are two designated work health and safety regulators: Maritime New Zealand (for work health and safety on ships and in major ports) and the Civil Aviation Authority (for work health and safety on aircraft).                                                                                                                                                                                                                                                                                                                                          |